
STATEWIDE MULTIMODAL TRANSPORTATION PLAN



Minnesota’s highest level policy plan for transportation

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**395 John Ireland Boulevard
Saint Paul, Minnesota 55155**

December 2022

Transportation keeps people connected to things they need and people they love. It connects businesses to suppliers and customers near and far. Our quality of life and economic wellbeing depend on a transportation system that works.

The Minnesota Department of Transportation envisions a transportation system that maximizes the health of people, the environment and our economy. We reaffirm this vision and remain committed to ensuring a safe, accessible, efficient and reliable transportation system. This update to the Statewide Multimodal Transportation Plan is the third in a series of plans that have made progress toward MnDOT's vision, and the plan acknowledges that we have more work to do.

For too many people, our state's transportation system is not accessible nor does it provide enough options to get around. Parts of the system are aging and need to be replaced. The transportation system of the past will not meet Minnesota's needs for the future.

Thank you to the thousands of Minnesotans who have shared thoughts and suggestions. Your feedback helped us make sure this is a people-powered plan for the future of transportation.

We find ourselves at a pivotal and exciting time. The 2022 SMTP includes the following new climate, equity and health commitments:

- Shift to more climate-friendly transportation options
- Ensure equity in transportation decision making
- Improve health outcomes and reduce disparities in Minnesota through transportation

MnDOT will continue to work with the public, stakeholders and partners to implement this plan. The 2022 SMTP is an invitation to join us to ensure transportation is equitable, sustainable, resilient and healthy for all.

Sincerely,



Nancy Daubenberger, P.E.
Commissioner

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**395 John Ireland Boulevard
Saint Paul, Minnesota 55155**

Diciembre 2022

El transporte mantiene a las personas conectadas con las cosas que necesitan y con las personas que aman. También conecta a las empresas con los proveedores y clientes que se encuentran cerca y lejos. Nuestra calidad de vida y nuestro bienestar económico dependen de un sistema de transporte que funcione.

El Departamento de Transporte de Minnesota visualiza un sistema de transporte que mejore al máximo la salud de las personas, el medio ambiente y nuestra economía. Reafirmamos esta visión y seguimos comprometidos a garantizar un sistema de transporte seguro, accesible, eficiente y fiable. Esta actualización del Plan Estatal de Transporte Multimodal es la tercera de una serie de planes que han avanzado hacia la visión del Departamento de Transporte de Minnesota (MnDOT), y el plan reconoce que tenemos más trabajo por hacer.

Para muchas personas, el sistema de transporte de nuestro estado no es accesible ni ofrece suficientes opciones para trasladarse. Algunas partes del sistema están deteriorándose y deben ser sustituidas. El sistema de transporte del pasado no cumplirá con las necesidades de Minnesota en el futuro.

Gracias a los miles de habitantes de Minnesota que han compartido sus opiniones y sugerencias. Sus comentarios nos han ayudado a asegurarnos de que éste sea un plan impulsado por la gente para el futuro del transporte.

Nos encontramos en un momento crucial y emocionante. El SMTP 2022 incluye los siguientes compromisos nuevos en cuanto a clima, equidad y salud:

- Cambiar a opciones de transporte más adecuadas para el clima
- Garantizar la igualdad en la toma de decisiones sobre el transporte
- Mejorar los índices de salud y reducir las desigualdades en Minnesota a través del transporte

MnDOT seguirá trabajando con el público, las partes interesadas y los socios para implementar este plan. El SMTP 2022 es una invitación a unirse a nosotros para garantizar que el transporte sea equitativo, sustentable, resistente y saludable para todos.

Atentamente,



Nancy Daubenberger, P.E.
Comisionada

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**395 John Ireland Boulevard
Saint Paul, Minnesota 55155**

Kaum Ob Hlis 2022

Cov kev caij tsheb, taug kev, thiab caij luv thij yog ib qho pab kom cov neeg mus cuag tau tej yam lawv yuav tsum tau mus thiab ntsib cov neeg lawv hlab. Nws pab cov lag luam mus kom cuag cov neeg xa khoom rau lawv muag thiab cov neeg nyob deb thiab ze tau tuaj yuav lawv cov khoom. Peb lub neej nyob tau kaj siab thiab kev lag luam khiav tau zoo yeej nyob ntwam seb peb cov kev khiav mus los ua tau zoo npaum li cas.

Lub koom haum saib xyuas cov kev khiav mus los hu ua The Minnesota Department of Transportation, MnDOT, muaj lub zeem muag pom tias cov kev khiav mus los yog qhov es ua rau tib neeg muaj kev nyab xeeb loj tshaj plaws, thiab ntwam ib cheeb tsam puag ncig thiab peb cov lag luam kom tau zoo tshaj plaws. Peb yeej ua kom lub zeem muag nov ruaj khov thiab yeej tseem yuav ua kom muaj kev nyab xeeb, kom txhua tus siv tau, kom yooj yim thiab kom zoo txog qhov kev caij tsheb khiav mus los. Qhov no yog ntxiv tshiab rau daim ntwam tawm tswv yim ntwam lub Statewide Multimodal Transportation Plan, SMTP, yog ntu thib peb daim ntwam tawm tswv yim es tau txhim kho zuj zus rau MnDOT lub zeem muag, thiab daim ntwam tawm tswv yim lees paub tias peb yeej tseem tshuav ntau yam hauj lwm yuav tsum tau ua.

Rau ntau leej neeg dhau los lawm, peb lub xeev Minnesota txoj kev khiav mus los tsis muaj kom txhua tus siv tau los yog tsis muab ntau txoj hauv kev kom lawv caij tau mus ncig ua si. Ib qho ntwam cov kev mus los nov mas qub dhau lawm thiab yuav tsum tau ua dua tshiab. Cov kev khiav mus los yav tag los tsis tau zoo raws li lub xeev Minnesota txoj kev ntshaw rau lub neej yav tom ntej.

Ua tsaug rau ntau ntau phav leej pej xeev hauv lub xeev Minnesota es tau qhia lawv txoj kev xav thiab lawv lub tswv yim tuaj. Nej cov lus hais tuaj pab tau peb kom paub tseeb tias daim ntwam tawm tswv yim nov yog lub zog ntwam cov pej xeev li qhia rau yav tom ntej txog kho cov kev khiav mus los.

Peb pom tau tias peb nyob rau lub caij nyooq thiab ib lub sij hawm muaj siab heev. Qhov 2022 SMTP muaj nrog rau cov hom phiaj yuav los ua zoo rau huab cua, muaj lub suab tawm kom sib npaug, thiab kom muaj kev noj qab hauv huv:

- Hloov peb txoj kev khiav mus los ib yam li caij tsheb, caij luv thij, los sis taug kev, kom tsis txhob ua cov pa tsis zoo ya mus saum ntuj.
- Kom txhua tus muaj lub suab sib npaug zos thaum muaj kev txiav txim siab.
- Txhim kho kev noj qab haus huv kom zoo dua thiab txo qhov kev pab tsis sib npaug hauv lub xeev Minnesota thaum hais txog cov kev siv mus los.

MnDOT yuav ua hauj lwm ntxiv mus nrog rau ib zej tsoom, cov neeg tseem ceeb thiab cov neeg peb koom tes nrog los siv daim ntwam tawm tswv yim no es ua raws nraim li tau teev tseg. Qhov 2022 SMTP yog ib daim ntwam caw kom tuaj koom peb kho cov kev khiav mus los kom muaj kev ncaj ncees, nyob ruaj khov, nyob ruaj nrees thiab kom zoo rau txhua tus.

Ua Tsaug,



Nancy Daubenberger, P.E.

Tus thawj coj

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**395 John Ireland Boulevard
Saint Paul, Minnesota 55155**

December 2022

Gaadiidku wuxuu dadka ku xiriiriyaa waxyaabaha ay u baahanyihiin iyo dadka ay jecelyihiin. Wuxuu ku xiraa ganacsiyada alaab-qeybiyeyaasha iyo macaamiisha kuwo dhow iyo kuwa fogba. Tayada nolosheena iyo ladnaanteena dhaqaale ayaa waxay ku xirantahay nidaamka gaadiidka oo shaqeyaa.

Waaxda Gaadiidka ee Minnesota waxa ay hiigsanaysaa nidaam gaadiid oo kor u qaada caafimaadka dadka, deegaanka iyo dhaqaalaheena. Waxaanu dib u xaqiijineynaa aragtidan waxaana naga go'an in la helo nidaam gaadiid oo ammaan ah, la heli karo, hufan oo la isku halayn karo. Cusboonaysiintan lagu samaynayo Qorshaha Gaadiidka Kala-duwan ee Gobolka oo dhan ayaa ah tii saddexaad ee qorshayaal taxane ah oo horumar ka sameeyay dhinaca aragtida MnDOT, qorshuhuna waxa uu qirayaa in ay noo taalo shaqo badan oo ay tahay in aanu qabano.

Dad aad u badani, nidaamka gaadiidka ee gobolkeena ma heli karaan mana siiyo fursado ku filan oo ay meel ku tagaan. Qaybo ka mid ah nidaamka ayaa gaboobay oo u baahan in la beddelo. Nidaamka gaadiidka ee xilligii hore ma dabooli doono baahida Minnesota ee mustaqbalka.

Waad mahadsantihiiin kumanaanka reer Minnesota ee fikirka iyo soo jeedinta nala wadaagay. Rayi celintiinu waxay naga caawisay inaanu hubino in kani yahay qorshe ku gundhigan dadka oo loogu talagalay mustaqbalka gaadiidka iyo isu socodka.

Waxaynu ku jirnaa waqti muhim ah oo xiiso leh. Qorshaha SMTP ee sanadka 2022 waxaa ka mid ah cimilada cusub ee soo socda, sinnaanta caddaaladaysan iyo ballanqaadyada caafimaadka:

- U beddelesho fursado gaadiid oo cimilada ku habboon
- Hubinta in si cadaaladi ku jirto loogu sinnaado go'aanada la xiriira gaadiidka iyo isu socodka
- Hagaajinta natiijooyinka caafimaadka iyo in la yareeyo farqiga u dhexeeya dadka reer Minnesota oo loo marayo gaadiidka

MnDOT waxay sii wadi doontaa la shaqaynta dadweynaha, daneeyayaasha iyo hawl-wadaagyadeena si loo hirgeliyo qorshahan. Qorshaha SMTP ee sanadka 2022 waa martiqaad ku aaddan in aad nagu soo biirtaan si loo hubiyo in gaadiidka iyo isu socodka yahay mid loo simanyahay, waara, adkaysi leh oo caafimaad qab u leh dhammaan.

Mahadsanid,



Nancy Daubenberger, P.E.
Gudoomiyaha

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HOW TO USE THIS PLAN

As the highest policy plan for transportation in Minnesota, the Statewide Multimodal Transportation Plan (SMTP) provides objectives, performance measures, strategies and actions to move Minnesota's transportation system forward. These collectively make up the policy direction that answers, "How are we going to achieve a multimodal transportation system that maximizes the health of people, the environment and our economy?"

Not all of the strategies and actions can be implemented right away. Some will require more time, support and funding. Also, it is important to achieve near-term successes while laying the groundwork for larger and more complex strategies and actions to follow.

Everyone has a role in implementing the policy direction in this plan and ensuring the success of the transportation system.

LOCAL PARTNERS

Agencies and organizations responsible for transportation decisions at the local level. This includes cities, counties, townships, public transit providers, ports, airports, etc.

TRIBAL PARTNERS

Minnesota is home to 11 reservations and 12 federally recognized sovereign Tribal Nations with jurisdiction over lands and resources within Minnesota: Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, Grand Portage Band of Lake Superior Chippewa, Leech Lake Band of Ojibwe, Lower Sioux Indian Community, Mille Lacs Band of Ojibwe, Prairie Island Indian Community, Red Lake Nation, Shakopee Mdewakanton Sioux Community, Upper Sioux Community and White Earth Nation. Minnesota is also home to the Minnesota Chippewa Tribe. The Minnesota Chippewa Tribe is a federally recognized tribal government for its member tribes (Bois Forte, Fond du Lac, Grand Portage, Leech Lake, Mille Lacs and White Earth). In addition, Minnesota contains lands owned by the Ho-Chunk Nation, which does not have a reservation. The Ho-Chunk Nation's lands are primarily located in Wisconsin.

REGIONAL PARTNERS

Agencies and organizations involved in regional planning, programming and economic development. This includes metropolitan planning organizations and regional development organizations.

STATE PARTNERS

Agencies and organizations with a statewide mission and interest in or impact on transportation. This includes the Minnesota Department of Employment and Economic Development, the Minnesota Department of Agriculture, the Minnesota Department of Health, the Minnesota Housing Finance Agency, the Minnesota Department of Public Safety, the Minnesota Pollution Control Agency, the Minnesota Department of Natural Resources, the Minnesota Environmental Quality Board and Explore Minnesota Tourism.

FEDERAL PARTNERS

Agencies and organizations that provide federal funding and have policies that impact planning, implementation and maintenance of the transportation system. This includes the U.S. Department of Transportation's Federal Aviation Administration, Federal Highway Administration, Federal Railroad Administration and Federal Transit Administration. Other federal agencies such as the U.S. Environmental Protection Agency, Department of Housing and Urban Development, Department of Commerce/Economic Development Administration, U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service also impact transportation decisions.

PRIVATE SECTOR PARTNERS

Companies that own and operate transportation services. These include railroads, terminal operators and shipping companies as well as developers, construction companies, consultants, etc.

COMMUNITY PARTNERS

Agencies and organizations that are advocates, academics, community-based organizations and chambers of commerce.

PUBLIC

State and federal legislators, community leaders and the general public are active participants in the state's transportation system. Everyone can contribute to transportation decisions by participating in public engagement, boards, committees, councils and legislative processes related to transportation.

OVERVIEW OF THE SMTP

The SMTP is divided into seven chapters. The following is a brief summary of what can be found in each chapter.

CHAPTER 1 WHAT ARE WE TRYING TO ACHIEVE sets the scene with the Minnesota GO Vision for the transportation system now and in years to come.

CHAPTER 2 WHERE ARE WE NOW discusses the state of the transportation system. It describes the current use and condition of the system and how transportation is funded.

CHAPTER 3 WHAT IS CHANGING describes key trends impacting transportation: population, economy, environment, technology, safety and transportation behavior.

CHAPTER 4 WHAT IS DIRECTING THIS PLAN describes public engagement activities for the plan. It also includes information on recent changes to planning and programming considerations and requirements.

CHAPTER 5 HOW WILL WE GUIDE OURSELVES MOVING FORWARD presents objectives, performance measures, strategies and actions that will guide Minnesota toward the Minnesota GO Vision over the next two decades.

CHAPTER 6 WHAT IS NEXT FOR MNDOT outlines a work plan with steps MnDOT will take to advance the plan's objectives, strategies and actions and how progress will be tracked in the next five years. The chapter also outlines how this plan will influence MnDOT's other statewide plans.

CHAPTER 7 HOW WILL WE IMPLEMENT THE SMTP identifies who has a role in implementing strategies, actions and considerations for preparing for the change needed to move Minnesota's transportation system forward and essential practices for SMTP implementation.

APPENDICES provide additional information and analyses that guided the development of this plan.

- Appendix A – Acknowledgments
- Appendix B – Acronyms
- Appendix C – Glossary
- Appendix D – Planning Reviews
- Appendix E – Environmental Justice & Title VI
- Appendix F – Transportation Funding
- Appendix G – Engagement Summary
- Appendix H – Transportation Equity
- Appendix I – Performance Measures
- Appendix J – Tribal Coordination and Consultation
- Appendix K – Planning Requirements





WHAT ARE WE TRYING TO ACHIEVE

The Statewide Multimodal Transportation Plan (SMTP) is Minnesota’s highest level policy plan for transportation. It is a 20-year plan based on the Minnesota GO Vision for a transportation system that maximizes the health of people, the environment and our economy. It supports the 16 goals for transportation established by the Minnesota Legislature. The plan is for all types of transportation and all transportation partners. It is about more than just roads and more than just the Minnesota Department of Transportation (MnDOT). The plan takes into account what is changing for the transportation system and provides direction for progress over the next 20 years.

READ CHAPTER 1 TO:

- Read the vision and goals guiding transportation in Minnesota.
- Learn about MnDOT’s modal and system plans.
- Learn about the SMTP and the 2022 update process.

MINNESOTA GO VISION

The transportation system is built to move people and goods, ensure a high quality of life for Minnesotans and support our economy. In 2011, MnDOT created the 50-year Minnesota GO Vision to set guiding principles for everyone with a role in making the transportation system work for Minnesotans. The vision says that “Minnesota’s multimodal transportation system maximizes the health of people, the environment and our economy.” It answers the question, “What are we trying to achieve with transportation over the next 50 years?” See Figure 1-1 for the Minnesota GO Vision and guiding principles.

The SMTP is the 20-year plan that sets policy direction for the modal and system plans that make up the statewide transportation plan (i.e., Family of Plans). The state requires the SMTP to be updated every five years. The SMTP and the other plans in the Family of Plans combined meet state and federal transportation planning requirements. These plans must support national, state and local goals. See Appendix K – Planning Requirements to see how the SMTP meets state and federal planning requirements.

Figure 1-1: Minnesota GO Vision and guiding principles

MINNESOTA’S MULTIMODAL TRANSPORTATION SYSTEM MAXIMIZES THE HEALTH OF PEOPLE, THE ENVIRONMENT AND OUR ECONOMY.

The system:

- Connects Minnesota’s primary assets—the people, natural resources and businesses within the state—to each other and to markets and resources outside the state and country.
- Provides safe, convenient, efficient and effective movement of people and goods.
- Is flexible and nimble enough to adapt to changes in society, technology, the environment and our economy.

 <p>Quality of Life</p>	 <p>Environmental Health</p>	 <p>Economic Competitiveness</p>
<ul style="list-style-type: none">• Recognizes and respects the importance, significance and context of place—not just as destinations, but also where people live, work, learn, play and access services• Is accessible regardless of socioeconomic status or individual ability	<ul style="list-style-type: none">• Is designed in such a way that it enhances the community around it and is compatible with natural systems• Minimizes resource use and pollution	<ul style="list-style-type: none">• Enhances and supports Minnesota’s role in a globally competitive economy as well as the international significance and connections of Minnesota’s trade centers• Attracts human and financial capital to the state

GOALS FOR TRANSPORTATION IN MINNESOTA

Minnesota statute 174.01 identifies 16 goals to ensure Minnesota has an integrated multimodal transportation system. The 16 goals are:

1. To minimize the fatalities and injuries for transportation users throughout the state.
2. To provide multimodal and intermodal transportation facilities and services to increase access for all persons and businesses and to ensure economic well-being and quality of life without undue burden placed on any community.
3. To provide a reasonable travel time for commuters.
4. To enhance economic development and provide for the economical, efficient and safe movement of goods to and from markets by rail, highway and waterway.
5. To encourage tourism by providing appropriate transportation to Minnesota facilities designed to attract tourists and to enhance the appeal, through transportation investments, of tourist destinations across the state.
6. To provide transit services to all counties in the state to meet the needs of transit users.
7. To promote accountability through systematic management of system performance and productivity through the utilization of technological advancements.
8. To maximize the long-term benefits received for each state transportation investment.
9. To provide for and prioritize funding of transportation investments that ensures that the state's transportation infrastructure is maintained in a state of good repair.
10. To ensure that the planning and implementation of all modes of transportation are consistent with the environmental and energy goals of the state.
11. To promote and increase the use of high-occupancy vehicles and low-emission vehicles.
12. To provide an air transportation system sufficient to encourage economic growth and allow all regions of the state the ability to participate in the global economy.
13. To increase use of transit as a percentage of all trips statewide by giving highest priority to the transportation modes with the greatest people-moving capacity and lowest long-term economic and environmental cost.
14. To promote and increase bicycling and walking as a percentage of all trips as energy-efficient, nonpolluting and healthy forms of transportation.
15. To reduce greenhouse gas emissions from the state's transportation sector.
16. To accomplish these goals with minimal impact on the environment.

FAMILY OF PLANS

The objectives, performance measures, strategies and actions in the SMTP set policy direction for MnDOT’s modal and system plans. This set of plans include aviation, bicycle, freight, highway, pedestrian, ports and waterways, rail and transit. These plans are collectively known as the “Family of Plans.” Together the Family of Plans directs

investments, maintenance, operations, modal programs and services for all types of transportation throughout the state. Other plans for safety, accessibility, operations, technology and more can but are not required to follow the SMTP’s policy direction.

SMTP UPDATE PROCESS

MnDOT is responsible for working with the public, transportation partners and tribal nations to produce the SMTP. Throughout the update process, MnDOT sought input from the public, stakeholders and partners. A summary of the engagement process and input received is included in Chapter 4. A detailed public engagement report is available in Appendix G – Engagement Summary. The plan update process is shown in Figure 1-2.

STEP 1. BACKGROUND INFORMATION

The SMTP process began with a review of plans and studies completed in the last five years and changes in law and policy since 2017. Staff evaluated the progress made in implementing the 2017 SMTP. Insights from these reviews highlighted where MnDOT could make updates to the trend library.

Chapter 2 provides a snapshot of the current transportation system. Chapter 3 includes a high-level summary of trends impacting the transportation system. More background information is included in the appendices.

STEP 2. POLICY DIRECTION

Based on insights from step 1, MnDOT reviewed and updated the objectives and strategies to ensure they aligned with the Minnesota GO Vision and current transportation policies. Actions were developed to clarify how to implement each strategy. Additionally, performance measures were updated for each objective based on the draft policy direction. The updated objectives, performance measures, strategies and actions are listed in Chapter 5.

STEP 3. NEXT STEPS

This work is expected to happen over the next five to 20 years after the plan is adopted and will focus on the implementation of the policy direction set forward in Chapter 5. Chapter 6 contains the list of activities MnDOT will do in the next five years, known as the SMTP Work Plan. Additionally, each of the Family of Plans will be updated to align with the SMTP policy direction. Chapter 7 identifies partner roles, change readiness considerations and implementation essential practices to move Minnesota’s transportation system forward.

Figure 1-2: Statewide Multimodal Transportation Plan process



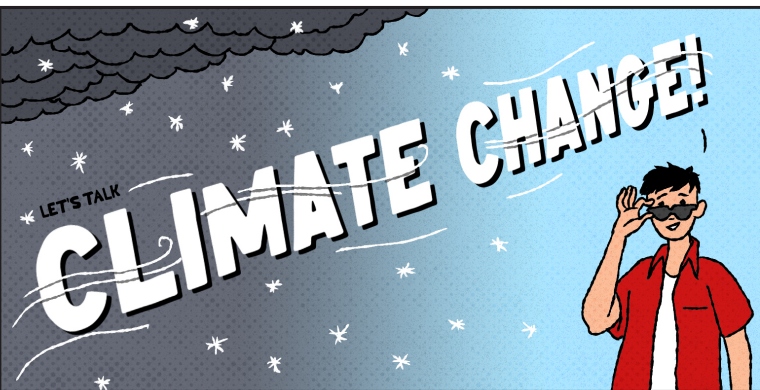
FOCUS AREAS

This update of the SMTP focused on six areas for transportation in Minnesota—aging infrastructure, climate, economy and employment, equity, safety and transportation options. These were selected in collaboration with the public, stakeholders and partners as part of SMTP engagement. These focus areas cut across all transportation topics and guide priorities for the transportation system.



AGING INFRASTRUCTURE

Infrastructure across the country is aging. As the system ages, more resources go to maintenance and repairs to make sure they serve communities as intended. Minnesota's transportation system shows signs of deterioration and requires attention.



CLIMATE

Minnesota's climate is already changing. Temperatures are increasing and larger, more frequent extreme weather events are occurring year round. Climate change will impact the way the transportation system is used, built, designed, operated and maintained. The transportation sector needs to combat climate change by providing people with environmentally friendly choices to ensure their daily transportation needs are met.



ECONOMY & EMPLOYMENT

The transportation system works best when it evolves to meet the needs of people and the changing economy. Understanding these needs helps ensure that people and goods move safely and efficiently throughout Minnesota. The future requires collaborative solutions that support the economy and employment as an essential goal for the transportation system.

EQUITY

WHAT DOES IT MEAN?



EQUITY

Decisions on policy, design and operations in the built environment and transportation system have led to inequities for underserved communities, especially Black, Indigenous and People of Color. Advancing transportation equity requires having a better understanding of how the transportation system, services and decision-making processes help or hinder the lives of people in underserved communities in Minnesota.

SAFETY

LET'S TALK



SAFETY

Recent shifts in transportation behavior have led to a significant step backwards in transportation safety. 2021 was the deadliest year on Minnesota roads in more than a decade. A mix of traditional and new practices and methodologies are needed to prevent and mitigate human error and ensure people are safe.

TRANSPORTATION OPTIONS

WHAT'S THEIR IMPACT?



TRANSPORTATION OPTIONS

A variety of transportation options support how people and goods move across the state, throughout a region or within a community. Collaboration with all partners is required to ensure a connected transportation system offers options and choices for moving people and goods.

A RENEWED COMMITMENT

This SMTP update continues the last five years of planning activities. It provides a revised set of strategies to advance the Minnesota GO Vision to continue the work set forward by the 2017 SMTP. Actions are a new level of detail to the policy direction to provide clarity on how to meet the commitments in the vision and who has a role in implementing this work.

Since the 2017 plan, there are new opportunities and challenges. Progress has been made toward the Minnesota GO Vision. This update renews the state's commitment to the vision, but it will take all partners to bring the vision to a reality. The challenges Minnesota is facing require bold, coordinated approaches. Collective commitment is needed from all who have a role in making transportation work for Minnesotans. Consider the policy direction in this SMTP an invitation to join MnDOT and transportation partners to build this bold new transportation future together.





WHERE ARE WE NOW

Minnesota's quality of life and economic wellbeing rely on an efficient and reliable transportation system. The system connects businesses to suppliers and customers near and far. The system also allows people to get to their jobs and schools, see a doctor and take advantage of the state's many cultural, entertainment and recreational opportunities. Minnesota and the state's transportation system have great strengths but there are also challenges. Table 2-1 highlights key characteristics of Minnesota.

**READ CHAPTER 2 TO LEARN ABOUT
MINNESOTA'S TRANSPORTATION
SYSTEM:**

- Roads
- Bridges
- Safety
- Bicycling & Walking
- Transit
- Freight
- Air
- Ports & Waterways

EXISTING TRANSPORTATION SYSTEM

Minnesota has a vast transportation system that includes roads, railroads, airports, ports, waterways, pipelines, transit systems, trails, bikeways and walkways. The Minnesota Department of Transportation (MnDOT) and local, regional, state, Tribal and federal government, along with private and non-profit partners keep the system running. Table 2-2 highlights key characteristics of the transportation system in Minnesota. The following sections provide more detail on the background, use and performance of each part of the system.

Table 2-1: Minnesota at a glance, 2021

CHARACTERISTIC	CURRENT STATUS
Population	5,707,390 (22nd largest)
State Area	86,939 square miles (12th largest)
Population Density	66.6 people/square mile
Median Household Income	\$71,306
Median Household Size	2.49 people
Largest City by Population	Minneapolis (429,954)
Largest County by Population	Hennepin (1,281,565)
Largest County by Area	St. Louis (6,125 square miles)
Gross State Product	\$415 billion (19th highest)
Largest Industries by Gross Domestic Product	1. Financial Services 2. Manufacturing 3. Professional and Business
Biomes	Coniferous Forest Deciduous Forest Prairie Grassland Tallgrass Aspen Parkland
Lakes (10+ acres in size)	11,842

Minnesota’s quality of life and economic well-being rely on an efficient and reliable transportation system.



Table 2-2: Snapshot of Minnesota’s transportation system, 2022

CHARACTERISTIC	CURRENT STATUS
All streets, roads and highways	142,865 centerline miles
State highways	11,703 centerline miles
County roads	44,526 centerline miles
City streets	23,149 centerline miles
Township roads	55,548 centerline miles
Other public roads	7,939 centerline miles
Bridges (10 feet span and greater)	21,148
Sidewalk miles	698 miles along state highways plus thousands more along local roadways
Designated U.S. Bicycle Routes	North Star Route (USBR 41): 315 miles Mississippi River Trail (USBR 45): 817 miles Prairie Lakes Bicycle Route (USBR 20): 188 miles Total: 1,320 miles
Off-highway Vehicle Trails	2,959 miles
Twin Cities Transit (7 county area)	204 bus routes, two light rail transit lines, four bus rapid transit lines and dial-a-ride services
Greater Minnesota Transit	40 public transit systems, 28 are rural systems, 7 small urban systems and 5 systems operated by tribal nations
Intercity Passenger Rail	Amtrak Empire Builder (Chicago and the Pacific Northwest)
Intercity Bus	Greyhound, Jefferson Lines, Land to Air Express, Megabus, Northfield Lines, Rainbow Rider and Saint Cloud Northstar Link
Freight Rail	4,444 route miles serviced by 21 railroad companies
Commuter Rail	Northstar commuter rail line (Minneapolis to Big Lake)
Airports	305 airports, 133 public airports with nine commercial airports
Great Lakes Ports	Three ports on Lake Superior
River Ports	Four ports on 195 miles of the Mississippi River System
Pipelines	10,398 miles
Carsharing	Two services (HOURCAR—which operates the electric car service Evie—and Zipcar) operating in Minneapolis, St. Paul, Winona and Mankato
Ride-hailing	Local taxi companies along with Lyft and Uber
Scooter Sharing	Services like Bird, Lyft and Lime primarily operate in the Twin Cities area and are becoming more prevalent in Greater Minnesota
Bicycle Sharing	Nice Ride operates in Minneapolis and on the University of Minnesota campus; additional informal systems in communities statewide

STREETS, ROADS & HIGHWAYS

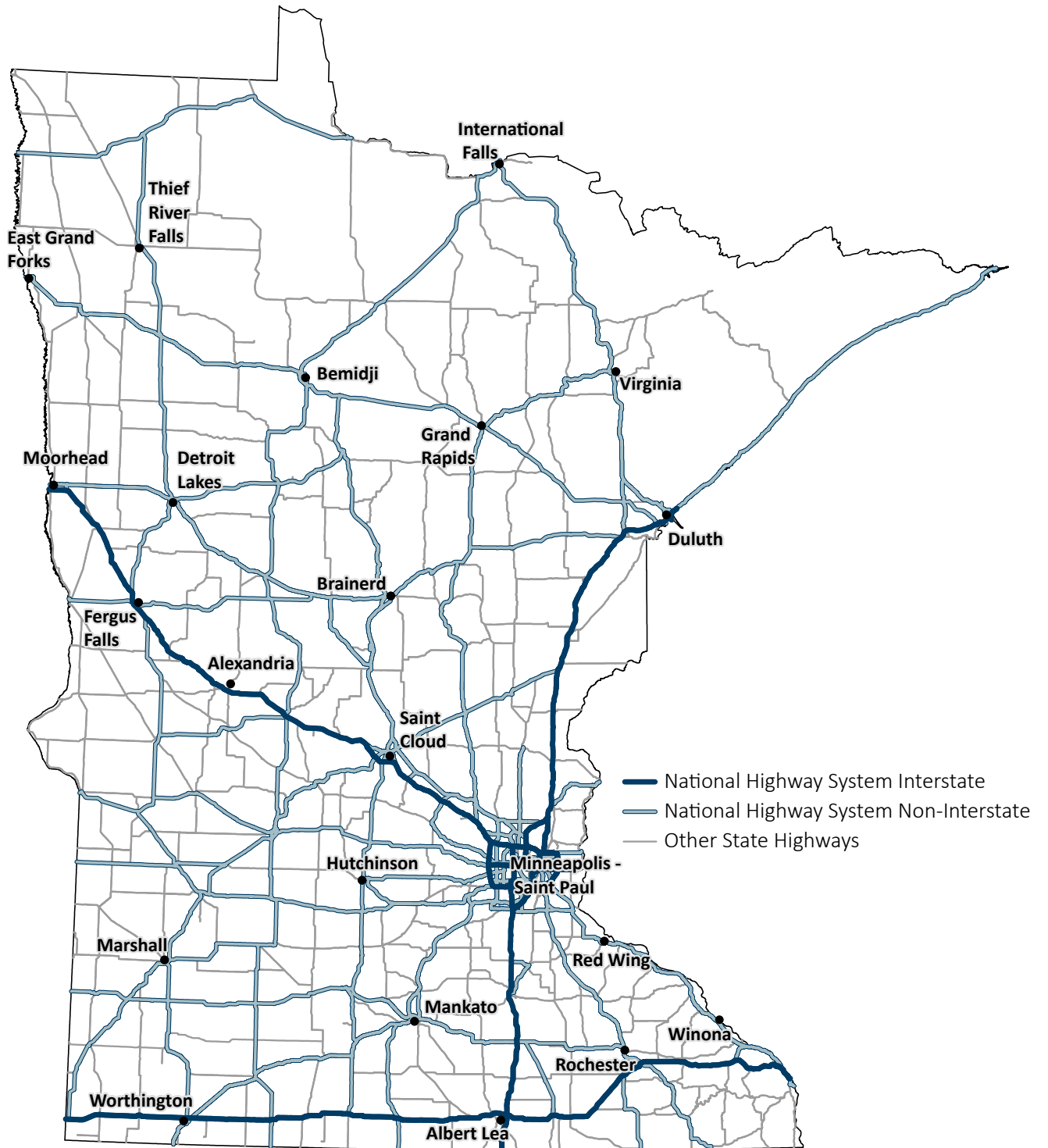
Minnesota has the fourth largest system of streets, roads and highways in the country. As a whole, the network is made up of 142,865¹ centerline² miles of public roadways across state, county, city and township systems. For context, the state ranks 22nd in population and 12th in geographic size. Figure 2-1 shows the existing state highway network. This network of Interstate, US and state highways is the backbone of Minnesota’s roadway system. It includes routes designated as part of the National Highway System (NHS) and other state roads. The state highway network is approximately 8% of all roadways in Minnesota.



¹ Minnesota Department of Transportation, “Centerline and Lane Mileage Reports,” Office of Transportation System Management, December 31, 2021, https://www.dot.state.mn.us/roadway/data/reports/mlm/21_strgp.pdf.

² Centerline miles is a term for one mile of a single roadway regardless of the number or size of the lanes.

Figure 2-1: Minnesota's State Highway network, 2022



VEHICLE MILES TRAVELED

Minnesota’s roadway network has changed over time to meet the needs of those who use it. From 1992 to 2018, VMT growth from motorized vehicles on all roads in Minnesota averaged about 1.4% per year.³ From 2000 to 2019, overall statewide total VMT rose approximately 16.5%, from 52.1 billion VMT to 60.7 billion VMT.⁴ However, statewide VMT saw a reduction by 1% from 2018 to 2019 per capita. Due to the COVID-19 pandemic, 2020 saw an unprecedented drop in VMT throughout the state. In the early months of the pandemic, the volume of vehicles on Minnesota roadways dropped in some areas by 30% to 50%. This drop in VMT is shown in Figure 2-2.⁵

Figure 2-3 shows how VMT is distributed across the different roadway systems in Minnesota. Since 2020, traffic volumes have returned to or exceed pre-pandemic levels in most of the state. Recent evidence from traffic volume data in the Twin Cities⁶ suggests that while daily volumes are rebounding to near pre-pandemic levels, the distribution of trips throughout the day has differed significantly.⁷

Volumes during the traditional morning peak period are lower, consistent with many workers continuing to work remotely, while trips during the afternoon peak period are returning to higher levels. In the near term, VMT is predicted to remain relatively consistent, but could rise considerably if Minnesotans don’t use lower emission travel options like walking, rolling, bicycling and taking transit or bundle trips to destinations.

Figure 2-3: Percentage of vehicle miles traveled by roadway system, 2020

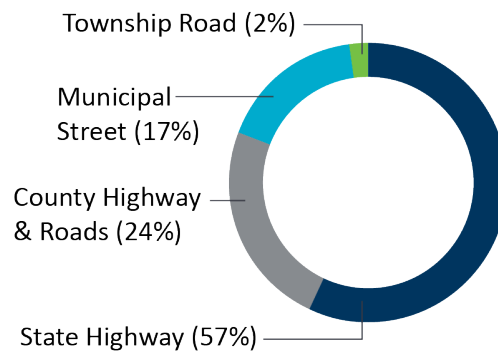
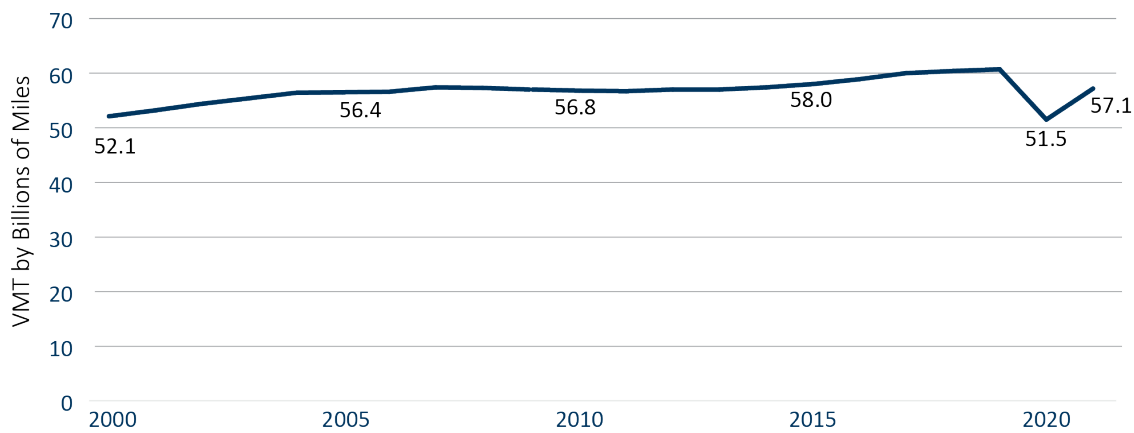


Figure 2-2: Total vehicle miles traveled in Minnesota, 2000-2021



³ Minnesota Department of Transportation, “Vehicle Miles of Travel Trends in Minnesota,” Office of Transportation System Management, September 2019, https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/DisplayDoc?docnumber=20012322&identifier=20012322.

⁴ Minnesota GO, “Transportation Behavior,” Trend Library, 2022, <https://minnesotago.org/trends/transportation-behavior>.

⁵ Minnesota Department of Transportation, “Performance Measures,” date accessed March 9, 2022, <https://www.dot.state.mn.us/measures/>.

⁶ Minnesota Department of Transportation, “Regional Transportation Management Center,” date accessed March 9, 2022, <https://www.dot.state.mn.us/rtmc/trafficoperations.html>.

⁷ Metropolitan Council, “Freeway Travel Trends,” date accessed March 9, 2022, <http://metrotransitm.shinyapps.io/freeway-traffic-trends/>.

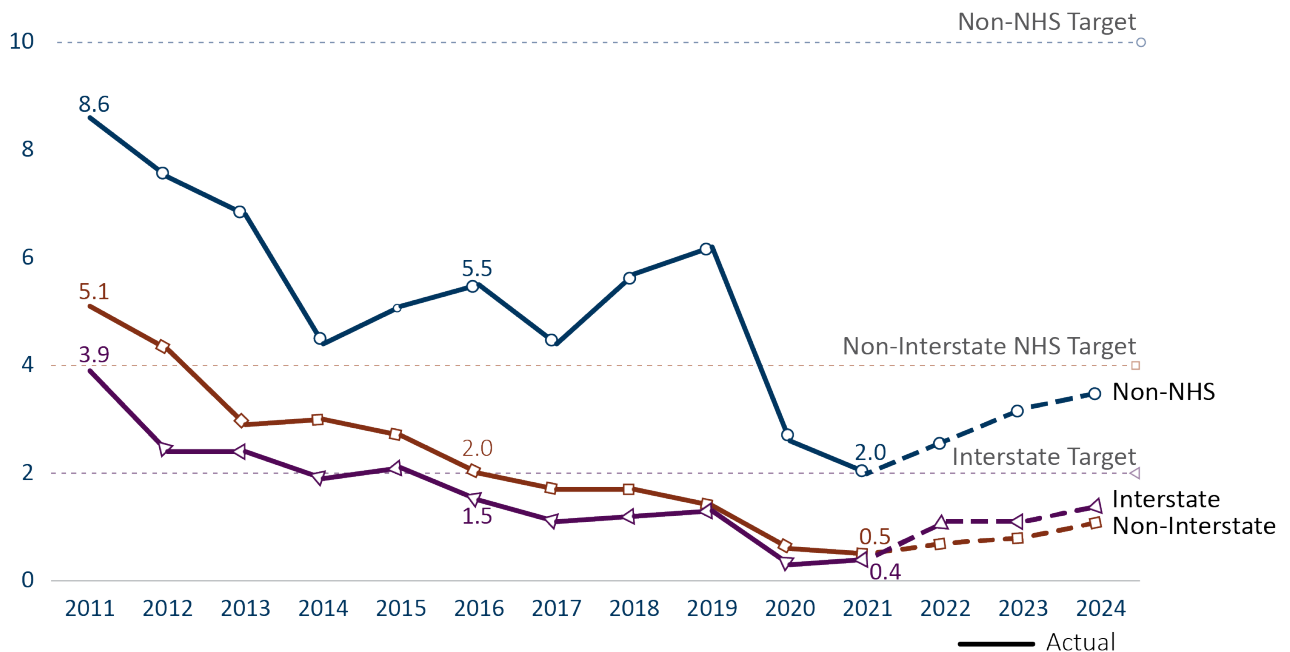
PAVEMENT CONDITION

Faced with an aging system and increasing construction costs, transportation partners throughout Minnesota are struggling to keep the roadway system in good condition. Even with these challenges, there has been a decrease in state highway miles rated as poor condition while more of the system is rated in fair and good condition, as seen in Figure 2-4.

In 2021, the Interstate system met the state target of less than 2% of Interstate pavements in poor condition. Additionally, the Non-Interstate NHS roadways achieved the target of having less than 4% of pavement in poor condition with 0.5% in poor condition in 2021. Finally, the Non-NHS system in 2021 also achieved the target of less than 8% in poor condition.

Although the roadways rated in poor⁸ condition are going down, the percentage of roadways rated in good condition are not increasing at the same rate. This means that more roadways are being categorized as in fair condition. If more roadways aren't moved from fair condition to good condition, the percentage of pavements in poor condition across all roadways is expected to increase in the future. Figure 2-4 shows the percent of roadway miles with a Ride Quality Index less than 2.0 since 2011 and projections for 2022-2024.

Figure 2-4: Percent of Minnesota State Highway pavement in poor condition, 2021



⁸ Minnesota Department of Transportation, "2020 Pavement Condition Annual Report," March 2021, https://www.dot.state.mn.us/materials/pvmtmgmtdocs/AnnualReport_2020.pdf.

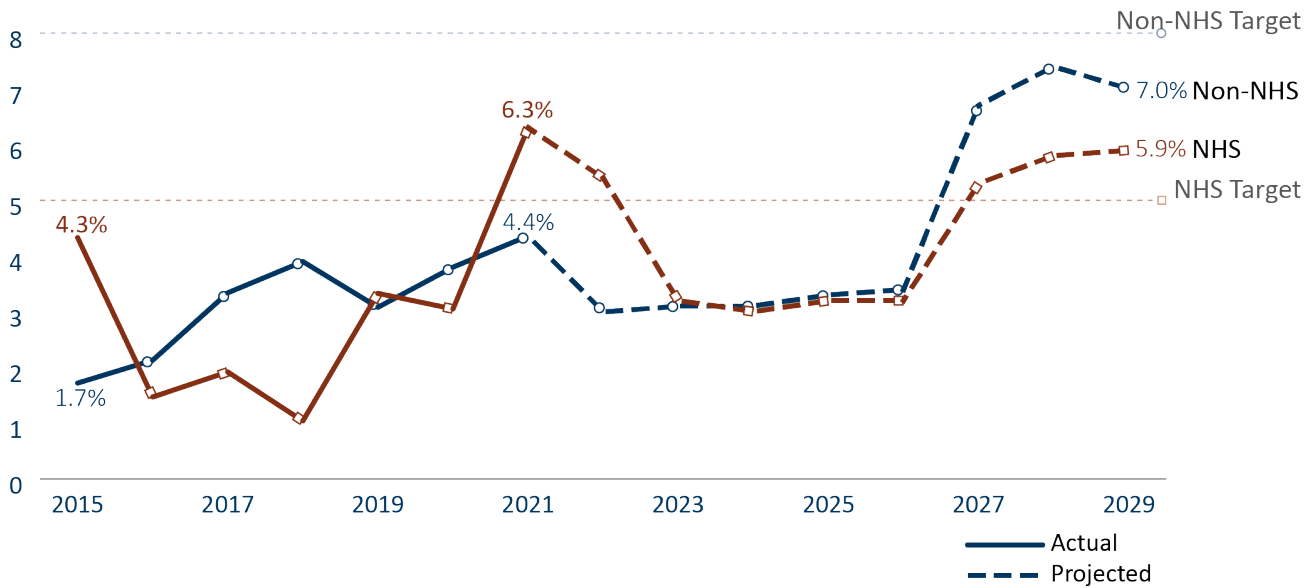
BRIDGE CONDITION

MnDOT is currently not meeting the state’s target for the acceptable percentage of NHS bridges in poor condition⁹. As of 2021, 6% of NHS bridges were in poor condition, which does not meet the NHS state target. Over 4% of Non-NHS bridges were in poor condition, which does meet the Non-NHS state target. Thirty percent of NHS bridges and 31% of Non-NHS bridges were in good condition.¹⁰ As seen in Figure 2-5, the percentage of bridges on the NHS in poor condition exceeded the NHS target of 5% in 2021. This is projected to still exceed the target in 2022 before returning to below the target in 2023. However, the percent of bridges on the NHS in poor condition is projected to again rise above the target in 2026. Note these projections are anticipated to improve as MnDOT expects to use federal funding for bridges as authorized by the Infrastructure Investment and Jobs Act.

On the local road network, the percentage of bridges in poor condition was 5% and 66% of bridges were in good condition in 2020.¹¹



Figure 2-5: Percent of Minnesota State Highway bridges in poor condition, 2021



⁹ Minnesota GO Performance Dashboard, “Bridge Condition,” date accessed March 9, 2022, <https://performance.minnesotago.org/system-stewardship/condition/bridge-condition>.

¹⁰ Minnesota GO Performance Dashboard, “Bridge Condition,” date accessed March 9, 2022, <https://performance.minnesotago.org/system-stewardship/condition/bridge-condition>.

¹¹ Minnesota Department of Transportation, “Minnesota Structures 2021 Report, Bridge Office – Bridge Inventory Management Unit.

TRAFFIC SAFETY

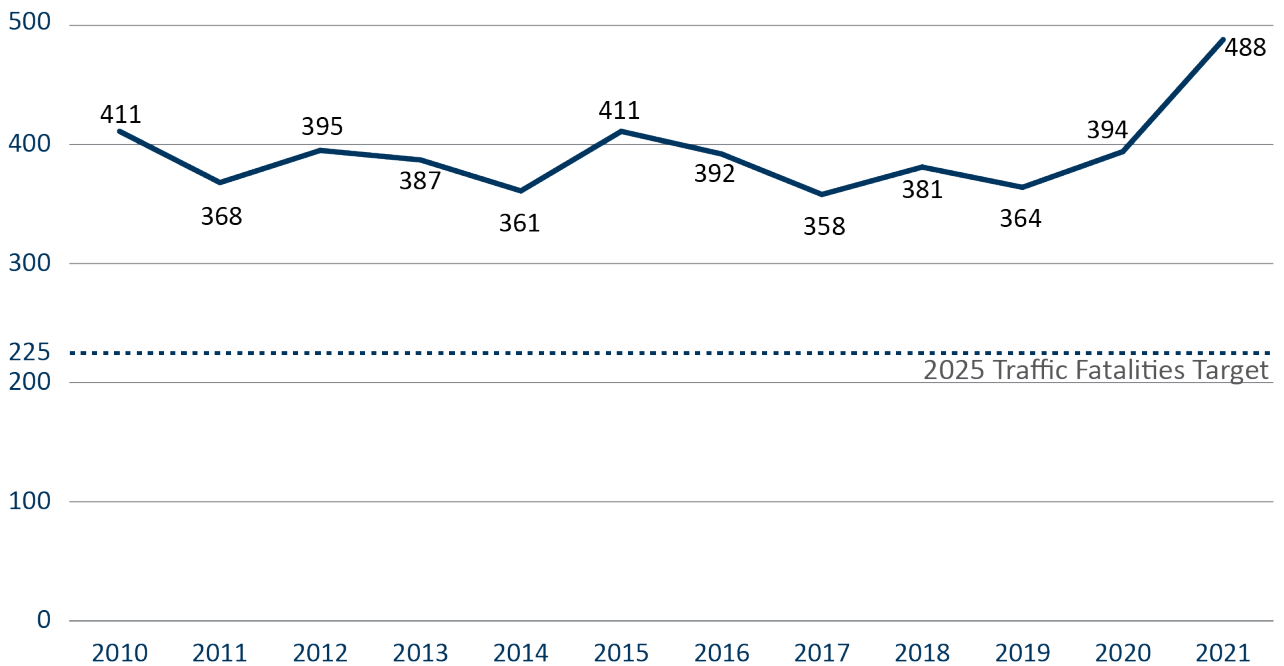
2021 was the deadliest year on Minnesota’s roads in over a decade. In total, preliminary reports from the Minnesota Department of Public Safety state that in 2021, 488 people died due to motor vehicle crashes compared with 394 fatalities in 2020, a 24% increase

(Figure 2-6). Note that 2021 numbers are preliminary and are subject to change. The number of serious injuries on the roadway system increased from 1,569 in 2020 to 1,722 in 2021. Overall, the total number of serious injuries has generally trended down over the past six years.¹²



From 2016 to 2020, approximately 48 pedestrians and eight bicyclists were killed each year.¹³ Fatalities and serious injuries involving bicyclists and pedestrians remain largely unchanged. For example, in 2015 there were 41 pedestrian and 10 bicyclist fatalities compared with 55 pedestrian and 9 bicyclist fatalities according to preliminary 2021 crash data.

Figure 2-6: Traffic fatalities on Minnesota roads, 2010 to 2021



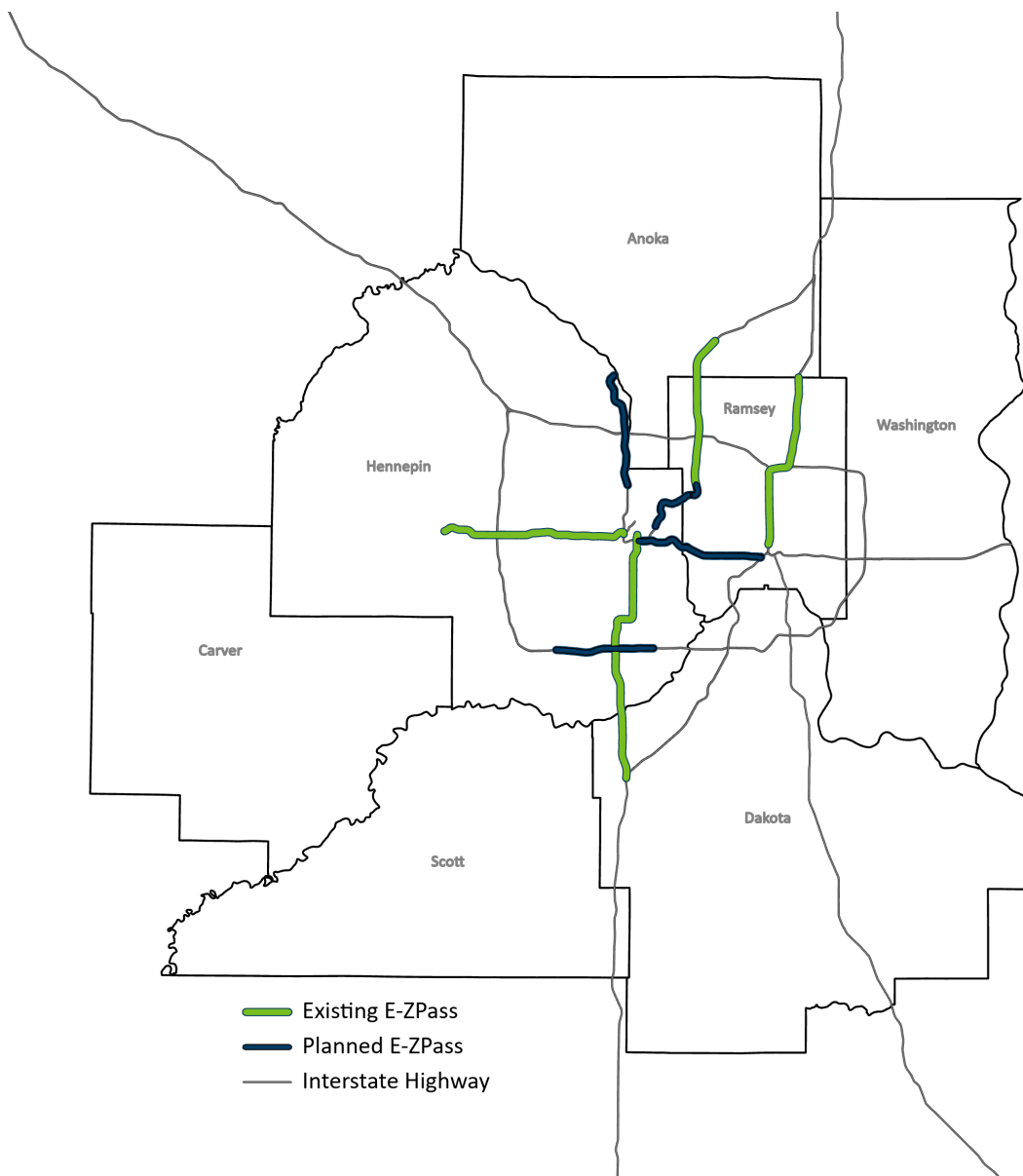
¹² Minnesota Department of Public Safety, “Bike and Pedestrian Safety,” Office of Traffic Safety, 2016-2020, <https://dps.mn.gov/divisions/ots/pedestrians-bicycles/Pages/default.aspx>.

¹³ Minnesota Department of Public Safety, “2020 Minnesota Annual Report,” Office of Traffic Safety, 2020, <https://dps.mn.gov/divisions/ots/reports-statistics/Documents/Annual-Report-2020.pdf>.

MANAGED LANES

“Managed lanes” are express lanes that use electronic tolls to improve traffic flow, provide alternatives to congestion and improve safety. Managed lanes were first implemented on the Twin Cities’ metro area freeway system in 2005 along I-394. Automated toll lanes and other managed lane technologies have since been extended to portions of I-35W and I-35E. These technologies are under consideration for other parts of the metro area. Figure 2-7 shows the existing and planned managed lane corridors in the metro area. Metro area managed lanes are also referred to as E-ZPass and were previously known as MnPASS.

Figure 2-7: Existing and Tier 1 planned managed lane corridors, 2022



HIGHWAY RELIABILITY & CONGESTION

There are many ways to think about and assess slowdowns on the roadway system. These include measures that analyze traffic delays, travel reliability and traffic congestion when monitoring the performance of the transportation network. Travel time reliability is important for the public and freight operators. For individual travelers, reliability may dictate what mode or travel route to use, or it may impact departure times. For freight operators who have to make a freight transfer, an unexpected delay may lead to missed connections or longer travel times.

Since 2013, the reliability of Minnesota’s Interstate system has remained relatively consistent at both the statewide and Twin Cities area levels (see Figure 2-8 and Figure 2-9). The statewide Interstate reliability measures tend to be higher (more reliable) than the metro measures since the metro area tends to experience higher traffic volumes and congestion levels. For most of the years between 2017-2020, the Interstate has been less reliable compared to NHS for both the statewide and Twin Cities areas. Due to the COVID-19 pandemic, reliability was considerably better since fewer people were traveling and there was rarely congestion.

Both delays and congestion can be measured in the amount of time and fuel wasted, cost to travelers or reductions in access to destinations within a given amount of time. MnDOT keeps detailed data on motor vehicle congestion for the Twin Cities and collects and analyzes travel time reliability data for Greater Minnesota. Currently, MnDOT measures motor vehicle congestion in the metro area based on travel speed during peak periods which can be seen in Figure 2-10.

MnDOT defines freeway congestion as traffic flowing at speeds less than or equal to 45 miles per hour. Freeway congestion levels in the metro area have remained relatively constant since 2010, with a little more than 20-25% of freeway miles congested during peak travel periods. The metro area freeway system had a marginal increase in the percentage of miles of freeway congested, from 24.2% in 2018 to 24.4% in 2019. The COVID-19 pandemic stay-at-home order decreased congestion by 30-50% initially and it remains at a 15-20% decrease. In 2020, only 1.4% of freeways miles were operating below 45 miles per hour during peak periods. In 2021, congestion increased slightly to 5.8% of freeways miles operating below 45 miles per hour in peak periods. Although, congestion is currently projected to increase in the coming years.

Figure 2-8: Statewide travel reliability, 2017-2021

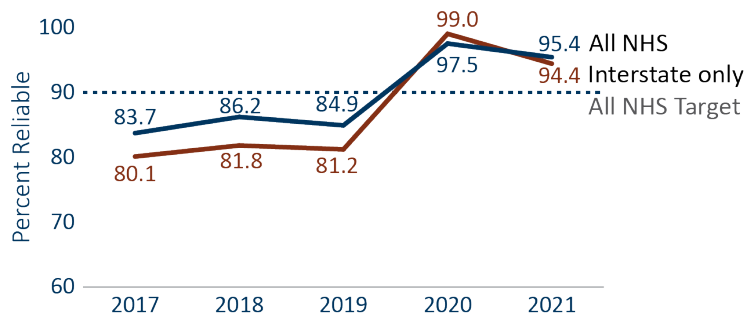
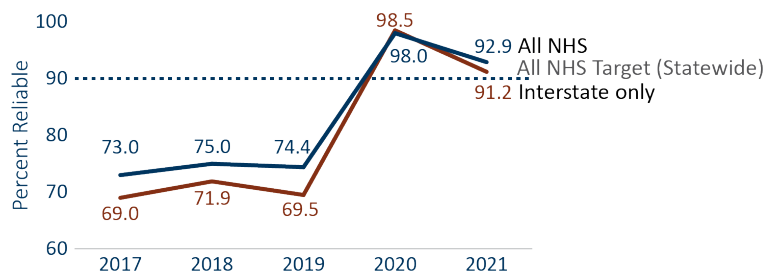
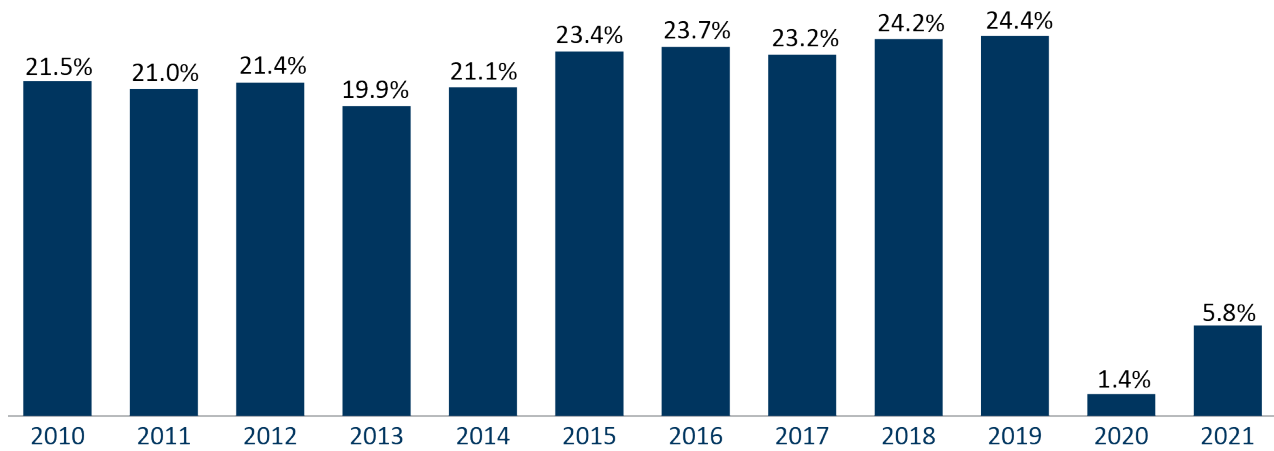


Figure 2-9: Twin Cities travel reliability, 2017-2021



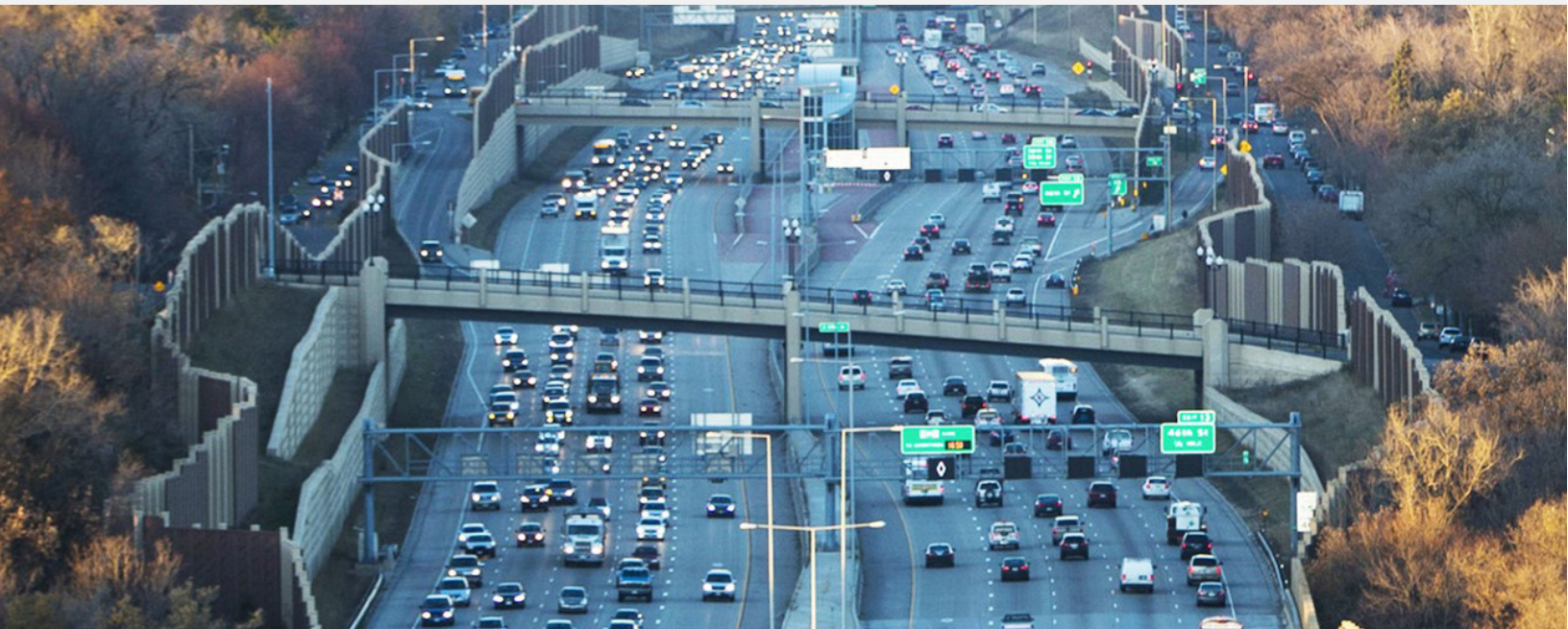
CHAPTER 2 | STREETS, ROADS & HIGHWAYS

Figure 2-10: Percentage of freeway miles in the Twin Cities operating below 45 mph during peak periods, 2010 to 2021



“...I usually need to get to work at a specific time each day and just from a logistical standpoint I cannot really afford to introduce any variables into my morning commute.”

– Policy Panel and Online Discussion Board Participant



BICYCLING & WALKING

For bicycling and walking, local trips within communities are often more important than long-distance connections. However, there is limited data to report at a local level. At the state level, Minnesota currently has three designated U.S. Bicycle Routes – the Mississippi River Trail, the North Star Route and the Prairie Lakes Bicycle Route. These routes include 1,320 miles of designated bicycle facilities on state and local roads and trails.

Additionally, there are more than 4,000 miles of trails for bicycling and walking in the state. Figure 2-11 highlights existing state trails and priority bicycle corridors under consideration for infrastructure improvements and future designation as state bicycle routes. There are also many more off-road infrastructure facilities that support bicycling and walking. Examples of on-road bicycle and pedestrian facilities include bicycle lanes and widened or paved shoulders.

Minnesota’s statewide bicycling and walking trends can be seen in the results of MnDOT’s Omnibus Survey, where respondents are asked which transportation modes they used over the past year. MnDOT’s Omnibus Survey is a biennial public opinion survey that provides department leadership, managers and program staff with public feedback on MnDOT’s core operations. The 2017 Omnibus Survey indicated 28% of respondents either walked or used a wheelchair or mobility device at least a few times per week, while 9% said they bicycle at least a few times per week. In 2019, 31% of respondents indicated they either walked or used a wheelchair or mobility device at least a few times per week, while 8% said they bicycle at least a few times per week. During 2020, COVID-19 had a substantial impact on frequency of bicycling and walking trends statewide. Twenty percent of survey respondents indicated they walked or used a wheelchair more due to COVID-19 and 13% of survey respondents indicated they bicycled more due to COVID-19.¹⁴

In the Twin Cities, 17% of Minnesotans use a bicycle for travel at least once a month and over 7% complete their trips with a bicycle at least once a week. Almost 2% of daily commutes in the Twin Cities are completed on foot or through rolling.¹⁵ The COVID-19 pandemic also had an impact on daily walking and bicycling trends in the Twin Cities. The initial five weeks of the pandemic saw an increase of 51% in people walking and bicycling when comparing 2017 to 2019 at the same time.

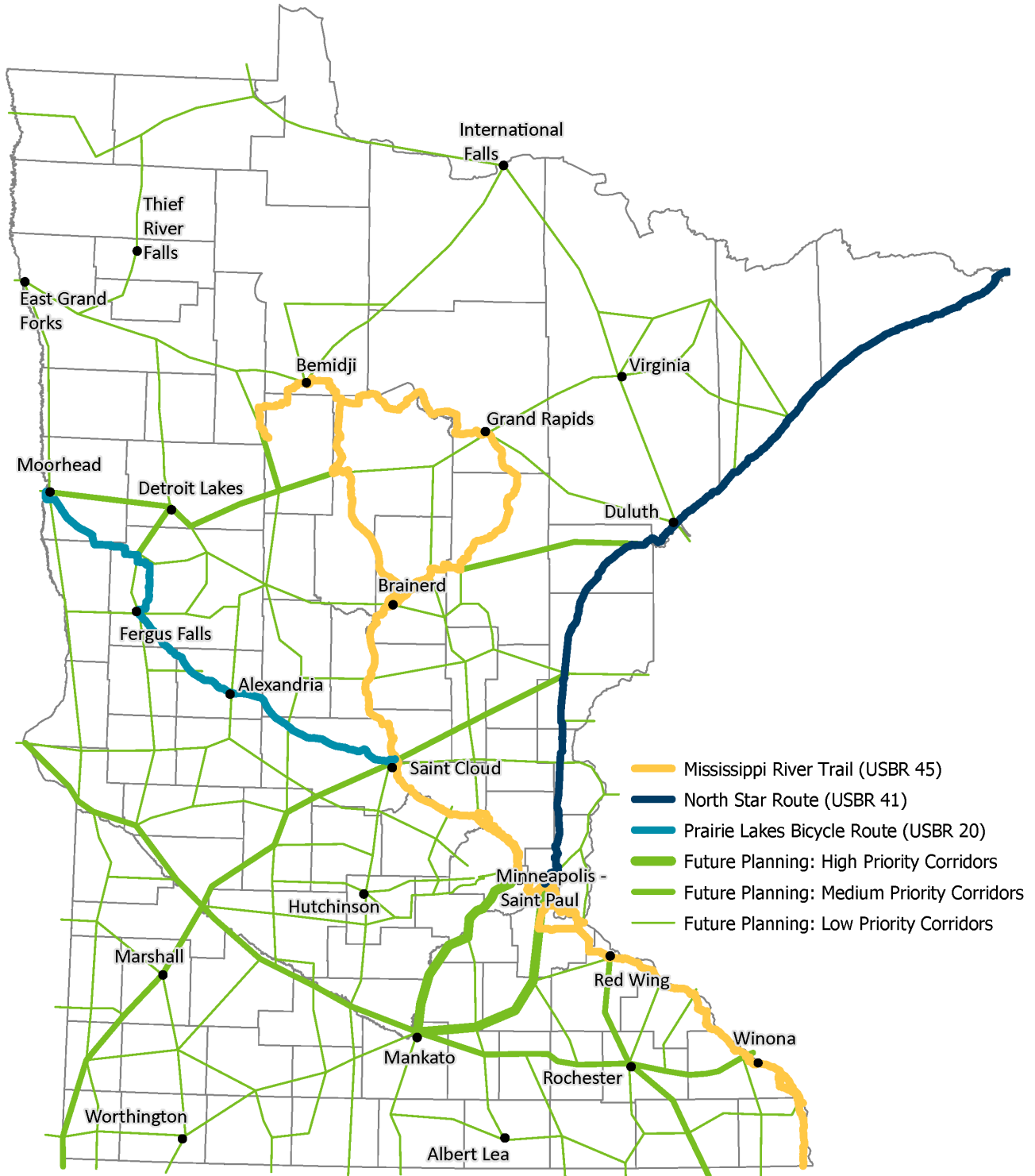


¹⁴ Minnesota Department of Transportation, “Omnibus Public Opinion Survey,” MnDOT Public Engagement and Constituent Services Office, MnDOT 2017, 2019, 2020.

¹⁵ Minnesota Department of Transportation, “Minnesota’s Walking and Bicycling Data Collection Report Update,” Office of Transit and Active Transportation, February 22, 2021, <http://www.dot.state.mn.us/bike-ped-counting/reports/2018-2019%20MinnesotaPedBikeCountReport.pdf>.

CHAPTER 2 | BICYCLING & WALKING

Figure 2-11: Minnesota's designated state routes and priority future bicycle corridors, 2022



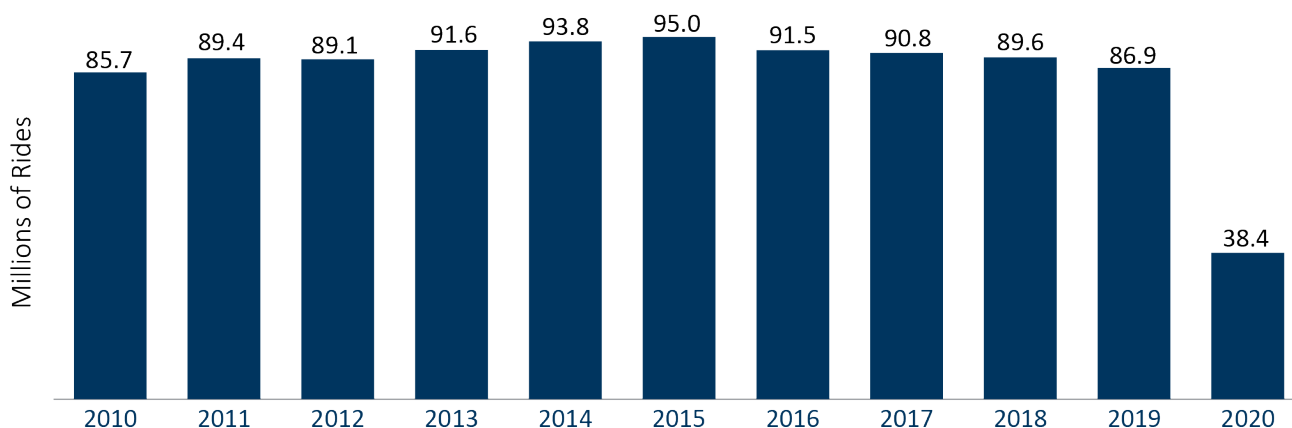
PUBLIC TRANSIT

SEVEN-COUNTY METRO TRANSIT

A variety of public transit options are available in the seven-county metro area. Current options include regular and express bus routes, light rail transit, commuter rail and bus rapid transit—these are collectively known as fixed route services. Dial-a-ride service is also available throughout the region. All 180 communities in the Twin Cities have access to some form of public transit service. Transit use has remained steady between 2010 and 2019 according to Metropolitan Council’s Travel Behavior Inventory Household Survey results. Of those who use transit, 7% use transit weekly and 44% only use transit when attending an event.¹⁶

COVID-19 had a significant impact on transit ridership and service. Ridership fell on all transit services – by as much as 60% on local bus routes, 70% on light rail and 95% on express bus routes and commuter rail.¹⁷ Twin Cities transit ridership fell from a total of 82,486,307 rides in 2019 to 38,390,500 in 2020.¹⁸ In 2021, ridership fell another 6.5% to a total of 35,885,429.¹⁹ Figure 2-12 shows total transit ridership between 2010 and 2020.

Figure 2-12: Seven-County regional transit ridership, 2010 to 2020



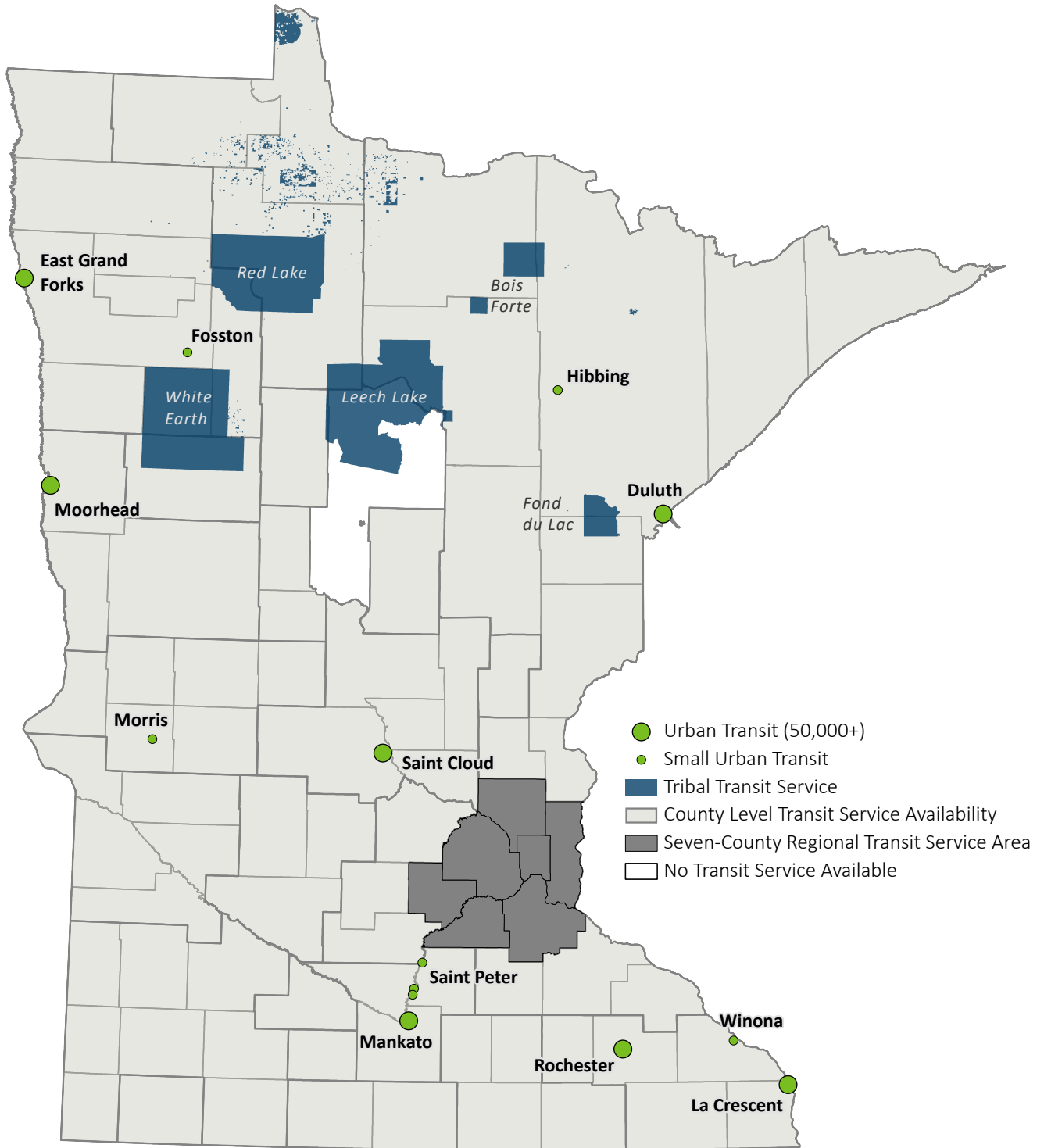
¹⁶ Metropolitan Council, “2019 Travel Behavior Inventory Household Survey Results,” 2019, <https://metrocouncil.org/Transportation/Performance/Travel-Behavior-Inventory/2019.aspx>.

¹⁷ Metropolitan Council, “2021 Regional Transit Ridership,” 2021, <https://metrocouncil.org/Transportation/Planning-2/Reports/Transit-Transitways/Regional-Transit-Ridership.aspx>.

¹⁸ Metro Transit, “Metro Transit Facts,” December 31, 2020, <https://www.metrotransit.org/metro-transit-facts>.

¹⁹ Metropolitan Council, “2021 Year End Ridership,” Transportation Committee, February 14, 2022, <https://metrocouncil.org/Council-Meetings/Committees/Transportation-Committee/2022/February-14,-2022/2021-Year-End-Ridership-Report.aspx>.

Figure 2-13: Greater Minnesota transit service, 2021



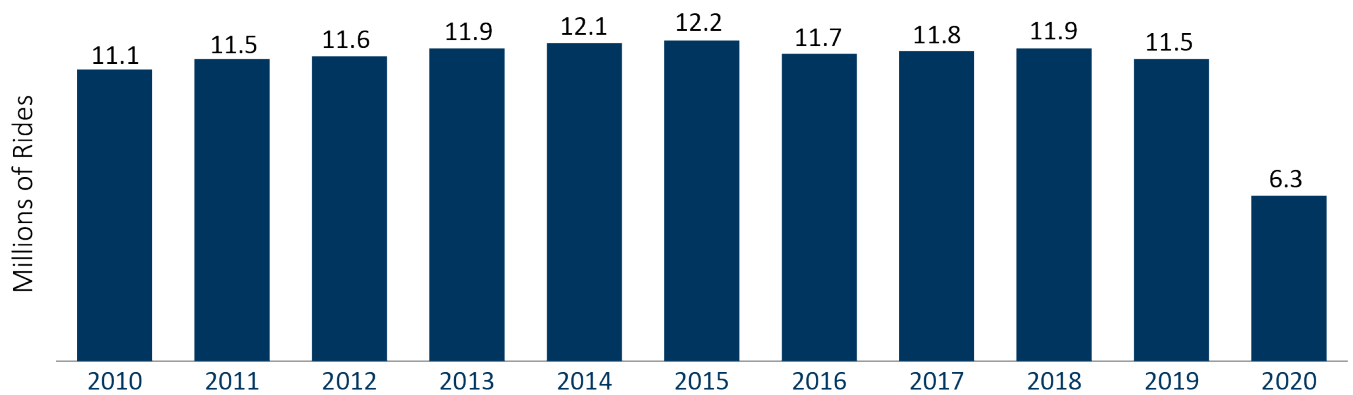
GREATER MINNESOTA TRANSIT

Greater Minnesota has 28 rural transit (5311) systems, five tribal transit systems and several intercity bus providers operated by local governments, joint powers organizations, non-profits and tribal governments that serve 80 Minnesota counties. There are seven small urban (5307) systems in Greater Minnesota’s metropolitan areas and 28 rural Enhanced Mobility for Seniors and Individuals with Disabilities programs (5310) across Greater Minnesota. Additionally, eight Regional Transportation Coordinating Councils and six Transit Coordination Assistance Programs are located throughout Minnesota to help reduce transportation gaps, streamline access and provide more transportation options.

Figure 2-13 shows public transit systems in Greater Minnesota. Since the decade high in 2015 of 12.2 million, total transit ridership in Greater Minnesota has decreased over the years as shown in Figure 2-14.²⁰ COVID-19 had a significant impact on ridership and 2020 saw nearly a 50% decrease with 6.3 million rides versus 2019’s 11.5 million.



Figure 2-14: Greater Minnesota transit ridership, 2010 to 2020



²⁰ Minnesota GO Performance Dashboard, “Annual Greater Minnesota Transit Ridership,” date accessed March 9, 2022, <https://performance.minnesotago.org/critical-connections/access/annual-boardings-recorded-public-transit-providers-serving-greater-minnesota-counties-amtr>.

INTERCITY PASSENGER RAIL & BUS SERVICES

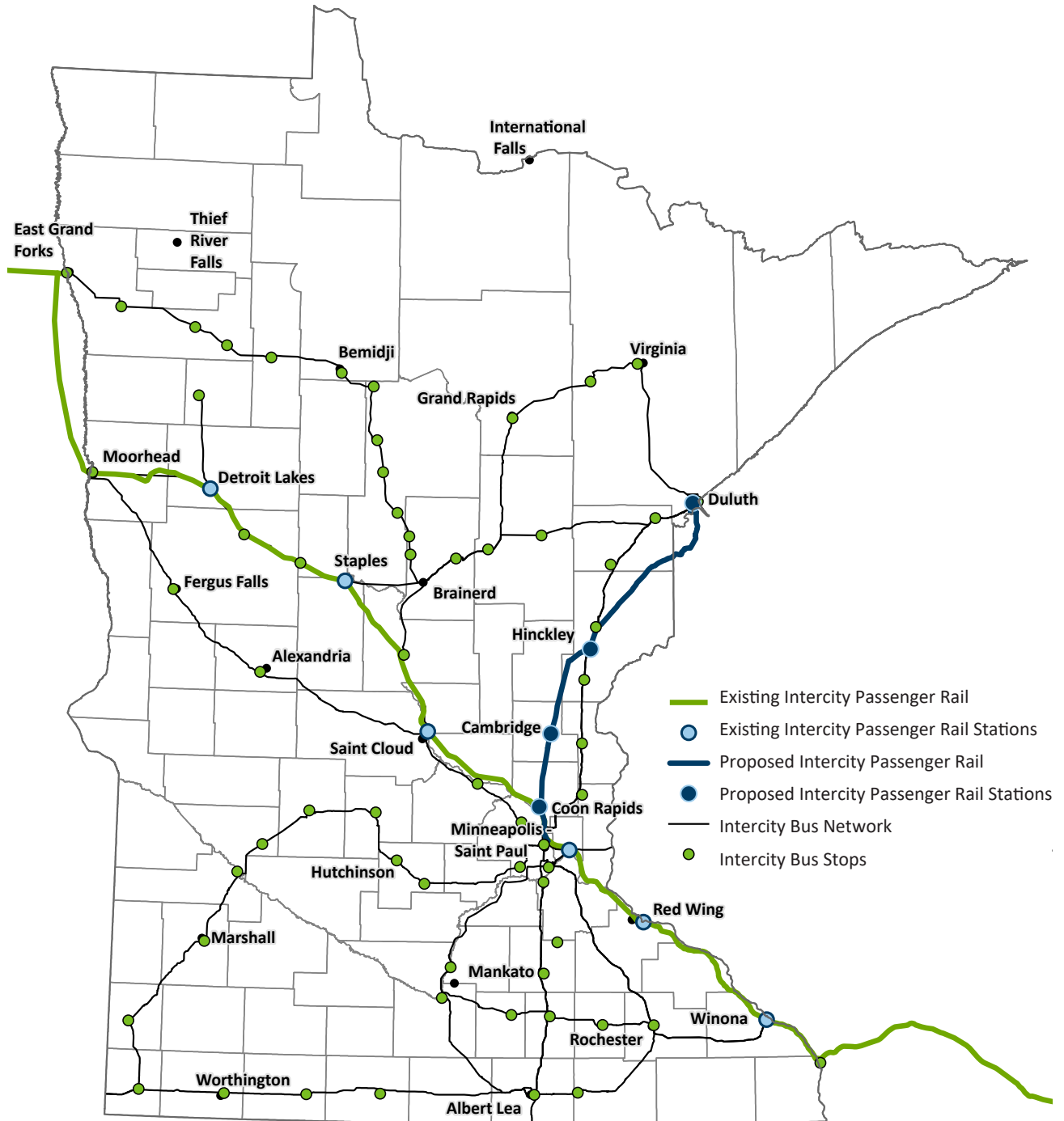
Minnesota has intercity passenger rail and bus service. Amtrak’s Empire Builder route offers passenger rail service between Chicago and the Pacific Northwest, stopping at stations in six Minnesota cities (i.e., Detroit Lakes, Staples, Saint Cloud, Minneapolis-St. Paul, Red Wing and Winona). Round-trip service is expected to be expanded in 2024 with a second daily train from St. Paul to Chicago being added to the existing Amtrak service on the Empire Builder route. Additional corridors are being considered for future passenger rail service.

Greyhound, Jefferson Lines, Land to Air Express, Megabus, Northfield Lines, Rainbow Rider and Saint Cloud Northstar Link provide intercity bus service to 87 destinations across the state. These services also connect to every major metropolitan area in the Midwest. People took 49,801 rides on intercity bus routes in 2015 and 52,823 in 2020. During the COVID-19 pandemic, intercity bus ridership experienced an increase largely due to short term supplemental intercity bus contracts that were funded through the Coronavirus Aid, Relief and Economic Security Act (CARES Act). These contracts provided additional service beyond the regular intercity bus route services normally provided. Figure 2-15 shows the existing and planned intercity passenger rail corridors and intercity bus network in Minnesota.



Photo Credit: Mike Armstrong

Figure 2-15: Minnesota's existing and planned intercity passenger rail corridors and existing intercity bus network, 2021



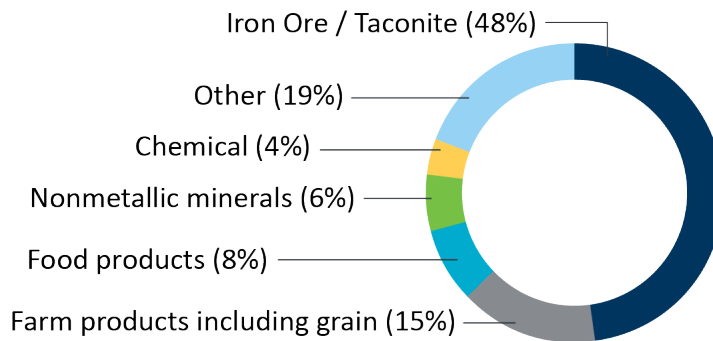
FREIGHT RAIL

As of 2021, there were 21 railroad companies operating in Minnesota on 4,444 route miles of track.²¹ Figure 2-17 shows the state freight rail network. The state ranks eighth in the nation for total track mileage.²² The main products shipped on Minnesota’s freight rail system are iron ores/taconite, coal, cereal grains and other food products as seen in Figure 2-16. Minnesota ranks first in the nation in tons of iron ore shipped, second in originated farm products and third for originated food products.²³

Figure 2-16 shows the mix of commodities that are originated on Minnesota’s freight rail network.²⁴ Furthermore, 15% of commodities on the rail network are farm products and grain. This accounts for 12 million tons. Food products are 8% of commodities, nonmetallic minerals at 6% and chemicals at 4%. Additionally, over 6.5 million tons of commodities fall into the “other” category. In total, 88.6 million tons of commodities were originated on Minnesota’s rail network in 2019.



Figure 2-16: Commodities originated on Minnesota’s freight rail network by weight, 2019



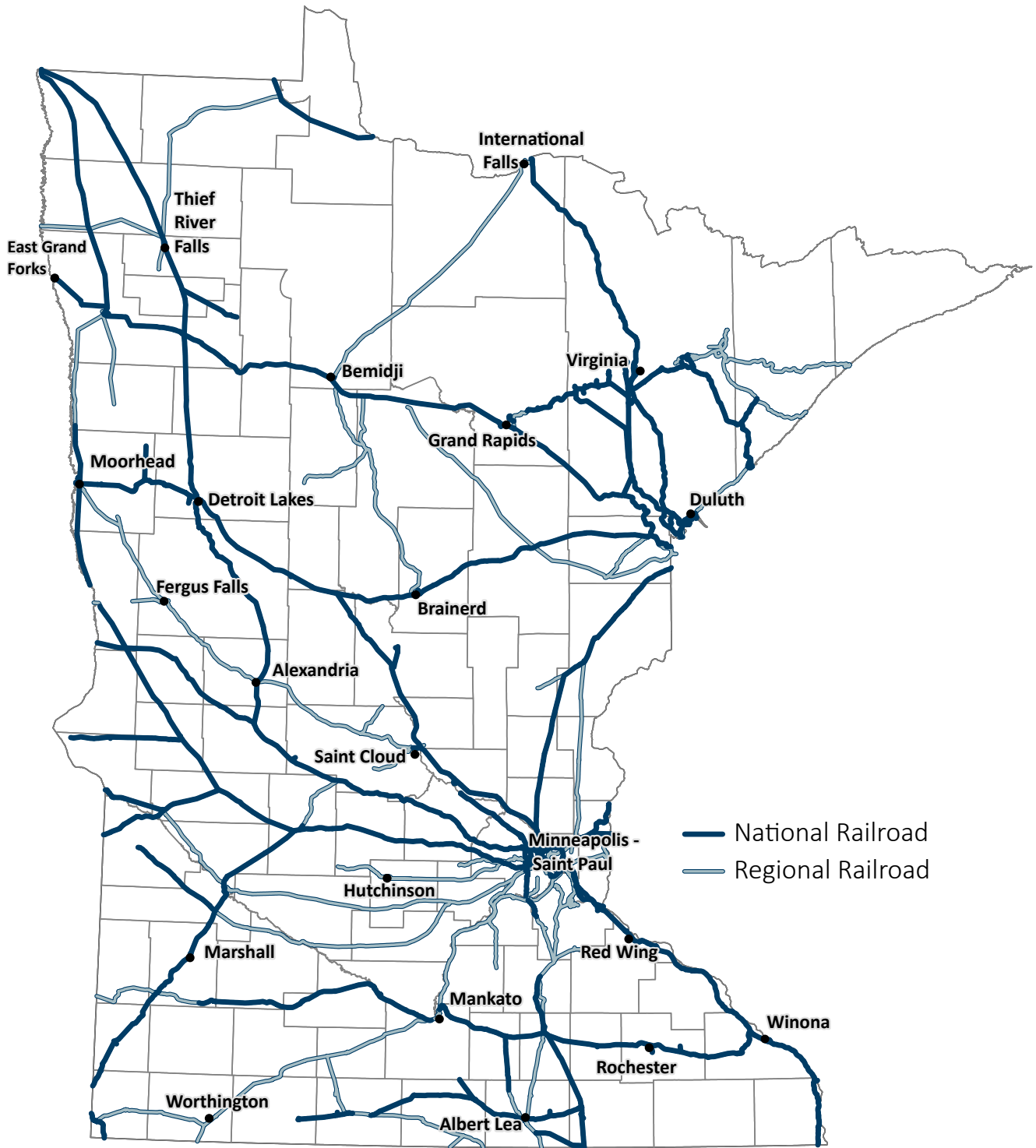
²¹ Minnesota Department of Transportation, “About Railroads in Minnesota,” date accessed March 9, 2022, <https://www.dot.state.mn.us/aboutrail/index.html>.

²² American Association of Railroads, “State Rankings – total rail miles by State: 2020,” 2019, <https://www.aar.org/wp-content/uploads/2021/02/AAR-State-Rankings-2019.pdf>.

²³ Minnesota Department of Transportation, “State Rail Plan,” March 2015, Office of Freight and Commercial Vehicle Operations, <https://www.dot.state.mn.us/planning/railplan/2015report/DraftMNStateRailPlan.pdf>.

²⁴ Minnesota Regional Railroads Association, “Information about Minnesota’s Railroads,” 2021-2022, <https://www.mnrailroads.com/assets/MRRA%202021-22.pdf>.

Figure 2-17: Minnesota's freight rail network, 2021



AIR

Minnesota’s air transportation system includes a total of 305 airports, 133 of which are publicly funded and open to the public. Some common aviation activities include personal travel, cargo services, medical transport, agricultural spraying and aerial surveying. Nine of the state’s airports offer ticketed airline service – Minneapolis-St. Paul, Bemidji, Brainerd, Duluth, Hibbing, International Falls, Rochester, Saint Cloud and Thief River Falls.

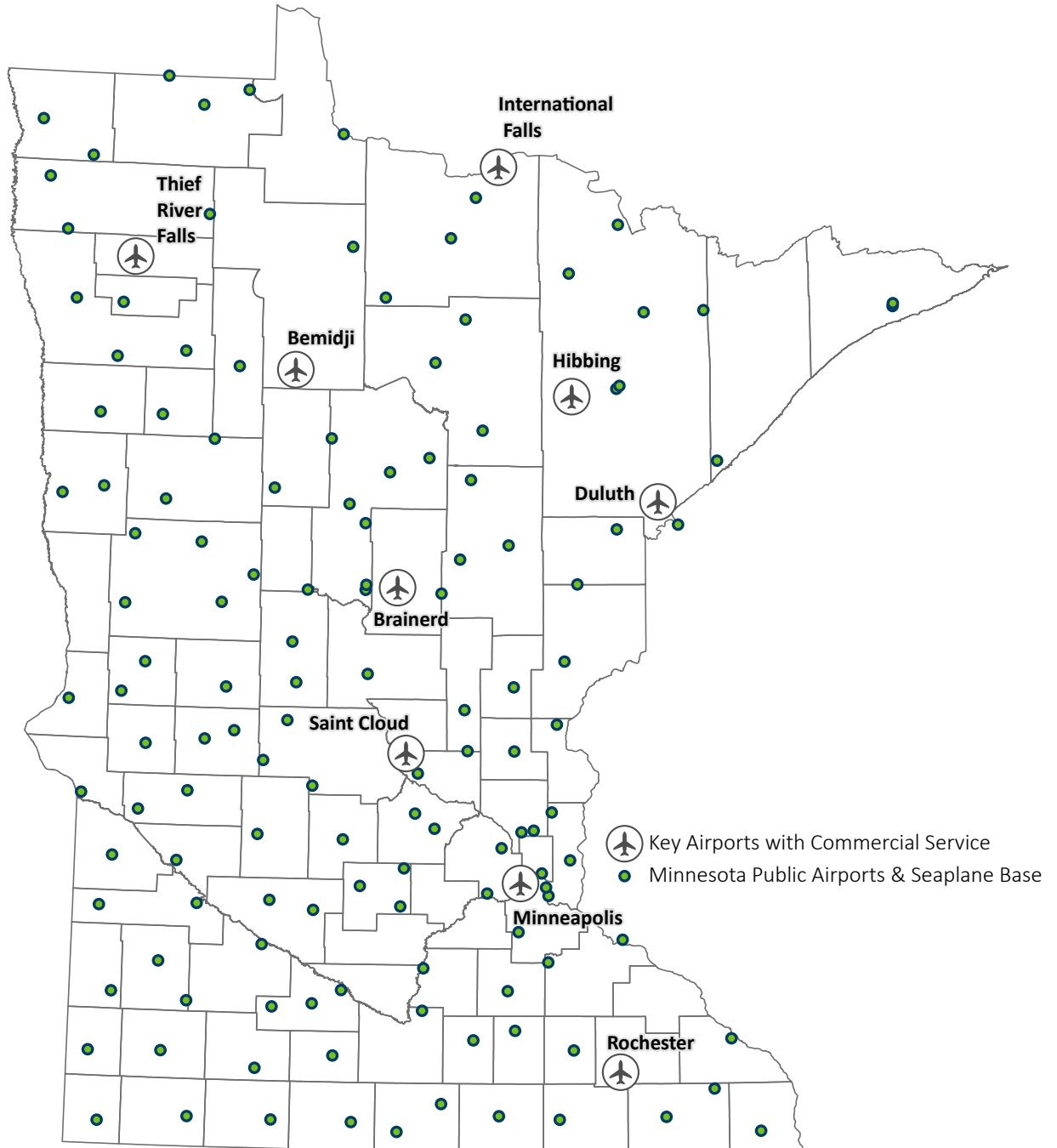
The condition of airport runways and taxiways is important for the efficient functioning of an airport. The last time the aggregate pavement conditions were calculated was for survey year 2017. At that time, the area weighted average pavement condition for Runways and Taxiways was 91.3 on the Pavement Condition Index (PCI). The pavement conditions fluctuate over time with funding levels and other factors. The peak pavement condition was in year 2016 with a PCI index of 94.4. The previous low was in 2009 with an index of 82.9. If this pattern

were to repeat itself, it is anticipated that the next low point would occur in about 2023. However, with the various federal stimulus programs, the recent funding levels have been good, and pavement conditions will be anticipated to be skewed on the high side. Since 2000, the only year that the pavement condition has been lower than the target PCI of 84 was 2009.

Airports are classified based on their size and role in supporting their community. Figure 2-18 shows the existing airport network serving Minnesota.



Figure 2-18: Minnesota's aviation system, 2021



PORTS & WATERWAYS

Minnesota has three ports on Lake Superior. They are located in Silver Bay, Two Harbors and Duluth-Superior. The combined tonnage shipped from these ports in 2019 was more than 56 million tons.²⁵

Four ports are located on 195 miles of the Mississippi River System and provide essential transportation connections and access to national and international markets. The current river ports are located in Red Wing, the Twin Cities, Savage (located on the Minnesota River, a Mississippi River tributary) and Winona. The 15 navigable miles of the Minnesota River are considered a part of the Mississippi River System. A new Wabasha port is also in development and will appear on the system within the next few years bringing the total to five ports on the Mississippi River System. These ports were used to transport over 11 million tons in 2019.

The largest commodity category by tonnage shipped on Minnesota’s waterways is iron ore, iron and steel waste and scrap metal. Figure 2-19 highlights the port and waterway system in Minnesota.



²⁵ Minnesota Department of Transportation, “Ports and Waterways,” Office of Freight and Commercial Vehicle Operations, date accessed March 9, 2022, <https://www.dot.state.mn.us/ofrw/waterways/commercial.html>.

Figure 2-19: Minnesota's ports and waterway system



TRANSPORTATION FUNDING IN MINNESOTA

Many partners involved in Minnesota’s transportation system provide transportation funding or help decide how money is spent.

Different rules guide revenue and expenditures. All transportation modes are funded to some extent by two funding sources – transportation revenue and general revenue. Typically, funds from public sources are distributed to specific projects and activities through funding programs (Figure 2-20).

Funding for any given project depends on a variety of factors such as the project purpose, transportation mode, scope, lead organization and timing. All these funding factors, including partners, sources and programs, contribute to the process that is fundamental to maintaining and developing the Minnesota transportation system.

Putting it all together is a complex puzzle. See Appendix F – Transportation Funding for a more detailed overview of Minnesota’s transportation funding process. Chapter 7 includes more information on the need for sustainable transportation funding as part of implementing the SMTP.

Figure 2-20: Transportation funding process







WHAT IS CHANGING

Minnesota broadly and transportation specifically is in a period of change and transition. Some of the changes have been underway for years and others are just starting to be felt. Understanding and planning for these changes is complicated by the COVID-19 pandemic. It remains unclear what the lasting impacts of the pandemic will be on the state and specifically transportation.

This chapter describes opportunities and challenges that will impact Minnesota under six trend categories: population, economy, environment, technology, safety and transportation behavior. Recent data throughout this chapter will highlight the effects of COVID-19 across the transportation system. It is not possible to draw firm conclusions on the long-term future for Minnesota and transportation. However, reviewing trends over time can highlight opportunities and challenges for ongoing recovery efforts

Chapter 4 explains MnDOT's work to understand how these trends are informing transportation in Minnesota and how the policy direction in Chapter 5 can prepare the transportation system for the changes to come. See [Minnesota GO's Trend Library](#) to find trend papers.

**READ CHAPTER 3 TO LEARN
ABOUT TRENDS IMPACTING
TRANSPORTATION:**

- Population
- Economy
- Environment
- Technology
- Safety
- Transportation Behavior

POPULATION

Minnesota continues to grow and become more diverse. Strong population growth continues to occur in the seven-county metro area, in the Rochester and Mankato areas, as well as along the Interstate-94 corridor toward the Fargo-Moorhead area. While the state demographer estimates that most Minnesota counties will lose population in the next 30 years, the counties experiencing the most population decline are predominantly rural.

Most counties with growth rates 10% and higher include urbanized areas with populations of 50,000 or more. Given the strong historical trend of Minnesota's population becoming more urbanized, it is projected that Minnesota's population growth will continue to occur predominately in urban areas. The seven-county metro area has approximately 56% of the state's population, according to the Minnesota State Demographic Center, and is expected to add nearly 800,000 more people by 2050. This represents most of the state's forecasted population growth over this time period. In 2040, the state's population is expected to reach over six million people. At the same time, deaths will outnumber births, which means that population growth will come from people moving to the state from other states and countries.¹ See Minnesota's population by county in Figure 3-1.

Minnesota is becoming more diverse. Black, Indigenous, Asian, Hispanic and other communities of color (collectively referred to as BIPOC) are expected to increase by more than one million residents between 2018 and 2053. These communities will exceed one-third of the total population.² This trend is most profound in children and youth as BIPOC now make up 32% of the

population age 17 and under. Conversely, BIPOC Minnesotans are only 8% of the state's demographic population age 60 and older.³ Immigration to Minnesota is one contributing factor to Minnesota's increasing diversity with nearly 9% of the state's population being foreign-born. The share of foreign-born residents coming from Asia, Africa and Central and South America stands at 65% as of 2018.

Minnesota continues to get older. Over 920,000 Minnesotans are currently age 65 and older, and that number is projected to grow to more than 1.3 million by the year 2040. The percentage of Minnesotans in that age group is projected to grow from 16% to 21% over the next 20 years. Now and into the future, the median age in Greater Minnesota will be substantially higher than in the seven county metro area.

While older adults have the highest proportion of disability status by age group, most Minnesotans with a disability are younger than 65 years old. According to the U.S. Census Bureau, one in nine Minnesotans have a disability, which is 11% of the total state population.⁴



¹ Minnesota State Demographic Center "Long Term Population Projections for Minnesota," October 2020, https://mn.gov/admin/assets/Long-Term-Population-Projections-for-Minnesota-dec2020_tcm36-457300.pdf.

² Minnesota State Demographic Center, "Minnesota State Demographer Population Projections," Department of Administration, October 2020, <https://mn.gov/admin/demography/data-by-topic/population-data/our-projections/>

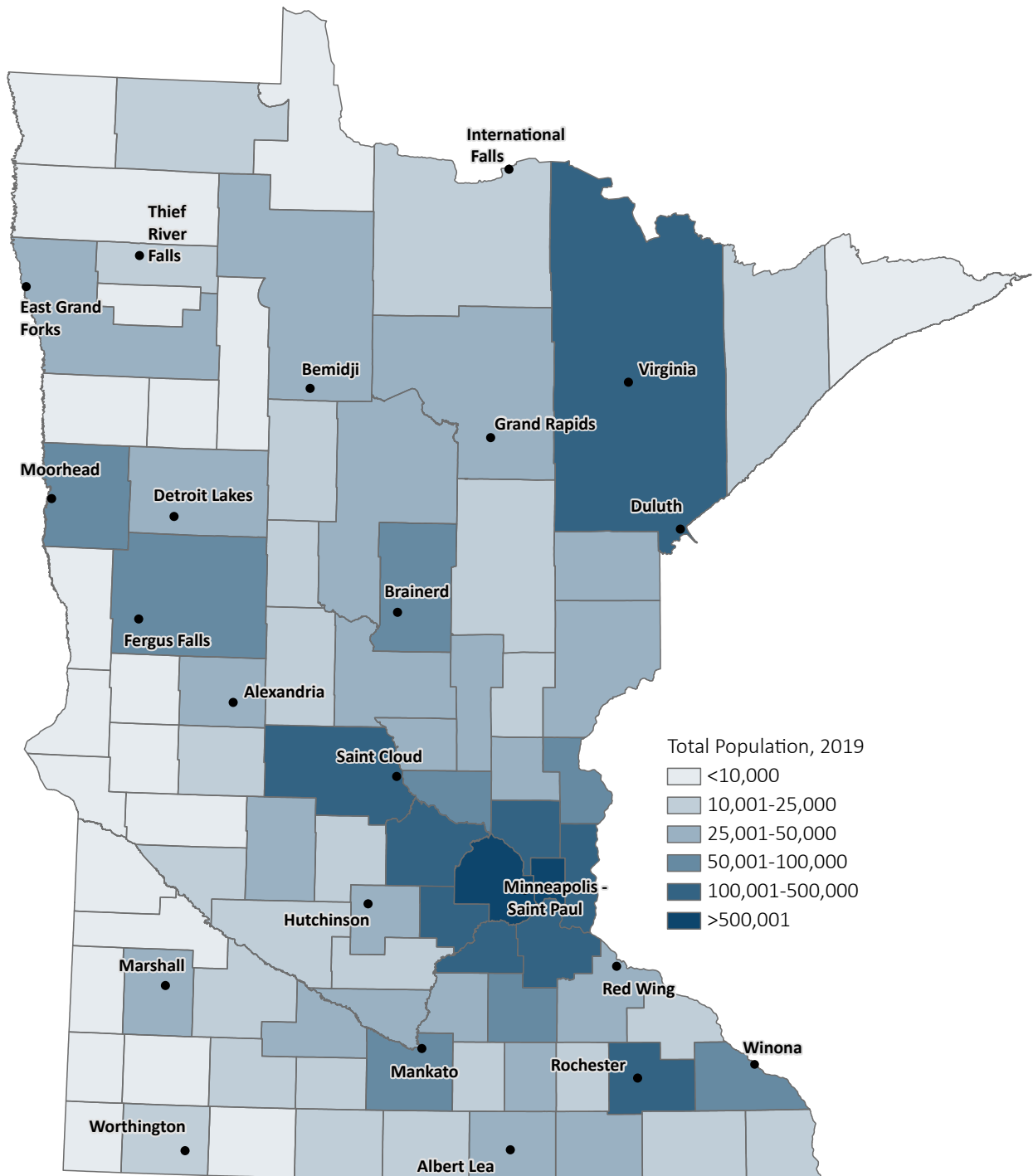
³ U.S. Census, American Community Survey, 2015-2019 5-year estimates, generated by MnDOT using data.census.gov.

⁴ U.S. Census Bureau, American Community Survey, 2019 American Community Survey 1-year estimates, S1810; generated by MnDOT using data.census.gov.

Different communities, including those within relatively small geographies, have different transportation needs. Understanding these changing demographic patterns and how they shape travel behavior will help transportation agencies plan

future investments that will allow Minnesota to meet its transportation needs and support the people of Minnesota.

Figure 3-1: Minnesota Population by County, 2019



ECONOMY

Minnesota’s economy today is diverse and varies regionally. Historically, the state’s economy was focused on agriculture, natural resources and manufacturing, which continue to be important sectors in our economy. Over time service-oriented sectors and others have grown. Despite this shift, Minnesota has strength in a broad range of industries within manufacturing. Among the most robust manufacturing clusters are food production, computer and electronics, fabricated metal, machinery and medical devices.

Minnesota’s strong manufacturing sector relies on an efficient transportation system to move goods. The movement of goods is the transfer of raw materials and finished goods from point of origin through manufacturing to the consumer. This can involve trucks, trains, airplanes, pipelines, ships and barges. Projections show that the volume of freight moved nationally is expected to grow 25% to 45% by 2040 according to the U.S. Department of Transportation.⁵

Changes in supply chain management, the growth in e-commerce, technological advances and new product delivery options are also affecting the manufacturing sector and freight. Additionally, supply chain disruptions throughout the freight industry slow or impede the efficient movement of goods. As a result of supply chain disruptions, there has been a rise in the construction of distribution centers. These centers provide more flexibility to online retailers and for on-demand availability of products.

On-demand shipping will continue to change the way that people think about delivery and courier services, and the way that those services use the transportation system. Freight destinations used to be focused on hubs and businesses, but now have expanded to include individual homes. Logistics continue to adapt and evolve rapidly, but these changes sometime occur more quickly than transportation infrastructure can respond. A modern and safe freight system is key to a strong economy.



⁵ U.S. Department of Transportation, “Freight Activity in the U.S. Expected to Grow Fifty Percent by 2050,” November 21, 2021, <https://content.govdelivery.com/accounts/USDOT/bulletins/2fd6c0b>.

Generally, roads are reconstructed every 70 to 80 years. In Minnesota, about 30% of state highway pavements are 60 to 79 years old and needing to be reconstructed. While they usually have longer lives, many bridges and large culverts on the state highway system are nearing their useful life as well.⁶ Railroads, ports and waterways, public drinking water and wastewater systems all face similar challenges as infrastructure that is aging.

Aging infrastructure, a lack of preventive maintenance and not replacing assets in poor condition can result in leaky pipes and pothole filled streets. Protecting public and private resources invested in the transportation system is important to be good stewards of tax payers' dollars. Asset management is key when making decisions about prioritizing investments, balancing trade-offs and ultimately adapting and improving the transportation system.

The transportation system will also need to adapt to changing employment environments following the COVID-19 pandemic. Even prior to the pandemic, many employers were reinventing workplaces and providing more flexible work environments. Overall demand for office real estate is expected to decrease if remote and hybrid work trends continue. This may be most felt in downtowns, central business districts and suburban office parks. However, downtowns and urban centers are not likely to disappear.

The future of work and resulting economic and transportation shifts remain uncertain. Though the mix of office, housing, recreation and other amenities may change, the economics of dense urban centers and a growing population are expected to continue to support urban cores.

⁶ Minnesota Department of Transportation, "MnDOT Transportation Asset Management Plan," Asset Management, June 2019, <https://www.dot.state.mn.us/assetmanagement/pdf/tamp/tamp.pdf>.

⁷ Federal Reserve Bank of Kansas City, Hybrid Officing Will Shift Where People and Businesses Decide to Locate, date accessed February 28, 2022, <https://www.kansascityfed.org/research/economic-bulletin/hybrid-officing-will-shift-where-people-businesses-decide-to-locate/>



The specific near- and long-term changes and the resulting impacts to the transportation system are unclear and may take decades to materialize.⁷

It is known that inflation has increased during the recovery from the pandemic. Over the long term, restoration of global supply chains will help balance demand for goods and services. Interest rate increases are anticipated to also slow inflation to lower, steadier levels like what was seen in the 2010s. But transportation is expected to continue to face an inflation premium above consumer levels. Infrastructure investment relies on crude oil products and other volatile commodities like steel.

ENVIRONMENT

The transportation system can have significant short- and long-term impacts on people and communities. In Minnesota, the transportation sector is a leading source of air pollution, with on-road vehicles and other mobility equipment accounting for about half of overall air pollution emissions.⁸ Fine particles and other toxins from industrial activity and transportation can negatively affect human health at all levels. Air pollution is estimated to be a major contributor to 3,200 to 6,400 deaths a year in Minnesota. Historically, the benefits and burdens of transportation have not been distributed equitably. The Minnesota Pollution Control Agency estimates that 91% of BIPOC

communities have air pollution-related risks above health guidelines, compared to 46% for low-income communities and 32% for the statewide average.⁹

Minnesota's transportation sector is also contributing to climate change. Since 2016, transportation has been the largest contributor to greenhouse gas emissions in the state. Climate change impacts from high temperatures, large storms and more are impacting transportation.¹⁰ Transportation practices need to change to reduce the sector's contribution to climate change and to ensure the system can adapt to and mitigate the impacts of extreme temperatures and weather.



8 Minnesota Pollution Control Agency, *The Air We Breathe: The State of Minnesota's Air Quality*, Amanda Jarrett Smith, Ralph Pribble, Fawkes Steinwand. Saint Paul, Minnesota: Minnesota Pollution Control Agency, 2019. <https://www.pca.state.mn.us/sites/default/files/lraq-1sy19.pdf>.

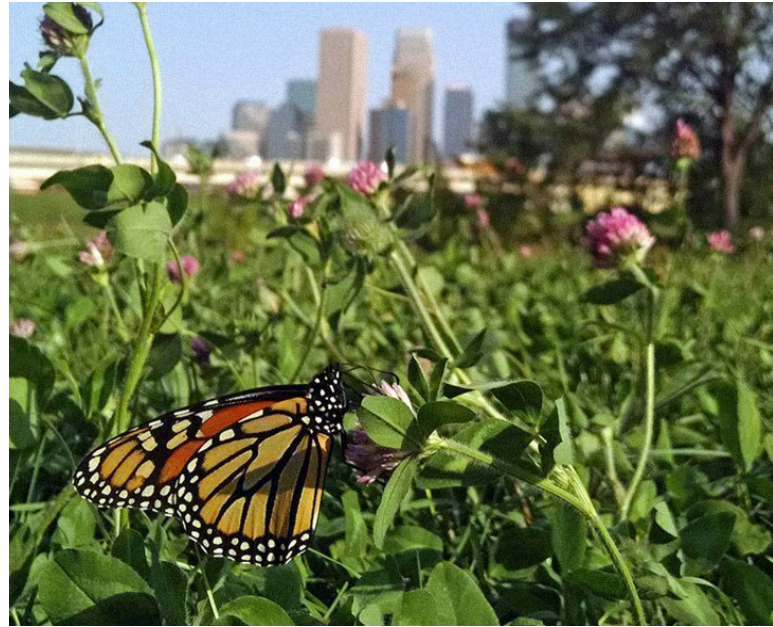
9 Minnesota Pollution Control Agency, "Disproportionate impacts in Minnesota," date accessed January 11, 2022, <https://www.pca.state.mn.us/air/disproportionate-impacts-minnesota>

10 Elizabeth Dunbar and Dan Kraker, "Climate Change in Minnesota: More Heat, More Big Storms," MPR News, February 2, 2015, <http://www.mprnews.org/story/2015/02/02/climate-change-the-proof>

Transportation's effect on the environment extends beyond tailpipe emissions. Construction activities and transportation infrastructure can have long term environmental impacts. Infrastructure disrupts habitats, restricts the movement of animals, contributes to water, air and noise pollution and more.

Infrastructure like roads, airports and railways can divide habitats making it difficult for wildlife to safely navigate through its habitat. Habitat loss, degradation and fragmentation are the three leading causes of biodiversity decline in the state. Populations of monarch butterflies¹¹, rusty-patched bumble bees¹² and little brown bats¹³ in particular have declined dramatically in recent years. Species at the edges of these ecosystems such as moose, loons and wild rice are most vulnerable to climate change and at risk of disappearing from Minnesota. Transportation-related activities have contributed to the degradation of ecosystems and natural habitats over time, including the loss of agricultural land.

Rethinking the role of transportation right-of-way can act as a powerful catalyst for the future of transportation, environment and economy. Alternative uses of the right-of-way can help accommodate utilities, allow opportunities to increase clean and renewable energy production, protect agricultural land and provide strategies to revive and maximize the health of the environment. Alternative uses of transportation right-of-way, when implemented properly, provide community benefit, ensure a high quality of life, maximize investments and protect the environment.



¹¹ Minnesota State Agency Pollinator Report, "2017 Annual Report," Environmental Quality Board, 2018, [https://www.eqb.state.mn.us/sites/default/files/documents/2017 State Agency Pollinator Report_accessible.pdf](https://www.eqb.state.mn.us/sites/default/files/documents/2017%20State%20Agency%20Pollinator%20Report_accessible.pdf).

¹² U.S. Fish and Wildlife Service Midwest Region, "In a Race Against Extinction, Rusty Patched Bumble Bee Is Listed as Endangered," Newsroom, January 10, 2017, <https://www.fws.gov/midwest/news/861.html>.

¹³ Minnesota Department of Natural Resources, "Bat Population Decline Continues as Expected," Newsroom, March 28, 2019, <https://www.dnr.state.mn.us/news/2019/03/28/bat-population-decline-continues-as-expected>.

TECHNOLOGY

New technologies are constantly transforming the way the transportation system is used, planned, designed, built and maintained. Things like traffic condition monitoring, maps, on-board vehicle monitors and real-time transit information have improved the ability for people and goods to move around Minnesota. Increasingly, communications and technology need to be integrated into the system to ensure transportation can meet its goals like reducing greenhouse gas emissions, improving air quality and supporting economic development.

Digital infrastructure like broadband is necessary to integrate technology and transportation. Digital infrastructure can be supported by sensors, utilities and data-collecting devices embedded in roads, surrounding infrastructure and right-of-way. The information collected helps improve road conditions, inform first responders, update drivers, promote safety for people traveling and more. For transportation, connected devices and sensors need a reliable, accurate, always-on way to send data and information. But developing digital infrastructure requires significant public and private investment.

Many places in United States, particularly in rural and economically depressed areas, have inconsistent internet and cellular service. Many homes and businesses do not have a fixed high-speed internet connection (also called broadband). These access disparities leave people behind as many higher-paying jobs require a high-speed

internet connection. This was made obvious in the differences of who was able to work remotely during the stay-at-home orders for the COVID-19 pandemic. Though some people substitute cellular wireless for a high-speed internet connection, this is not a long-term solution.

Even when there is little or no opportunity for remote work, technology can have a profound impact on the economy, transportation, education, etc. As communications technology becomes more advanced and cheaper, it can replace some reliance on the transportation system. The COVID-19 pandemic demonstrated that some trips—whether for shopping, school, work or medical care—can be replaced by high-speed internet connectivity.

Technology is also changing the way people get from one point to another. People are now using internet and smartphones to hail rides, compare transportation options and rent cars, bikes and scooters. Transportation services and resources that are shared by users are known as “shared mobility.”¹⁴ These services can be used concurrently or one after another. Shared mobility includes services such as public transit, micromobility (bikeshare and scooter share), automobile-based services (carshare and rideshare) and commute modes such as car or vanpooling. Many of these services are improved by or rely entirely on technology to work.

“While [teleworking] doesn’t work for me in general, one of the major limitations is access to reliable and affordable Internet.”

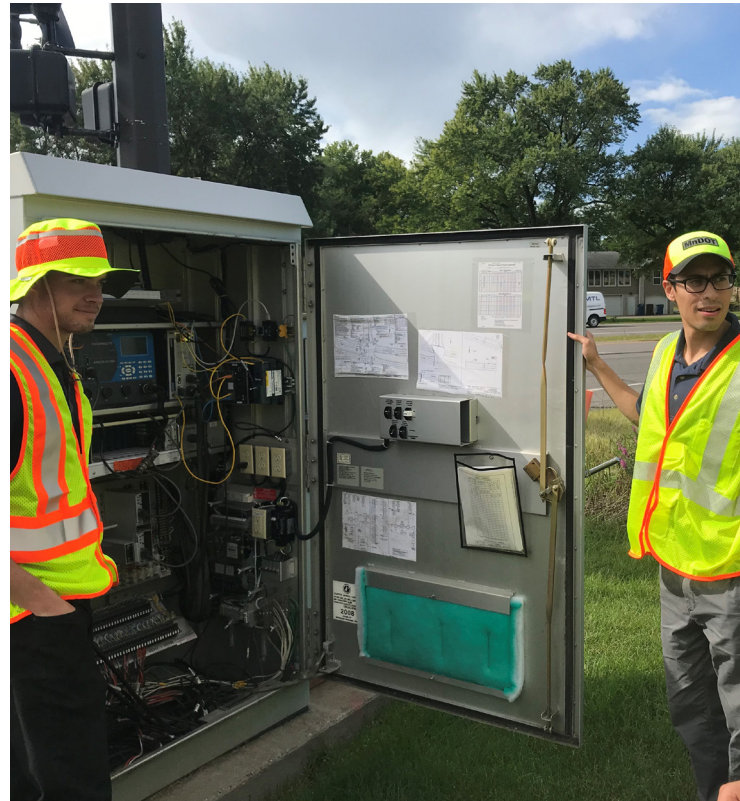
– Policy Panel and Online Discussion Board Participant

¹⁴ Shared-Use Mobility Center, “What is Shared Mobility,” accessed February 2, 2022, <https://sharedusemobilitycenter.org/what-is-shared-mobility/>.

Connected and automated vehicle (CAV) technology especially requires communications and other digital infrastructure to function properly. Connected vehicles can provide information and alerts to drivers and other vehicles to reduce crashes, improve traffic flow and save energy. Highly automated vehicles may not have a steering wheel or a human driver. Widespread use of fully “driverless” vehicles is not anticipated for many years, potentially decades. However, partially automated vehicles are already on Minnesota roads, with companies developing new advancements every day.

As transportation becomes increasingly connected by technology, data is getting larger and more complex. These datasets are sometimes referred to as big data, defined as data gathered from devices like smartphones and services like online shopping.¹⁵ The breadth of big data creates opportunities to reimagine how people live. Big data helps the healthcare system understand how treatments and procedures impact patient populations. Retailers use big data to better target customers and to suggest products to consumers. MnDOT uses big data to maintain roads and bridges, understand travel patterns and improve safety.

As the abundance of collectible data grows—generated from smartphones, Wi-Fi enabled devices, and automated vehicles—security concerns multiply. Transportation departments have already been attacked. Cyber security is vital for the future reliability of the transportation system.



¹⁵ Michael Mattioli, “Disclosing Big Data,” *Minnesota Law Review*, November 2014: 539-40.

SAFETY

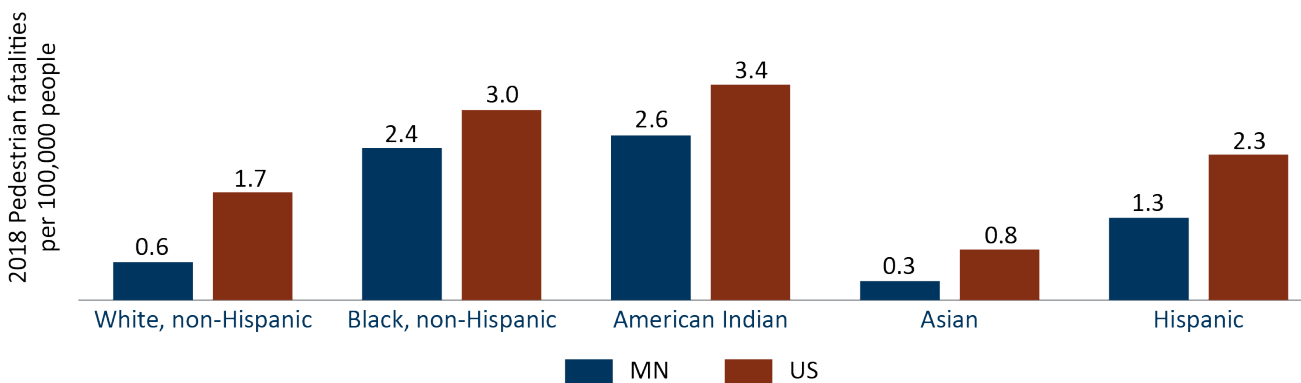
For much of the 20th Century, deaths or serious injuries related to traffic crashes were seen as an unfortunate, but an unavoidable, side effect of the automobile. However, this sentiment is changing. The federal government began enacting requirements for vehicle safety starting in the 1970s. Initiatives like Vision Zero and Minnesota’s Toward Zero Deaths program have grown over the previous two decades. U.S. roadways have become safer for people in motor vehicles. These initiatives contend that even a single death on the nation’s roadways is one too many. However, during the COVID-19 pandemic, the trend of reducing traffic deaths reversed as unsafe driving behaviors increased. Minnesota saw 488 deaths on Minnesota roads in 2021, up from 394 deaths in 2020 and 364 in 2019.¹⁶

While pedestrian and bicyclist deaths are down slightly from earlier peaks, there has been a backslide in recent years. Now more Americans are dying on foot or bicycle than any year since 1990.

In 2021 in Minnesota, 64 of 488 roadway deaths were people walking or bicycling. Minnesota rural counties continue to experience a higher traffic fatality rate than metro counties. People walking and bicycling in rural Minnesota communities are more likely to be struck and killed by drivers than in Minnesota metro communities.

As seen in Figure 3-2, pedestrian death rates by race and ethnicity are similar to national trends, although lower overall.^{17, 18} American Indians had the highest pedestrian death rate per 100,000 people in both Minnesota and the United States. Black people had the second highest rate of pedestrian deaths, with 2.4 pedestrian deaths per 100,000 people in Minnesota and 3.0 pedestrian deaths per 100,000 people in the United States. Transportation safety is a top priority for Minnesota and applies to all people who use the transportation system regardless of their mode of travel. A one-size-fits-all approach does not work for transportation safety.

Figure 3-2: Pedestrian death rates by race and ethnicity, 2018



¹⁶ Minnesota Department of Public Safety, “Monthly Preliminary Fatal Crash Numbers,” Office of Traffic Safety, accessed February 2, 2022, <https://dps.mn.gov/divisions/ots/reports-statistics/Pages/monthly-preliminary-fatal-crash-numbers.aspx>.

¹⁷ Fatality and Injury Reporting System Tool, “Pedestrians Killed in Fatal Crashes,” 2013 and 2018, National Highway Traffic Safety Administration,” date accessed March 11, 2022, <https://cdan.dot.gov/query>.

¹⁸ U.S. Census Bureau, “Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States: April 1, 2020 – July 1, 2019,” accessed March 11, 2022, generated by MnDOT using data.census.gov.

TRANSPORTATION BEHAVIOR

Vehicle miles traveled (VMT) is the sum of all distances traveled by all motor vehicles on all roadways during a year. From 2000 to 2019, statewide total VMT rose approximately 16.5%, from 52.1 billion VMT to 60.7 billion VMT.¹⁹ This growth in VMT correlates closely with population growth, growing 14.6% over the same period. Greater Minnesota saw a slight increase in per capita VMT over the same period of time. However, from 2010 to 2019, there was a slight per capita VMT decline (-0.1%) mostly driven by the Twin Cities metro area, which had lower per capita VMT than Greater Minnesota. The pandemic significantly impacted VMT in 2020 and 2021, and long-term trends remain unclear. Figure 3-3 shows per capita vehicles miles traveled by year in Minnesota from 2000 to 2019.

VMT looks different for different communities. For example, rural communities can have higher average VMT because they have farther distances between destinations, fewer convenient multimodal options and less access to high-speed internet. In urban communities where development is denser, there

may be more opportunities for walking, bicycling, and transit options potentially resulting in lower average VMT.

Transit is an essential component of the transportation system in Minnesota and helps to connect people with employment, education, new opportunities, entertainment and shopping. As Minnesota's economy and population change, public transit systems adapt to continue to serve residents, especially those who have no other means to access essential services. In 2019, public transit provided millions of trips, including over 91 million rides in the Twin Cities metro area and 11.5 million rides in Greater Minnesota.^{20,21} Transit ridership levels significantly decreased because of the COVID-19 pandemic. In 2020, the Twin Cities metro area saw a decrease in ridership by as much as 60% on local routes, 70% on light rail and 95% on express bus routes and Northstar commuter rail.²² There was a further decline in total ridership of 6.5% from 2020 to 2021. The long-term impacts of the pandemic on public transit are yet to be determined.



¹⁹ Minnesota GO, "Transportation Behavior," Trend Library, 2022, <https://minnesotago.org/trends/transportation-behavior>.

²⁰ Metropolitan Council, "Metropolitan Area Transit Finance Report," 2020, <https://metrocouncil.org/Transportation/Publications-And-Resources/Transit/FINANCE/2020-Metropolitan-Area-Transit-Finance-Report.aspx>.

²¹ Minnesota Go Performance Dashboard, "Annual Greater Minnesota Transit Ridership," date accessed January 26, 2022, <https://performance.minnesotago.org/critical-connections/access/annual-boardings-recorded-public-transit-providers-serving-greater-minnesota-counties-amtp>.

²² Metropolitan Council, "Metropolitan Area Transit Finance Report," 2020, <https://metrocouncil.org/Transportation/Publications-And-Resources/Transit/FINANCE/2020-Metropolitan-Area-Transit-Finance-Report.aspx>.



Prior to the COVID-19 pandemic, the percentage of individuals working from home in the United States had been increasing. In 2014, 4.5% of workers worked from home. By 2018, 5.3% of workers worked from home.²³ In 2019, the U.S. Bureau of Labor Statistics estimated that more than 26 million Americans worked remotely at least part of the time—16% of the total workforce.²⁴ The way people have worked since March 2020 has broken down

cultural and technological barriers that prevented remote work in the past. The pandemic gave more than half of employed adults the opportunity to experience working from home full-time.

While the rates have gone down since the mandatory stay at home orders, full- and part-time teleworking is likely to be a more common option in the workforce. As communications technology becomes more advanced and affordable, it can replace reliance on the transportation system, like it did in the COVID-19 pandemic, by transferring reliance on transportation connectivity to high-speed internet connectivity.

The COVID-19 pandemic dramatically impacted travel in all of 2020. In 2020, total VMT decreased to 51.5 billion, almost back to 2000 levels. In 2020, reductions in daily traffic were typically in the range of 30%-50% and reached their lowest traffic volume levels on April 12 at 66% below 2019 traffic levels.²⁵ The long-term impacts of the COVID-19 pandemic in reducing single occupancy vehicle trips on freight demand is not yet known. Further, not all reductions in driving have resulted in reductions in VMT. For example, online shopping may eliminate several trips to stores, but those trips are replaced with deliveries.

“My son does not have a car and he really struggles with the insane cost of Uber or Lyft on a daily basis. For low-income wage earners, the % of income spent on transportation can be most of their earned wages - over 50%. Increased access is essential and in the Twin Cities area, there is a dearth of transportation choices in the suburbs.”

– Comment shared during SMTP engagement

²³ U.S. Census Bureau, American Community Survey, 1-Year Estimates 2014-2018, B08301, accessed August 25, 2020, generated by MnDOT using data.census.gov.

²⁴ U.S. Bureau of Labor Statistics, “Table 6. Employed Persons Working at Home, Workplace, and Time Spent Working at Each Location by Full- and Part-Time Status and Sex, Jobholding Status, and Educational Attainment, 2019 Annual Averages,” Economic News Release, June 25, 2020, <https://www.bls.gov/news.release/atus.t06.htm>.

²⁵ Minnesota Department of Transportation, “Traffic Safety Impact of COVID-19,” June 2020, <https://www.dot.state.mn.us/trafficeng/safety/docs/traffic-safety-impact-of-covid19.pdf>.

Since 2020, traffic volumes have returned to or exceed pre-pandemic levels in most of the state. Recent evidence from traffic volume data in the Twin Cities²⁶ suggests that while daily volumes are rebounding to near pre-pandemic levels, the distribution of trips throughout the day is different.²⁷ It is yet to be determined what near- and long-term VMT trends could look like and can be influenced by transportation and economic recovery efforts following the pandemic.

The pandemic also affected walking, rolling and bicycling. Data collected from automated pedestrian and bicyclist counters from 2017 through 2020 showed declines in walking and bicycling from 2017 to 2019. However, numbers rebounded in 2020, but were lower than volumes in 2017.²⁸ One limitation of these findings is that they reflect volumes at a limited number of specific locations. Also, the volumes do not fully reflect how people are moving throughout a transportation network due to closures, construction projects, daily routines affected by a pandemic or other factors. This limitation can be addressed through additional monitoring, which MnDOT is committed to.

Much of the travel behavior data available focuses on people traveling to and from work. Commuting, however, accounts for less than 20% of all trips.²⁹ Commutes have a unique role in determining peak travel demand across many modes. But people use transportation for a variety of reasons. People need to access grocery stores, health services, educational opportunities, social activities and more. The transportation system ensures people can reach all destinations safely, reliably and conveniently whatever their reason for travel.



²⁶ Minnesota Department of Transportation, “Traffic Operations,” date accessed March 9, 2022, <https://www.dot.state.mn.us/rtmc/trafficoperations.html>.

²⁷ Metropolitan Council, “Freeway Travel Trends,” date accessed March 9, 2022, <http://metrotransitmn.shinyapps.io/freeway-traffic-trends/>.

²⁸ Institute of Transportation Engineers, “Trends in Bicycling and Walking in Minnesota: A Multi-Year Perspective on the COVID Surge,” February 2022, <https://ite.ygsclibook.com/pubs/itejournal/2022/february-2022/#p=44>.

²⁹ U.S. Department of Transportation, “Commute Mode Share,” date accessed May 15, 2022, <https://www.transportation.gov/mission/health/commute-mode-share#:~:text=Commutes%20account%20for%20less%20than,Federal%20Highway%20Administration%2C%202011>).



WHAT IS DIRECTING THIS PLAN

This update of the Statewide Multimodal Transportation Plan (SMTP) was based on evaluation of the public and stakeholder engagement and analyses of other plans and studies by the Minnesota Department of Transportation (MnDOT) or transportation partners completed since 2017. The work that guided this plan has highlighted the complex problems facing Minnesota today and into the future. Commitment is needed from all who have a role in making transportation move for Minnesotans. MnDOT in collaboration with the public, stakeholders and partners have incorporated these insights into the policy direction in Chapter 5.

READ CHAPTER 4 TO:

- Learn how MnDOT connected with people through plan engagement.
- Read what staff learned through reviewing plans and studies that relate to transportation.
- Learn about the plan's state and federal requirements.
- Read about the plan's six focus areas:
 - Aging Infrastructure
 - Climate Change
 - Economy and Employment
 - Equity
 - Safety
 - Transportation Options

PUBLIC ENGAGEMENT

Transportation has a large impact on people, the environment and the economy. People have a right and deserve to be involved in decisions that impact their lives. Accordingly, public engagement was an essential part of the update to the SMTP. The transportation system exists to meet the needs of the people and businesses in Minnesota. It is important to understand what those needs are and use that information to guide decision making. It is also important that everyone is able to participate and be heard.

A high-level summary of engagement is included in the following section. More detailed information can be found in Appendix G – Engagement Summary.

PUBLIC ENGAGEMENT IN CONTEXT

The impact of transportation on peoples’ lives has the potential for vast change. Not all people experience outcomes equitably. For example, the COVID-19 pandemic has disproportionately affected Black, Indigenous and People of color (BIPOC) due to ongoing systemic health and social inequities. These inequities combined with the killing of Philando Castile in 2016, George Floyd in 2020 and Daunte Wright in 2021 have highlighted the need to focus on racial and social justice.

Long-range planning efforts like the SMTP have the potential to address some of these inequities

when planning within the social and economic context of the time. However, plans like the SMTP are not at the top of many Minnesotans’ minds. The goal for this update of the SMTP was to have meaningful, inclusive and accessible interactions with Minnesotans while understanding demands from these overlapping public health crises.

MnDOT recognized the extraordinary circumstances surrounding the plan process. However, the goal to engage Minnesotans meaningfully in this project remained. MnDOT committed to a flexible, phased approach to respond to the changing context.





“I believe it is essential to ensure we find ways to live together across diverse perspectives and that people who have been underrepresented in opportunities for health and [unclear] gain be given more support.”

– Comment shared during SMTP engagement

COMMITTEES & WORK GROUPS

The project team created several advisory committees and work groups that helped to guide the planning process. These groups included individuals from a variety of audiences.

POLICY ADVISORY COMMITTEE (PAC)

guided the overall SMTP update process, including advising on engagement activities. PAC members included advocacy organizations, boards, councils, stakeholders and partners who represent different perspectives and modes of transportation.

TECHNICAL ADVISORY COMMITTEE (TAC)

provided guidance on the plan update process, including input on engagement activities. The TAC helped ensure the final policy strategies reflect the priorities and needs of MnDOT and partners. TAC members included staff from MnDOT, other state agencies and partner transportation organizations.

WORK GROUPS related to the six focus areas identified in Phase 1 engagement – one work group for each focus area. These groups addressed technical issues and drafted strategies for MnDOT and partners to address transportation priorities. Members included staff from MnDOT and partner agencies with subject matter expertise in each topic. The six work groups were:

- Aging Infrastructure
- Climate Change
- Economy and Employment
- Equity
- Safety
- Transportation Options

A complete list of committee and work group members is included in Appendix A – Acknowledgments.

TRIBAL COORDINATION & CONSULTATION

Minnesota is home to 11 federally recognized reservations or communities and 12 federally recognized sovereign governments (see Figure 4-1). Each tribe is a separate sovereign nation — unique unto itself and distinct from all other federally recognized tribes. Each tribe has an independent relationship with the United States and the State of Minnesota. Minnesota affirmed the government-to-government relationships between tribes and the state by Minnesota Statute Section 10.65 and Executive Order 19-24.

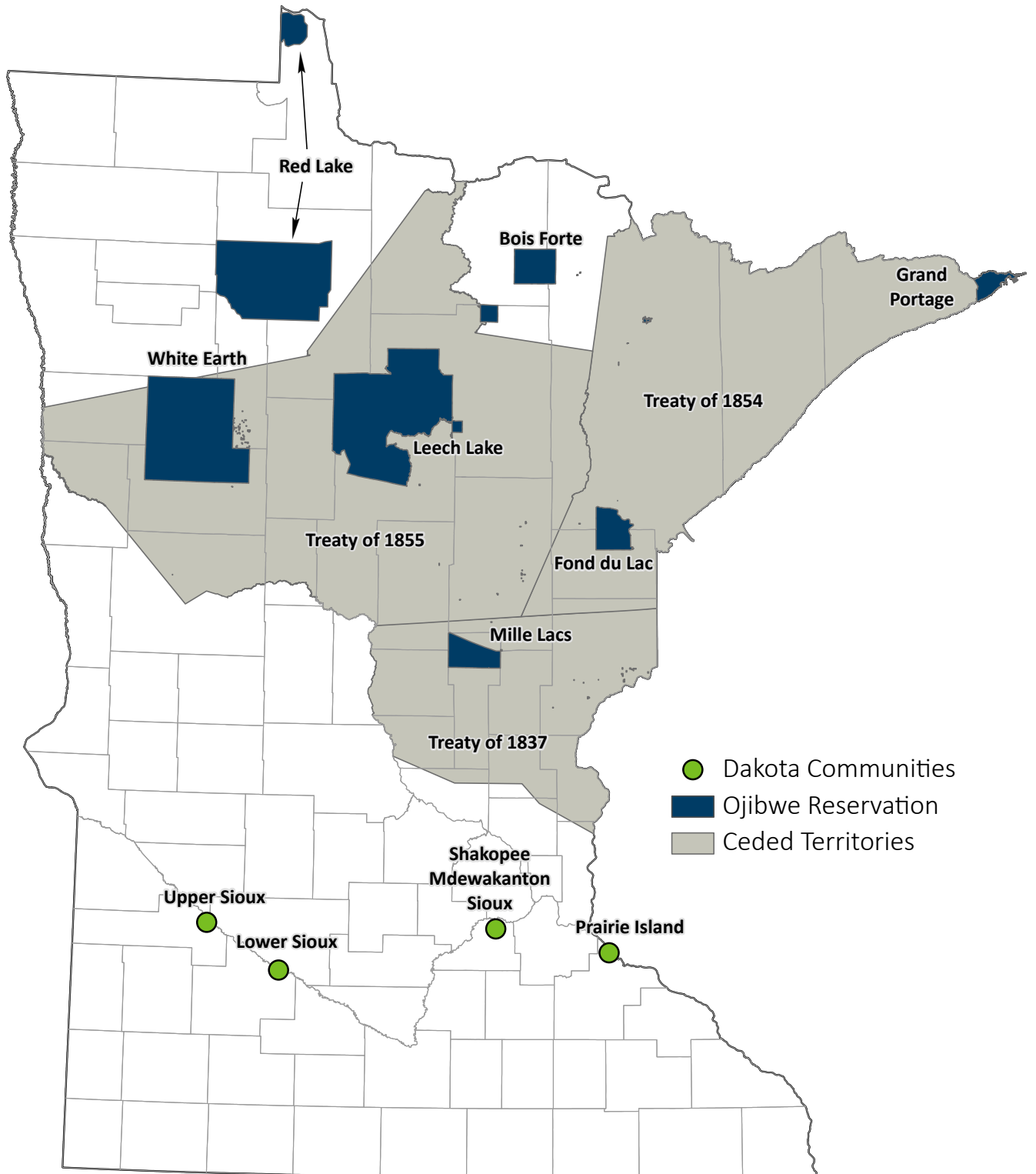
It is important to recognize the long history and enduring relationship between Indigenous peoples' connection to “Mni Sota” and the lasting impacts of policies detrimental to the balance of nature. Mutually respectful relations between Indigenous and non-Indigenous peoples are founded on long-term relationship-building, learning processes and developing solutions. Meaningful consultation assists in building better relationships and ensuring a transportation system that works for all.

For this update of the SMTP, MnDOT engaged with Tribal Nations through a government-to-government process. Tribal Nations were asked to provide tribal transportation plans as part of the planning review process. To ensure Tribal Nations interests are included in these high-level decisions, Minnesota Indian Affairs Council helped to designate representatives to serve on three advisory committees (see Appendix A – Acknowledgments). Three Tribes participated in staff-to-staff coordination meetings: Bois Forte, Prairie Island Indian Community and White Earth Nation. Additionally, staff presented to the Advisory Council for Tribal Transportation at key decision points: project start, public launch, strategy development, policy direction coordination and public comment period.

More details about coordination and consultation with Tribal Nations can be found in Appendix G – Engagement Summary and Appendix J – Tribal Coordination and Consultation.



Figure 4-1: Tribal reservations and communities in Minnesota, 2021



WE ARE STILL HERE

We live in a place the Dakota call “Mni Sota”, which is not only our state’s name but can be translated to “where the sky reflects off the water.” MnDOT acknowledges the Dakota and Ojibwe people that have historically called this place home, **are still here**. To discuss land acknowledgement, we must recognize that historic events on this land had serious consequences to Tribal Nations, including the Dakota and Ojibwe people, and MnDOT, as a state agency, must not only be willing to verbally acknowledge but go beyond and take action.

After 163 years, Minnesota state elected leaders have not only recognized that **TRIBAL NATIONS ARE STILL HERE**

but also codified the government-to-government relationship between Tribal Nations and the State of Minnesota. MnDOT acknowledges Dakota and Ojibwe self-governance, self-determination, and that they adopted the first and most effective sustainability laws.

MnDOT not only verbally acknowledges land issues that paint a shared past but is also taking action with Dakota and Ojibwe Nations to forge a new future around these lands we call home.

The Ojibwe and Dakota people believe you live with the land. It is not something you own but rather an animate being, full of living things, all equally important to human beings. So, we must take advantage of this opportunity to move past our historic social norms to truly acknowledge the historic events around these lands we call Mni Sota, home of the Dakota and Anishinaabe.

One opportunity for the SMTP is to demonstrate that our work will be different. The objectives, strategies and actions in Chapter 5 emphasize investing time and resources in relationships with the eleven Tribal Nations in Minnesota. Building better relationships helps to ensure a transportation system that works for all Minnesotans. Early coordination is key to meaningful consultation with Tribal Nations.



NECESSARY CONCEPTS ABOUT JURISDICTION IN INDIAN COUNTRY

To understand jurisdiction in Indian country, there are a few basic concepts that you need to know about first. To that end, this section will explain that tribes are sovereign nations and that “Indian” is a legal status, not just a race. This section will also explore the definitions of the terms “jurisdiction” and “Indian country,” as well as how jurisdiction in Indian country impacts transportation.

TRIBES ARE SOVEREIGN NATIONS. Sovereignty is the authority of a political entity to govern itself. A tribe determines its own government structures and laws.

“INDIAN” IS A LEGAL STATUS, NOT SIMPLY A RACE. You might think of “Indian” as a race. It is true that individuals can self-identify as belonging to the race “American Indian” on Census Bureau surveys. However, “Indian” is also a legal status.

WHAT IS JURISDICTION? Jurisdiction is the power and authority of a government or court to make or enforce law. The federal government, state government, and tribal governments all have different jurisdiction (i.e., different powers to make and enforce law). When determining what kind of jurisdiction a government has, where you are located geographically is important.

WHAT IS INDIAN COUNTRY? The most commonly used definition of Indian country comes from federal criminal law, but courts often use the same definition in civil (non-criminal) court cases. Indian country includes more than just reservations. Here is a simplified version of the most commonly used definition of Indian country: reservations; allotments; and “dependent Indian communities” (i.e., land that is federally supervised and set aside for the use of Indians, this is usually found on trust land). You can find the complete – more nuanced – definition of Indian country at 18 U.S.C. § 1151.

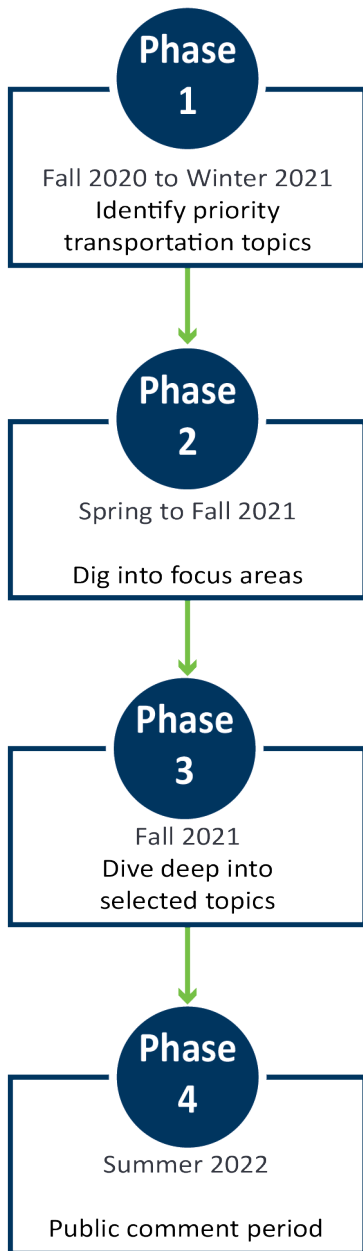
Appendix J – Tribal Coordination and Consultation has more information about:

- Building better relationships with Tribal Nations.
- Case studies of recent work MnDOT has completed in partnership with Tribal Nations.
- Considerations for Tribal Coordination.
- Details about Tribal Coordination and Consultation throughout the SMTP.

Much of the information in Appendix J can apply to any jurisdiction wanting to build better relationships with Tribal Nations.

PHASED APPROACH

Figure 4-2: Four Phases of SMTP Engagement



The four-phased engagement approach (see Figure 4-2) included a variety of ways and opportunities to meet people where they were at. The goal during Phase 1 (completed in early 2021) focused on identifying six focus areas for the SMTP update. The goal for Phase 2 (completed in fall 2021) was to dive deep into each of these six focus areas. The goal for Phase 3 (completed in fall 2021) was to get more feedback on select topics where MnDOT and transportation partners needed more information on how to proceed. Phase 4 (completed in summer 2022) was the public comment period and hearing for the draft SMTP. See the [Overall Engagement Summary](#) for a brief overview of Phase 1-3 engagement activities.

PHASE 1

Phase 1 began in October 2020 and ended February 2021. The first phase of engagement focused on connecting with both the general public and transportation partners. This phase prioritized partnerships with community-based organizations and promoted input opportunities with communities and people who have been underserved by transportation decision making. Activities built a broad understanding of Minnesotans’ transportation challenges and priorities over the next 20 years. MnDOT asked participants to identify up to six focus areas for this plan update. See the [Phase 1 Engagement Summary](#) for more information on activities, demographics and what MnDOT learned.

PHASE 2


Phase 2 began in March 2021 and ended in October 2021. The second phase of engagement dove deep into each of six focus areas to understand impacts to the transportation system. People were asked to share ideas that evolved into draft strategies and actions for the six focus areas—aging infrastructure, climate change, economy and employment, equity, safety and transportation options. See the [Phase 2 Engagement Summary](#) and [Transportation Equity Definition Report](#) for more information on activities, demographics and what MnDOT learned.

Figure 4-3: SMTP Mode Lib Postcard, 2020

m MINNESOTA MULTIMODAL TRANSPORTATION PLAN

Transportation Mode Lib Game

A FILL-IN-THE-BLANK STORY ABOUT HOW YOU MOVE IN MINNESOTA




I am a _____ with _____ ideas for the future of transportation in Minnesota!

For the past few years, I would go to _____ almost every day to _____. These trips were _____, I would use _____ most often because I needed a _____ way to get there. In an ideal world I would be able to move around using _____ to get to _____.

Life has changed a lot since April, when our normal routines changed due to the COVID-19 pandemic. Now, I go to _____ way more often, but go to _____ much less frequently. Instead of _____ now I take my _____ and it is _____. Over the last 6 months, I realized I would like to _____ more in the future.

Ever since _____ it has been _____ to go to _____ by _____. I feel especially _____ about that.

The easiest way to take short trips around my community is _____. Someday, I hope that: _____



Send this back to us or go online to submit your story!
www.minnesotago.org/modelib




Illustration by Noah Lawrence-Holler

Figure 4-4: SMTP Air Quality Comic, 2021

LET'S TALK

AIR QUALITY!



HIGHER EFFICIENCY VEHICLES,



REGULATION OF ENGINE DESIGNS AND ALLOWABLE EMISSIONS,



OVERALL, AIR QUALITY HAS IMPROVED IN THE US SINCE THE 1970'S CLEAN AIR ACT.



HOWEVER, POOR AIR QUALITY CONTINUES TO HARM MINNESOTANS --



ESPECIALLY BLACK, INDIGENOUS AND PEOPLE OF COLOR.

AND RIDING BIKES AND BUSES MORE - WHILE USING OUR CARS LESS.



TRANSPORTATION CONTINUES TO BE THE THIRD LARGEST POLLUTANT IN THE US.



HOWEVER, TRANSPORTATION EMISSIONS ARE IMPROVING FOR A FEW KEY REASONS:



WHAT DO YOU THINK CLEANER TRANSPORTATION IN MINNESOTA MIGHT LOOK LIKE?



CHAPTER 4 | PUBLIC ENGAGEMENT

PHASE 3

Phase 3 began in September 2021 and ended in December 2021. The aim was to get feedback on select topics where MnDOT and transportation partners needed more information on how to proceed. Phase 3 included both virtual and in-person engagement activities. The changing circumstances around COVID-19 briefly provided an opportunity for staff to connect with people at in-person community events. Phase 3 included a collaboration with MnDOT’s Artist-in-Residence, Marcus Young 楊墨, to facilitate the Council of Old and New Wisdom. Two forums provided opportunities for stakeholders to share feedback on select policy areas where MnDOT could use additional guidance. See the [Phase 3 Engagement Summary, Council of Old and New Wisdom Report, Policy Panel Survey and Discussion Forum Report](#) and [Stakeholder Forum Summary](#) for more information on activities, demographics and what MnDOT learned.

“Both my mind and my heart agree that the bridges that we build – physically, theoretically and spiritually – connect us to a world bigger than ourselves, and will likely impact the safety of my children and my grandchildren. And when I think about that, I want to mix concrete. I want to pour it in all of the places that need something solid. So that the safety of this collective project can more than anything be what matters the most. I feel like the world around us sometimes only focuses on an agenda. We don’t think about the human aspect of it; we don’t think about the people that it might impact.”

-Marie Chanté Flowers, Council of Old and New Wisdom

PHASE 4

Phase 4 ended on September 18, 2022, with the completion of the eight-week public comment period and public hearing held on September 7, 2022.



PLANNING REVIEWS

The SMTP development process includes plan analyses to ensure we are tracking current and relevant work completed by MnDOT, Tribal governments, transportation partners and other organizations. This section is a summary of work that offered insights that informed how engagement was conducted and what was included in the policy direction in Chapter 5.

PREVIOUS PLAN REVIEW

This SMTP is an update of the 2017-2036 SMTP. To inform the update of the plan, MnDOT staff reviewed engagement conducted for the 2017 plan, progress on the 2017-2020 Work Plan for MnDOT identified in the 2017 plan and the recommendations of a Health Impact Assessment by the Minnesota Department of Health on the 2017 plan.

ENGAGEMENT REVIEW

In developing the previous SMTP (2017-2036) MnDOT conducted robust engagement receiving over 12,000 responses, which included determining which trends impacting transportation were the most important. In 2019, MnDOT staff completed a qualitative review of the responses to identify common themes and rationale about why the trends were important. Common themes followed topics included in the 2017 plan's objectives:

- Access and use of different modes (Critical Connections)
- Asset management, funding, spending, extreme weather (System Stewardship)
- Environment, land use, complete streets/context sensitive solutions, behavior, health equity (Healthy Communities)
- Planning and engagement processes, performance measurement, data, technology (Open Decision Making)
- Safety related to different modes (Transportation Safety)

EQUITY IN THE 2017 SMTP ENGAGEMENT

MnDOT completed a deeper analysis on transportation equity in the engagement responses. The analysis signaled the need to ask about access to destinations, transportation options, travel experiences, opportunities to provide input and barriers to transportation. Themes from the analysis noted the need to plan for:

- Providing safe, convenient and affordable transportation alternatives to driving. Quality transportation options are essential for equity.
- Minimizing environmental impacts. People of different races and people with low incomes are disproportionately affected.
- Meeting the transportation needs of people of different races and people with low incomes first.

The themes from the analysis also highlighted the need to use a people-first planning approach and a health-equity lens in setting the policy direction. See Appendix D – Planning Reviews to see the 2017 SMTP Engagement Review.

CHAPTER 4 | PLANNING REVIEWS

2017-2020 SMTP WORK PLAN ASSESSMENT

The 2017 SMTP included a MnDOT-specific work plan with 17 activities to advance the goals and objectives established in the plan. The activities were organized into six subject areas:

- Engagement, communications & education
- Advancing equity
- Asset management
- Land use & transportation
- Planning
- Climate change & environmental quality

Progress on the work plan items were listed as complete, substantial progress, some progress or in progress. At the time of the assessment, all 2017-2020 Work Plan items had been initiated. Only two were marked as complete: increase the transparency of MnDOT's project selection processes and review existing and potential new National Highway System intermodal connectors.

See Appendix D – Planning Reviews to see the 2017 SMTP Work Plan Assessment.

HEALTH IN ALL POLICIES REVIEW

The 2017 SMTP was cross-referenced with the corresponding 2016 Health Impact Assessment (HIA). The review focused on confirming areas where the SMTP included health recommendations and identifying opportunities for greater inclusion in the SMTP update process. Opportunities identified for inclusion in the 2022 SMTP range fell into the following five categories:

- Transportation Safety
- Critical Connections
- Equity
- Healthy Communities
- Additional Opportunities for the SMTP update

See Appendix D – Planning Reviews to read the results of the Health in All Policies Review of the 2017 SMTP.



OTHER MNDOT, PEER & PARTNER PLAN REVIEW

Staff compiled a list of peer and partner agencies whose work is impacted or informed by transportation decisions or is transportation focused. Staff reviewed nearly 100 plans completed since January 2017—the adoption date for the previous SMTP. The review confirmed that MnDOT, partners and peers were tracking similar trends and issues. Many of the topics in the plans and studies were topics MnDOT had already integrated into its work or was tracking for the 2022 SMTP. Examples of topics and trends MnDOT is already tracking include planning for all transportation modes, economic vitality, safety and environmental stewardship. This alignment confirms staff were aware of the trends and topics most likely to affect transportation.

The review identified the following potential new topics to include in MnDOT’s trend analysis. Other MnDOT plans and programs may already consider these, but this review indicated increased emphasis on their importance.

- Extreme weather impacts
- Housing affordability
- Logistics including change in freight traffic
- Park access and transportation needs
- Travel safety including speeds

See Appendix D – Planning Reviews to learn more about the Other MnDOT, Peer and Partner Plan Review.



PLANNING REQUIREMENTS

The SMTP update process is guided by federal, state and agency requirements. Chapter 1 includes a list of state transportation goals. Two notable requirements guiding the 2022 SMTP are Environmental Justice & Title VI and Justice40. A complete list of requirements can also be found in Appendix K – Planning Requirements.

ENVIRONMENTAL JUSTICE & TITLE VI

Title VI of the 1964 Civil Rights Act prohibits discrimination on the basis of race, color and national origin in federally funded programs and activities. Additionally, Presidential Executive Order 12898 on Environmental Justice requires agencies to identify and address the effects of all programs, policies and activities on minority and low-income populations.¹ The purpose of environmental justice is to ensure that public agencies treat people fairly and involve them in meaningful ways during the development and implementation of transportation plans and projects.

Appendix E – Environmental Justice and Title VI provides an analysis of the potential impacts the policy direction identified in Chapter 5 may have on the state’s environmental justice populations. More information on how MnDOT engaged people in the SMTP plan process can be found in Appendix G – Engagement Summary.

JUSTICE40

In January 2021, President Biden signed Executive Order 14008 “Tackling the Climate Crisis at Home and Abroad,” which created the Justice40 Initiative. Justice40 aims to “deliver 40% of the overall benefits of relevant federal investments to disadvantaged communities.” The Executive Order combined with investments like the Infrastructure Investment and Jobs Act (IIJA) make this the largest expansion in environmental justice in history. The initiative is to ensure cross-governmental collaboration to ensure benefits from investments in climate and clean energy are delivered to disadvantaged communities.

Given transportation’s role in contributing to climate change and contributing to inequities in communities, the industry will need to align work to ensure federal investments achieve this goal. Implementation of Justice40 is unclear. However, the policy direction in Chapter 5 helps to build a foundation for this work going forward.

¹ U.S. President. Proclamation. “Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations,” Executive Order 12898 of February 11, 1994, Federal Register 59, no.32 (February 16, 1994), <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

PLAN FOCUS AREAS & EQUITY REVIEW

Planning context, analysis and public engagement resulted in the following framework guiding the SMTP policy guidance and work plan. Since the adoption of the Minnesota GO Vision in 2011, MnDOT has helped to usher in a new standard for moving people and goods. This includes using technology, strategic investments and commitment to communities to make transportation more equitable, sustainable, efficient and convenient.

However, there is uncertainty of what the future may look like and what the lasting impacts of COVID-19 will be. People are experiencing the quadruple threat of a pandemic, systemic racism, climate change and an inequitable economic recovery. Any one of these crises could have significant consequences to people, the environment or the economy. Combined, the threats have created fluid, uncertain and complex challenges in which action can feel more hasty than bold.

Yet, the future can be more equitable, sustainable, efficient and convenient if planned in context. The

results of the work outlined in this chapter highlights the importance of acknowledging the most significant challenges and how the transportation system can change to deliver on the promises of the Minnesota GO Vision. To be clear on the priorities for transportation in Minnesota, this update of the SMTP is centered on six focus areas that cut across all transportation topics:

- Aging infrastructure
- Climate change
- Economy and employment
- Equity
- Safety
- Transportation options

The objective statements, performance measures, strategies and actions in Chapter 5 are the result of work completed by six work groups—one for each focus area. The TAC and PAC further refined the policy direction. Policy development was informed by an equity review process to ensure the policy direction advances transportation equity.



FOCUS AREAS

AGING INFRASTRUCTURE

Minnesota’s transportation system shows signs of deterioration and requires attention. Between the 1950s and 1980s, the growth of urban and suburban areas required a rapid build out of sewer, transportation, utility and water systems. This means that a majority of transportation and other infrastructure was built between 40 and 80 years ago. This infrastructure is aging, which requires increased maintenance and repairs.

Minnesota, like other states across the nation, has an abundance of aging roads and bridges that need upkeep. For reference, MnDOT typically reconstructs roads when the road is between 70 and 80 years old and bridges are typically reconstructed when they are between 50 to 100 years old. Additionally, maintenance needs can be found on city and county roads, transit systems, ports and waterways, railroads and airports. These add to an ever-growing list of investments needed to maintain the quality of the state’s transportation system.

Faced with an extensive, rapidly aging system and increasing construction costs, transportation partners in Minnesota are struggling to keep the system out of poor condition. Poor condition can look like out-of-service transit vehicles, gaps in sidewalks, bridges in need of repair and poor pavement quality. Not only do deficiencies result in rough roads, sidewalks that fail to meet ADA standards, etc., deterioration can also make the system vulnerable to risks from things like climate change and extreme weather.

Climate change will likely disrupt critical systems, increase operating costs, exacerbate funding gaps and cause spillover effects for our communities and economy. Few infrastructure assets will be left untouched by the changing climate and none can be ignored entirely. However, investment needs present opportunities to build back better to adapt the transportation system to meet the challenges of climate change and extreme weather events.

“Rebuild what is needed cost effectively. Do not let it get into poor condition which requires complete reconstruction.”

– Comment shared during SMTP engagement

CLIMATE CHANGE

Minnesota’s climate is changing rapidly. Temperatures are increasing and larger, more frequent extreme weather events are occurring year-round. Substantial warming during winter and at night and increased rain and snow fall damage buildings and infrastructure, limit recreational opportunities, alter growing seasons and impact natural resources. The decades ahead will bring even warmer winters and nights, even larger rainfall events, increased summer heat and longer droughts. For these reasons, climate change will impact the way transportation infrastructure is used, built, operated and maintained.

Transportation is the largest contributor to greenhouse gas (GHG) emissions—the most significant driver of climate change—in the state. While GHG emissions from the transportation sector have been declining since 2005, Minnesota did not meet the statewide 2015 emissions target. Although continued declines in emissions are projected, they are still projected to be 10 to 15% higher than the 2030 reduction target. While transportation contributes a large percentage of GHG emissions, the sector can also deliver strategies to reduce transportation’s impact to the climate. However, bolder action is needed to meet targets to reduce and mitigate GHG emissions.

The SMTP focuses on how the transportation system—not just individual people—can act to combat climate change. The transportation choices people make as individuals contribute to climate change. However, people’s choices are constrained by the options available and affordable to them. Many Minnesotans need more choices to ensure their daily transportation needs are met while giving them options to do so in ways that contribute less to climate change. Change starts with bold policy solutions to ensure people have choices in how, when and in what form they act.

A combination of statewide policy solutions, like those in this SMTP, and local actions are needed to connect the goals of climate action with the tangible choices people have available to them. The future of transportation and climate change requires more coordination across jurisdictions and disciplines. Transportation will need to make a shift to default to climate-friendly options such as using modes that don’t depend on fossil fuels and building in ways that reduce impact on the environment. This shift will require the transportation system to look, feel, operate and be maintained differently in the coming decades.



ECONOMY AND EMPLOYMENT

Trends in Minnesota’s economy are highly reflective of demographic, environmental and technological trends in the state. Changes in these areas impact the types of businesses that are needed to provide the goods and services that are in demand. Ensuring that a variety of modes are available to move goods to, from and within Minnesota is a vital part of supporting economic expansion and recovering from the COVID-19 pandemic. Greater employment in service-based industries has changed where people work and the times that they need to be at work, placing changing demands on the transportation system, especially in Minnesota’s cities and towns.

Rising inflation and ongoing global supply chain disruptions are putting even greater pressure on Minnesota’s businesses, households and transportation partners.

Changes in the manufacturing sector may necessitate easier access to air cargo facilities to ship smaller, high value goods. On-demand shipping will continue to change the way that people think about delivery and courier services, and the way that those services use the transportation system. Freight movement was changing before the pandemic. But COVID-19 accelerated the trend toward customized deliveries for individual consumers. Freight destinations used to be focused on hubs and businesses, but now have expanded to include individual homes. Any place with an address can now be served as a freight destination.

Economic trends impacting transportation will also change the future of the transportation workforce. The sector employs millions of people in planning, design, construction, operation and maintenance of the vast transportation system. Many more people rely on transportation-related fields like freight operators and state troopers. Driver shortages, skills mismatch, an aging workforce, etc. are raising concerns about how to ensure the workforce can deliver the transportation system Minnesotans need and rely on. Also, evolving industry needs are requiring more and different positions like accountants, IT professionals, lawyers, etc. now and in the future.

Dealing with workforce challenges may require changes in ways transportation agencies do business and the role of partnerships. The transportation future in Minnesota needs to maintain flexibility to be nimble to serve people, businesses and the economy. Coordinated and collaborative solutions are needed to keep Minnesota’s economy and workforce moving.



EQUITY

Policy, design and operations in housing and transportation have led to inequities for BIPOC. For example, construction of the interstate system in the 1950s displaced homes, businesses, places of faith and more. This mostly took place in communities where loans were denied or housing was restricted by deed, which led to much lower property values. Highway development was favored over investment in public transit for decades. As a result, housing development has been happening further from key destinations, further compounding issues of equity and access to jobs and essential services. These and other practices have exacerbated segregation and income inequity over generations creating a harmful legacy of past decisions. These inequities combined with the killing of Philando Castile, George Floyd and Daunte Wright have highlighted the need to focus on racial and social justice. This legacy has strengthened Minnesota’s commitment to advance transportation equity today.

MnDOT’s [Advancing Transportation Equity Initiative](#) has aimed to better understand how the transportation system, services and decision-making processes help or hinder the lives of people in underserved and underrepresented communities in Minnesota. The initiative has looked at transportation equity at a high level. Work completed as part of the initiative has ranged from equity-focused conversations with stakeholders in Greater Minnesota, policy and program equity reviews, research and more. Insights include:

- Lack of an agency-wide transportation equity definition or specific target populations is a challenge
- Equitable engagement is necessary but not sufficient
- Statewide solutions to advance equity can help address broader transportation challenges and vice versa
- Need to move beyond research to implementation

The 2022 SMTP process included several activities to embed transportation equity in the planning approach. Staff collaborated with the Minnesota Department of Health to complete a Health in All Policies review of the 2017 SMTP. Equity was one of six focus areas, which resulted in the Equity Work Group that advised the process and draft policy direction. An equity review was developed and applied to review all draft strategies and solutions. More work is needed to be able to measure progress and hold transportation decision makers accountable.

See Appendix H – Transportation Equity for more information.

TRANSPORTATION EQUITY STATEMENT OF COMMITMENT

ACKNOWLEDGMENT OF PAST HARMS

MnDOT acknowledges the transportation system and agency decisions have underserved, excluded, harmed and overburdened some communities. We understand some of our past decisions denied Black and Indigenous communities as well as people with disabilities the full participation of transportation benefits. These and other underserved communities have historically carried disproportionate burdens of transportation decisions.

WHAT TRANSPORTATION EQUITY MEANS TO MNDOT

MnDOT is committed to creating an equitable transportation system.

Transportation equity means the benefits and burdens of transportation systems, services and spending are fair and just, which historically has not been the case. Transportation equity requires ensuring underserved communities, especially Black, Indigenous and People of Color, share in the power of decision making.

The journey of transforming our transportation systems, services and decision-making processes will require ongoing listening, learning, changing, implementing and adapting.

Everyone in our agency regardless of position or work assignment has a role to advance transportation equity. We will partner with community members, community-based organizations, transportation service providers, Tribal Nations and government institutions to evolve our work and to change outcomes for our communities.

TRANSPORTATION EQUITY KEY TERMS

What transportation equity means to MnDOT includes several key terms and statements including:

BENEFITS

Transportation benefits are positive impacts of all modes of transportation, including access to affordable, reliable and safe transportation options. Other benefits of transportation include access to affordable housing, employment opportunities, healthy food, clean air and clean water. Transportation benefits are best defined by impacted communities.

BURDENS

Transportation burdens are negative impacts of all modes of transportation including lack of or limited access to affordable, reliable and safe transportation options. Other transportation burdens include exposure to air pollution and related poor health outcomes as well as lack of or limited access to affordable housing and employment opportunities. Transportation burdens are best defined by impacted communities.

TRANSPORTATION SYSTEMS, SERVICES AND SPENDING

Transportation systems, services and spending refer to different transportation funding and decision-making processes that impact people. Transportation systems refer to the various elements and networks that constitute the overall state transportation system such as state and local road networks, sidewalks and trails, transit systems, rail networks, ports and airports, etc. Transportation services refer to various programs that transportation agencies manage. Transportation spending refers to the decisions that lead to the allocation of funds for specific activities like snow removal and projects such as spending of capital projects to construct interchanges or spending for maintenance on state highways.

FAIR

Fairness in transportation means everyone has access to transportation outcomes that are free from bias and discrimination. Fairness in transportation requires a proportionate distribution of transportation benefits and burdens.

JUST

Justice in transportation means taking proactive measures to ensure transportation benefits are adequately accessible to underserved communities especially Black, Indigenous and People of Color, who often bear disproportionate transportation burdens. Justice in transportation requires transforming current inequitable systems so no person is denied accessing the transportation opportunities they need to lead a dignified life.

UNDERSERVED COMMUNITIES

Underserved communities refer to populations that share a particular characteristic, as well as geographic communities, that have been systematically denied through public and private discriminatory practices and neglect the full opportunity to participate in aspects of economic, social and civic life. This includes Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. These characteristics can and do overlap, which can magnify and increase the impact experienced.

CHAPTER 4 | TRANSPORTATION EQUITY KEY TERMS

BLACK, INDIGENOUS AND PEOPLE OF COLOR (BIPOC)

Transportation equity requires acknowledging past harms by intentionally naming and centering the experiences of communities that faced the most profound transportation harms and racism. While BIPOC includes all people of color, it leads with Black and Indigenous identities to counter anti-Black racism and erasure of Native communities.

SHARING POWER

Sharing power means creating opportunities for underserved communities to access decision making power. This includes institutional and structural power. Institutional power is the ability to create or greatly influence and shape the rules, policies and actions of an institution. Structural power is the ability to create or greatly influence and shape the rules, policies and actions that govern multiple and intersecting institutions or an industry. Sharing power requires engaging early and often with underserved communities to better understand community needs and incorporating those needs to transportation initiatives that lead to real, measurable change in the lives of community members. Shared power framework recognizes and addresses the power imbalance that often leads to poor and uninformed decisions that perpetuate harms on underserved communities especially Black, Indigenous and People of Color.

Examples of sharing power include:

- Prioritizing solutions that combat the most pressing issues of our time that have disproportionate impact on underserved communities. Rethinking I-94 is a new model of corridor planning to prioritize community needs and co-create solutions to meet the challenges of the transportation system.

- Meaningfully engaging those communities most impacted by structural racism in the creation and implementation of the programs and projects that impact their daily lives. MnDOT recently created a community ambassador position to build better relationships with BIPOC communities.
- Collaborating with partners on projects that meet social and economic priorities for communities. MnDOT regularly partners with jurisdictions on locally initiated and led projects such as transit and interchanges.
- Reforming programs, policies and procedures to deconstruct institutional and structural barriers. The Office of Transportation System Management's Transportation Equity Labs explore programs, policies and procedures with a commitment to advancing transportation equity. Participants can include external partners depending on the focus of the lab.
- Creating a workforce at all levels that is representative of the communities we serve. MnDOT has been expanding partnerships with education partners (e.g., MnDOT's CAV Career Pathways Camp) to ensure our future transportation workforce is representative of our communities and capable of meeting the challenges arising.

Ultimately, MnDOT cannot share decision-making power in all instances, as other agencies also have authority to make key transportation decisions. For example, sovereign Tribal Nations hold authority to make transportation decisions for programs, projects, studies and other efforts for tribal lands. Metropolitan planning organizations, federal and state regulatory agencies, and local units of government all have clear legal charges to make key decisions. Also, the Minnesota Legislature sets spending levels and allowable uses of funds.

SAFETY

Over the last decade and half, Minnesota has made targeted efforts to reduce traffic fatalities through its multi-agency Toward Zero Deaths initiative. Unfortunately, reduced traffic volumes resulting from COVID-19, along with the expectations around enforcement during the pandemic, is thought to have produced higher speeds and more aggressive driving. That shift in behavior has continued despite a return to pre-pandemic traffic volumes.

2021 WAS THE DEADLIEST YEAR ON MINNESOTA'S ROADS IN OVER A DECADE.

Recently, transportation and public safety officials launched a traffic enforcement and awareness campaign aimed at the spike in speed-related fatalities.

This recent increase in traffic-related fatalities illustrates the value of a Safe System approach to transportation. The Safe System approach aims to anticipate human error and accommodate human injury tolerances to reduce fatal and serious injuries. Implementing traditional and new Safe System strategies can incrementally improve safety and help build a culture of safety in transportation.

New technologies like connected and automated vehicles (CAV) have the potential to reduce fatalities and injuries and significantly change the way that people travel. However, many questions still remain on how CAV will impact society as it relates to equity, liability and privacy. That is why it is important to consider the implications of this technology when planning for the future of transportation. One aspect of this is CAV readiness, which assumes a mix of non-automated, partially automated and highly automated vehicles on the roadway—which comes with several safety concerns—and unclear timelines for CAV adoption.

A mix of traditional and new practices and methodologies will likely be required to design the transportation system to prevent and mitigate human error. Partners like those in engineering, enforcement, education and emergency response can help shift the focus to design and operate a safe system for all Minnesotans especially those most vulnerable. Everyone has a role and responsibility to implementing an equitable, Safe System approach.

“MnDOT and state government can create safe conditions with speed limits, no potholes, and keeping ice and snow off roads. All individuals have a responsibility to be safe and respectful on the roads.”

– Policy Panel and Online Discussion Board Participant

TRANSPORTATION OPTIONS

The more people drive, the more vehicles there are on the road. More vehicles mean more congestion. Measuring delay can help a region understand congestion and its impacts. Delay per person controls for population growth and helps to understand efficiency and reliability on highways. MnDOT collaborated with the Metropolitan Council on the [Twin Cities Highway Mobility Needs Analysis](#) to develop a target of 9 minutes per person per day (equivalent to 40 hours per year). Overall, the transportation system needs a range of solutions including travel demand management, active transportation investment, land use changes and vehicle miles traveled (VMT) reduction to meet the target.

VMT provides a measure of total travel by motor vehicle, travel changes over time and differences in travel among regions and state. When combined with other measures (e.g., accessibility, mode use, delay), VMT becomes a powerful indicator about how the transportation system is functioning. VMT tends to increase with population growth and in areas with lower density and long travel distances. Decreased VMT can have positive impacts on the overall health of people and the environment. For example, VMT bears a direct relationship to vehicle emissions, and can serve as a GHG emissions indicator.

The ability to meet the targets to decrease GHG emissions, delay and VMT requires similar strategies. These include providing more transportation options, encouraging mode shifts and coordinating land use policies. Making these changes allow people to take shorter trips, trips by other modes, combine trips, the opportunity not to travel or option to use virtual options. Health and equity considerations should be central to conversations about decreasing VMT. Without comprehensive and coordinated solutions, people with the least means are most likely to experience the negative impacts of policies to decrease VMT.

Transportation options vary in scale depending on whether people and goods move across the state, throughout a region or within a community. This could mean an integrated network of roads, safe options to bicycle and walk, easy access to transit service or local connections to key freight routes. All connections, regardless of level, location or transportation type, need to be coordinated to ensure they are accessible.

Each person identifies different connections as critical based on where they live and their individual needs. For example, the key connections needed for driving may be different than those for freight, transit, bicycling or walking. Transportation options in the suburban Twin Cities will look different than those for main streets around Greater Minnesota. Collaboration across all partners is required to ensure a connected transportation system offers options and choice for how people and goods move.

“Not everyone can afford a car and it’s important that cities are accessible for everyone to be able to get around to their jobs, grocery stores, medical appointments, etc. Cities planned around the assumption that everyone has a car are inaccessible and bad for the environment.”

– Policy Panel and Online Discussion Board Participant

POLICY DIRECTION EQUITY REVIEW

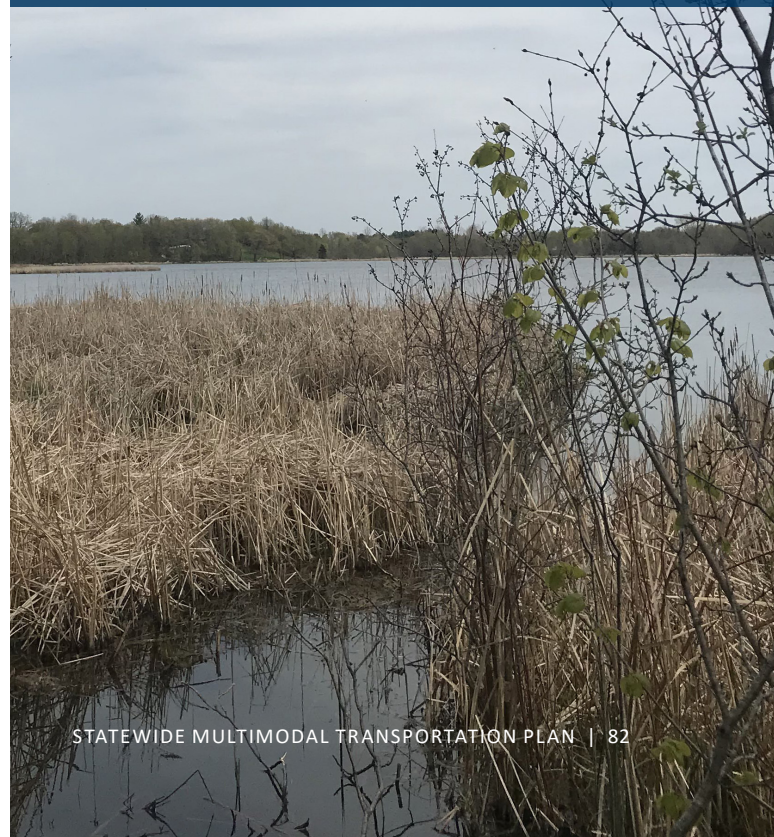
The Equity Work Group coordinated an equity review of the draft strategies identified by the other five work groups advising the SMTP. The review was completed in three parts—initial evaluation, equity workshop and staff review of strategies. The review process was guided by discussions and input with the Equity Work Group. During the initial evaluation, each of the six work groups prioritized which of the draft strategies would go through the equity review. Comments were consistent across work groups and included changes to strategies that focused on:

- Prioritizing people (specifically BIPOC), historically excluded communities and people disadvantaged in transportation decision making.
- Acknowledging who has been harmed by past decisions.
- Reducing barriers to participation and decision making.
- Considering who are the most vulnerable users of the transportation system.

During the equity workshop, participants discussed a mix of strategies from the equity review and flagged some for further review. Following the workshop, staff completed a thorough review of draft strategies and actions to amend language to advance transportation equity. Staff shared feedback from the equity review with the TAC and PAC, and both committees completed further review of the language. More information on the equity review process is available in Appendix H – Transportation Equity.

“Our leadership, our people that cared for us, they always thought seven generations ahead. It wasn’t about your child and your grandchild. It was your great, great, great, great, great grandchild. It was thinking about someone who’s not here, and the importance of their care, of there being water, and land, and home, and food.”

- Juanita Espinosa, Council of Old and New Wisdom





HOW WILL WE GUIDE OURSELVES MOVING FORWARD

The challenges Minnesota is facing require bold, coordinated approaches. This work cannot be left to chance. Collective commitment is needed from all with a role in making transportation work for Minnesotans. The policy direction in this SMTP is an invitation to join MnDOT to build this bold new transportation future together.

READ CHAPTER 5 TO:

- Understand the policy direction that will guide transportation decisions for the next 20 years:
 - Objectives – desired outcomes for meeting the Minnesota GO Vision and transportation goals.
 - Performance Measures – metrics used to track progress toward the success of the objective.
 - Strategies and Actions – approaches and specific steps to meet or support the objective.

OBJECTIVES, PERFORMANCE MEASURES, STRATEGIES & ACTIONS

The purpose of this plan is not to list every possible activity, but to focus on key areas where additional emphasis is needed. Taken together, the objectives, performance measures, strategies and actions support the Minnesota GO Vision and 16 statutory goals for transportation in Minnesota. The plan focuses on six objectives:

- Transportation Safety
- System Stewardship
- Climate Action
- Critical Connections
- Healthy Equitable Communities
- Open Decision Making

Each objective has four parts:

- **Objective statement** – desired outcomes for meeting the Minnesota GO Vision and transportation goals.
- **What this is about** – description about the purpose of the objective.
- **Performance measures** – metrics used to track progress toward the success of the objective.
- **Strategies and actions** – approaches and specific steps to meet or support the objective.

The objectives, performance measures, strategies and actions are listed in no particular order.

To help ensure that progress is made over the next 20 years, each objective includes a list of related performance measures. These measures help track progress toward meeting the objectives and the desired outcomes of the vision. The state performance measures are a mix of metrics MnDOT has authority over and some MnDOT does not. Some of the measures influence annual decision-making processes. Other measures help to understand how the transportation system is functioning over time but are beyond any one agency to directly influence. To clarify the difference between the performance measures, the tables below include a column titled “MnDOT’s Role.” The agency’s role may be a mix of Lead, Partner and Support reflecting the following considerations:

- **Lead:** MnDOT has authority to influence the measurable outcomes that help meet SMTP objectives.
- **Partner:** MnDOT collaborates with key partners to measure system performance over time.
- **Support:** MnDOT has limited direct authority and focus may be on long-term outcomes.

Land Use

Land use and development effect how, when and why people travel. Land development is primarily managed by local governments such as cities, counties and townships. Transportation agencies like MnDOT typically do not have a leading role in land use decisions. Transportation decisions also can affect where and how land is used and developed. Local planning discussions need to start with the acknowledgment that land use and transportation decisions affect each other. Priorities and community needs will vary throughout the state. Land use decisions and transportation design and operations should reflect those differences.

TRANSPORTATION SAFETY

SAFEGUARD TRANSPORTATION USERS AS WELL AS THE COMMUNITIES THE SYSTEM TRAVELS THROUGH. APPLY PROVEN STRATEGIES TO REDUCE FATALITIES AND SERIOUS INJURIES FOR ALL MODES. FOSTER A CULTURE OF TRANSPORTATION SAFETY IN MINNESOTA.

WHAT THIS IS ABOUT

Ensuring transportation safety is a top priority for Minnesota. It includes the safety of people traveling and the safety of the communities the system travels through.

ENSURING TRANSPORTATION USER SAFETY applies to all people who use the transportation system regardless of their mode of travel, as well as transportation workers. Comprehensive safety involves an integrated approach that includes education, enforcement, engineering and emergency medical and trauma services – and more. Each of these areas is critical to improving overall safety and helping to grow a safe transportation culture in Minnesota.

Advancing transportation equity in safety is key to making sure all Minnesotans are safe. A one-size-fits-all approach does not work for transportation safety. Data can help MnDOT and transportation partners understand how to address specific safety challenges and eliminate the disproportionate number of fatalities and serious injuries for people who are underserved by transportation, especially BIPOC. Working with communities to make transportation decisions grounded in local wisdom can help eliminate disparate safety outcomes.

PROTECTING COMMUNITY SAFETY is much more than just transportation. There are risks to the transportation system that can negatively impact community safety by impeding essential travel needs such as emergency response, emergency medical and trauma services. These threats include severe weather, acts of terrorism and crime. Planned special events like major sporting events, parades and marathons can also strain or overwhelm the transportation system's capacity and inhibit public safety efforts. In addition, transportation infrastructure, facilities and services can impose risks to surrounding communities.

Through the Toward Zero Deaths program, MnDOT partners with various enforcement agencies (state and local) that improve road user safety through education and enforcement. MnDOT encourages a holistic and collaborative approach to ensure enforcement that does not adversely impact BIPOC and other underserved communities. To advance equity in transportation, each organization has a specific role to play to ensure people and communities are safe.

Safe System Approach

Safe System approach to traffic safety makes a commitment to reach zero deaths through building a culture of safety. The six principles of Safe System address all aspects of transportation safety through a people-centered, holistic approach. Road system investment decisions are central to a culture of safety putting MnDOT and transportation partners in a key position to achieve our zero deaths vision.

MnDOT's transportation safety partnerships like Minnesota Toward Zero Deaths (TZD) and Safe Routes to School are key to building a culture of safety through a Safe System approach. TZD is the state's cornerstone traffic safety program, employing an interdisciplinary approach to reducing traffic crashes, injuries and deaths on Minnesota roads. Safe Routes to School improve safety, reduce traffic and improve air quality near schools through a multidisciplinary approach. Everyone has a role in a culture of transportation safety!



REDUCING FATALITIES AND SERIOUS INJURIES requires an ongoing focus that puts safety first and helps demonstrate Minnesota's commitment to protecting people traveling.

Understanding and accommodating human behavior can reduce fatal and serious injuries. Implementing "Safe System" designs can improve safety for all people traveling by any mode. See the call out box to learn more about the Safe System approach to transportation safety.

BUILDING A CULTURE OF SAFETY requires ongoing collaboration to recognize and reduce gaps in transportation safety. A mix of traditional and innovative practices and methodologies will likely be required to prevent and mitigate crashes and injuries. Partners—like those in engineering, enforcement, education and emergency response—can help shift the focus upstream to design and operate a safe transportation system for all Minnesotans especially those most vulnerable. Everyone has a role and responsibility to implement an equitable, Safe System approach.

PERFORMANCE MEASURES

Table 5-1 lists performance measures related to the Transportation Safety objective. More information on these performance measures can be found in Appendix I – Performance Measures.

Table 5-1: Transportation Safety Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Fatalities	Annual traffic fatalities on Minnesota roadways	488 traffic fatalities (2021)	≤225 by 2025 Decreasing to 0	Lead & Partner	Number and trend
Serious Injuries	Annual traffic serious injuries on Minnesota roadways	1,722 serious injuries (2021)	≤980 by 2025 Decreasing to 0	Lead & Partner	Number and trend
Pedestrian Fatalities and Serious Injuries	Annual fatalities and serious injuries of people walking on Minnesota roadways	55 pedestrians killed and 168 seriously injured (2021)	Decreasing to 0	Lead & Partner	Number and trend
Bicycle Fatalities and Serious Injuries	Annual fatalities and serious injuries of people bicycling on Minnesota roadways	Nine bicyclists killed and 52 seriously injured (2021)	Decreasing to 0	Lead & Partner	Number and trend
Perception of Safe Walking and Bicycling	Percent of MnDOT Omnibus Survey respondents perceiving safe environments for walking/bicycling	84% of respondents felt safe bicycling 78% of respondents felt safe walking (2020)	≥80% overall and for all demographic segments	Partner	Percent and trend; report by different demographic segments
Aviation Fatalities and Crashes	Total number of aviation fatalities and incidents	Four fatalities in four crashes (2021)	0	Partner	Number and trend
Rail Derailments	Annual total number of rail derailments	18 (2020)	0	Partner	Number and trend
Rail Grade Crossing Fatalities and Serious Injury Crashes	Annual number of crashes at highway-rail grade crossings that result in a fatality or serious injury	4 fatalities and 11 serious injuries (2021)	0	Lead & Partner	Number and trend
Rail Grade Crossings	Annual percent of highest risk crossings receiving improvements	Under Redevelopment	≥5% annually	Lead & Partner	Percent and trend
Incident Clearing Time	Average incident clearance time	≤35 minutes since 2010	≤35 minutes	Lead	Number and trend
Transit Safety Events	Urban transit operators (i.e., 5307) safety events	In development	Decreasing number of events	Partner	Under consideration through SMTP Work Plan

OTHER RELATED PERFORMANCE MEASURES INCLUDE: Bridge Inspections (System Stewardship), Rest Area Condition (System Stewardship) and Rural Transit Vehicle Condition (System Stewardship).

“We have very few sidewalks to walk on so walkers have to walk on the shoulder of the streets. Vehicles don’t move over when meeting a walker and I’ve even had vehicles swerve towards me when I have been walking in the street because there was no sidewalk.”

– Comment shared during SMTP engagement



STRATEGIES & ACTIONS

1. Coordinate with partners to ensure the health, safety and security for people most vulnerable especially for those walking, rolling, bicycling and taking transit.

1.1 Implement more forgiving road design to mitigate the severity of crashes and the resulting injuries.

1.2 Work with partners to create and implement shared values, actions and behaviors that build a traffic safety culture for all modes.

1.3 Leverage partnerships to implement Toward Zero Deaths and Vision Zero strategies and road safety design initiatives.

1.4 Implement best practices for people to feel safe and secure walking, rolling, bicycling and taking transit.

1.5 Develop effective engagement efforts to educate local agencies and the general public on engineering solutions that will improve safety.

2. Modify infrastructure to accommodate all modes of transportation using complete streets, context sensitive and Safe System approaches.

2.1 Explore opportunities for lower cost solutions that can be deployed quickly.

2.2 Design roads for appropriate speeds based on land use context and user needs.

2.3 Design and maintain transportation infrastructure to support current and new technology with proven safety benefits for all users.

3. Emphasize equitable education and enforcement techniques with proven safety benefits for people and communities.

3.1 Support effective education and enforcement efforts focused on unsafe transportation behaviors such as speeding, not using seatbelts, distracted driving, driving under the influence, etc.

3.2 Engage communities in an ongoing dialogue on transportation safety needs for all people and modes.

3.3 Collaborate with other agencies like the Department of Public Safety to explore equitable enforcement approaches through research and review of new and best practices.

3.4 Expand collecting and sharing of transportation safety data to include factors most important to underserved populations.

3.5 Develop and share critical safety information and support education and outreach efforts to improve health, safety and security for people.

4. Prioritize safety for people and communities through the safe movement of goods.

4.1 Invest to increase safe and reliable routing for hazardous, oversize and overweight material transport.

4.2 Increase availability and accessibility of safe and reliable freight truck parking.

4.3 Invest in safety improvements to roads, sidewalks, bicycle lanes and trails that cross railroads and freight routes, including the installation of gates and warning signs.

5. Collaborate with local, regional, Tribal, state and federal partners to ensure efficient and coordinated response to special, emergency and disaster events.

5.1 Work with emergency medical and trauma services to reduce response time and increase survivability.

5.2 Enhance and maintain emergency communications infrastructure across the state.

5.3 Preserve and enhance critical access routes for emergency response.

5.4 Develop emergency response plans in areas where evacuation or other major events may require coordinated transportation responses.

6. Promote the development and deployment of connected and automated transportation technologies.

6.1 Pilot technologies and business models to maintain flexibility in a changing market.

6.2 Use technology to improve transportation accessibility and safety for all Minnesotans and to reduce transportation disparities.

6.3 Improve school and work zone safety by leveraging connected and automated vehicle technologies and data.

6.4 Advance connected and automated vehicle research and data collection to address Minnesota’s transportation challenges and opportunities.



SYSTEM STEWARDSHIP

STRATEGICALLY BUILD, MAINTAIN, OPERATE AND ADAPT THE TRANSPORTATION SYSTEM BASED ON DATA, PERFORMANCE AND COMMUNITY NEEDS. ENSURE EFFECTIVE AND EFFICIENT USE OF RESOURCES.

WHAT THIS IS ABOUT

MnDOT and transportation partners are stewards of the transportation system. This includes the management of specific transportation assets and the overall transportation system. Ensuring the transportation system stays in a state of good repair is key goal. With a changing climate and other disruptive events, there is also a focus on resiliency of the transportation system. Each of these components plays a key role in ensuring the transportation network is reliable.

MANAGING ASSETS is a systematic process of cost-effectively operating, maintaining and upgrading assets once they are built or purchased. Transportation assets include all aspects of the transportation system such as travel ways, vehicles and support facilities. This also includes data, software and research that help improve materials and practices to maximize the useful life of an asset. The trend for the past decade has been to focus on maintaining and modernizing existing roads and bridges, while strategically completing the network for other modes. This continues to be a priority.

DESIGNING WITH CONTEXT SENSITIVITY ensures that the character of projects is appropriate to the surrounding context, such as built, natural and cultural elements. Developing accessible transportation facilities with the community in mind can create transportation projects that reflect the goals of the people who live, work and travel in the area. Context varies by geography, community and how someone uses the system. A community-based approach to transportation requires partnering early and often, understanding the needs of all users and considering impacts that extend beyond the right-of-way.

PRACTICING ENVIRONMENTAL STEWARDSHIP protects and improves natural and cultural resources. This includes focusing on equity, the environment and our economy while also planning for the near- and long-term stewardship of environmental resources. MnDOT and transportation partners can consider new environmental quality techniques, maintenance activities and alternative site design practices to preserve the state’s natural and cultural resources while reducing harm.

DEVELOPING THE TRANSPORTATION WORKFORCE can provide opportunities to leverage innovation and technology. Innovation is critical to get the most out of transportation investments. By seeking a diverse workforce and promoting transportation careers, MnDOT and transportation partners can identify more efficient ways to build, maintain and adapt to ongoing system-level changes (e.g., climate change).



PERFORMANCE MEASURES

Table 5-2 lists performance measures related to the System Stewardship objective. More information on these performance measures can be found in Appendix I – Performance Measures.

Table 5-2: System Stewardship Performance Measures, 1 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Pavement Condition	Annual percent of state highways with good and poor ride quality	<ul style="list-style-type: none"> Interstate Good: 92.5% Interstate Poor: 0.4% NHS Good: 82.2% NHS Poor: 0.5% Non-NHS Good: 77.2% Non-NHS Poor: 2.0% (2021)	<ul style="list-style-type: none"> Interstate Good: $\geq 70\%$ Interstate Poor: $\leq 2\%$ NHS Good: $\geq 65\%$ NHS Poor: $\leq 4\%$ Non-NHS Good: $\geq 60\%$ Non-NHS Poor: $\leq 8\%$ 	Lead	Percent, trend and predicted future
Bridge Condition	Annual percent of state bridges in good and poor condition as a percent of total bridge deck area	<ul style="list-style-type: none"> NHS Good: 30.4% NHS Poor: 6.3% Non-NHS Good: 30.5% Non-NHS Poor: 4.4% (2021)	<ul style="list-style-type: none"> NHS Good: $\geq 55\%$ NHS Poor: $\leq 5\%$ Non-NHS Good: $\geq 50\%$ Non-NHS Poor: $\leq 8\%$ 	Lead	Percent, trend and predicted future
Bridge Inspections	Annual percent of routine bridge inspections completed on time	99.5% (2020)	100%	Lead	Percent and trend
Culvert Condition	Annual percent of highway culverts in poor or severe condition	17% (2020)	$\leq 10\%$	Lead	Percent and trend
ADA Compliance	Total percent of state-owned sidewalks, signals, curbs and driveways substantially compliant with ADA standards	<ul style="list-style-type: none"> Sidewalk 66% compliant Signals 76% compliant Curb Ramp 61% compliant (2021)	100% by 2037	Lead	Percent and trend
Airport Pavement Condition	Measure identifying the condition and quality of the airport infrastructure across the state	Under Redevelopment	$\leq 4\%$	Lead & Partner	Percent and trend

CHAPTER 5 | SYSTEM STEWARDSHIP

Table 5-3: System Stewardship Performance Measures, 2 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Rural Transit Vehicle Condition	Percent of 5311 vehicles exceeding Useful Life Benchmark (ULB)	7.5% (2020)	<10%	Partner	Percent and trend
Rest Area Condition	Share of buildings in poor condition	8% (2021)	<4%	Lead	Percent and trend
Native Seeding and Plantings	Percentage of acres planted with native seeds and plants as part of large projects	<ul style="list-style-type: none"> • Seeding: 61% (2020) • Planting: 50% of projects planted with native plantings (2021) 	<ul style="list-style-type: none"> • Seeding: ≥75% • Planting Urban: ≥80% • Planting Rural: ≥90% 	Lead	Percent and trend
Road Salt Chloride Use	Rate of liquid to solid de-icing chemicals applied to reduce overall chlorides used on the roadway for snow and ice control	41 gallons of liquid chlorides used for every ton of salt (2020-2021)	200 gallons of liquid per ton of solid by 2027	Lead	Rate and trend
Workforce Participation	Annual percent ethnic representation and women in the highway-heavy construction workforce	12.9% of people working on a federal aid highway project were ethnic representation and 11.1% were women (July 2021)	Increasing	Partner	Percent and trend
Representation within MnDOT	Annual percent racial and ethnic representation and women in MnDOT's workforce	11% ethnic representation and 22% women in MnDOT's workforce	Increasing	Lead	Percent and trend

Other related performance measures include: Rail Grade Crossings (Transportation Safety), Greenhouse Gas Emissions (Climate Action) and Resilience (Climate Action).

“Undeniably, funding for maintenance and preservation activities needs to be consistent and sustainable.”

– Comment shared during SMTP engagement

STRATEGIES & ACTIONS

1. Maximize the useful life of transportation assets while considering performance, costs and impacts to people, the environment and our economy.

- 1.1 Incorporate asset management principles in capital, maintenance and operations decisions.
- 1.2 Ensure capital planning processes cover preventive maintenance.
- 1.3 Review planned maintenance and reconstruction projects to identify cost-effective opportunities to improve safety, manage congestion and improve transportation options.
- 1.4 Minimize environmental impacts and lower lifecycle costs through the reuse of materials and use of innovative new materials and techniques.
- 1.5 Use performance-based planning and data to inform the location and timing for project improvements.

2. Improve coordination with partners on the management of all assets connected to the transportation system.

- 2.1 Expand fiber optic and communications infrastructure for safety, access and operational benefits.
- 2.2 Explore contractual, technical and design options for better year-round maintenance and use for all modes of transportation.
- 2.3 Align timing and scale of transportation improvements with local utility replacement plans.



3. Plan, design, develop and maintain transportation infrastructure and facilities in a way that reflects and is informed by the surrounding context.

- 3.1 Make transportation improvements that support existing and compatible planned land uses.
- 3.2 Right size the transportation system to make the best use of available resources and right-of-way for all modal options.
- 3.3 Expand opportunities to leverage full value and productivity of existing transportation right-of-way.
- 3.4 Develop a transportation system that is respectful of cultural resources and maintains those resources for generations to come.

4. Preserve and improve Minnesota’s natural resources and minimize harm to the environment.

- 4.1 Promote pollinator habitat, native plantings and trees within transportation right-of-way.
- 4.2 Integrate green infrastructure practices into transportation projects and facilities.
- 4.3 Improve water quality through the development and use of innovative stormwater management strategies.
- 4.4 Implement practices that reduce chloride use during winter maintenance.
- 4.5 Research, develop and implement measures to preserve habitats near the transportation system, protect wildlife and limit the spread of invasive species.

5. Provide training and resources for a diverse and inclusive transportation workforce.

- 5.1 Examine current hiring practices and policies to reduce biases.
- 5.2 Identify opportunities to attract, retain, develop and promote Black, Indigenous and People of Color, people with disabilities, women and people from other underserved communities.
- 5.3 Set and meet equity goals in awarding contracts and build community capacity to fulfill contracting goals.
- 5.4 Analyze and reduce barriers to contracting such as project size, performance bonding, insurance requirements and capital access.
- 5.5 Provide consistent equity messaging and training opportunities in the transportation sector.

6. Promote transportation trades and technical careers.

- 6.1 Promote careers in transportation including job fairs, partnering with schools and other activities.
- 6.2 Support organizations to create a diverse pipeline of qualified applicants for construction and transportation operations.
- 6.3 Work with partners to develop training and apprenticeship programs in transportation-related occupations with high demand.
- 6.4 Create new partnerships to expand recruitment efforts that address transportation needs and the pool of bus, commercial and volunteer drivers.



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CLIMATE ACTION

ADVANCE A SUSTAINABLE AND RESILIENT TRANSPORTATION SYSTEM. ENHANCE TRANSPORTATION OPTIONS AND TECHNOLOGY TO REDUCE GREENHOUSE GAS EMISSIONS. ADAPT MINNESOTA'S TRANSPORTATION SYSTEM TO A CHANGING CLIMATE.

WHAT THIS IS ABOUT

Minnesota's climate is changing and will continue to do so for the foreseeable future. The decades ahead will bring even warmer winters and nights and heavier rainfalls. This includes the likelihood of increased summer heat and the potential for longer dry spells. Minnesota is also likely to see more severe weather and floods. For these reasons, climate change will impact the way transportation infrastructure is used, built, operated and maintained. Change is needed to ensure the transportation system can sustain through and adapt to climate change. Key commitments include reducing emissions, coordinating with communities and building resiliency.

ENHANCING TRANSPORTATION OPTIONS

to provide a variety of choices for people to access goods, services and destinations is key. Transportation partners must work together to make transportation accessible, equitable and reliable, which can encourage shifts to lower emission transportation options.

REDUCING EMISSIONS from the transportation sector will create healthier and more livable communities. Minnesota's transportation sector is the largest contributor to greenhouse gas emissions—the most significant cause of climate change—in the state. This objective focuses on tailpipe emissions as this presents a significant near-term opportunity to curb GHG emissions. Lower emissions modes of travel (such as walking, rolling, bicycling and taking transit), electric vehicles, alternative fuels and innovative technologies and solutions can help reduce GHG emissions.

COORDINATING WITH COMMUNITIES is key to understanding people's needs. Resilient and sustainable solutions need to be centered on community voices, especially underserved communities who are facing severe climate change impacts. It is crucial that coordination and consultation with impacted communities occurs early and often, so the community can be a partner in creating effective, sustainable and adaptive solutions that work for them.

BUILDING RESILIENCY within the transportation sector can help communities recover from a range of events. Within transportation and infrastructure planning, there are two types of climate change responses—mitigation and adaptation. Mitigation focuses on reducing emissions to slow climate change. Reducing GHG emissions results in healthier communities, enhanced biodiversity and a stronger economy. Adaptation focuses on adjusting to the effects of climate change that are already happening and cannot be avoided. Adaptation can reduce vulnerability and increase resilience through asset management, long-range planning, design, construction, operations and maintenance.

PERFORMANCE MEASURES

Table 5-3 lists performance measures related to the Climate Action objective. More information on these performance measures can be found in Appendix I – Performance Measures

Table 5-3: Climate Action Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Greenhouse Gas Emissions	Total annual greenhouse gas emissions from the transportation sector (percentages shown in parenthesis reflect percent reduction from 2005)	40.3 million metric tons CO ₂ e (2018)	<ul style="list-style-type: none"> • 29.5 million metric tons CO₂e (30%) by 2025 • 20.1 million metric tons CO₂e (50%) by 2030 • 14.1 million metric tons CO₂e (65%) by 2035 • 8.0 million metric tons CO₂e (80%) by 2040 	Lead & Partner	Number and trend
Zero Emission Vehicles (ZEV) Registered in Minnesota	Percent of all light-duty vehicles registered in Minnesota that are electric or another type of ZEV	23,897 EVs registered, 0.4% of total vehicles (December 2021)	<ul style="list-style-type: none"> • 5% by 2025 • 20% by 2030 • 45% by 2035 • 65% by 2040 	Support	Percentage and trend
Zero Emission Vehicles (ZEV) Sold in Minnesota	Percent of new light-duty vehicles registered in Minnesota that are electric or another type of ZEV	About 2% (2021)	<ul style="list-style-type: none"> • 20% by 2025 • 60% by 2030 • 100% by 2035 • 100% by 2040 	Support	Percentage and trend
System Resilience	Measure that evaluates resilience at a system level (i.e., not just individual assets)	In development	Work plan item	Lead	Under consideration through SMTP Work Plan
Asset Resilience	Resilience of assets by type (e.g., bridges, culverts, etc.)	In development	Work plan item	Lead	Under consideration through SMTP Work Plan

Other related performance measures include: Perceptions of Safe Walking and Bicycling (Transportation Safety), Vehicle Miles Traveled (Critical Connections), Regional Job Accessibility by Bicycle, Car and Transit (Critical Connections), Transit Span of Service (Critical Connections), Bridge Condition (System Stewardship), Culvert Condition (System Stewardship), Native Seeding and Planting (System Stewardship) and Physical Activity (Healthy Equitable Communities).

STRATEGIES & ACTIONS

1. Transition the transportation sector away from dependence on fossil-based fuels.

- 1.1 Invest in and encourage the transition of vehicle fleets to electric or non-fossil-based fuels.
- 1.2 Partner to expand electric vehicle charging using non-fossil-based sources of energy.
- 1.3 Implement a clean fuels standard.
- 1.4 Integrate equity in siting of electric vehicle charging infrastructure.
- 1.5 Support non-fossil-based sources of electricity for trucking, rail, aviation and maritime use.
- 1.6 Encourage more efficient travel like grouping errands or activities into one trip, shortened trips, etc. when using transportation powered by fossil fuels.

2. Make transportation and land use decisions that reduce total greenhouse gas emissions.

- 2.1 Integrate transportation and land use decisions to encourage mode shifts and to reduce the distance needed to travel for daily needs.
- 2.2 Support land use decisions and parking policies that expand walking, rolling, bicycling and transit options for people to get to destinations.
- 2.3 Monitor, track and forecast greenhouse gas emissions as part of investment, program and project decision making.
- 2.4 Develop state, regional, county and city climate action plans.

3. Protect people and communities through regional approaches to mitigate risk from the changing climate and extreme weather.

- 3.1 Integrate climate change considerations into transportation decision making and evaluate opportunities to mitigate risks.
- 3.2 Develop corridor and regional vulnerability assessments.
- 3.3 Coordinate with agencies on stormwater management within and on adjacent lands to the transportation system.

4. Increase resiliency of people and communities by adapting infrastructure to withstand the changing climate.

- 4.1 Adapt design and maintenance practices to increase the resiliency of the transportation system.
- 4.2 Coordinate with partners to identify and implement transportation right-of-way uses that reduce threats to people from exposure to extreme weather and temperatures.
- 4.3 Use economic, disaster and public health recovery efforts to rebuild in a way that is more resilient.
- 4.4 Leverage data to inform investment and project development decisions and identify new approaches to climate adaptation.
- 4.5 Prioritize infrastructure resiliency along critical freight corridors to ensure safe and efficient delivery of goods during adverse conditions.



Climate Action

Innovative solutions are needed to make our transportation system more resilient to climate change and extreme weather. A more resilient system can reduce health impacts and minimize disruptions to the travel of people and goods. The Climate Action strategies focus on emerging transportation issues not covered by other sections of the SMTP. Climate-related strategies and actions in other SMTP objectives include reducing vehicle miles traveled, encouraging travel options other than driving alone and coordinating with local partners on land use planning. Many strategies and actions throughout Chapter 5 are part of a coordinated and comprehensive approach to climate action.

“The changing climate needs to be considered for future projects. While I may not see the change, I would love for my grandchildren to live in a better climate.”

– Policy Panel and Online Discussion Board Participant

CRITICAL CONNECTIONS

MAINTAIN AND IMPROVE MULTIMODAL TRANSPORTATION CONNECTIONS ESSENTIAL FOR MINNESOTANS' PROSPERITY AND QUALITY OF LIFE. STRATEGICALLY CONSIDER NEW CONNECTIONS THAT HELP MEET PERFORMANCE TARGETS AND MAXIMIZE SOCIAL, ECONOMIC AND ENVIRONMENTAL BENEFITS.

WHAT THIS IS ABOUT

The transportation system is a vital part of keeping Minnesotans connected to family, jobs, healthcare, schools, places of worship, shopping, recreation and entertainment. What is considered a critical connection is different for each person depending on where they live and each mode. Components of this objective include identifying key connections, ensuring transportation options and sharing responsibility to ensure critical connections.

IDENTIFYING KEY CONNECTIONS within and between communities is key to providing a complete, efficient and affordable transportation system. Critical connections vary by transportation mode and may be different for walking, rolling, bicycling, transit, driving and freight purposes. These connections differ in scale depending on how people and goods move across the state, throughout a region or within a community. Changes in our economy may warrant new freight connections or increase connectivity. Also, new investments are needed to increase system connectivity for people walking, rolling, bicycling and taking transit.



ENSURING TRANSPORTATION OPTIONS can support communities by providing the necessary link between people and opportunities. Businesses need predictable and reliable access to suppliers and customers. People need access to jobs, school, food, childcare, health services and other destinations no matter where they live. To accommodate people who don't drive, it is necessary to provide various transportation options like complete accessible sidewalk networks, shared mobility services, transit, shuttles, etc. All communities are designed differently and need various types of transportation networks. A well-connected local network can promote mobility choice, reduce local trips by vehicle and positively impact the environment.

Providing transportation options is key to reducing per capita vehicle miles traveled (VMT). VMT is one measure that can help us understand how the system is serving all users in different communities across the state. It helps inform progress towards agency goals around safety, accessibility, person throughput and reducing emissions causing climate change.

Reducing VMT will look different depending on the geography, community and context. There may be more potential to reduce VMT in urban communities where denser development is more conducive to walking, biking and transit options. Rural communities have farther distances between destinations, fewer convenient multimodal options and less access to high-speed internet. Additionally, agriculture, manufacturing and tourism are important parts of Minnesota's economy. Collaborating with partners to evaluate strategies for different geographic areas, populations, businesses and communities will allow for the balance between reduction in VMT and continued support to economic activity.

SHARING RESPONSIBILITY across all transportation partners is key to identifying, maintaining and enhancing priority connections. MnDOT and transportation partners strive to provide connections that prioritize people's movement and quality of life. This includes sidewalks, bicycle routes, roadways, waterways, intercity and regional bus, airports and railways. All connections, regardless of level, location or transportation type, need to be coordinated with one another to ensure a connected Minnesota.



PERFORMANCE MEASURES

Table 5-4 lists performance measures related to the Critical Connections objective. More information on these performance measures can be found in Appendix I – Performance Measures.

Table 5-4: Critical Connections Performance Measures, 1 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Travel Time Reliability	Percent of person-miles traveled on the National Highway System (NHS) that are considered reliable	<ul style="list-style-type: none"> 84.9% in 2019 95.4% in 2021 	≥90%	Lead	Percent and trend
Truck Travel Time Reliability	Index measuring the consistency of commercial truck travel times on the Interstate system	<ul style="list-style-type: none"> 1.48 in 2019 1.24 in 2021 	≤1.5	Lead	Number and trend
Vehicle Miles Traveled per Capita	Number of miles traveled across Minnesota per capita (percentages shown in parentheses are the percent reduction from 2019)	<ul style="list-style-type: none"> 10,691 miles per capita (2019) 9,957 miles per capita (2021) 	<ul style="list-style-type: none"> 10,263 (-4%) by 2025 9,835 (-8%) by 2030 9,515 (-11%) by 2035 9,195 (-14%) by 2040 	Partner	Number and trend and by urban, suburban and rural
Job Accessibility by Bicycle, Car and Transit	Average annual number of jobs accessible within 30-minutes during morning peak traffic by bicycle (on medium stress roads), driving and transit	<ul style="list-style-type: none"> 40,967 jobs accessible by bicycle (on medium stress roads) 586,940 jobs accessible by car 13,069 jobs accessible by transit (2019) 	Increasing	Lead & Partner	Number and trend by mode
Traveler Delay	Average delay per person in the Twin Cities	9.7 minutes (2018)	≤9 minutes per weekday	Lead & Partner	Number and trend
Transit On-time Performance	Annual transit on-time performance within the Twin Cities and within Greater Minnesota	<ul style="list-style-type: none"> Twin Cities: Metro Transit Bus: 84.8% (2021) Greater Minnesota: 95.2% (2021) 	<ul style="list-style-type: none"> Twin Cities: Metro Transit Bus: ≥90% Greater Minnesota: ≥90% 	Partner	Percent and trend

Table 5-4: Critical Connections Performance Measures, 2 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Transit Span of Service	Measure communicating the percentage of public transportation services that meet minimum service guidelines for access in the Twin Cities and Greater Minnesota	Under Redevelopment	≥90%	Partner	Percent and trend
Transit Ridership	Boardings recorded by public transit providers	<ul style="list-style-type: none"> • Urban: 91.6 million (2019); 38.1 million (2021) • Rural: 11.5 million (2019); 6.2 million (2021) 	Increasing	Partner	Number and trend by Twin Cities Metropolitan Area and in Greater Minnesota
Air Transportation	Annual number of available seat miles offered from commercial service airports	<ul style="list-style-type: none"> • MSP: 24.3 million (2019); 16.8 million (2021) • Greater Minnesota: 181,447 (2019); 131,952 (2021) 	Increasing	Support	Number and trend

Other related performance measures include: ADA Compliance (System Stewardship), Emergency Response (Transportation Safety), Greenhouse Gas Emissions (Climate Action), Multimodal Accessibility (Healthy Equitable Communities) and Physical Activity (Healthy Equitable Communities).



STRATEGIES & ACTIONS

1. Provide equitable access to destinations and services.

- 1.1 Address the needs of people most vulnerable in the transportation system using complete streets, context sensitive and Safe System approaches.
- 1.2 Partner with other agencies on projects to create or expand connections within and between communities.
- 1.3 Partner and invest in high-capacity transit services and transitway corridors where existing and planned land uses justify a high demand for transit services in urban areas.
- 1.4 Increase accessibility for people walking, rolling, bicycling and taking transit as part of highway resurfacing and preservation projects, traffic operations and system design.

2. Ensure efficient, affordable, reliable and safe movement of goods to support a vibrant and growing economy.

- 2.1 Define priority networks and integrate the networks into decision making based on connectivity and access to destinations.
- 2.2 Add new and improve existing first- and last-mile connections for better freight access to the transportation system.
- 2.3 Address freight bottlenecks in the transportation system.
- 2.4 Use technology for system optimization for all modes.

3. Provide transportation options to connect people to services, employment, neighborhoods and other destinations.

- 3.1 Develop and improve multimodal options including intercity passenger rail and intercity bus within and between cities and regions.
- 3.2 Integrate transit with mobility options, shared mobility and micromobility through system improvements like mobility hubs and transit stations.
- 3.3 Provide more flexibility in types, spans and frequency of transit service to better connect people with key destinations.
- 3.4 Expand and modify the transportation network for safe and convenient options for people to walk, roll, bicycle and take transit.

4. Support economic vitality through transportation investment.

- 4.1 Identify and prioritize solutions with a high return on investment.
- 4.2 Collaborate with partners early to leverage existing and planned transportation resources to support business development.
- 4.3 Support and expand transportation programs that demonstrate potential to strengthen economic competitiveness.
- 4.4 Meet regularly with economic development officials, freight carriers and other industry stakeholders to understand changing economic conditions and future freight transportation needs.
- 4.5 Communicate the importance of freight movements to economic and community health.

5. Follow a tiered, phased approach to addressing mobility and safety based on the following order of actions.

- 5.1 Encourage walking, rolling, bicycling, carpooling and taking transit.
- 5.2 Support and encourage technology solutions like telework and telehealth that provide virtual access to jobs and services.
- 5.3 Leverage travel demand management strategies as part of comprehensive congestion management planning.
- 5.4 Implement lower cost and targeted improvements before considering major expansion.

6. Encourage modal shifts away from single-occupant vehicles through infrastructure improvements, education, programs and services.

- 6.1 Use quick, low-cost and creative projects to gain public and institutional support for investing in permanent projects.
- 6.2 Use data and community input to understand walking, rolling, bicycling and transit needs and preferences for vulnerable populations.
- 6.3 Increase consumer awareness of transportation choices using education, outreach and incentives to inform travel decisions.
- 6.4 Support complete streets implementation through education, trainings and technical assistance.
- 6.5 Invest to make travel by non-single occupant vehicle more easily available and attractive to use.



HEALTHY EQUITABLE COMMUNITIES

FOSTER HEALTHY AND VIBRANT PLACES THAT REDUCE DISPARITIES AND PROMOTE HEALTHY OUTCOMES FOR PEOPLE, THE ENVIRONMENT AND OUR ECONOMY.

WHAT THIS IS ABOUT

Healthy equitable communities provide opportunities for everyone to reach their fullest potential. They connect people to employment, education, recreation, goods, services and more. Also, the places we live, work and play have considerable impact on health and wellbeing. Investments preserve and promote community identity and should be considered a part of the community. Not all places are the same and there is no one-size-fits-all transportation solution.

Unfortunately, transportation can be a barrier, especially for underserved communities such as BIPOC, people with disabilities, people with low incomes, people with limited English proficiency and others. Tailoring solutions to specific places, leads to projects that respect and complement people, the environment and our economy. This also helps ensure that Minnesota is advancing equitable access to opportunities, preserving the natural and cultural heritage for future generations and maintaining an environmentally and economically viable transportation system for all to use in the future.

COORDINATING WITH LOCAL PARTNERS to develop and design places that reflect the character of the community help to advance the health of people, the environment and our economy. Supporting local strategies and development practices create employment opportunities and can lower housing and transportation costs.

ELIMINATING BARRIERS AND REDUCING DISPARITIES lead to healthy outcomes for all. Transportation provides connections to destinations, but often serves as a barrier for underserved communities. Engaging with people underserved by transportation decision making can aid in reducing inequities. Community-based organizations are able to help identify and remove barriers to participation. By identifying disparities, transportation partners can develop policies, programs and deliver projects that expand mobility and access.

ADVANCING THE HEALTH OF PEOPLE AND COMMUNITIES means expanding opportunities, access and mobility choices for people. Transportation partners should work with communities to support opportunities for convenient multimodal access. This can look like providing connections for physical activity or improving access to a park or recreation area. Also, transportation is an important part of the built environment, and contributes to healthier, more livable communities. By considering health and equity in transportation planning, transportation partners can develop new policies, programs and projects that will improve the health and wellbeing of people and the communities they live in.



PERFORMANCE MEASURES

Table 5-5 lists performance measures related to the Healthy Equitable Communities objective. More information on these performance measures can be found in Appendix I – Performance Measures.

Table 5-5: Healthy Equitable Communities Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Air Quality	Number of criteria pollutants below National Ambient Air Quality Standards (NAAQS) threshold each year	Minnesota is in compliance with NAAQS	All criteria pollutants below threshold	Partner	Number of and which pollutants not meeting standards
Physical Activity	Percent of Minnesotans who bicycle or walk at least weekly	35% of Minnesotans bicycle or walk at least weekly (2019)	<ul style="list-style-type: none"> • 40% by 2025 • 45% by 2030 • 50% by 2035 • 60% by 2040 	Partner	Percent and by demographic segments
Transportation Cost	Measure of how much household income goes to transportation	In development	Work plan item	Support	Under consideration through SMTP Work Plan
Multimodal Accessibility	(i.e., destination access) for walking, bicycling and transit at a project- and program-level	In development	Work plan item	Lead & Partner	Under consideration through SMTP Work Plan
Increase in Transportation Equity	Transportation equity is directly influenced by improving multimodal access, reducing transportation costs and improving transportation safety	In development	Work plan item	TBD	Under consideration through SMTP Work Plan

Other related performance measures include: Fatalities and Serious Injuries (Transportation Safety), Perception of Safe Walking and Bicycling (Transportation Safety), Transit Safety (Transportation Safety), ADA Compliance (System Stewardship), Workforce Participation (System Stewardship), Vehicle Miles Traveled (Critical Connections), Regional Job Accessibility by Bicycle, Car and Transit (Critical Connections), Transit Span of Service (Critical Connections) and Public Trust and Confidence (Open Decision Making).

STRATEGIES & ACTIONS

1. Coordinate transportation and land use planning among transportation partners, stakeholders and the public.

- 1.1 Design spaces that reflect the identity and priorities of the community, foster a sense of belonging and improve Minnesotans' quality of life.
- 1.2 Collaborate with a broad set of stakeholders and partners on transportation planning as part of comprehensive, economic development and land use planning, coordination and review.
- 1.3 Collaborate with partners to identify and plan economic development sites that can enhance transportation connectivity.
- 1.4 Encourage compact development to enable job access through different modes.
- 1.5 Identify opportunities to redesign or remove transportation barriers that divide or separate communities.

2. Eliminate burdens and reduce structural inequities for people and communities disproportionately impacted by transportation.

- 2.1 Work with community partners to identify and remove barriers to participating in transportation planning and decision making.
- 2.2 Identify disparities in mobility and access and develop plans to reverse or eliminate these impacts through multimodal transportation solutions.
- 2.3 Implement equity reviews for transportation or land use policies, planning, programs and projects.
- 2.4 Develop and support community resources to reduce inequities in transportation.
- 2.5 Accelerate technology solutions for accessible and reliable transportation.
- 2.6 Pursue strategies to mitigate past effects of transportation construction.



3. Reduce combined housing and transportation costs for cost-burdened households.

- 3.1 Improve first- and last-mile connections in neighborhoods and job centers.
- 3.2 Support the construction of complete streets and a connected network to accommodate walking, rolling, bicycling and transit.
- 3.3 Educate people on the impacts transportation decisions have on housing costs.
- 3.4 Expand and enhance public transportation to improve access across the state.
- 3.5 Promote infill development and land use practices that support walkable and bikeable communities.

4. Develop and support a diverse workforce in Minnesota.

- 4.1 Promote job retention and creation in the core of communities to support community vitality.
- 4.2 Ensure the transportation system supports job access for second and third shift workers.
- 4.3 Collaborate with multisector partners to identify, understand and address gaps in workforce skills for current and future demand.
- 4.4 Connect people to education, training and workforce development centers.

5. Leverage transportation solutions to improve public health.

- 5.1 Integrate health and equity considerations in transportation planning, programming and project delivery using a Health in All Policies approach.
- 5.2 Support opportunities for physical activity through walking, rolling and bicycling.
- 5.3 Implement programs and investments that improve air quality and reduce noise especially for people experiencing the greatest impacts.
- 5.4 Ensure convenient multimodal access to open space, parks and recreation areas.
- 5.5 Increase equitable access to healthy, culturally appropriate and sustainable food through transportation options.
- 5.6 Align transportation assets and services with community needs during public health emergencies.



OPEN DECISION MAKING

MAKE EQUITABLE TRANSPORTATION DECISIONS THROUGH INCLUSIVE AND COLLABORATIVE PROCESSES THAT ARE SUPPORTED BY DATA AND ANALYSIS.

WHAT THIS IS ABOUT

Transportation decision makers are stewards of the transportation system and have the responsibility to make informed choices and be open about how and why decisions are made. Decision makers need to rely on many different types of information and input to make responsible decisions supported by data and analysis, when applicable. This also requires balancing many, sometimes competing, priorities. Open, transparent and equitable decision making are essential to building better relationships and ensuring learning, understanding and trust.

ENGAGING WITH PEOPLE using the transportation system means creating opportunities for people to influence decisions. Good engagement starts with understanding community wisdom and uses inclusive, accessible and varied tools to reach and hear communities. Communication must be effective; this means information is available, easy to find, culturally responsive and understandable. This includes using plain language and meeting the Americans with Disabilities Act (ADA) accessibility standards. Good engagement and communication result in decisions that better reflect the community's priorities.

Engagement also requires being clear and specific about what decisions will be made and by whom. The public's role in transportation decision making is not static. The process for each decision can and will likely be different. Engagement should ensure that people understand their role and what opportunities there are to influence the decision at hand. Engagement done early and often builds capacity for transportation partners and the public to work together.

LEARNING AND UNDERSTANDING are essential in the decision-making process. Early coordination and collaboration are key to learning and understanding community goals, issues and concerns. Transportation partners should build better relationships to understand the unique needs of communities. Communication and education for the public is also crucial to meet Minnesota's transportation goals. Open decision making includes communicating the big picture to develop support and mutual understanding of constraints and opportunities. Everyone can listen, learn and seek to understand the expertise that others are bringing into conversations. In partnerships, learning and understanding go both ways.

ENSURING TRANSPARENT AND EQUITABLE DECISION MAKING is about building public trust through thoughtful communication, engagement and education. Transportation decision makers need to be accountable for the decisions they make, because the majority of transportation funding comes from the public through taxes and fees. Decision makers need to ensure public resources are used efficiently and effectively, and that decisions are well documented and communicated.

This work should be rooted in understanding and overcoming the history of transportation-related trauma and exclusion that underserved communities have historically faced. Some community groups—such as Black, Indigenous and People of Color (BIPOC)—may not be ready to start building relationships with agencies and staff. Trust in government beyond transportation agencies has been eroding over time especially in communities harmed by previous decisions.

Working with a variety of partners and community-based organizations can help get community input and data while making progress toward building trust and forming relationships. Asking a series of questions which include who is influencing decisions, who is potentially left out, who is burdened and

who is benefitting by a transportation decision can help to advance transportation equity. The SMTP policy direction lays the groundwork of trust and relationship building to improve transportation decision making in the future.

PERFORMANCE MEASURES

Table 5-6 lists performance measures related to the Open Decision Making objective. More information on these performance measures can be found in Appendix I – Performance Measures.

Table 5-6: Open Decision Making Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Public Trust and Confidence	Annual percent of respondents that agree with the following statements: <ul style="list-style-type: none"> “I feel MnDOT understands my needs (and the needs of others like me) and has developed a transportation system that works well for me.” “MnDOT acts in a financially responsible manner.” “How confident are you today in MnDOT’s ability to do a good job at communicating accurate information to Minnesota citizens about their transportation plans and projects?” 	74% felt MnDOT understood their needs, 64% felt MnDOT acts in a financially responsible manner and 82% felt MnDOT was communicating accurately about transportation plans and projects (2020)	≥80% overall and for each demographic segments	Lead	Percent and trend; report by different demographic segments
Project-Level Public Engagement Measures	e.g., post-project surveys	In development	Work plan item	Lead	Percent and trend
Partner Coordination	Measure MnDOT coordination with external partners during planning and programming	In development	Work plan item	Lead	Under consideration through SMTP Work Plan

OTHER RELATED PERFORMANCE MEASURES INCLUDE: Representation within MnDOT (System Stewardship).

STRATEGIES & ACTIONS

1. Ensure people have opportunities to play an active and direct role in transportation decision making.

- 1.1 Start transportation processes by working with communities to identify strategies that support people’s vision, priorities and needs.
- 1.2 Determine community demographics for plans, programs and projects and tailor public engagement approach to increase broad community participation and input.
- 1.3 Create public engagement plans that clearly articulate decision points, who will be involved at each step of the process and who has authority over each decision.
- 1.4 Include those impacted by transportation decisions as members of decision-making teams.
- 1.5 Actively engage in community-centered conversations and use community wisdom to inform decision making.
- 1.6 Create and implement processes and systems to monitor and evaluate effectiveness in achieving shared outcomes.

2. Build and strengthen lasting relationships to ensure that people are engaged in transportation projects and activities especially with underserved communities.

- 2.1 Commit to regular two-way communication with partners, stakeholders and the public to continuously gather feedback.
- 2.2 Hire and involve community-based organizations to conduct and lead engagement activities with underserved populations.
- 2.3 Identify and connect with Tribal Governments, local elected officials and community leaders through project scoping and delivery.
- 2.4 Collaborate with partners to include transportation-related questions in their surveys and other data collection efforts with underserved communities.
- 2.5 Coordinate with partners to ensure people’s priorities and needs are considered including for those without reliable transportation choices.
- 2.6 Provide education opportunities and programs for community members and transportation partners to understand each other on how to participate in transportation decision making together.



3. Provide consistent, transparent, fair, just and equitable communication.

- 3.1 Partner with the public and stakeholders to identify, develop and implement communication and engagement approaches.
- 3.2 Use culturally appropriate communication and engagement methods and techniques.
- 3.3 Set plain language and accessibility standards for agency and contractor deliverables and provide training for staff.
- 3.4 Provide training for different communication methods including storytelling.
- 3.5 Increase staff ability and provide resources to improve engagement for people with disabilities and limited English proficiency.
- 3.6 Provide the public with clear information about overarching policy and project goals to help frame community engagement.

4. Understand and learn from personal and community experiences on how the transportation system can negatively and positively affect communities.

- 4.1 Co-create and share narratives about transportation in collaboration with communities that have been harmed by decisions related to the transportation system and built environment.
- 4.2 Use the wisdom from community narratives to inform plans, manuals, training content, etc.
- 4.3 Provide training and resources to build staff capacity to understand cumulative historical impacts of transportation decision making.

5. Use research and data to drive decision making in pursuit of local, regional, Tribal, statewide and national goals.

- 5.1 Ensure key transportation data is kept up-to-date, usable and easily accessible to transportation partners and the public.
- 5.2 Track and share information about transportation needs and system performance to inform decision making.
- 5.3 Increase use of accessible mapping tools and data visualization in communications with the public.
- 5.4 Analyze and present data broken out by community and demographic segments to allow for meaningful analysis.
- 5.5 Use qualitative data to advance transportation equity.



MODES & USERS OF THE TRANSPORTATION SYSTEM

The SMTP is for all the ways people and goods move around Minnesota. The number of ways people and goods travel continues to change and evolve and now even includes substituting travel for virtual access.

AGRICULTURAL EQUIPMENT



Agricultural equipment is not traditionally thought of as a mode, but nevertheless is often a user of the transportation system. Within the past few decades, there has been significant change in both farm size and farm equipment. Changes in agricultural practice has caused a faster shift to larger, heavier equipment than transportation technology and design can monitor and test. Transportation must ensure safe use of the system for agricultural equipment and others traveling in the area.

ANIMAL POWERED VEHICLES



Communities using animal powered vehicles are often located along scenic routes, in agricultural areas, around economic centers and in natural and cultural areas. Transportation construction, operations and maintenance requires taking care to connect with and account for people traveling using animal powered vehicles. This needs to be balanced with the needs of a variety of users.



AVIATION

Aviation is central to social connections and economic development. Air mobility is about efficiency, speed and interconnectivity. Improvements in aviation are creating new opportunities to move people and goods. This mode is positioned to lead innovation and have big impacts on new mobility, sustainability and freight.

BARGES & SHIPS



The ports and waterways connect Minnesota's people and goods to destinations around the US. Rail and water serve the agriculture, mining, manufacturing and trade sectors while air is mostly used for the transport of high-value manufactured goods and consumer products. New infrastructure, programs and services can bring opportunities to turn ports into hubs for innovation, mobility and sustainability.



BICYCLES

Increasing the number of people traveling by bicycle can help meet vehicle miles traveled, physical activity and accessibility targets. Bicycle use varies by context and culture. New electric powered bicycles and cargo bicycles are increasing the ranges and uses of bicycles.



Engineering solutions and education programs can provide more and better opportunities for people to ride their bicycles.



BUSES & LIGHTRAIL TRANSIT

Transit provided vital connections for frontline and essential workers during the pandemic. Transit services are key to connecting people to destinations both historically and now.



Improvements and innovations are transforming transit from a service to an integrated mobility network. Transit can continue to innovate to help address congestion, health, safety, equity and sustainability.



CARS, MOTORCYCLES, TRUCKS & SPORT UTILITY VEHICLES

Motorized passenger vehicles are essential modes for the transportation system. These are the most commonly used forms of transportation in the state. Passenger vehicles provide essential first- and last-mile connections for people and goods. Evaluating and retooling programs and practices can help transportation partners continue to provide people a robust network that meets user needs now and into the future.



COMMERCIAL TRUCKING

The efficient movement of freight and commodities, including the movement of freight by truck, is a key consideration for transportation in Minnesota. Trucking is important to all industries, as even goods moving via other modes often use trucks for the first- and last-mile of the trip. Freight volumes are increasing, and commercial trucking will continue to serve a significant role in transportation and economic development.



MICROMOBILITY

Micromobility services—like electric kick scooters or bike share—provide versatile transportation options especially for shorter trips. Where consistently available, they provide people with options outside personally owning an automobile. These options also help make first- and last-mile connections for people traveling by other modes. Micromobility helps to serve an integrated multimodal transportation system.



CHAPTER 5 | MODES & USERS OF THE TRANSPORTATION SYSTEM

PIPELINES



Pipelines, unlike the other modes of logistics, move through our daily lives unseen, whether buried beneath our feet or silently moving commodities overland through sparsely populated fields. Pipelines serve as a primary route to move crude oil to refineries and natural gas to power plants. This option will continue to have a logistics role in transportation.

TRAINS



The railroad industry is growing and changing. New technology is refining physical systems, and new approaches and practices are improving safety and operations. These changes help boost economic growth, productivity, competitiveness and safety. Efforts are underway to increase intercity passenger rail options.

ATV & SNOWMACHINES



ATVs and snowmachines often operate in transportation right-of-way traveling adjacent to or across roadways. In areas with fewer paved roads, they serve an important transportation function. These uses will continue to be considered and anticipated in areas where they provide recreational and transportation options.

VIRTUAL



While not traditionally considered a mode of transportation, virtual options are increasingly how people access goods, services and connect with family, friends, etc. Over time, virtual options have replaced part or all of some trips that used to be completed using another mode of travel. The future of transportation includes understanding the role of virtual services in connecting Minnesotans to goods and services.

WALKING



Most trips start and end with walking and rolling. Walking for daily or short trips can provide health and economic benefits. Investing in more opportunities for people to walk and roll is especially important in low-income communities and areas with Black, Indigenous and People of Color. Improvements need to focus on removing barriers for people walking and rolling.





WHAT IS NEXT FOR MNDOT

The Minnesota GO Vision, objectives, performance measures, strategies and actions laid out in Chapter 5 provide direction for all transportation partners. This direction outlines how partners should work together to develop, maintain and operate Minnesota’s transportation system. This chapter outlines how the Minnesota Department of Transportation (MnDOT), specifically, will move forward the objectives, strategies and actions of the 2022 Statewide Multimodal Transportation Plan (SMTP). The next steps for MnDOT include identifying near-term work activities, continued planning efforts, monitoring and reporting.

READ CHAPTER 6 TO:

- Understand what MnDOT will do in the next five years (2022-2027) to implement the SMTP.
- Read what is next for MnDOT’s modal and system plans.
- Learn how MnDOT tracks SMTP implementation by reporting each year how the transportation system is operating.

2022-2027 WORK PLAN

MnDOT will initiate the activities listed below before the SMTP is updated in five years. These activities are not necessarily specific to any one objective or strategy but represent key areas for MnDOT to advance. Taken together, these activities will help realize the overall policy direction laid out in this plan. The list is not meant to be all inclusive. There are many other activities in each of these areas and other areas that MnDOT will do in the upcoming years to help move this plan forward.

As a statewide transportation agency, MnDOT works every day with communities around the state and is often asked to help with issues that go beyond transportation. MnDOT can help by enlisting other agencies, partners or organizations whose expertise or authority falls in these areas. Depending on the situation, MnDOT may fill one of several roles:

- **DO:** Some work plan activities are exclusively within MnDOT’s authority to complete. These focus on internal processes, procedures, policies, etc. to inform how the agency makes decisions.
- **LEAD:** For many transportation decisions, MnDOT is typically the leader in partnership with other agencies and communities. MnDOT’s primary and traditional mission is to provide an integrated transportation system and to lead state transportation policy, plans and programs.
- **PARTNER:** For issues or situations that cross over agency disciplines or missions, MnDOT is typically a partner with communities and other agencies. Though MnDOT might not be leading a conversation or an investment, staff may still be involved in other important ways.
- **FACILITATE:** While MnDOT’s primary mission is focused on transportation, MnDOT has the capacity to assist with other issues. These could range from local transportation issues to land use, housing, public health and economic opportunities. While these issues are typically not under MnDOT’s purview, the agency has an interest in the health of the communities it serves and beneficial relationships with Tribal, federal, state and local agencies.

Each category includes acknowledgment of the role MnDOT is expected to play. The work plan activities are categorized by themes that are quick for people to understand and communicate. Related objectives are listed for each work plan item to clearly tie the activities to the policy direction in Chapter 5.

Note that not all activities will be implemented at the same time. Implementation may require building on existing work. This can sometimes mean implementing near-term actions to move towards longer-term strategies. It is possible that MnDOT might not be able to complete all work plan items before the next update of the SMTP. Lessons learned through implementation will provide valuable information and insights for MnDOT processes and operations that could likely extend beyond long-range planning.

WORK PLAN ACTIVITIES

ENGAGEMENT, COMMUNICATIONS & EDUCATION

DO

- **Increase partnerships with community-based organizations** to conduct public engagement and communication activities for MnDOT’s projects, plans, studies and programs. Nurture relationships with community-based organizations to enhance the breadth and depth of collaboration with Minnesotans.

Related objectives: Healthy Equitable Communities, Open Decision Making

- **Evaluate and update policies and procedures that will reduce participation barriers for underserved communities** to engage with MnDOT processes. This includes learning from current pilot projects and developing policy and processes for providing reimbursement, vouchers or incentives to increase participation from underserved communities in our transportation processes and projects.

Related objectives: Healthy Equitable Communities, Open Decision Making

- **Develop a community ambassador program** to enhance public engagement with Black, Indigenous and People of Color (BIPOC), people with limited English proficiency and people with low incomes. Support the development of two-way communications between MnDOT and these populations in transportation planning, policy, program and project-development processes. This includes sharing back to MnDOT information and insights from engagement—such as work done by MnDOT’s Office of Tribal Affairs—to inform future public engagement efforts.

Related objectives: Healthy Equitable Communities, Open Decision Making

- **Provide more continuous engagement with partners and the public.** MnDOT has a large presence within a community during planning and construction activities but is less present and involved if no work is currently underway. Expanding MnDOT’s engagement efforts to include more ongoing communication and relationship building would allow for broader understanding of local and regional priorities.

Related objectives: Open Decision Making

- **Improve transparency of MnDOT decisions and efforts.** MnDOT has increased the transparency of the agency’s decisions by posting project selection scores, candidate lists, plans, programs and other related information. MnDOT will build on this work by expanding the practice to other programs and look for additional opportunities to publicly share more information about decisions the agency makes. Transparency helps ensure people are informed in transportation decision making and helps combat misinformation.

Related objectives: Open Decision Making

Answer to “How do you envision a more equitable future?”

“Re-envisioning ways to bring people to the table, addressing the barriers, and altering the educational requirements that limit Indigenous and Persons of Color to the planning and design process.”

– Comment shared during SMTP engagement

LEAD

- **Collaborate with partners, stakeholders and the public to prepare for connected and automated transportation.** Building knowledge of connected and automated vehicle (CAV) technology throughout Minnesota so people have the information they need and can help shape the future of transportation. Develop two-way, trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota’s CAV program.

Related objectives: Transportation Safety, System Stewardship, Critical Connections, Open Decision Making

PARTNER

- **Enhance public education programs in collaboration with transportation partners.** Keep the public and stakeholders informed on major transportation policy and safety issues using a variety of tools such as communication campaigns, demonstrations, pilots, technical assistance workshops and more.

Related objectives: Transportation Safety, Healthy Equitable Communities, Open Decision Making

“It’s important to center our decision making processes on people’s lived experiences and the challenges that they have, and also connect this to who is making decisions.

-Abdullahi Abdulle, Council of Old and New Wisdom

CLIMATE ACTION AND PUBLIC HEALTH

DO

- **Transition MnDOT’s fleet to zero emission vehicles.** MnDOT owns hundreds of light, medium and heavy duty vehicles. MnDOT has already started to transition the light and medium duty vehicles to zero emission vehicles (ZEV) options and will continue to do so. MnDOT is also exploring options for heavy duty vehicles. MnDOT will be a leader in the state enterprise by encouraging all state departments and agencies to transition to zero emission fleets.

Related objectives: Climate Action, Healthy Equitable Communities

- **Leverage MnDOT right-of-way to reduce carbon emissions.** There is a growing list of ways transportation right-of-way can be used to reduce carbon emissions such as carbon capture and storage, clean energy utilities, active transportation and more. Expand on MnDOT’s NextGen Highways work.

Related objectives: System Stewardship, Climate Action, Healthy Equitable Communities

- **Develop resources to mitigate urban heat islands.** Document understanding of how extreme heat affects Minnesota, what populations are most directly affected and how people are impacted in the long term. Recommend and implement strategies to reduce urban heat islands.

Related objectives: System Stewardship, Climate Action, Healthy Equitable Communities

- **Identify opportunities to use low-carbon construction and building materials.** This includes materials throughout the cement and concrete value chain. Research materials that could be used in all weather conditions. Pursue low-carbon building materials for use in MnDOT facilities.

Related objectives: System Stewardship, Climate Action, Healthy Equitable Communities

LEAD

- **Develop a carbon reduction strategy.** The federal Infrastructure Investment and Jobs Act created dedicated funding for projects that reduce transportation emissions. To do so, states must work with metropolitan planning organizations and other partners to develop a carbon reduction strategy. This will build off of the Pathways to Decarbonization report in 2019 and other recent efforts to identify key strategies for reducing transportation greenhouse gas emissions.

Related objectives: Climate Action, Critical Connections, Healthy Equitable Communities

PARTNER

- **Collaborate with private and public partners to support the deployment of zero emission vehicles (ZEV) throughout Minnesota.** Use a variety of tools and tactics to support ZEV in Minnesota. Implement the recommendations from the Regional Electric Vehicle Midwest Plan. Develop and implement a National Electric Vehicle Infrastructure plan for designated corridors in the state. Create opportunities for co-ops, municipal utilities and investor-owned utilities to discuss best practices related to ZEV chargers. Engage fuel providers to understand their role in ZEV charger deployment. Develop and share resources for businesses on how to support ZEVs.

Related objectives: System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities

- **Strengthen and develop collaborative relationships with public health partners** to better integrate health into transportation decisions. Expand on MnDOT’s collaboration with the Minnesota Department of Health. Work with partners to identify opportunities to integrate health into transportation policies, programs and projects along with a commitment to advance shared goals. Identify and track public health measures, including the utility of public impact evaluation tools.

Related objectives: Critical Connections, Healthy Equitable Communities, Open Decision Making



“Living where I do, means I am dependent upon a car for transportation. I am very anxious about climate change and fear we have not moved quickly enough to slow the process.”

– Comment shared during SMTP engagement

EQUITY

DO

- **Build internal capacity to advance transportation equity.** Offer transportation equity training for all staff and update orientation materials to include information about transportation equity. Develop resources to ensure staff throughout the agency understand how their role can advance transportation equity.

Related objectives: System Stewardship, Healthy Equitable Communities, Open Decision Making

- **Clarify how equity considerations could be accounted for in Environmental Justice analysis.** Ensure there is clear distinction on the federal requirements for Environmental Justice. Provide resources to staff to understand how MnDOT’s commitment to transportation equity relates to and supports Environmental Justice analysis. Update guidance materials for consistency.

Related objectives: System Stewardship, Healthy Equitable Communities, Open Decision Making

LEAD

- **Enhance analysis and evaluation of transportation equity in planning, programming and project development.** Use an equity lens to facilitate decisions and build tools to measure transportation equity in capital improvements. Understand how to quantify benefits and burdens for planning and project delivery.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

PARTNER

- **Co-create stories about transportation in Minnesota in collaboration with communities.**

Center Minnesota’s transportation story in people’s lived experiences, especially for communities that have been harmed most by past decisions. Collaborate with partners and communities to identify dominant narratives, align our understanding of the power of storytelling and generate elements of a new transformational narrative that centers on transportation equity.

Related objectives: Healthy Equitable Communities, Open Decision Making

FACILITATE

- **Collaborate with partners to evaluate equity implications of transportation fees, fines and fares and develop options to reduce disparities.** Conduct analyses on the impact of transportation fees, fines and fares for BIPOC and people with low incomes. Recommend policy changes to advance transportation equity.

Related objectives: Transportation Safety, Critical Connections, Healthy Equitable Communities, Open Decision Making

“We have one car and two adults which means that we need reliable transportation and shared mobility to access employment. This limits where either of us can access jobs because most public transportation and shared mobility do not reliably exist outside of Minneapolis and St. Paul.”

– Comment shared during SMTP engagement

TRANSPORTATION OPTIONS

DO

- **Implement recommendations from regional studies and plans.** Regional planning processes like the Manufacturers’ Perspectives Project, Community Conversations project focused on equity as well as district freight and bicycle plans resulted in near- and long-term recommendations. Look for opportunities to implement the actions listed in the plans.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

- **Continue to integrate complete streets into transportation decision making.** Support Complete Streets Policy and Complete Streets Handbook implementation. Track Complete Streets performance measures to inform decision making. This will help ensure the needs for people of all ages and abilities, traveling along and across roadways, are considered during all phases of planning, scoping, project development, construction, operations and maintenance activities.

Related objectives: Transportation Safety, System Stewardship, Critical Connections, Healthy Equitable Communities

LEAD

- **Increase the availability and accessibility of safe and affordable transportation options,** including more lower emission transportation options. Provide community engagement and education needed to maximize the return on infrastructure investment. Work with multijurisdictional partners to understand how increasing transportation options meet SMTP commitments.

Related objectives: System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

PARTNER

- **Expand travel demand management strategies in collaboration with partners.** Diversify travel choices, such as route, time of travel and mode. Provide people with effective choices to improve travel accessibility and reliability.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

- **Expand intermodal and multimodal freight opportunities** with input from Minnesota businesses. Explore opportunities to invest in and support intermodal freight access across the state and identify potential options to promote modal shifts for freight carried by railroads, ports and waterways.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Open Decision Making

- **Work with transportation partners to identify and advance statewide strategies for reducing per capita vehicle miles traveled (VMT) 20% by 2050.** Opportunities to reduce vehicle miles traveled vary by geography, community and context. Work with partners to determine where there are the greatest opportunities to meet local travel needs and SMTP targets for VMT, greenhouse gas (GHG) emissions and multimodal accessibility. Develop guidance for regional planning with place-based strategies to reduce per capita VMT. Additionally, the VMT target will be revisited with the next SMTP. Sub targets for specific modes or geographies will be considered after working with partners to better understand implementation and effectiveness. Consideration will be given to growth in the movement of goods and how to support agriculture, manufacturing, and tourism while reducing per capita VMT.

Related objectives: System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

PLANNING, POLICY & GUIDANCE

DO

- **Revise Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities between MnDOT and Local Units of Government Policy** to incorporate explicit considerations for SMTP commitments including climate, equity and health after the completion of MnSHIP. The review will identify who, when and under what circumstances agencies will cover project costs.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

- **Update MnDOT technical guidance to incorporate new practices and policy direction.** MnDOT is responsible for a variety of technical guidance that influences how projects are developed and impact communities in Minnesota. It is important that these documents are updated periodically to reflect new research, innovation and policy direction. Guidance should address changes needed to meet SMTP targets for VMT reduction, GHG reduction, multimodal accessibility and transportation safety.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

SYSTEM STEWARDSHIP & OPERATIONS

DO

- **Strengthen vulnerability identification and resilience in planning and programming.** Expand data and analysis to be able to identify the criticality of transportation assets, understand prioritization options and establish decision analyses to inform programming decisions.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

- **Expand the diversity of MnDOT's contractor pool for more opportunities for women, people with disabilities, Veterans and BIPOC to perform MnDOT work.** By increasing the proportion of contracting dollars for these groups, MnDOT can drive economic recovery in tribal, rural and urban parts of the state and increase the safety, accessibility and useful life of MnDOT assets. Effort should be made to collaborate with contractors with diverse staff and those who will have a difficult time competing with large firms. MnDOT can use statutory authority for negotiated contracts and other contracting strategies (like the Disadvantage Business Enterprise program) to reduce contracting disparity and to continue developing best practices in government contracting in order to drive change regionally and nationally.

Related objectives: System Stewardship, Healthy Equitable Communities, Open Decision Making



- **Pilot collaborative approaches to develop, attract and retain more Black, Indigenous and People of Color, people with disabilities and women to the transportation industry, including trades positions.** Use MnDOT’s Workforce Diversity Initiative as a resource for strategies and lessons learned to scale workforce development.

Related objectives: System Stewardship, Healthy Equitable Communities, Open Decision Making

- **Procure and implement a freight network optimization tool** that will provide cargo and marketing information to chambers of commerce and Minnesota businesses.

Related objectives: Transportation Safety, System Stewardship, Critical Connections, Open Decision Making

LEAD

- **Support recovery and resilience of transportation operations from the COVID-19 pandemic.** All parts of the transportation system have been disrupted by the pandemic. MnDOT will collaborate with partners to understand opportunities to improve transportation system operations as more information about long-term impacts become clearer. Near-term opportunities include studying changes to travel demand by different modes, exploring strategies to support transit ridership recovery and addressing freight bottlenecks.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

- **Explore options to improve year-round maintenance.** Collaborate with partners to explore best practices to ensure year-round maintenance within MnDOT right-of-way. Update planning, design and maintenance to incorporate best practices.

Related objectives: Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities

PARTNER

- **Increase the number of licensed commercial drivers in Minnesota.** From transit and snowplows to freight and construction, many aspects of transportation depend on licensed drivers to keep the system moving. MnDOT will collaborate with private and public partners on opportunities to increase the number of people with commercial driver’s licenses including exploring options for people ages 18 to 21.

Related objectives: Transportation Safety, System Stewardship, Critical Connections

- **Work with partners to evaluate telework opportunities and broadband expansion** to support transportation system operations and economic development. Understand the state of the industry through pandemic recovery and support the development of resources.

Related objectives: System Stewardship, Climate Action, Critical Connections, Open Decision Making

TRANSPORTATION SAFETY

DO

- **Integrate Safe System approach in transportation safety processes and initiatives.**

Pursue a holistic and comprehensive framework to make the transportation system safer for people. Incorporate considerations of human behavior and human vulnerability into system design and operations.

Related objectives: Transportation Safety, Healthy Equitable Communities

- **Complete and implement district safety plans.** Incorporate information from the SMTP into the district safety planning for both rural and urban contexts. Ensure processes and outcomes support a Safe System approach to transportation safety.

Related objectives: Transportation Safety, Healthy Equitable Communities

LEAD

- **Continue to strengthen and expand partnerships for Toward Zero Deaths, Vision Zero, Safe Routes to School, Active Transportation Program, Operation Lifesaver and other partnerships.** Working together, partners can build a culture of safety, advance transportation equity and focus investment where there is opportunity for greatest impact.

Related objectives: Transportation Safety, Climate Action, Critical Connections, Healthy Equitable Communities, Open Decision Making

- **Expand efforts to ensure safe speeds.** 2021 was the deadliest year on Minnesota's roads in over a decade due in part to reckless driving including high speeds. Partners, including the Department of Public Safety, have a role in decreasing speeds and improving transportation safety.

Related objectives: Transportation Safety, Healthy Equitable Communities, Open Decision Making

PARTNER

- **Provide more options for safe and reliable truck parking** in collaboration with partners. Identify underused locations that might be appropriate for truck parking in the near term. Regulatory changes and partnerships may be needed to provide sustainable options for the long term.

Related objectives: Transportation Safety, System Stewardship

FACILITATE

- **Collaborate with partners to evaluate speed enforcement options in school and work zones.** Study, track and monitor options to evaluate safety and equity outcomes.

Related objectives: Transportation Safety, Healthy Equitable Communities, Open Decision Making

NEXT STEPS FOR THE FAMILY OF PLANS

MnDOT's Family of Plans provides direction for all the ways that goods and people move throughout Minnesota and helps meet the 16 statutory goals for transportation in Minnesota. All planning at MnDOT begins with the Minnesota GO 50-year Vision. The SMTP is the first plan under the Minnesota GO Vision in the Family of Plans listed in Figure 6-1. The other plans in the Family of Plans provide policy direction for all transportation modes in the state. Descriptions for each modal and system plan is located below. See Table 6-1 for the update cycle for each modal and system plan.

- **Greater Minnesota Transit/Mobility and Investment Plan** – The plan sets policy and investment priorities for transit and determines the level of funding necessary for the state to meet its transit needs in Greater Minnesota. Updating the Greater Minnesota Transit/Mobility and Investment Plan is anticipated to start in 2022, with final adoption anticipated in 2025.
- **Statewide Pedestrian System Plan** – The plan identifies priority areas for investments and lays out specific strategies to improve walking availability and accessibility. The plan was based off of the collaborative framework, Minnesota Walks, developed in 2016 with the Minnesota Department of Health. MnDOT adopted the state's first statewide pedestrian plan in 2021.
- **Statewide Bicycle System Plan** – This plan identifies policy direction for bicycle transportation in Minnesota. The most recent update of the Statewide Bicycle System Plan was adopted in 2016.
- **Minnesota State Highway Investment Plan** – This plan sets a fiscally constrained, performance-based, 20-year investment direction for future capital improvements on Minnesota's state highway system. Updating the Minnesota State Highway Investment Plan is underway and anticipated to be adopted in 2023.
- **Minnesota State Freight Plan** – This document broadly plans for Minnesota's freight system across all modes. This plan also includes Minnesota's Freight Action Agenda for MnDOT and its partners to advance a number of strategies that will improve the efficiency, safety and reliability of the freight system. The most recent update was adopted in 2018 and the update is due in 2024.
- **Minnesota State Aviation System Plan** – This plan informs decision making and guides the development of Minnesota's system of publicly-funded airports. The plan is updated in two parts; Phase 1 was completed in 2019. Phase 2 is ongoing and will validate the deliverables from Phase 1 and include developing a continuous implementation plan.
- **State Rail Plan** – This plan establishes guidance for Minnesota initiatives and investments for freight and passenger rail services. An update to the State Rail Plan is in process and adoption is anticipated in 2024.
- **Statewide Ports and Waterways Plan** – This document broadly plans for Minnesota ports and waterway facilities. The first Statewide Ports and Waterways Plan was adopted in 2014 and the update is anticipated in 2025.

The new policy direction from this SMTP will be reflected in each of MnDOT's modal and system plans as they are updated. It is anticipated that these updates will occur over the next few years.

In addition to MnDOT's Family of Plans, there are many more supporting plans and studies that inform transportation decision making for MnDOT and other transportation partners. These plans focus on specific topics, such as safety or on specific geographic areas or corridors. This planning helps direct the specific projects that build, maintain and operate Minnesota's transportation system.

Figure 6-1: MnDOT’s Minnesota GO Vision and Family of Plans

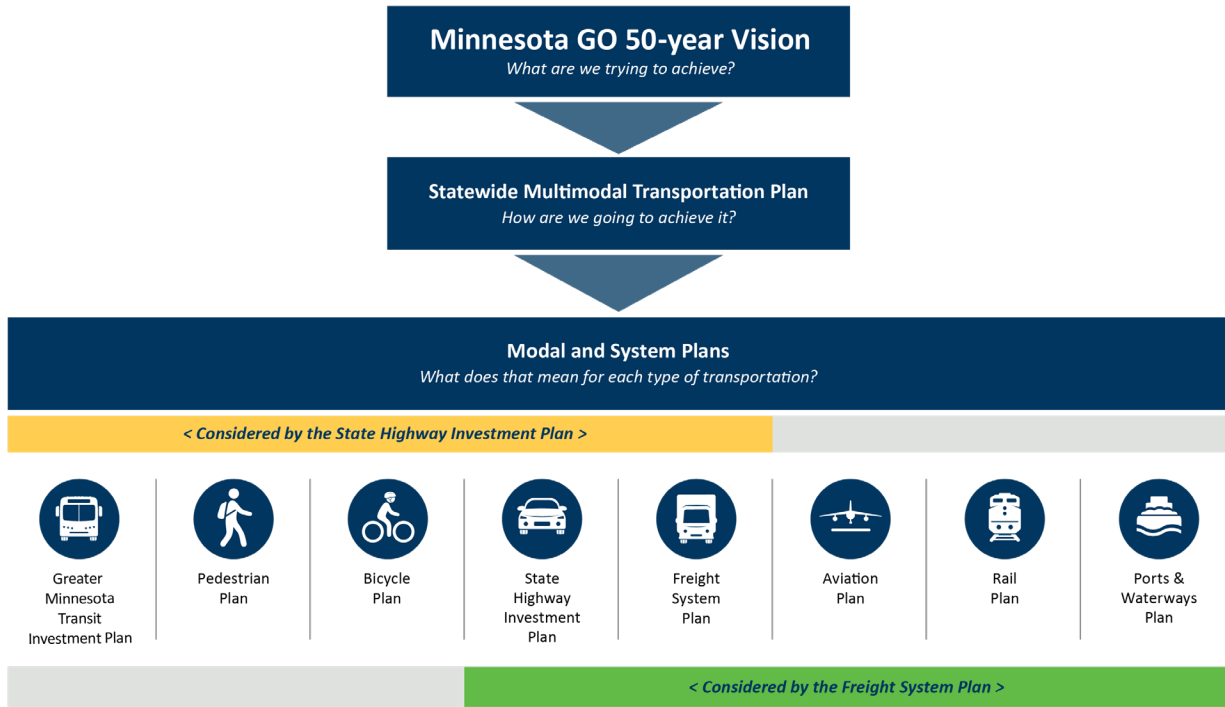


Table 6-1: Family of Plans update schedule

MODAL OR SYSTEM PLAN	LAST ADOPTED	NEXT UPDATE ANTICIPATED
Greater Minnesota Transit/Mobility and Investment Plan	2017	2025
Statewide Pedestrian System Plan	2021	Recommended to be updated every five years and at least once every 10 years
Statewide Bicycle System Plan	2016	Recommended to be updated every five years and at least once every 10 years
Minnesota State Highway Investment Plan	2017	2023
Minnesota State Freight Plan	2018	2024
Minnesota State Aviation System Plan	Phase 1: 2019	Phase 2: 2023
State Rail Plan	2015	2024
Statewide Ports and Waterway Plan	2014	2025

MONITORING & REPORTING

To track progress toward the objectives identified in this plan, MnDOT will continue to monitor and report on the key performance measures identified in Chapter 5. The primary reporting method is Minnesota GO Performance Dashboard. This website holds transportation partners accountable for delivering the direction identified in this plan. It also allows the public and transportation partners to see how well the plan strategies are working. Since the SMTP is only updated every five years, annual performance reporting is useful to identify if and when any mid-course corrections are necessary.

MnDOT will also collaborate with partners, stakeholders and the public to develop additional performance measures and targets in the near term. The current list of measures does not tell the complete story of the plan. For some policy areas there is a need to develop new measures or reassess existing targets to better communicate progress. Specific measures to be explored and developed are identified in Table 6-2. However, others may be added over time.

MnDOT will also look to improve how performance measures are reported to make sure the information is easy to find, engaging and accessible for Minnesotans. MnDOT will update its performance measure website and reporting to include all the performance measures from Chapter 5 and new measures as they are adopted.



Table 6-2: List of performance measures to be developed

PROPOSED MEASURE	RELATED OBJECTIVE
System resilience	Climate Action
Asset resilience	Climate Action
Transportation Cost	Healthy Equitable Communities
Multimodal accessibility	Healthy Equitable Communities
Increase in Transportation Equity	Healthy Equitable Communities
Project-level engagement	Open Decision Making
Partner coordination	Open Decision Making



HOW WILL WE IMPLEMENT THE SMTP

The next phase of the SMTP is to transition the plan’s broad policy direction into specific, action-oriented tasks. Some of the considerations are easier to foresee than others. For example, investing in first- and last-mile connections continues to be a priority for walking, rolling, bicycling, transit, freight and economic development. Other things are harder to predict 20 years—even 10 years—from now.

Evolving technology, reckoning with systemic oppression, a global pandemic and climate change present new opportunities, stresses, innovations and practices to keep transportation moving in Minnesota. The transportation industry can’t anticipate all the unknowns. However, it is known that the transportation system of the past cannot solve the problems of today or those of tomorrow.

The SMTP needs to be implemented with purpose, intention and in coordination with stakeholders and partners. And everyone has a role!

READ CHAPTER 7 TO:

- Understand how partners can integrate SMTP policy direction into their work.
- Read about what is required of MnDOT and partners to implement the SMTP.

PARTNER ROLES

Everyone has a role in implementing the SMTP. For partners with transportation decision-making authority, the SMTP provides a framework for changes to policies, programming and practices to move transportation toward the Minnesota GO Vision. For partners without transportation decision-making authority, the plan serves as a set of recommendations and direction to understand how transportation can be integrated into their work and an opportunity to hold transportation partners accountable. Roles include:

LOCAL PARTNERS include agencies and organizations responsible for transportation decisions at the local level, and who play the lead role implementing the SMTP in their communities. Local partners include entities that make important transportation decisions reflecting the value, context and needs of the community. Transportation partners will assist in aligning design, engineering, land use, programming and operational decisions.

TRIBAL PARTNERS are the 12 federally recognized sovereign Tribal Nations with jurisdiction over land and resources in Minnesota. Indian Country includes road, bridges, highways, transit services, sidewalks and more. Tribal partners plan, build and manage key parts of Minnesota’s transportation system and tribes are key partners in moving transportation forward.

REGIONAL PARTNERS include metropolitan planning organizations (MPOs), regional development organizations (RDOs) and groups of counties and cities that can play a lead role in implementing the SMTP at the regional scale. Regional collaboration is critical to update other regional visions and long-range plans. In addition, these collaborations help to align transportation, economic development, workforce development and environmental stewardship decisions.

STATE PARTNERS can assist in facilitating the implementation of SMTP policy direction at the system level. Partner and sibling agencies can collaborate through steering committees and councils, coordinate implementation activities and assist in the monitoring and reporting.

FEDERAL PARTNERS can help ensure that ongoing planning efforts are consistent with the SMTP. Additionally, federal partners may be able to provide guidance and technical assistance to help implement the strategies and actions. On occasion, outcomes from statewide planning are able to inform work completed by federal partners.

PRIVATE SECTOR PARTNERS own and operate transportation services. These include railroads, terminal operators and shipping companies as well as developers, construction companies, consultants, etc. Partnerships are key to delivering plans, programs and projects that meet the SMTP policy direction.

COMMUNITY PARTNERS are advocates, academics, community-based organizations and chambers of commerce. These partners help identify community needs, proven practices and tangible steps to improve transportation for people.

MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT) will lead, partner or facilitate as appropriate. MnDOT will lead strategic efforts where it is appropriate, serve as a partner for work that crosses over disciplines or missions, develop MnDOT-specific actions and facilitate implementation with partners to move forward the SMTP policy direction. MnDOT work plan items are identified in Chapter 6.

PREPARING FOR CHANGE

This SMTP is intended to provide a framework for evaluating evolving conditions to proactively manage the change required to serve Minnesotans now and into the future. One role of the public sector is to manage technology, innovation and change. Each agency—or even department, team or person—may be in different phases of change. Some will be working to understand opportunities and risks to new initiatives. Others will be evaluating the impact of pilots and offering lessons learned to others considering similar solutions.

The SMTP policy direction includes a range of work to meet jurisdictions where they are in the change process. For each strategy and action, it may be helpful to determine where the organization is at currently and how best to proceed whether preparing for, managing or reinforcing change:

- **PREPARE FOR CHANGE.** Understand opportunities and risks. Align change with industry values. Formulate plans for change management in collaboration with stakeholders. Build coalitions to accelerate change.
- **MANAGE CHANGE.** Listen for and respond to stakeholder feedback. Adapt work and apply new techniques to support change over time. Implement engagement and training plans to empower others to act.
- **REINFORCE CHANGE.** Monitor and track change processes. Identify gaps and plan responses. Document and share learnings and insights to integrate promising approaches as new standards of doing work.

The challenges Minnesota is facing require bold, coordinated approaches. Collective commitment is needed from all who have a role in making transportation move for Minnesotans. Collaboration with transportation partners throughout the plan development process has built a solid foundation to implementing this plan. Continuing to collaborate and coordinate with partners is key to successful implementation of the SMTP. Consider the objectives, performance measures, strategies and actions in Chapter 5 an invitation to join MnDOT and transportation partners to build this bold new transportation future together.



NEED FOR SUSTAINABLE FUNDING

Fully implementing the SMTP will require adequate funding that is sustainable and equitable. While MnDOT does not have a current comprehensive estimate of funding needed for the entire transportation system over the next 20 years, past efforts—including the 2012 Minnesota Transportation Finance Advisory Committee¹ and the American Society of Civil Engineers infrastructure report card²—have consistently documented the need for more funding.

MnDOT has recently estimated that \$30-33 billion in funding will be available for construction projects on the state highway system (Interstates, US Highways and Minnesota State Highways) between 2023 and 2042. However, to achieve the targets and objectives in the SMTP on the state highway system, MnDOT would need \$52-57 billion for construction, not counting additional funding for maintenance, planning and operations. That means there is a funding gap of \$19-27 billion just for state highway construction, which is only a small piece of the transportation system. Funding gaps also exist for local roads and bridges, transit, walking and bicycling, rail, airports, and ports and waterways

The SMTP envisions a future transportation system that is different than what exists today. Realizing that system will likely require changes in how transportation is funded. For example, a shift to zero emission vehicles will reduce the amount of gasoline and diesel used in the state, reducing the amount of motor fuel taxes collected. Likewise, reducing per capita vehicle miles travelled would also reduce the amount of motor fuel taxes. Conversely, reducing per capita VMT would also reduce the extent and duration of congestion and reduce the need for construction projects to address delays for vehicle drivers and passengers. Those changes also require supporting services and infrastructure.

The Infrastructure Investment and Jobs Act passed by Congress and signed into law by President Biden in November 2021 will provide a helpful infusion of funding over the next five years. However, it will not solve Minnesota’s long-term transportation funding needs on its own. Additional state funds are needed to match those federal funds. Even with the additional federal funding, there is not currently enough funding to address all of the needs on the transportation system.

MnDOT is committed to working with the Legislature and transportation partners to determine long-term, reliable and sustainable funding plans for the future of Minnesota’s multimodal transportation system. This may include changes to current funding mechanisms as well as exploring alternative ways to fund transportation in the state. All new proposals for transportation funding must also consider how to ensure the distribution of benefits and burdens is fair and just.

For detailed information about how transportation is funded in Minnesota, see Appendix F - Transportation Funding.

¹ “Transportation Funding and Financing for the Next 20 Years,” Minnesota Transportation Finance Advisory Committee, December 2012, <http://www.dot.state.mn.us/tfac/docs/final-report.pdf>.

² “2022 Infrastructure Report Card for Minnesota,” American Society of Civil Engineers, accessed on October 21, 2022, <https://ascemn.org/report-card>.

MANAGING TRADEOFFS

It's important to acknowledge that not all strategies and actions may be implemented concurrently. The policy direction set forth requires tradeoffs. Also, several of the commitments in the SMTP—like reducing greenhouse gas emissions and decreasing traveler delay—may have positive and negative equity impacts. Change is required to meet social, economic and environmental goals for transportation. But a one-size-fits-all approach will not serve Minnesotans in the near term.

Overall, examining tradeoffs is needed to understand how best to use available resources and barriers that exist. As a part of SMTP implementation, strategies and actions should be evaluated for barriers, benefits and burdens to inform future transportation decisions. Chapter 6 includes work for MnDOT to understand the distribution of benefits and burdens to inform phased implementation and future policy recommendations.

ESSENTIAL PRACTICES FOR PLAN IMPLEMENTATION

The SMTP needs to be implemented with purpose, intention and in coordination with stakeholders and partners. Each step of the process helps to understand needs and develops strategies to address short- and long-term changes necessary to realize the commitments in this plan. Implementation activities should reflect flexible and realistic schedules to adapt to a wide variety of changing conditions. Essential practices for plan implementation include:

- Building more and better capacity for equitable and inclusive engagement.
- Consulting and evaluating other efforts to integrate transportation planning processes.
- Informing future long-range transportation plan updates across all jurisdictions.
- Coordinating on regional and local plans with Metropolitan Planning Organizations and Regional Development Organizations.
- Incorporating best practices from other state agencies and transportation partners.
- Providing ongoing implementation communications.

These efforts together are foundational to implement the SMTP. Everyone has a role in implementing the policy direction in this plan and ensuring the success of the transportation system. We will make Minnesota GO together.



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APPENDIX A - ACKNOWLEDGMENTS

The 2022 Statewide Multimodal Transportation Plan would not have been possible without the contributions of many individuals and partners.

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APPENDIX B - ACRONYMS

ACS	American Community Survey	MDH	Minnesota Department of Health
ADA	Americans with Disabilities Act	MnDOT	Minnesota Department of Transportation
ATP	Area Transportation Partner	MPCA	Minnesota Pollution Control Agency
BIPOC	Black, Indigenous and People of Color	MPO	Metropolitan Planning Organization
CAV	Connected and automated vehicles	NHS	National Highway System
CBO	Community-based organizations	PAC	Policy Advisory Committee
CDL	Commercial Driver's License	PCI	Pavement Condition Index
DEED	Minnesota Department of Employment and Economic Development	RDO	Regional Development Organization
DNR	Minnesota Department of Natural Resources	SMTTP	Statewide Multimodal Transportation Plan
DPS	Minnesota Department of Public Safety	TAC	Technical Advisory Committee
EDA	Economic Development Administration	TZD	Toward Zero Deaths
EPA	Environmental Protection Agency	ULB	Useful Life Benchmark
EQB	Environmental Quality Board	USACE	U.S. Army Corps of Engineers
FAA	Federal Aviation Administration	VMT	Vehicle Miles Traveled
FHWA	Federal Highway Administration	ZEV	Zero Emission Vehicles
FRA	Federal Railroad Administration		
FTA	Federal Transit Administration		
GHG	Greenhouse gas		
HIA	Health impact assessment		
IIJA	Infrastructure Investment and Jobs Act		
LEP	Limited English Proficiency		

APPENDIX C – GLOSSARY

A

ACTION

An action is a concrete or specific step to implement the strategy.

AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act, or ADA, is federal legislation passed in 1990 that protects against discrimination based on disability. A portion of the law imposes accessibility requirements on public accommodations, which includes transportation infrastructure.

AREA TRANSPORTATION PARTNERSHIP

Unique to Minnesota, Area Transportation Partnerships, or ATPs, are regional partnerships made up of technical and political representatives from the state, tribes, counties, cities, townships and other local partners. There are eight ATPs that closely follow MnDOT district boundaries. Each ATP in the state functions differently. Generally speaking, the ATPs are programming entities. They have some level of involvement in selecting projects for most state and federal funding programs. However, their role varies depending on the funding program and ranges from reviewing and commenting to project selection.

ASSET

In terms of transportation, an asset refers to infrastructure, equipment or data (such as roadway pavement, bridges, signals, rest areas, transit vehicles, condition data, etc.) under the responsibility of a transportation entity.

ASSET MANAGEMENT

Asset management is a systematic process of maintaining, upgrading and operating physical assets cost-effectively throughout their life cycle. Asset management provides a decision-making framework for both short- and long-range planning.

AUTOMATED VEHICLE

Automated vehicles use technology to steer, accelerate, and brake with little to no human input. Some vehicles still require a human to monitor the roadway, while other vehicles require no human intervention.

B

BENEFITS

Transportation benefits are positive impacts of all modes of transportation, including access to affordable, reliable and safe transportation options. Other benefits of transportation include access to affordable housing, employment opportunities, healthy food, clean air and clean water. Transportation benefits are best defined by impacted communities.

BLACK, INDIGENOUS AND PEOPLE OF COLOR (BIPOC)

Transportation equity requires acknowledging past harms by intentionally naming and centering the experiences of communities that faced the most profound transportation harms and racism. While BIPOC includes all people of color, it leads with Black and Indigenous identities to counter anti-Black racism and erasure of Native communities.

APPENDIX C | GLOSSARY

BURDENS

Transportation burdens are negative impacts of all modes of transportation including lack of or limited access to affordable, reliable and safe transportation options. Other transportation burdens include exposure to air pollution and related poor health outcomes as well as lack of or limited access to affordable housing and employment opportunities. Transportation burdens are best defined by impacted communities.

C

CENTERLINE MILES

One mile of a single roadway, regardless of the number of lanes or overall roadway width, is called a centerline mile.

CLIMATE CHANGE

Climate change refers to a change in global or regional climate patterns. This includes natural variation and the influence of human activity.

COMMUNITY-BASED ORGANIZATIONS

Local organization that could be a public or private nonprofit, charitable or tribal organization that represents a community or significant segment of a community. The organization provides assistance and services to individuals in the local community.

CONNECTED VEHICLES

Connected vehicles use technology to either communicate with each other, connect with traffic signals, signs, and other road items, or obtain data from a cloud. This information exchange will help with safety and improve traffic flow.

COMPLETE STREETS

Complete streets is an approach to road planning and design that considers and balances the needs of all users. Its goal is to provide a system that is accessible and equitable to all, regardless of how they choose to travel.

CONTEXT SENSITIVE SOLUTIONS

Collaborative approach that involves providing transportation infrastructure that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility.

CULTURAL RESOURCES

Cultural resources include archaeological, Native American, traditional and built environment resources. It includes buildings, structures, objects, districts and sites.

E

E-COMMERCE

E-commerce is the sale of goods and services where the buyer places an order, or the price and terms of the sale are negotiated over an Electronic Data Interchange, the internet or any other online system (extranet, e-mail, instant messaging).

ELECTRIC VEHICLE

Electric vehicles (EVs), also referred to as battery electric vehicles, have an electric motor instead of an internal combustion engine. The vehicle uses a large traction battery pack to power the electric motor and must be plugged in to a wall outlet or charging equipment.

ENVIRONMENTAL JUSTICE

Identifying and addressing as appropriate, disproportionately high and adverse human health or environmental effects of programs, policies and activities on minority populations and low income populations.

ENVIRONMENTAL STEWARDSHIP

Environmental stewardship is the protection and preservation of environmental quality, support for healthy communities and conservation of natural resources.

F

FAIR

Fairness in transportation means everyone has access to transportation outcomes that are free from bias and discrimination. Fairness in transportation requires a proportionate distribution of transportation benefits and burdens.

FOCUS AREAS

The six focus areas used in this plan are aging infrastructure, climate, economy and employment, equity, safety and transportation options. Focus areas were selected in collaboration with the public, stakeholders and partners. These focus areas cut across all transportation topics and guide priorities for transportation system.

G

GREATER MINNESOTA

Greater Minnesota is the portion of the state excluding the seven county Twin Cities region.

GREENHOUSE GAS EMISSIONS

Greenhouse gasses (GHG) are atmospheric gases that contribute to the greenhouse effect through their absorption of solar radiation. Commonly known greenhouse gases are carbon dioxide, methane and ozone.

GREEN INFRASTRUCTURE PRACTICES

Most green infrastructure uses natural processes to improve water quality and manage water quantity. This could include using soils and vegetation to capture, slow down and filter runoff. The practices can be integrated into existing features of the built environment, including streets, parking lots and landscaped areas.

H

HEALTH IN ALL POLICIES

Health in All Policies (HiAP) is a collaborative approach to address key drivers of health outcomes and health inequities in policy making. Using a HiAP approach means health considerations are intentionally incorporated into decision-making processes across sectors and policy areas.

I

INFRASTRUCTURE

Infrastructure refers to the basic underlying structures and facilities that are required by society, such as buildings, roads and power supplies.

INFRASTRUCTURE INVESTMENT AND JOBS ACT (IIJA)

Also known as the Bipartisan Infrastructure Law (BIL). This congressional act passed in November 2021 and authorizes federal funding for the nation’s infrastructure. This includes roads, highways, bridges, transit, ports, airports, railway systems, electric systems and rural broadband.

INTERSTATE

Interstate refers to the Eisenhower Interstate System of highways that retains its separate identity within the National Highway System.

J

JUST

Justice in transportation means taking proactive measures to ensure transportation benefits are adequately accessible to underserved communities especially Black, Indigenous and People of Color, who often bear disproportionate transportation burdens. Justice in transportation requires transforming current inequitable systems so no person is denied accessing the transportation opportunities they need to lead a dignified life.

JUSTICE40 INITIATIVE

President Biden signed Executive Order 14008 “Tackling the Climate Crisis at Home and Abroad,” which created the Justice40 initiative. Justice40 is a whole-of-government effort that aims to deliver 40% of the benefits of relevant federal investments in climate and clean energy to disadvantaged communities.

L

LAND USE

Land use refers to the physical characteristics and activity that define an area. Different types of land uses exist, such as residential, commercial and agricultural.

LIFE CYCLE COSTS

Total amount of money spent on an asset over the course of its useful life.

M

MANAGED LANES

Also referred to as E-ZPass (formally known as MnPASS), managed lanes are express lanes that use electronic tolls to improve traffic flow, provide alternatives to congestion and improve safety.

METROPOLITAN PLANNING ORGANIZATION

A Metropolitan Planning Organization, or MPO, is an entity created by federal law. The primary role of the MPO is to encourage and facilitate teamwork among local governments related to transportation planning. The MPO's work includes planning for highways, public transit, bicycles and pedestrians, freight and other modes of transportation.

The MPO acts as a liaison between the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Minnesota Department of Transportation (MnDOT) and local municipalities within the MPO planning area. The governing body of the MPO is the Policy Board. MPOs are designated in urbanized areas with populations over 50,000 as determined by the Decennial Census. State departments of transportation are required by federal law to uphold a continuous, comprehensive and cooperative (3-C) planning process within a MPO planning boundary.

MICROMOBILITY

Collective name for fleets of small, low-speed vehicles for personal transportation. They usually are bicycles or scooters and used primarily for short trips.

MOBILITY HUB

A mobility hub is a place where people can connect to many modes of transportation. Hubs help make people's trips as safe, convenient and reliable as possible. Airports, train and transit stations are examples of mobility hubs.

MODE

Mode refers to the different ways that goods and people move, such as by foot, bicycle, car, truck, train, ship and airplane.

MULTIMODAL

Multimodal refers to anything that includes more than one type of transportation. For example, the Statewide Multimodal Transportation Plan is a plan for all the ways people and goods move throughout Minnesota.

N

NATIONAL HIGHWAY SYSTEM

The National Highway System, or NHS, is a network of strategic highways throughout the country. It includes Interstates and principal arterials as well as other roads that serve major freight or passenger facilities and destinations. The NHS is designated by the United States Department of Transportation, but MnDOT periodically reviews and submits changes to the system.

NEXT GENERATION ENERGY ACT

The Next Generation Energy Act, under Minn. Stat. Chapter 216H, was signed by Governor Pawlenty in 2007. The act requires the state to reduce greenhouse gas emissions by 80% between 2005 and 2050, while supporting clean energy, energy efficiency and supplementing other renewable energy standards in Minnesota.

NEXTGEN HIGHWAYS

NextGen Highways are highways where electric and communications infrastructure are strategically co-located in the highway right-of-way.

O

OBJECTIVE

In the SMTP, an objective is a few key phrases that describe the outcome that MnDOT and transportation partners are working toward. This plan's six objectives can be found in Chapter 5.

OMNIBUS SURVEY

MnDOT conducts a public opinion survey call the "Omnibus" every year. A representative sample of more than 1,000 Minnesota residents are asked to reflect on their transportation experiences and rate MnDOT's products, services and performance. Respondents provide input on key areas to influence MnDOT operations and future decision making.

P

PARIS AGREEMENT

The Paris Agreement is an international accord adopted by nearly every nation in 2015 to address climate change. Also referred to as the Paris Accord, the agreement aims to reduce greenhouse gas emissions at a rate to keep global temperature from increasing 2 degrees Celsius above pre-industrial levels. The United States joined the agreement in 2021, and Minnesota is a member of the U.S. Climate Alliance—a coalition of governors who have committed their states to meeting their share of the U.S. greenhouse gas reduction target.

PERFORMANCE MEASURE

In the SMTP, a performance measure is a metric that measures progress toward a goal, outcome or objective. This plan's existing performance measures can be found in Chapter 5 and Appendix I - Performance Measures.

PROGRAMMING

In transportation, programming refers to the process of identifying which projects will receive funding. Different funding sources have different processes to select projects. Most projects use funding from more than one source.

Q

QUALITATIVE

Qualitative refers to something measured by its characteristics rather than number.

QUANTITATIVE

Quantitative refers to something measured by its number rather than characteristics.

R

REGIONAL DEVELOPMENT ORGANIZATION

Regional Development Organizations, or RDOs, are regional entities that primarily work with, and on behalf of, local units of government in order to develop plans and implement programs that focus on the economic, social, physical and governmental concerns in each region of the state. This includes working with MnDOT related to rural regional transportation planning and programming. There are 12 regions that cover Greater Minnesota. Many of the RDOs are formally designated Regional Development Commissions, or RDCs, as established by Minnesota statute. Not every region has a RDC.

RESILIENCE

Resilience is the ability to anticipate, prepare for and adapt to changing conditions and withstand, respond to and recover rapidly from disruptions. This means transportation is designed and built to address current and future vulnerabilities.

RETURN ON INVESTMENT

Return on investment, or ROI, is a measure comparing costs and benefits of a particular project, action, or strategy. In transportation, ROI is most commonly used to determine the net present value of a project and typically includes financial as well as societal costs and benefits.

RIGHT-OF-WAY

Right-of-way refers to a strip of land which is used as a transportation corridor. The land is acquired as an easement or in fee, either by agreement or condemnation. It may also refer to temporary rights needed to construct a transportation facility.

S

SAFE ROUTES TO SCHOOL

Safe Routes to School programs improve safety, reduce traffic and improve air quality near schools through a multidisciplinary approach that is structured around the 6 E's: evaluation, education, encouragement, equity, engagement and engineering.

SAFE SYSTEM

The Safe System approach aims to anticipate human error and accommodate human injury tolerances to reduce fatal and serious injuries.

SHARED-USE MOBILITY

Transportation services and resources that are shared among users. This includes public transit, taxis, bike sharing, car sharing and scooter sharing.

SHARING POWER

Sharing power means creating opportunities for underserved communities to access decision making power. This includes institutional and structural power. Institutional power is the ability to create or greatly influence and shape the rules, policies and actions of an institution. Structural power is the ability to create or greatly influence and shape the rules, policies and actions that govern multiple and intersecting institutions or an industry. Sharing power requires engaging early and often with underserved communities to better understand community needs and incorporate those needs to transportation initiatives that lead to real, measurable change in the lives of community members. Shared power framework recognizes and addresses the power imbalance that often leads to poor and uninformed decisions that perpetuate harms on underserved communities especially Black, Indigenous and People of Color.

SOCIOECONOMIC

Socioeconomic refers to a combination of social and economic factors such as a person's job, income and education. A person's socioeconomic status can impact their transportation needs, preferences and choices.

STATE HIGHWAY SYSTEM

The state highway system is a network of roads that includes interstates, U.S. highways and state highways, and serves automobiles, trucks, motorcycles, pedestrians, bicyclists and transit.

STRATEGY

In the SMTP, a strategy is an action to help MnDOT and transportation partners achieve an objective. This plan's strategies can be found in Chapter 5.

SYSTEM RESILIENCY

System resiliency refers to the transportation system's ability to handle stresses, such as extreme weather or other emergencies.

T

TARGET

In the SMTP, a target is a specific performance level or value of a performance measure representing the achievement of a goal, outcome or objective. This plan's performance targets can be found in Chapter 5 and Appendix I - Performance Measures.

TOWARD ZERO DEATHS

Toward Zero Deaths, or TZD, is Minnesota's cornerstone roadway safety initiative. It is led through a partnership between MnDOT, the Minnesota Department of Public Safety and Minnesota Department of Health. It is a collaborative program aimed at eliminating fatal and life-changing injury crashes on Minnesota roadways by strategically addressing education, enforcement, engineering and emergency response issues.

TRANSPORTATION EQUITY

Transportation equity means the benefits and burdens of transportation systems, services and spending are fair and just, which historically has not been the case. Transportation equity requires ensuring underserved communities, especially Black, Indigenous and People of Color, share in the power of decision making.

TRANSPORTATION SERVICES

Transportation services refer to various programs that transportation agencies manage.

TRANSPORTATION SPENDING

Transportation spending refers to the decisions that lead to the allocation of funds for specific projects such as spending of capital projects to construct interchanges or spending for maintenance on trunk highways.

TRANSPORTATION SYSTEM

Transportation system refers to the various elements and networks that constitute the overall state transportation system such as state and local road networks, sidewalks and trails, transit systems, rail networks, ports and airports, etc.

TRANSPORTATION USER

Transportation user refers to a person using any mode of transportation, whether walking, bicycling, driving, riding as a passenger, etc.

TRAVEL DEMAND MANAGEMENT

Travel demand management is a set of strategies aimed at reducing the demand for travel, particularly single occupancy vehicles. Travel demand management is often implemented as an alternative to adding capacity to the road system. Examples of strategies include telework, ridesharing, parking pricing and transit incentives.

TWIN CITIES

Twin Cities refer to the portion of the state including and surrounding Minneapolis and St. Paul. Most commonly, this includes the seven-county area of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties. Other similar, though different, "Twin Cities" boundaries also exist.

U

UNDERSERVED COMMUNITIES

Underserved communities refer to populations that share a particular characteristic, as well as geographic communities, that have been systematically denied through public and private discriminatory practices and neglect the full opportunity to participate in aspects of economic, social, and civic life. This includes Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. These characteristics can and do overlap, which can magnify and increase the impact experienced.

URBAN HEAT ISLAND

Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads and other infrastructure absorb and re-emit the sun's heat more than natural landscapes, such as forests and water bodies.

USEFUL LIFE

The expected lifetime or productive period of use of a depreciable asset. For example, the useful life of transit vehicles is based on the combination of miles and years the vehicle has been in service.

V

VEHICLE MILES TRAVELED

Vehicle miles traveled (VMT) is the sum of all distances traveled by all motor vehicles on all roadways during a year.

VISION ZERO

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.

Z

ZERO EMISSION VEHICLE

A zero emission vehicle (ZEV) is one that does not produce exhaust emissions of criteria pollutants or greenhouse gases, excluding emissions from air conditioning systems.

APPENDIX D - PLANNING REVIEWS

The Statewide Multimodal Transportation Plan (SMTP) development process included plan analyses to ensure the updated plan reflects current and relevant work completed by the Minnesota Department of Transportation (MnDOT), Tribal governments, transportation partners and other organizations.

2017 SMTP ENGAGEMENT REVIEW

MnDOT conducted a robust engagement process as part of the 2017 SMTP. In 2016, engagement included asking Minnesotans which trends impacting transportation were most important for MnDOT to plan for. In total, MnDOT collected over 12,000 responses through several in-person and online input tools.

The analysis in 2016 included input from a quantitative perspective. This told MnDOT which

trend areas were more important to plan for. However, it did not dig into the reasons why people felt those trends were important. In 2019, MnDOT revisited the engagement data to analyze open-ended responses that people provided as part of their input to identify common themes and rationale. This analysis included focused review of responses received that related to transportation equity.

WHAT DID PEOPLE SAY

Comments related to equity from the 2017 SMTP included the following themes:

TRANSIT, BICYCLE, PEDESTRIAN & TRANSPORTATION ALTERNATIVES

- Encourage and invest in non-driving modes of transportation – system build out and safety. Non-driving modes are better for individual/community health and are more accessible for people of different incomes and abilities.
- Build out the transit system. Use transit to connect key destinations for low-income communities.

GENTRIFICATION

- Be careful about where and how transportation investments are made to prevent gentrification of low-income neighborhoods.

ACCESS

- Measure housing and transportation affordability.
- Encourage and invest in non-driving modes to increase access to jobs and other destinations.
- Hold engagement opportunities where diverse populations gather.
- Uphold or repair access to community assets and community cohesion/integration.

AIR QUALITY & REDUCE VMT

- Encourage travel behavior that reduces emissions – fewer trips, cleaner modes. Health impacts of transportation emissions disproportionately affect low-income and minority communities.

PUBLIC HEALTH

- Use a health equity lens in developing transportation policies and priorities.
- Encourage and invest in active transportation modes to promote health.

AGING POPULATION & INDIVIDUALS WITH DISABILITIES

- Encourage and invest in non-driving transportation options for seniors with health/mobility issues – improve service and vehicles.
- Provide affordable transportation options for seniors and low-income individuals.
- Support seniors aging in place by providing transportation options.
- Increase transportation options from rural to urban areas for services.

TECHNOLOGY

- Avoid technology-only solutions. Plan for people first.

FUNDING

- Invest in low-income and minority communities. Increase funding to do so.
- Raise new revenue in an equitable way.



WHAT THIS MEANT FOR THE 2022 SMTP

MNDOT ASKED ABOUT:

- People's access to jobs, services and other destinations.
- People's access to different transportation options and experiences using them.
- People's access to public input opportunities and transportation decision making.
- Barriers created by transportation within communities.

MNDOT PLANNED FOR:

- Safe, convenient and affordable transportation alternatives to driving. Quality transportation options are essential for equity.
- Minimizing environmental impacts. Low-income and minority communities are disproportionately affected.
- Meeting the transportation needs of low income and minority communities first.

MnDOT used an equity lens in setting the SMTP policy guidance and used a people-first planning approach throughout the update process.

2017-2020 SMTP WORK PLAN ASSESSMENT

The 2017 SMTP included a MnDOT-specific work plan with 17 activities to advance the goals and objectives established in the plan. The activities are organized into six subject areas:

- Engagement, communications & education
- Advancing equity
- Asset management
- Land use & transportation
- Planning
- Climate change & environmental quality

Table D-1 summarizes MnDOT's progress in implementing the 2017-2020 SMTP Work Plan.



Table D-1: Assessment of 2017-2020 SMTP Work Plan Items, 1 of 2

ACTIVITY	SUBJECT AREA	RELATED OBJECTIVE(S)	ASSESSMENT	EXAMPLES
Increase the transparency of MnDOT's project selection processes	Engagement, Communications & Education	Open Decision Making	Complete	Project Selection website
Provide more continuous engagement with partners and the public	Engagement, Communications & Education	Open Decision Making	Some progress	STEM education and outreach Added Public Engagement Coordinators in every district District-specific engagement plans
Develop and update new, more inclusive public engagement resources	Engagement, Communications & Education	Open Decision -Making	Substantial progress	Rethinking I-94 Public engagement toolkit
Develop and improve educational materials to answer key questions of interest to Minnesotans	Engagement, Communications & Education	Open Decision Making, Transportation Safety and System Stewardship	Substantial progress	Funding transportation website Performance dashboard
Develop and execute safety education campaigns	Engagement, Communications & Education	Transportation Safety and Healthy Communities	Substantial progress	Work Zone Safety Awareness Program Bike to School Day Ways to stay safe when traveling
Study how transportation affects equity and identify transportation strategies and approaches that will meaningfully reduce disparities	Advancing equity	Open Decision Making, Critical Connections and Healthy Communities	Substantial progress	Advancing Transportation Equity Initiative Livability Framework
Pilot tools and strategies to better incorporate equity into project-level decision-making	Advancing equity	Open Decision making, Critical Connections and Healthy Communities	Some progress	Rethinking I-94
Expand and improve asset management planning	Asset Management	Open Decision Making and System Stewardship	Substantial Progress	Transportation Asset Management Plan Transportation Asset Management System
Identify vulnerabilities and assess risks to the transportation system	Asset Management	Critical Connections, System Stewardship and Healthy Communities	Substantial progress	Slope Vulnerability Assessments Extreme Flood Vulnerability Analysis

APPENDIX D | PLANNING REVIEWS

Table D-1: Assessment of 2017-2020 SMTP Work Plan Items, 2 of 2

ACTIVITY	SUBJECT AREA	RELATED OBJECTIVE(S)	ASSESSMENT	EXAMPLES
Develop tools and resources to support transportation decisions that reflect the surrounding context	Land use & transportation	Open Decision Making and Healthy Communities	Some progress	Land Use Context Types Tech Memo (TM# 18-07-TS-05) Performance-Based Practical Design Guidelines Tech Memo (TM# 18-09-TS-07) Bicycle Facility Design Manual
Update MnDOT technical guidance to incorporate new practices and policy direction	Land use & transportation	Critical Connections, System Stewardship and Healthy Communities	Some progress	Road Design Manual update Bicycle Facility Design Manual
Review existing and potential new National Highway System intermodal connectors	Planning	Critical Connections	Complete	National Highway System Intermodal Connectors Review
Refine the methodology used for calculating return on investment	Planning	Open Decision Making, Critical Connections and Healthy Communities	Some progress	Return on Investment-MnPASS Study Cost-effectiveness and Benefit-Cost Analysis
Maintain the MnDOT Trend Analysis Library	Planning	Open Decision Making	In progress	Updated trend papers + new trends in process
Study and work with transportation partners to prepare for connected and autonomous vehicles	Planning	Transportation Safety and Critical Connections	Substantial progress	CAV Scenario Planning CAV Strategic Plan CAV Challenge Interagency CAV Team
Work with transportation partners to identify and advance statewide strategies for reducing greenhouse gas emissions	Climate Change & Environmental Quality	Healthy Communities	Substantial progress	Sustainable Transportation Advisory Council Pathways to Decarbonizing Transportation Sustainability Reports
Study and implement new and improved practices to reduce negative environmental impacts from state highway maintenance and operations	Climate Change & Environmental Quality	System Stewardship and Healthy Communities	Some progress	Salt Sustainability Best Practices Sustainability Reports

2017 SMTP HEALTH IN ALL POLICIES REVIEW

The 2017 SMTP was cross-referenced with the corresponding [2016 Health Impact Assessment \(HIA\)](#). The review focused on confirming areas where the SMTP included health recommendations and identifying opportunities for greater inclusion in the SMTP update process. The review results are organized by HIA themes and corresponding opportunities for the 2022 SMTP:

- Transportation Safety
- Critical Connections
- Equity
- Healthy Communities

TRANSPORTATION SAFETY

EXPLORE THE POTENTIAL UTILITY OF THE INTEGRATED TRANSPORTATION HEALTH IMPACTS MODEL. Integrate health impact evaluation into how MnDOT calculates return on investment. Follow-up on proposed work plan item to “explore tools that measure the health impacts of transportation decisions, such as the Integrated Transport and Health Impact Modeling tool.” (2017 SMTP Work plan, p.86)

INCREASE THE AVAILABILITY AND SYSTEMATIC USE OF AUTOMATED BICYCLE AND PEDESTRIAN COUNTERS.

- Include a focus on safe and accessible winter transit stop access.
- Explore how the Cost Participation Policy and Complete Streets Policy can support MnDOT’s transportation safety goals.

EXPAND THE ROLE OF THE NON-MOTORIZED TRANSPORTATION ADVISORY COMMITTEE to identify and examine how proposed infrastructure improvements may benefit one travel mode over another. Re-establish the Non-Motorized

Transportation Advisory Committee or create a new advisory body to provide expanded guidance on improving policy and systems for non-motorized user access.

WORK WITH CITIES TO REDUCE TRAVELED SPEED OF MOTOR VEHICLES IN URBAN AREAS.¹

STUDY, DOCUMENT AND ADDRESS DIFFERENCES IN PERCEIVED VERSUS ACTUAL SAFETY FOR DIFFERENT MODES, ENVIRONMENTS AND POPULATIONS.

- Consider revising “4E” to incorporate perceived safety: “Comprehensive traveler safety involves an integrated approach that includes the “4Es” of safety – education, enforcement, engineering and emergency medical and trauma services – and more. Each of these areas is critical to improving overall safety and helping to grow a traffic safety culture in Minnesota.” (2017 SMTP Transportation Safety, p. 78)
- In light of COVID-19, develop a campaign focused on infectious disease and transit use.

¹ Effective Aug. 1, 2019, new laws allow cities to set speed limits on certain city streets, after conducting an internal traffic study.

APPENDIX D | PLANNING REVIEWS

REVIEW EXISTING SAFETY BRANDS AND MESSAGING CAMPAIGNS TO INCORPORATE BROADER CONSIDERATIONS OF HEALTH AND SAFETY.

Explore opportunities to educate and influence traveler behavior during extreme weather events that are expected to increase due to climate change (e.g., flash floods, heavy rains, freezing rain in the winter months).

REVIEW EXISTING MAINTENANCE AGREEMENTS FOR SIDEWALKS TO ENSURE SAFE TRAVEL BY ALL AGES AND ABILITIES. TRACK AND REPORT MAINTENANCE DEFICIENCIES, AND DEVELOP ENFORCEMENT PROCEDURES TO ENSURE COMPLIANCE.

Develop accountability and enforcement for winter maintenance standards that provide accessible and safe routes for non-motorized travel. Move beyond ADA compliance.

WORK WITH LAW ENFORCEMENT AGENCIES AND THE LEGISLATURE TO SYSTEMATICALLY COLLECT DATA ON RACE AND ETHNICITY FOR TRANSPORTATION-RELATED VIOLATIONS,

including traffic stops and public transit violations, and provide annual summaries of the data to the public. Explore roles and responsibilities for MnDOT related to reducing racial inequities in transportation system safety. Consider partnering with the Minnesota Department of Health and the Minnesota Department of Public Safety.

CRITICAL CONNECTIONS

CONSIDER EXPLORING THE POTENTIAL UTILITY OF NEW MODELS AND TOOLS THAT CAPTURE THE SOCIAL AND HEALTH BENEFITS AND COSTS OF TRANSPORTATION PROJECTS.

- Identify a new model to integrate into project selection or development that captures social and health benefits.
- Prioritize projects with more social and health benefits.

CONSIDER DEMOGRAPHIC AND HEALTH DATA IN ORDER TO ENSURE SYSTEMS ARE ACCESSIBLE AND AVAILABLE TO SERVE THE RANGE OF NEEDS OF A COMMUNITY.

- Expand on Environmental Justice analysis being done on projects to make sure projects are serving the communities adjacent to them.
- Proactively engage people dependent on multimodal transportation throughout projects.
- Incorporate existing environmental justice analysis into the scoping process for projects.

WORK WITH TRANSIT AGENCIES, THE METROPOLITAN COUNCIL, AND CITIES TO REVIEW AND REVISE TRANSIT AGENCIES' FORMAL POLICIES TO BAN ALCOHOL ADVERTISEMENTS ON TRANSIT PROPERTY BY 2020.

Reconsider this recommendation for the next SMTP update, especially within Greater Minnesota transit agencies.

EQUITY

DEFINE WHAT EQUITY MEANS IN TRANSPORTATION AND INCLUDE TRANSPORTATION EQUITY IN THE MINNESOTA GO VISION. Cement equity as a part of the vision with specific language.

STUDY, DOCUMENT AND REPORT ON INEQUITIES IN MINNESOTA'S TRANSPORTATION SYSTEM AND DEFINE MNDOT'S ROLE IN REDUCING THOSE INEQUITIES.

- Use Re-thinking I-94 as a template for approaching other projects while acknowledging history and participating in robust engagement.
- Continue to assess planning processes, policies, and practices with an eye to equity. Build out this assessment process and create a framework for implementing change.

PRIORITIZE INVESTMENTS IN COMMUNITIES THAT HAVE FACED HISTORICAL

DISINVESTMENT. Integrate historical disinvestment into project scoring criteria.

- Create funding buckets that go specifically to both short and long-term improvements in communities that have faced historical disinvestment.
- Incorporate community values and priorities within transportation projects. (It is not enough to prioritize historically disadvantaged areas; communities need to be listened to and provided with the design/resources that support their identified priorities.)

HEALTHY COMMUNITIES

IDENTIFY EFFECTIVE STRATEGIES TO REDUCE AIR POLLUTION AND GREENHOUSE GAS EMISSIONS TO MEET THE NEXT GENERATION ENERGY ACT GOALS.

- Explore how connected and automated vehicles strategies can prioritize an electric/hybrid CAV system to help reduce air pollution and GHG emissions.
- Elevate work of the Sustainability and Public Health Division that's supporting this recommendation (e.g., Sustainable Transportation Advisory Council, Climate Change Subcabinet Transportation Action Team).
- Dig deeper/articulate "complementary policies outside of the transportation sector that can further facilitate the reduction of GHG emissions" as a new work plan item.
- Connect how mode shift toward active transportation and transit can support reduced air pollution and greenhouse gas emissions to meet Next Generation Energy Act goals.
- Ensure infrastructure that supports electric vehicles uses clean energy (e.g., solar).

WORK WITH STATE AND LOCAL PARTNERS TO COMPLETE CLIMATE CHANGE VULNERABILITY ASSESSMENTS.

- Identify a System Stewardship performance measure related to system resilience (reducing vulnerability to climate threats, tracking advanced preparation efforts).
- Follow-up on this work plan item of identifying vulnerabilities and assessing risks, report on what assessments have been done, where and what climate topics they cover. Do they cover the scope of climate, transportation and health topics (e.g., flooding, mudslides, extreme heat, pollen, environmental justice)? Where are gaps in assessments done thus far that the next SMTP work plan can prioritize?

APPENDIX D | PLANNING REVIEWS

CONTINUE TO WORK TOWARD SHIFTING TRAVELERS TO ACTIVE TRANSPORTATION MODES BY PROVIDING CONVENIENT, SAFE AND CONNECTED WALKING, BICYCLING AND TRANSIT INFRASTRUCTURE.

- Integrate “active transportation” infrastructure strategies and performance measures. Link these efforts to other SMTP goals, such as GHG emissions and incorporating equity.
- Look into policy changes to support active transportation system infrastructure and mode shift.

DEVELOP CONTEXT GUIDANCE FOR TRANSPORTATION PROJECTS THAT INCLUDES HEALTH DETERMINANT DATA AND COMMUNITY ENGAGEMENT BEST PRACTICES. Identify a strategy or work plan item to integrate health determinants into Context Sensitive Solutions planning and design approach.

EXPLORE THE POTENTIAL UTILITY OF THE INTEGRATED TRANSPORT AND HEALTH IMPACTS MODEL TO ASSESS, QUANTIFY, AND MESSAGE AROUND THE HEALTH BENEFITS OF TRANSPORTATION PROJECTS THAT INFLUENCE MODE CHOICE.

Follow-up on work plan item to explore ITHIM tool. If ITHIM was evaluated and determined that it wasn’t an applicable tool, what other opportunities can MnDOT explore to identify and evaluate health impacts of transportation system decisions?

FOCUS ON RELIABILITY AND TOTAL NUMBER OF TRIPS GENERATED, WITH THE GOAL OF REDUCING SINGLE-OCCUPANCY AUTOMOBILE TRIPS. Create a new performance measure related to reducing single-occupancy automobile trips and increasing mode shift.

ADDITIONAL OPPORTUNITIES FOR THE SMTP UPDATE

These items were highlighted within the HIA text but not formally identified as an HIA Recommendation:

- Look into how MnDOT publicly-owned land can be managed in a way that maximized health of residents and surrounding environment (HIA, p. 81).
- Explore MnDOT’s role in preventing crashes linked to poor weather, as climate change will bring more intense rainstorms, freezing rain and other challenging conditions (HIA, p. 85). This could be a continuation of the “Develop and execute safety education campaigns” in the 2017 SMTP work plan (p. 103).
- Mitigate allergenic pollen burden, evaluate/update vegetation seed mixes and plantings as well as guidance for local jurisdictions on environmental controls for ragweed and other nuisance plants (HIA, p. 89).
- Continue to examine and review cost sharing agreements (including maintenance) with local jurisdictions to facilitate adoption of complete streets (HIA, p. 97).

OTHER MNDOT, PEER & PARTNER PLAN REVIEWS

Staff compiled a list of peer and partner agencies whose work is impacted or informed by transportation decisions or is transportation focused. This review process was an opportunity to identify how transportation relates to the work of other agencies and partners, and to identify ways to improve coordination in the future.

Staff completed the reviews to identify:

- New trends impacting transportation.
- Policies and investment priorities to consider for the SMTP.
- Feedback provided by the public providing additional context for transportation planning.

PROCESS

To identify plans and studies to review, staff compiled a list of peer and partner agencies whose work is transportation focused or impacted or informed by transportation decisions. Only those plans and studies completed since January 2017—the adoption date for the previous SMTP—were reviewed. The nearly 100 planning reviews fell into the following categories:

- MnDOT Plans
- MnDOT Reports and Studies
- Peer Agency Plans
- Federal Plans
- Regional Development Organization Plans
- Metropolitan Planning Organization Plans

Tribal plans were requested but none were received for review before the completion of the SMTP.

Over 60 plans and studies were reviewed. Nearly 40 plans or studies were still in process or determined to be not applicable (e.g., dated prior to January 2017). For each review, staff summarized the following details if the information was available:

- Purpose
- References to Minnesota GO Vision for transportation or SMTP
- Policy objectives
- Trends identified
- Investment priorities

RESULTS

The review confirmed that MnDOT, partners and peers were tracking similar trends and issues. Many of the topics in the plans and studies were topics MnDOT had already integrated into its work or was tracking for the 2022 SMTP. Examples of topics and trends MnDOT was already tracking include planning for all modes, economic vitality, safety and environmental stewardship. This alignment confirms staff were aware of the trends and topics most likely to affect transportation.

The review identified the following potential new topics to include in MnDOT’s trend analysis. Other MnDOT plans and programs may already consider these, but this review indicated increased emphasis on their importance.

- Extreme weather impacts
- Housing affordability
- Logistic changes including change in freight traffic
- Park access and transportation
- Travel safety

The planning review also highlighted a few questions that partners have been wrestling with as they

update their own planning documents. During the review, staff noted inconsistencies in the guidance provided by MnDOT, partners and peers for a select few topics. The following questions were considered during the SMTP process to try to reconcile these inconsistencies and provide clear guidance to MnDOT and partners.

- How do we balance maintaining our current system with building the system we want in the future?
- How do we decide on optimal speed limits and ensure uniformity across the transportation system?
- How do we encourage deeper and broader consideration for all people using the transportation system relative to their unique travel needs?
- How do we balance safety versus efficiency in project selection? Is there a hierarchy of considerations?
- How does MnDOT balance innovation with safety and efficiency?

Table D-2 shows the key trends and broad policy objectives identified.

Table D-2: Key trends & policies identified in MnDOT, MPO and partner plans, 1 of 3

TREND TOPIC AREA	MNDOT STATEWIDE PLANS	MPO PLANS	PARTNER STATEWIDE PLANS
Transportation Safety	<ul style="list-style-type: none"> • Increase investment in truck parking. • Walking and bicycling limited due to real and perceived barriers. • Provide an integrated system of freight transportation in Minnesota - highway, rail, water, air cargo and intermodal terminals — that offers safe, reliable, and competitive access to statewide, national and international markets. 	<ul style="list-style-type: none"> • Prioritize safety and acceptable levels of risk for vulnerable users. • Provide viable and efficient travel options for the movement of people and goods. • Support, to the extent practical, a safe transit system. • Improve reliability and reduce delay for freight operations. • Support state and regional emergency, evacuation and security plans. • Reduce vehicle speed. 	<ul style="list-style-type: none"> • Safety and security is a top priority for transportation.
System Stewardship	<ul style="list-style-type: none"> • Land use decisions impact transportation and the options available to Minnesotans. • Establish performance measures for asset management. • Build fiber optic infrastructure to support connected and automated vehicles and transportation system management operations. 	<ul style="list-style-type: none"> • Efficiently preserve and maintain the regional transportation system in a state of good repair. • Operate the regional transportation system to efficiently and cost-effectively connect people and freight to destinations. • Reduce impacts of transportation construction, operations, and use on the natural, cultural, and development environments. • Invest in a multimodal transportation system to attract and retain businesses and residents. • Encourage local land use design that integrates highways, streets, transit, walking and bicycling. • Effectively coordinate transportation and land use by promoting the sustainability and livability principles, goals and objectives from local land use plans. • Invest in cost-effective transportation solutions. 	<ul style="list-style-type: none"> • Encourage investment in rural communities. • Promote cybersecurity, infrastructure durability and cost effectiveness. • Care for natural resource and existing facilities.

APPENDIX D | PLANNING REVIEWS

Table D-2: Key trends & policies identified in MnDOT, MPO and partner plans, 2 of 3

TREND TOPIC AREA	MNDOT STATEWIDE PLANS	MPO PLANS	PARTNER STATEWIDE PLANS
Climate Action	<ul style="list-style-type: none"> • Build a market for electric vehicles and provide more EV options. • Promote biofuels to reduce greenhouse gas emissions. • Reduce reliance on single-occupant vehicles and reduce greenhouse gas emissions. 	<ul style="list-style-type: none"> • Reduce the transportation system’s vulnerability to natural and human-caused incidents and threats, including climate change and terrorism. • Reduce transportation-related air emissions and improve regional air quality. 	<ul style="list-style-type: none"> • Transportation produces 24% of state’s total greenhouse gas emissions. • Active transportation key to reducing emissions. • Need to reduce congestion, idling and travel during peak periods.
Critical Connections	<ul style="list-style-type: none"> • Expanding transit can help serve some transportation needs especially in Greater Minnesota. • Build and maintain safe and comfortable bicycling facilities for people of all ages and abilities. • Connect regional communities and strengthen neighborhood bonds. 	<ul style="list-style-type: none"> • Build and maintain infrastructure that fits the neighborhood character. • Increase travel time reliability and predictability for travel on highway and transit systems. • Increase the number and share of trips taken using carpools, transit, bicycling and walking. • Enhance connectivity across and between modes of transportation. • Increase mode share for travel that is not single occupant vehicle. • Reduce travel time and improve access to jobs and community destinations. 	<ul style="list-style-type: none"> • Transportation options for connecting people to work are important. • Inter-city transit is difficult because of long distances, gravel roads.

Table D-2: Key trends & policies identified in MnDOT, MPO and partner plans, 3 of 3

TREND TOPIC AREA	MNDOT STATEWIDE PLANS	MPO PLANS	PARTNER STATEWIDE PLANS
Healthy Equitable Communities	<ul style="list-style-type: none"> • Need to track equity; we fund what we measure. • Need for a statewide “transportation equity” definition. • Try to reduce cost of travel to work. 	<ul style="list-style-type: none"> • Improve the availability and quality of multimodal travel options for people of all ages and ability to connect to jobs and other opportunities, particularly for underrepresented populations. • Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities through the use of active transportation options. • Improve transportation access for Environmental Justice and Title VI communities. • Avoid, minimize and/or mitigate adverse social, environmental and economic impacts resulting from existing or new transportation facilities. 	<ul style="list-style-type: none"> • Reducing fine particles and ground-level ozone levels could prevent early deaths, hospitalizations and emergency department visits. • Health and wellness benefits are offered by parks and trails as part of our daily lives, and more accessibility is needed to connect people with these resources.
Open Decision Making	<ul style="list-style-type: none"> • Organize administrative rules and policies to support planning based on community input and support. • Transparency of processes and decision making is needed. • Engagement is necessary but not sufficient to meet goals. • District-specific engagement strategies are needed to respond to community needs. 	<ul style="list-style-type: none"> • Involve all local partners in the transportation planning process. • Assure transportation disadvantaged communities are served and included in decision making. 	<ul style="list-style-type: none"> • Connect people to resources through programming and awareness.

PLANNING DOCUMENTS REVIEWED

The planning documents reviewed are listed below. Plans are listed in no particular order.

MNDOT PLANS

1. District Freight Plans
2. Transportation System Management Operations Strategic Plan/Implementation Plan
3. Transportation Asset Management Plan
4. District Bicycle Plans
5. Strategic Highway Safety Plan
6. Connected and Automated Vehicle Strategic Plan
7. Minnesota Weight Enforcement Plan
8. Strategic Operating Plan

MNDOT REPORTS & STUDIES

9. Truck Parking Study
10. Greater Minnesota Mobility Study
11. Advancing Equity: Programs and Process Review
12. District 2 Community Conversations
13. District 8 Community Conversations
14. District Manufacturers' Perspectives Studies
15. Airport Economic Impacts
16. CAV-X Scenario Planning
17. Pathways to Decarbonizing Transportation
18. Sustainability Report
19. Aesthetic Market Research Project

PEER AGENCY PLANS

20. Minnesota State Parks and Trails System Plan
21. State Patrol Strategic Plan
22. Minnesota Pollution Control Agency Strategic Plan
23. Minnesota Pollution Control Agency The Air We Breathe
24. Minnesota Pollution Control Agency Life and Breath Report
25. Legacy Amendment 10th Anniversary Report
26. Department of Public Safety State Hazard Mitigation Plan
27. Minnesota Environmental Quality Board Water Plan
28. Minnesota Board on Aging MN2030 Looking Forward
29. Minnesota Association of Development Organizations DevelopMN
30. Minnesota Council on Transportation Access Strategic Plan
31. Minnesota Board of Water & Soil Resources One Watershed One Plan Transition Plan
32. Minnesota Department of Employment and Economic Development 2020 Strategic Plan
33. Office of the Governor One Minnesota Plan
34. Greater MN Regional Parks and Trails Commission Strategic Plan
35. North Dakota Department of Transportation Moves Active Transportation and Public Transit Plan
36. North Dakota Department of Transportation TransAction III Statewide Strategic Transportation Plan
37. Southern Red River Valley Review of Trade Network and Red River Crossings
38. South Dakota Department of Transportation Statewide Long-Range Transportation Plan
39. Iowa Department of Transportation Iowa in Motion
40. Wisconsin Department of Transportation Connections 2030
41. Wisconsin Department of Transportation Connect 2050

APPENDIX D | PLANNING REVIEWS

FEDERAL PLANS

- 42. US Department of Transportation Strategic Plan
- 43. Government of Canada Transportation 2030
- 44. Army Corps of Engineers 2014-2018 Civil Works Strategic plan
- 45. National Park Service System Plan
- 46. US Forest Service Strategic Plan
- 47. US Fish and Wildlife Service Lands in the Midwest Region Long Range Transportation
- 48. Natural Resources Conservation Service Strategic Plan Update 2016-2018
- 49. Department of the Interior 2018-2022 Strategic Plan

RDO PLANS

- 50. Region 1 2016 Local Human Service Transit Coordination Plan
- 51. Northwest Regional Development Commission Regional Transportation Coordinating Council Operational Plan
- 52. Region 5 Development Commission Regional Transportation Coordinating Council Operational Implementation Plan
- 53. Region 9 Development Commission 2017 Local Human Service-Public Transit Coordination Plan

MPO PLANS

- 54. Duluth-Superior Metropolitan Interstate Council (MIC) Sustainable Choices 2045
- 55. Duluth-Superior Metropolitan Interstate Council (MIC) Duluth-Superior Metropolitan Bikeways Plan
- 56. Grand Forks-East Grand Forks Metropolitan Planning Organization 2045 Street/Highway Plan
- 57. Grand Forks-East Grand Forks Metropolitan Planning Organization Bicycle and Pedestrian Plan
- 58. Grand Forks-East Grand Forks Metropolitan Planning Organization Transit Development Plan Update
- 59. Fargo Moorhead Metropolitan Council of Governments (Metro COG) Metro GROW 2045
- 60. La Crosse Area Planning Committee (LAPC) Coulee Vision
- 61. Mankato/North Mankato Area Planning Organization (MAPO) MAPO Long Range Transportation Plan Update
- 62. Metropolitan Council Thrive MSP 2040
- 63. Metropolitan Council Transportation Policy Plan
- 64. Twin Cities Highway Mobility Needs Analysis
- 65. Rochester Olmstead Council of Governments (ROCOG) ROCOG Long Range Transportation Plan
- 66. St. Cloud Area Planning Organization (APO) Mapping 2045

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APPENDIX E - ENVIRONMENTAL JUSTICE & TITLE VI

This appendix provides a system-level analysis of the potential impacts the objectives, strategies and actions in Chapter 5 may have on the state’s environmental justice populations and other communities with specific transportation needs. These populations are racial and ethnic minorities, people with low-incomes, people with limited-English proficiency, people age 17 and younger, people age 65 and older or households without vehicles. These groups will be collectively referred to as “EJ and Title VI populations” for the purposes of this document.

Since this analysis for the Statewide Multimodal Transportation Plan (SMTP) occurs at the statewide system level, the results are general and qualitative in nature. Minnesota Department of Transportation (MnDOT) will complete additional environmental justice analyses for modal plans, other plans and studies and capital investment projects. Those individual project analyses identify specific impacts on communities and neighborhoods. The analysis completed during project planning processes and related project design decisions helps avoid, minimize or mitigate adverse impacts.



ENVIRONMENTAL JUSTICE & TITLE VI

OVERVIEW

Presidential Executive Order 12898, issued in 1994, directed each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low-income populations.”¹ The order builds on Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color or national origin. The order also provides protection to low-income groups. The three fundamental EJ principles are to:

- Avoid, minimize or mitigate disproportionately high adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Executive Order 12898 and U.S. Department of Transportation define minority populations as:

- Black – a person having origins in any of the black racial groups of Africa.
- American Indian and Alaskan Native – a person having origins in any original people of North America and who maintains cultural identification through tribal affiliation or community recognition.
- Asian – a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent.
- Native Hawaiian or Other Pacific Islander – a person having origins in any of the original people of Hawaii, Guam, Samoa and other Pacific Islands.

- Hispanic – a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

The executive order and U.S. Department of Transportation also define low-income populations as:

- Low-income – a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

Executive Order 13166: Improving Access to Services for Persons with Limited-English Proficiency, issued in 2000, further clarified Title VI of the Civil Rights Act of 1964. It stated that individuals who do not speak English well and who have a limited ability to read, write, speak or understand English are entitled to language assistance in order to access public services or benefits for which they are eligible. MnDOT is a recipient of federal funds from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) and other federal agencies. Accordingly, MnDOT is required to have a Language Assistance Plan. More information can be found in [MnDOT’s Language Assistance Plan](#).

While not identified by Title VI, Executive Order 12898 or Executive Order 13166, this analysis also includes people age 65 and older, people age 17 and younger and zero vehicle households because these groups have unique transportation needs. These groups in addition to those listed in the executive orders will collectively be referred to as “EJ and Title VI populations” unless referred to specifically.

¹ Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.

ENVIRONMENTAL RACISM

Minnesota has a complicated history related to environmental racism. Past racist policies and practices shaped the way Minnesota developed, and Black, Indigenous and People of Color (BIPOC) communities continue to bear a disproportionate share of the negative impacts of those decisions. Advancing environmental justice means that benefits and burdens resulting from past actions and policy decisions will be fairly and justly split among all people and that BIPOC communities will be involved in future planning and decision-making processes. Environmental justice considerations go beyond considering impacts to BIPOC. Minnesota's history includes prominent examples of the impact of the transportation system on BIPOC communities.

The construction of Interstate 94 (I-94) is an example of environmental racism in Minnesota's transportation system. The final route for the highway bisected the Rondo Neighborhood, a historically Black neighborhood in Saint Paul. Freeway construction displaced many BIPOC resulting in the loss of homes and businesses.² People living near I-94 have since been exposed to increased light, noise and air pollution.

According to the Minnesota Pollution Control Agency, 91% of BIPOC Minnesotans are exposed to higher levels of air pollution than the state average. This is due in part to a higher portion of BIPOC living near major roads like I-94. The impacts of transportation on BIPOC do not end with air pollution, but extend to other aspects of human, economic, social and environmental health.³ These disproportionate impacts are examples of environmental racism. Environmental justice seeks to right the wrongs created by environmentally racist policies and practices.

The Oxford Dictionary defines environmental racism as "Intentional or unintentional racial discrimination in environmental policy-making, enforcement of regulations and laws, and targeting of communities for the disposal of toxic waste and siting of polluting industries."⁴ Advancing environmental justice requires acknowledging past harm from environmentally racist policies and actions.

MnDOT's Rethinking I-94 project is a recent example of how changing the way transportation decisions are made can change the status quo and reimagine the future. MnDOT's plans to reconstruct the freeway between downtown Saint Paul and Minneapolis presents an opportunity to address negative community impacts from the initial construction and the ongoing health impacts. The project started with review of community cultures and history along the corridor to provide historical and cultural background about groups along the freeway. This information helped to acknowledge the history of harm along the corridor and to inform public engagement. MnDOT also hosted meetings and open houses to hear feedback and suggestions from community members.

Rethinking I-94 is advancing environmental justice by acknowledging the harmful impacts of this corridor on local communities and working with them to create a better, more equitable solution. Overall, environmental justice and transportation equity are necessary tools to overcome the legacy of environmental racism in transportation.

² "How to connect and heal St. Paul's Rondo neighborhood," <https://reconnectrondo.com/how-to-connect-and-heal-st-pauls-rondo-neighborhood/>

³ U.S. Department of Transportation, "Guidance on Environmental Justice and NEPA," Federal Highway Administration, December 16, 2011, https://www.environment.fhwa.dot.gov/env_topics/ej/guidance_ejustice-nepa.aspx.

⁴ Oxford Reference, "Environmental Racism," <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095753679>.

OVERVIEW OF MINNESOTA'S POPULATION

According to the U.S. Census, 2015 – 2019 American Community Survey five-year estimates, 5,563,378 people live in Minnesota. Table E-1 shows the population based on race, ethnicity, age, limited-English proficiency, low-income and households with zero vehicles.

Table E-1: Minnesota's Demographics, US Census, 2015 to 2019 American Community Survey 5-year Estimates

POPULATION GROUP	TOTAL GROUP POPULATION	PERCENT OF POPULATION
Total Population	5,563,378	100.00%
Total Households	2,185,603	100.00%
White alone	4,609,049	82.85%
Black alone	356,515	6.41%
American Indian or Alaskan Native alone	58,011	1.04%
Asian alone	268,181	4.82%
Native Hawaiian or other Pacific Islander alone	2,194	0.04%
Some other race alone	104,032	1.87%
Two or more races	165,396	2.97%
Hispanic	299,556	5.38%
Age 65 and older	858,698	15.43%
Age 17 and under	1,295,848	23.29%
Persons below the poverty level	526,065	9.46%
Limited English-Speaking Households	52,622	2.41%
Households with zero vehicles	146,861	6.72%

TRENDS

Age, demographic and health trends, among others, in Minnesota impact EJ and Title VI populations. When viewing these trends, it is important to note how these issues affect each other. EJ and Title VI populations in Minnesota disproportionately bear the burden of environmental harms. Environmental injustice or inequality occurs when an underserved community experiences disproportionately higher risks than the population as a whole. Recognizing what factors are present can help create solutions that are designed to serve all.

Changing demographics combined with systemic inequities result in certain Minnesotans at risk of harm. Age and race are two such demographics. Minnesota's population is aging and becoming more racially diverse. As discussed in the [Aging Population Trend](#), the number of people age 65 and older is expected to grow from 920,000 to more than 1.3 million by 2040. As Minnesota's population ages, the state's transportation system will need to adapt to the changing needs. Providing accessible and affordable ways for older adults to get around is a vital part of ensuring independent, fulfilled lives.

Significant racial disparities exist in Minnesota. The [Demographics Trend](#) explains from 2010 to 2019, BIPOC communities grew by 32% and the white, non-Hispanic population grew by 1%. Minnesota Employment and Economic Development's Minnesota Disparities by Race Report highlights racial disparities across a number of socioeconomic factors including employment, business ownership, pandemic response, income and more.⁵ The report concludes noting that "the economic challenges and opportunities for BIPOC Minnesotans will be great over the next 15 years and an equitable, multi-pronged approach will be necessary for attracting, retaining, and training workers of all demographic characteristics."

As discussed in the [Health Trend](#), low-income people and BIPOC who live next to major highways are more likely to be hospitalized for asthma-related reasons. Additionally, heat-related illnesses are more common in areas with large roadways and little vegetation due to the heat island effect and warming temperatures related to climate change.⁶

⁵ Minnesota Employment and Economic Development, "Minnesota Disparities by Race Report," 2020, https://mn.gov/deed/assets/061020_MN_disparities_final_tcm1045-435939.pdf

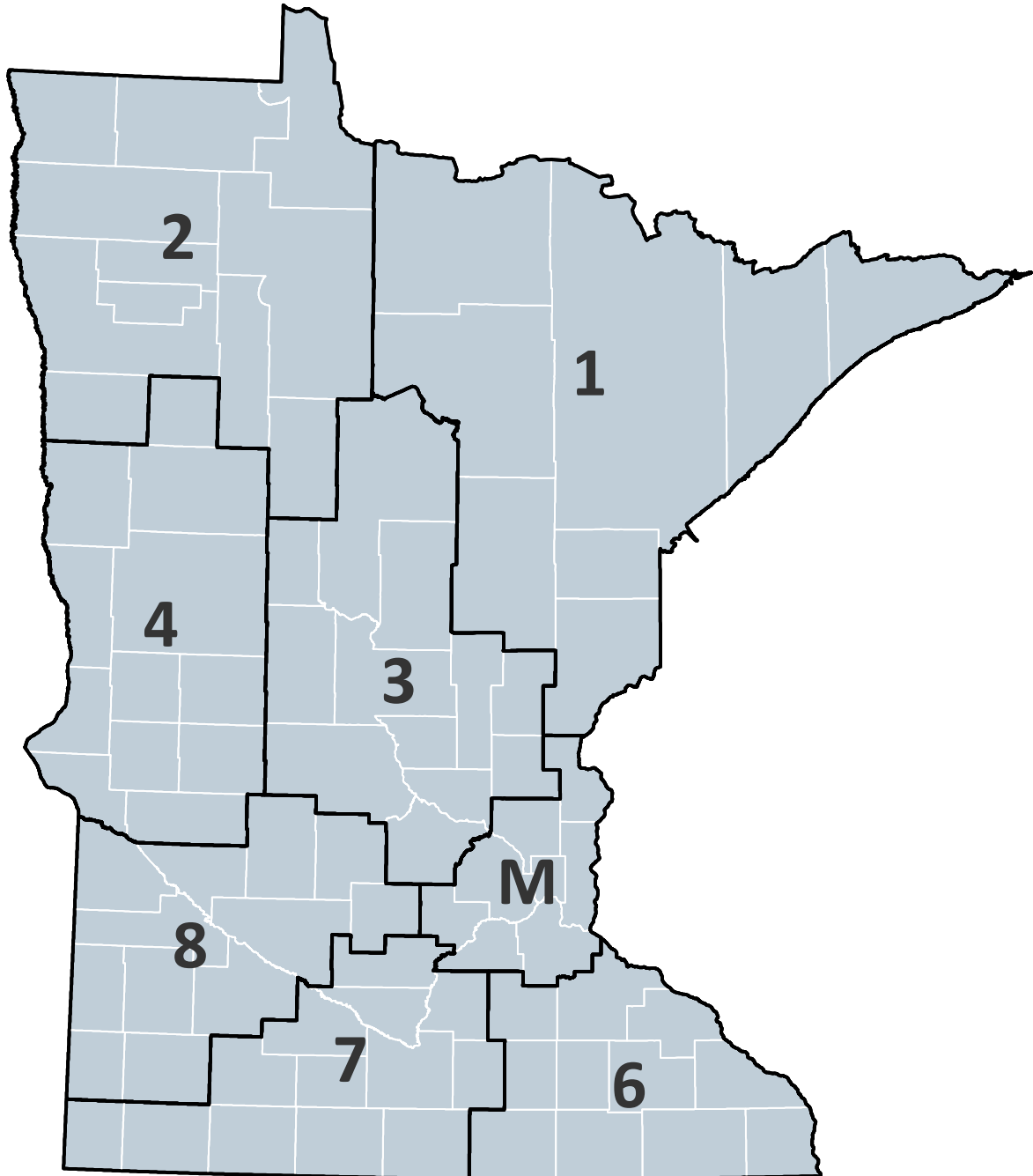
⁶ Environmental Protection Agency, "Learn About Heat Islands," 2021, <https://www.epa.gov/heatislands/learn-about-heat-islands>.

AREA TRANSPORTATION PARTNERSHIPS

An Area Transportation Partnership (ATP) is a group of traditional and non-traditional transportation partners including representatives from MnDOT, Metropolitan Planning Organizations, Regional Development Commissions, counties, cities, tribal

governments, special interests and the public that have the responsibility of developing a regional transportation improvement program for their area of the state. There are eight ATPs in Minnesota—one for each MnDOT district.

Figure E-1: Minnesota Area Transportation Partnerships (ATPs)



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The ATP process was introduced in the early 1990s to ensure stakeholder participation in the investment of federal transportation funding. The ATP process provides for early and continuous involvement in the development of the State Transportation Improvement Program (STIP), a four-year list of projects that are expected to be completed within that timeframe.

The ATP solicits for projects that are eligible for federal funding. The resulting project lists are reviewed and integrated into the Area Transportation Improvement Program, which is then sent to MnDOT's Office of Transportation System Management to be included in the STIP. The final STIP is forwarded to the Federal Highway Administration/Federal Transit Administration for approval. No federal projects can be started until this approval is received.

Figure E-1 shows Minnesota's ATP boundaries across the state. Table E-2, Table E-3 and Table E-4 show racial and ethnic population data, low-income population data and total limited English-speaking households data by Minnesota ATP boundary.

Table E-2 shows Minnesota's racial and ethnic populations by ATP. The majority of the state's BIPOC population lives in the Metro ATP. Eighty-three percent of the state's Black population, 86% of the state's Asian population and 65% of the state's Hispanic population reside in the Metro ATP. The largest American Indian/Alaskan Native population is also in the Metro ATP and represents 31% of the state's total American Indian/Alaskan Native population.

Outside of the Metro ATP:

- Southeast ATP 6 has the largest Black population.
- Southeast ATP 6 has the largest Asian population.
- Southeast ATP 6 has the largest Hispanic population.

Table E-3 summarizes the total low-income population in each ATP. Low-income includes all persons whose median household income is at or below the guidelines set by the U.S. Department of Health and Human Services. Statewide, over 9% of persons were below the poverty level. Southeast ATP 6 and West Central ATP 4 had the highest percentage of their population below the poverty level with 12% and 11%. Southwest ATP 8 had the lowest outside the Metro ATP with just over 6%.

Table E-2: Minnesota’s racial & ethnic populations by ATP, 2015-2019 American Community Survey 5-year Estimate

DEMOGRAPHIC	TOTAL	NORTHEAST ATP 1	NORTHWEST ATP 2	CENTRAL ATP 3	WEST CENTRAL ATP 4
Total Population	5,563,378	354,041	165,297	673,563	249,395
White Alone	4,609,049	325,947	144,091	620,058	229,573
% White alone	82.80%	92.10%	87.20%	92.10%	92.10%
Black alone	356,515	4,930	2,049	17,493	4,052
% Black alone	6.40%	1.40%	1.20%	2.60%	1.60%
American Indian or Alaskan Native alone	58,011	9,124	11,978	7,270	6,660
% American Indian or Alaskan Native alone	1.00%	2.60%	7.20%	1.10%	2.70%
Asian alone	268,181	2,788	1,514	8,080	1,844
% Asian alone	4.80%	0.80%	0.90%	1.20%	0.70%
Native Hawaiian and Other Pacific Islander alone	2,194	136	67	67	174
% Native Hawaiian and Other Pacific Islander alone	0.04%	0.04%	0.04%	0.01%	0.07%
Some Other Race alone	104,032	1,393	797	6,721	1,774
% Some Other Race alone	1.90%	0.40%	0.50%	1.00%	0.70%
Two or more Races	165,396	9,723	4,801	13,874	5,318
% Two or more Races	3.00%	2.70%	2.90%	2.10%	2.10%
Hispanic	299,556	6,219	5,508	18,362	8,088
% Hispanic	5.40%	1.80%	3.30%	2.70%	3.20%

DEMOGRAPHIC	TOTAL	METRO	SOUTHEAST ATP 6	SOUTH CENTRAL ATP 7	SOUTHWEST ATP 8
Total Population	5,563,378	3,120,462	506,721	284,800	209,099
White Alone	4,609,049	2,384,590	451,701	261,780	191,309
% White alone	82.80%	76.40%	89.10%	91.90%	91.50%
Black alone	356,515	299,788	18,191	5,946	4,066
% Black alone	6.40%	9.60%	3.60%	2.10%	1.90%
American Indian or Alaskan Native alone	58,011	18,261	1,905	764	2,049
% American Indian or Alaskan Native alone	1.00%	0.60%	0.40%	0.30%	1.00%
Asian alone	268,181	230,717	15,425	5,084	2,729
% Asian alone	4.80%	7.40%	3.00%	1.80%	1.30%
Native Hawaiian and Other Pacific Islander alone	2,194	1078	467	58	147
% Native Hawaiian and Other Pacific Islander alone	0.04%	0.03%	0.09%	0.02%	0.07%
Some Other Race alone	104,032	73,290	8,474	6,042	5,541
% Some Other Race alone	1.90%	2.30%	1.70%	2.10%	2.60%
Two or more Races	165,396	112,738	10,558	5,126	3,258
% Two or more Races	3.00%	3.60%	2.10%	1.80%	1.60%
Hispanic	299,556	196,682	28,706	21,524	14,467
% Hispanic	5.40%	6.30%	5.70%	7.60%	6.90%

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How well a person speaks English can affect their ability to participate in the transportation planning process. According to the American Community Survey (ACS), “a limited English-speaking household” is one which all members 14 years and over have at least some difficulties with English.” Approximately 2%, or 52,622 of Minnesotan households are considered to be “limited-English household.” Table E-4 compares this information by ATP. The majority of limited-English speaking households (76% of those in Minnesota) live in the Metro ATP. Northwest ATP 2 has the fewest number of limited-English speaking households, while Northeast ATP 1 has the lowest percentage of total households in the ATP.

Table E-5 compares languages spoken at home. After English, Spanish is the most common language spoken at home, followed by Afro-Asiatic languages and Hmong. Afro-Asiatic languages include Somali, Amharic, along with others. While only a little under 2% of the state’s population five years and older speaks an Afro-Asiatic language, about 1%, or over 38,000 people, speak English less than “very well.” This is the highest percentage aside from Spanish speakers among those who spoke a language other than English at home.

Table E-3: Minnesota’s low-income population by ATP, 2015-2019 American Community Survey 5-year Estimates

ATP	TOTAL POPULATION	POPULATION BELOW POVERTY LEVEL	% POPULATION BELOW POVERTY LEVEL
1 Northeast	571,530	51,687	9.0%
2 Northwest	796,228	58,807	7.4%
3 Central	1,518,738	155,703	10.3%
4 West Central	167,982	18,448	11.0%
Metro	251,273	26,733	10.6%
6 Southeast	932,310	111,749	12.0%
7 South Central	712,232	73,150	10.3%
8 Southwest	489,794	29,788	6.1%
Total	5,440,087	526,065	9.7%

Table E-4: Minnesota’s limited English-speaking households by ATP, 2015-2019 American Censuses Survey 5-year Estimates

ATP	TOTAL HOUSEHOLDS	LIMITED ENGLISH-SPEAKING HOUSEHOLDS	% LIMITED ENGLISH-SPEAKING HOUSEHOLDS
1 Northeast	150,788	589	0.4%
2 Northwest	65,740	435	0.7%
3 Central	256,810	2,452	1.0%
4 West Central	103,481	847	0.8%
Metro	1,207,665	39,869	3.3%
6 Southeast	200,918	4,568	2.3%
7 South Central	114,553	2,332	2.0%
8 Southwest	85,648	1,530	1.8%
Total	2,185,603	52,622	2.4%

**Table E-5: Languages spoken at home in Minnesota,
2015-2019 American Community Survey 5-year Estimate**

LANGUAGE SPOKEN AT HOME	TOTAL POPULATION	% TOTAL POPULATION	POPULATION AGE 5-YEARS AND OLDER THAT SPEAKS ENGLISH LESS THAN "VERY WELL"	% POPULATION AGE 5-YEARS AND OLDER THAT SPEAKS ENGLISH LESS THAN "VERY WELL"
Speak only English	4,589,965	88.10%	NA	NA
Spanish or Spanish Creole	205,634	3.90%	82,116	1.60%
Amharic, Somali, or other Afro-Asiatic languages	83,546	1.60%	38,908	0.70%
Yoruba, Twi, Igbo, or other languages of Western Africa	12,244	0.20%	3,956	0.10%
Swahili or other languages of Central, Eastern, and Southern Africa	10,799	0.20%	3,538	0.10%
Hmong	64,057	1.20%	27,801	0.50%
German	19,060	0.40%	2,593	<0.0%
Chinese	23,773	0.50%	10,509	0.30%
Vietnamese	22,940	0.40%	13,046	0.30%
Other Asian languages	16,866	0.30%	12,179	0.20%
French (incl. Patois, Cajun)	15,479	0.30%	3,800	0.10%
Russian	14,474	0.30%	6,304	0.10%
Arabic	15,014	0.30%	5,310	0.10%
Other languages	4,834	0.10%	1,337	<0.0%

**Table E-6: Minnesotans age 17 and under and age 65 and older by ATP,
2015-2019 American Community Survey 5-year Estimate**

ATP	TOTAL POPULATION	POPULATION 17 AND UNDER	% POPULATION 17 AND UNDER	POPULATION 65 AND OLDER	% POPULATION 65 AND OLDER
1 Northeast	354,041	69,079	19.5%	72,156	20.4%
2 Northwest	165,297	39,380	23.8%	31,096	18.8%
3 Central	673,563	166,066	24.7%	105,071	15.6%
4 West Central	249,395	57,189	22.9%	49,011	19.7%
Metro	3,120,462	733,023	23.5%	423,926	13.6%
6 Southeast	506,721	117,219	23.1%	86,455	17.1%
7 South Central	284,800	64,078	22.5%	50,223	17.6%
8 Southwest	209,099	49,814	23.8%	40,760	19.5%
Total	5,706,494	1,295,848	22.7%	858,698	16.3%

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Table E-6 shows the population of each ATP that is age 17 and under or age 65 and older. People age 17 and under make up 23% of Minnesota’s population, while people age 65 and older make up over 15%. Populations of people age 65 and older are estimated to increase significantly over the next 30 years. By 2035, there are projected to be more than 1.2 million people age 65 and older in Minnesota.

Northeast ATP 1 had the largest percentage (20.4%) of persons age 65 and older. The Metro ATP had the smallest percentage (13.6%) of those 65 and older. Central ATP 3 had the highest percentage (24.7%) of those 17 and under, while Northeast ATP 1 had the smallest (19.5%).

Households with zero vehicles have a greater reliance on transit, bicycling, walking and car- or ride-sharing services. Table E-7 shows the estimated number of households by ATP that had zero vehicles. The ACS estimated that just over 6% of Minnesota households, under 150,000 households, do not have a vehicle. More than 60% of these zero-vehicle households are in the Metro ATP, which accounts for over 7% of all Metro ATP households. In Greater Minnesota, Northeast ATP 1 had the highest percentage (7.2%) of households without a vehicle, while Central ATP 3 had the smallest percentages (4.9%).

Table E-7: Minnesota households with zero vehicles by ATP, 2015-2019 American Censues Survey 5-year Estimates

ATP	TOTAL HOUSEHOLDS	HOUSEHOLDS WITH NO VEHICLE	% HOUSEHOLDS WITH NO VEHICLE
1 Northeast	150,788	10,859	7.2%
2 Northwest	65,740	4,297	6.5%
3 Central	256,810	12,456	4.9%
4 West Central	103,481	5,936	5.7%
Metro	1,207,665	89,825	7.4%
6 Southeast	200,918	12,456	6.2%
7 South Central	114,553	6,349	5.5%
8 Southwest	85,648	4,683	5.5%
Total	2,185,603	146,861	6.7%

SMTP PUBLIC ENGAGEMENT

As described in Chapter 4 and Appendix G – Engagement Summary, MnDOT used an inclusive and comprehensive engagement effort to ensure that Minnesota residents had opportunities to participate in the development of the SMTP. The public engagement process offered an opportunity for people from diverse backgrounds to provide feedback on the issues facing Minnesota’s transportation system.

The engagement process for the plan update was unlike any that MnDOT had done before. MnDOT recognized the extraordinary circumstances surrounding the plan process. However, the goal to engage Minnesotans meaningfully in this project remained. MnDOT committed to a flexible, phased approach to respond to the changing context. MnDOT created opportunities to hear directly from people what transportation issues they face.

Staff made efforts to listen closely to the voices of people who are underserved by transportation decision making, including Black, Indigenous and People of Color, people with low-income, people with limited English proficiency and youth (under 18). Materials and communications were tailored to reach EJ and Title VI populations. MnDOT prioritized partnerships with community-based organizations and promotions of input opportunities for EJ and Title VI populations, and provided input opportunities in Spanish, Hmong and Somali.

Several SMTP materials were translated depending on time and resources available and intended audience. The Mode Lib survey was translated into Spanish. The VideoAsk survey was available in Spanish, Hmong, Somali and English. The Let’s Talk Transportation comics were translated into Spanish, Hmong and Somali. Comics and the Phase 2 survey could have been translated into several languages using the built in translation at MinnesotaGO.org. The survey responses received, and the responses received from the broader

general public engagement, shaped the objectives, strategies and actions included in the SMTP by identifying which challenges and opportunities participants believed MnDOT should consider in its planning process.

MnDOT used targeted Facebook ads to increase participation among EJ and Title VI populations and balance the participation numbers to better reflect the demographic breakdown of Minnesota’s population. Organic and targeted advertisements via zip code targeting were used to reach EJ and Title VI populations within diverse or lower income areas. Further, statewide distribution of sidewalk stickers and large posters targeted locations to reach EJ and Title VI populations.

During the online engagement opportunities, participants were asked to provide optional demographic information to help MnDOT in its outreach efforts. This data is included to provide further context in understanding the responses, as well as highlight which communities may require more engagement in the future. Demographic data was primarily received via the online self-paced trivia and feedback tool and MnDOT-hosted online trivia and discussion events. MnDOT hosted various internal conversations with staff, committees and other groups, but did not track demographics. Community partner-hosted events also did not always ask the same demographic data questions. However, these partner-hosted events focused on individuals who are underserved in transportation decision-making.

- Latino Chamber of Commerce
- African Career, Education, and Resource (ACER)
- Lakes & Prairies Community Action Partnership (CAPLP)
- Hispanic Advocacy and Community Empowerment through Research (HACER)
- Sisters of Synergy
- Vietnamese Social Services (VSS)

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For the Let's Talk Transportation Trivia discussion events, MnDOT partnered with community-based organizations to be responsive to attendee needs. NewPublica, a consultant for the SMTP, and advisory committee members assisted with coordinating translation for select events. In total, five events were offered in different languages: two in Spanish in partnership with HACER and one each in Karen, Karenni and Vietnamese in partnership with VSS.

Approximately 60% of Let's Talk Transportation participants provided at least one piece of demographic information. Of those who provided demographic data, most were white and skewed older. The audience was relatively gender balanced, providing nearly equal responses from men and women. Responses were primarily collected via the online self-paced tool and MnDOT hosted trivia events. This takeaway is solely based on the limited demographic information shared by the people who participated online.

Restrictions on in-person meetings due to the COVID-19 pandemic made it difficult for many people to participate in planning. When there was a short opportunity for in-person engagement in fall 2021, staff focused on attending community events and locations where people who are underserved by transportation might attend, including:

- Mankato State
- Mercado Central (Minneapolis)
- Metro Bus Transit Center (St. Cloud)
- Midtown Global Market (Minneapolis)
- Southwest Minnesota State University (Marshall)

Spanish-speaking staff participated in events at Mercado Central and Midtown Global Market. Opportunities for outdoor in-person engagement were extremely limited with the arrival of winter and the Omicron variant.

For the policy panel, the market research survey included a representative sample of 653 respondents from around Minnesota. To increase representation within harder-to-reach groups, MnDOT provided community-based organizations unique survey links and asked them to invite individuals from their communities. This contributed an additional 12 respondents to the overall base for a total of 665 participants.

SMTTP OBJECTIVES, STRATEGIES, ACTIONS & WORK PLAN

The SMTTP builds on the foundation provided by the Minnesota GO Vision. The plan identifies objectives, performance measures, strategies, actions and work plan activities to meet the vision and address the challenges and opportunities facing Minnesota over the next 20 years.

The plan identifies six objectives:

- Transportation Safety
- System Stewardship
- Climate Action
- Critical Connections
- Healthy Equitable Communities
- Open Decision Making

Each objective includes performance measures, strategies and actions to achieve the objective. These serve as policy direction for transportation in Minnesota. The policy direction is the foundation for MnDOT modal and system plans and transportation partners throughout Minnesota. How each objective advances environmental justice is summarized in the following sections.

TRANSPORTATION SAFETY

Safety remains a top priority for MnDOT and its transportation partners. The Transportation Safety objective seeks to safeguard transportation users as well as the communities the system travels through. The objective also looks to apply proven strategies to reduce fatalities and serious injuries for all modes. And finally, to foster a culture of transportation safety in Minnesota. See Chapter 5 for the Transportation Safety performance measures, strategies and actions.

HOW THIS OBJECTIVE ADVANCES ENVIRONMENTAL JUSTICE

Safety is a priority for everyone. It includes traveler safety and community safety and applies to everyone who uses the transportation system. It focuses on providing an integrated approach to safety. Traveler safety addresses all forms of transportation such as driving, walking, rolling, bicycling or riding transit. Differences in physical safety help to illustrate disparities for people traveling in Minnesota.

Adults age 65 and older are at a higher risk of injury and death during crashes compared to younger drivers. As highlighted in the [Aging Population Trend](#),

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older adults account for about 20% of licensed drivers, but only 10% of drivers involved in crashes are 65 and older. Older adults also are more likely to have a disability than younger people, especially related to walking and hearing, which can pose higher risks when using the transportation system.

Transportation is just one factor that can influence community safety. Community safety is a person's ability to live in a safe environment. Proximity to large numbers of vehicles and exposure to hazardous materials during transport are two ways that Minnesota's transportation network cause harm. For example, pedestrian fatalities for white

Minnesotans are one per 100,000 people and nine per 100,000 people for BIPOC Minnesotans. This objective advances environmental justice by acknowledging these patterns and working to develop creative strategies to mitigate potential negative impacts.

This objective includes strategies and actions encouraging MnDOT and transportation partners to engage with community stakeholders during the planning process and to develop rigorous communication infrastructure so all communities can use Minnesota's transportation system safely.

SYSTEM STEWARDSHIP

The transportation system is made up of many assets. Some assets are seen every day, such as bridges, sidewalks, pavement markings, transit buses, crossing signals, docks and airport runways. Other assets may not be as visible, such as stormwater management or transportation data. For the transportation system to be effective, MnDOT and its transportation partners must operate and maintain these different assets, but also plan so the system can adapt to changing needs and risks.

The System Stewardship objective seeks to strategically build, maintain, operate and adapt the transportation system based on data, performance and community needs. The objective also seeks to ensure that there is an effective and efficient use of resources. See Chapter 5 for the System Stewardship performance measures, strategies and actions.

HOW THIS OBJECTIVE ADVANCES ENVIRONMENTAL JUSTICE

Transportation is a vital part of everyone's day-to-day lives. It is crucial that the transportation system

is operated and maintained in a way that meets public expectations and needs, despite limited resources. A key part of system stewardship is considering and planning how the transportation system may need to change and how those decisions may impact Minnesotans' quality of life. This objective promotes sustainability, equity and accessibility when it comes to maintaining the existing transportation system. This will ensure that historical harms are not repeated, and that the existing system can better serve all Minnesotans.

People depend on transportation for their quality of life and having a disability can make it harder to move around. Though people with disabilities are not typically included in EJ analyses, disability often amplifies other inequities resulting from one's race, ethnicity, national origin, poverty status and more. According to the U.S. Census Bureau, one in nine Minnesotans has a disability.⁷ This equals 608,774 people (or 11%) of the total state population. Disability rates vary widely by race from 22% for Dakota populations to as low as 2% for Chinese populations in Minnesota.⁸ According to Minnesota

⁷ U.S. Census Bureau; American Community Survey, 2018 American Community Survey 1-year estimates, S1810; generated by MnDOT using data.census.gov (accessed February 19, 2021).

⁸ Minnesota State Demographic Center, "Minnesotans with Disabilities: Demographic and Economic Characteristics," March 2017, https://mn.gov/admin/assets/minnesotans-with-disabilities-popnotes-march2017_tcm36-283045_tcm36-283045.pdf.

Compass, almost one in five Minnesotans with a disability lives in poverty, which is nearly double the statewide poverty rate.⁹

Disabilities can complicate everyday tasks, such as reading a transit schedule, reading directions, driving a car, climbing steps or crossing a street. Different or added transportation services can help people with a disability stay in good health and take part in the community. For example, a 2017 study found that accessible transportation options reduce social isolation and increase community integration for people with a disability.¹⁰

Agencies are working toward Americans with Disabilities Act (ADA) compliance. This improves aspects of transportation, like transit service and sidewalk infrastructure, so that people of all abilities can use them safely and comfortably. New mobility service options, like ride hailing and e-bikes or e-scooters, are also creating more mobility choices

for people with disabilities. However, more work is needed to ensure fair services. Some barriers that prevent people from using these services include the type of payment needed, physical disability limitations and reliance on smart phones.

System stewardship means ensuring a sustainable transportation system that focuses on equity, environment and economy. Developing transportation facilities with the community in mind can create transportation projects that reflect the goals of the people who live, work and travel in the area. A community-based approach to transportation is based on active and early partnerships with communities and considers the impacts that extend far beyond the right-of-way. This objective advances environmental justice by taking the necessary steps to create a transportation system that is well-maintained and modified to be inclusive, accessible and resilient so it can better serve all Minnesotans.

CLIMATE ACTION

Minnesota's environment is changing. Land development, technological changes, population shifts and the ways that people travel all have an impact on Minnesota's natural resources and the well-being of the environment. Understanding how Minnesota's transportation system contributes to these changes can help plan in ways that limit the negative impacts of the transportation system on the environment.

The goal of the objective is to advance a sustainable and resilient transportation system, while supporting transportation options and technology to reduce emissions. The objective also looks to adapt Minnesota's transportation system to a changing climate. See Chapter 5 for the Climate Action performance measures, strategies and actions.

HOW THIS OBJECTIVE ADVANCES ENVIRONMENTAL JUSTICE

For decades, climate change and environmental hazards have impacted BIPOC at a disproportionately high rate compared to white Minnesotans. By adapting existing systems to be climate resilient, promoting sustainability and working to limit pollution, MnDOT and transportation partners can help to reduce environmental hazards related to the Minnesota transportation system from harming EJ and Title VI populations.

Developing climate action plans and working with smaller-scale organizations to develop mitigation and adaptation strategies for assets

⁹ Minnesota Compass, "By Disability Status," <https://www.mncompass.org/topics/demographics/disability#:~:text=Almost%201%20in%205%20Minnesotans,double%20the%20statewide%20poverty%20rate>, (accessed May 16, 2022)

¹⁰ N.N. Sze and Keith M. Christensen, "Access to Urban Transportation System for Individuals with Disabilities," Science Direct (International Association of Traffic and Safety Sciences, May 20, 2017), <https://www.sciencedirect.com/science/article/pii/S0386111217300444#>!

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will be important going forward. Ensuring the transportation system can effectively change as environmental conditions change is key to maintaining the usability of the transportation system. Prioritizing EJ and Title VI populations when implementing specific strategies improves equity statewide. Recognizing that each community may face different circumstances due to climate change can improve the efficacy of solutions.

The connection between transportation and land use illustrates the importance of providing transportation options to reduce greenhouse gas emissions. Land use, transportation and related infrastructure can promote or detract from health for people and the environment. Low density development can result in people traveling longer distances to meet their daily needs, and longer distances result in more emissions. Given Minnesota's land use patterns, it is unsurprising that the transportation sector generates the greatest share of greenhouse gas emissions in the state. However, supporting different land use patterns and providing more lower emission transportation options improve air quality and reduce the system's impact on the environment and climate.

People would also benefit from changes to transportation and land use. Individuals in zero-vehicle households or those without reliable transportation alternatives experience barriers accessing essential goods and services. Working to develop policies that promote walkable and bikeable communities, transit, complete streets, etc. can expand transportation options and advance environmental justice.

According to the Minnesota Pollution Control Agency, 91% of BIPOC Minnesotans are exposed to higher levels of air pollution than the state average. Further, there is a disparity between the pollution that people cause and the pollution they are exposed to. Air pollution is disproportionately caused by white people but disproportionately inhaled by BIPOC.¹¹

Building infrastructure for sustainable energy and fuel sources (e.g., renewables, biofuels, etc.) and using new, sustainable technologies are two ways to reduce pollution. These actions will not only reduce harm to BIPOC communities but will also reduce Minnesota's reliance on unsustainable energy and fuel sources. This objective addresses solutions to serve people and the planet with a commitment to environmental justice and equity.

CRITICAL CONNECTIONS

Every day people and goods are moving. The movement occurs using a variety of connections—such as sidewalks, trails, roads, transit, air, rail and water. Since transportation agencies have limited resources, attention needs to be focused on connections that are identified as critical to the movement of people and goods.

The goal of the Critical Connections objective is to maintain and improve multimodal transportation connections essential for Minnesotans' prosperity and quality of life. The objective also focuses on strategically considering new connections to help meet performance targets and maximize social, economic and environmental benefits. See Chapter 5 for the Critical Connections performance measures, strategies and actions.

¹¹Tessum, Christopher W., Joshua S. Apte, Andrew L. Goodkind, Nicholas Z. Muller, Kimberley A. Mullins, David A. Paoella, Stephen Polasky et al. "Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure." *Proceedings of the National Academy of Sciences* 116, no. 13 (2019): 6001-6006.

HOW THIS OBJECTIVE ADVANCES ENVIRONMENTAL JUSTICE

Creating and maintaining transportation connections is important for improving quality of life for all. Transportation connects people to jobs, school, health care, family, shopping, places of worship, recreation and entertainment. Minnesotans' transportation needs vary by trip purpose and destination. As a result, each person will identify different connections as critical based on their individual needs. Disparities exist in mode use and travel behavior. These disparities can be influenced by income levels, race, ethnicity, age, disability or other characteristics.

Households experiencing poverty spend more on transportation expenses and are disproportionately Black and Hispanic households. Additionally, households experiencing poverty drive single occupant vehicles the least and use less costly transportation modes, such as walking, rolling, bicycling, carpooling and transit. This decreases the

radius of travel for these populations compared to higher income households. Additionally, both older adults and immigrant populations will continue to grow as a total proportion of Minnesota's population. Growing immigrant populations require information in languages other than English to increase their use of transit. Additional resources and outreach will be needed to ensure these populations can access and are well served by transit.

Critical connections encourage MnDOT and transportation partners to support and develop multimodal connections that provide equitable access and improve transportation connections within and between cities. Equitable access means recognizing that each person uses the transportation system differently and providing the services, resources and opportunities they need to reach their destinations. This focus is essential in ensuring the transportation system does not pose unintentional harm or barriers, but instead enhances quality of life for people and communities.

HEALTHY EQUITABLE COMMUNITIES

Transportation connects people to destinations and opportunities. As transportation decisions are made, it is important that those decisions consider the impact on the users of the transportation system and the surrounding context.

The goals of this objective are to foster healthy and vibrant places that reduce disparities and promote healthy outcomes for people, the environment and our economy. See Chapter 5 for the Healthy Equitable Communities performance measures, strategies and actions.

HOW THIS OBJECTIVE ADVANCES ENVIRONMENTAL JUSTICE

Prioritizing solutions that lead to healthy outcomes for people and the environment is central to creating healthy equitable communities. Minnesota has health disparities stemming from inequitable access to goods, services and social networks, as well as disparities in healthcare. These disparities are based on the location of these goods and services, and on people's ability to access the transportation system that can bring them to the goods and services. Cost and geography are large barriers, amplified by historical disinvestment and discrimination that has left many neighborhoods without goods and services within a short distance.

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The transportation system impacts the health of individuals and the communities they live in. For example, accessing health services can be particularly challenging and helps illustrate the importance of transportation in health. In rural areas, people often travel considerable distances to reach a medical center or clinic, while appointments with specialists often require long trips to regional destinations.¹² In both urban and rural areas, people are less likely to use health services if they do not have regular access to their own car or a care provider who can provide rides.¹³ This can be particularly challenging for people with lower incomes who may already struggle to access the healthcare system due to lack of insurance or the high cost of health services.

Minnesota currently ranks seventh worst in the nation for the share of residents with access to healthy foods.¹⁴ The transportation system and land use policies have led to the creation of food deserts—areas with limited access to affordable, culturally appropriate and nutritious food—in both rural and urban areas. Some small towns no longer have their own grocery store, making it hard for people without their own car to get food. In urban areas, despite the availability of transit, a trip to the grocery store can take several hours start to finish. Transportation and land use policies that are more attuned to community needs can help farmers, food retailers and consumers connect more efficiently.¹⁵ Increasing easy access to healthy food options can also help to address health outcomes like heart disease and obesity helping to demonstrate the link between transportation and health by the way of access to goods and services.

Improved speed and connection can improve the quality of life for all. It also can increase the ease and spread of communicable diseases, such as the seasonal flu and COVID-19. Further, heat-related illnesses are higher in areas affected by the urban heat island effect. Chronic illnesses related to the heart and lungs can also be exacerbated by higher temperatures and thus pose higher risks for older adults who are more likely to have chronic illnesses. Areas with higher concentrations of BIPOC and low-income households are also more likely to experience these health effects due to past transportation decisions.

The Healthy Equitable Communities objective recognizes there is no one-size-fits-all solution. MnDOT and its transportation partners must understand that transportation decisions influence the surrounding context. Decision makers must consider this community context and history when making transportation decisions. This will result in projects that are safer, sustainable and reflective of the specific place in which they occur.

¹² “Healthcare Access in Rural Communities Introduction - Rural Health Information Hub,” accessed April 3, 2020, <https://www.ruralhealthinfo.org/topics/healthcare-access>.

¹³ Samina T. Syed, Ben S. Gerber, and Lisa K. Sharp, “Traveling Towards Disease: Transportation Barriers to Health Care Access,” *Journal of Community Health* 38, no. 5 (October 2013): 976–93, <https://doi.org/10.1007/s10900-013-9681-1>.

¹⁴ “Food Access: Access to Healthy and Affordable Food” (Minnesota Department of Health, May 1, 2019), <https://www.health.state.mn.us/docs/communities/titlevi/foodaccess.pdf>.

¹⁵ “Transportation and Food: The Importance of Access,” *Food Security*, August 6, 2012, http://foodsecurity.org/policy_trans03_brief/.

OPEN DECISION MAKING

Open decision making relies on accountability, transparency and communication. The Open Decision Making objective seeks to make equitable transportation decisions through inclusive and collaborative processes that are supported by data and analysis. See Chapter 5 for the Open Decision Making performance measures, strategies and actions.

HOW THIS OBJECTIVE ADVANCES ENVIRONMENTAL JUSTICE

The Open Decision Making objective advances environmental justice by ensuring the full and fair participation of EJ and Title VI populations. Working with communities to address historic harms and build community trust is crucial. A key part of that trust is ensuring that everyone, regardless of income, age, race, ethnicity or ability has the opportunity to have their input heard and incorporated throughout the transportation decision-making process. Public engagement must include a wide range of interests – from those who use the system to those who are impacted by it.

Environmental justice populations are more burdened by the transportation system than the general public. Many EJ and Title VI populations may be hesitant to provide comments on transportation plans and projects due to past harmful transportation decisions where government broke community trust. Opportunities to provide comments also may not be well known. Seeking the input of those burdened and harmed by the transportation system is essential for creating solutions that benefit all.

Effective public engagement uses a variety of tools to reach different communities. This objective and its related strategies and work plan activities encourages and supports MnDOT and transportation partners to use a range of public outreach techniques with the goal of inclusive, relational and accessible processes for everyone. For example, hiring community-based organizations to lead engagement efforts that emphasize co-creation can foster stronger relationships between MnDOT, its partners and the communities served.

FOUR FACTOR ANALYSIS

Title VI and its regulations require MnDOT to take reasonable steps to ensure meaningful access to the department’s information and services. What constitutes reasonable steps to ensure meaningful access is contingent on a four-factor analysis established by the U.S. Department of Justice.¹⁶ The four-factor analysis is an individualized assessment that should be applied to all districts, offices, programs, and activities to determine what reasonable steps must be taken to ensure meaningful access for individuals with limited-English proficiency (LEP).

FACTOR 1: DEMOGRAPHY

The number or proportion of LEP individuals in the service area who may be served or likely to be encountered by the SMTP.

MnDOT has reviewed the 2015-2019 ACS five-year estimates and identified Spanish, Hmong, and Amharic, Somali or other Afro-Asiatic languages as the top three LEP groups in Minnesota (see Table E-8). The third category includes several languages. As of 2018, the Minnesota State Demographer’s Office reported Somali-born Minnesotans were the second-largest group of foreign-born immigrants living in Minnesota.¹⁷ Therefore, programs providing statewide information to the public should consider Spanish, Hmong and Somali as the primary languages for any language assistance services.

Although these are the primary languages in Minnesota for necessary language assistance services, languages needing assistance vary throughout the state. It’s important that when doing public engagement it is understood what language assistance services are in highest demand.

FACTOR 2: FREQUENCY

The frequency with which LEP persons come in contact with SMTP.

MnDOT staff reviewed the frequency of interactions with LEP individuals. The SMTP engagement occurred throughout the state. For each engagement effort, staff reviewed data for those areas to see if there would be potential interactions with LEP individuals. At times engagement efforts were directly coordinated with community-based organizations that primarily spoke a language other than English. In these instances, documents were translated and an interpreter was present.

Because the SMTP is a statewide plan, the Commissioner’s Letter in the document will be translated into Spanish, Hmong and Somali. Additionally, the document has been made available online at MinnesotaGO.org. The Minnesota GO website can be translated using Google Translate and requests for translation services can be made by one of the following language assistance services listed in the [MnDOT Language Assistance Plan](#).

¹⁶ Enforcement of Title VI of the Civil Rights Act of 1964 - National Origin Discrimination Against Persons with Limited English Proficiency, effective August 11, 2000, <https://www.justice.gov/sites/default/files/crt/legacy/2010/12/14/eolep.pdf>.

¹⁷ Immigration and Language: Key Findings, accessed January 21, 2002, <https://mn.gov/admin/demography/data-by-topic/immigration-language/>

Table E-8: Minnesota language spoken at home by ability to speak English for the population 5 years and over, 2015 to 2019 American Community Survey 5-year Estimate

LANGUAGE GROUPS SPEAKING ENGLISH LESS THAN “VERY WELL”	TOTAL POPULATION	% POPULATION
Minnesota total population	5,290,011	100.00%
Speak only English	4,640,645	87.72%
Spanish	75,212	1.42%
Amharic, Somali, or other Afro-Asiatic languages	34,611	0.65%
Hmong	29,004	0.55%
Vietnamese	13,208	0.25%
Other languages of Asia	10,238	0.19%
Chinese (incl. Mandarin, Cantonese)	8,591	0.16%
Thai, Lao, or other Tai-Kadai languages	5,615	0.11%
Russian	5,088	0.10%
Arabic	4,984	0.09%
French (incl. Cajun)	4,919	0.09%
Swahili or other languages of Central, Eastern and Southern Africa	4,626	0.09%
Yoruba, Twi, Igbo, or other languages of Western Africa	4,578	0.09%
Khmer	2,892	0.05%
Hindi	2,652	0.05%
Tagalog (incl. Filipino)	2,478	0.05%
German	2,229	0.04%
Nepali, Marathi, or other Indic languages	2,201	0.04%
Tamil	2,109	0.04%
Japanese	1,578	0.03%
Korean	1,532	0.03%
Other Indo-European languages	1,501	0.03%
Persian (incl. Farsi, Dari)	1,346	0.03%
Serbo-Croatian	1,304	0.02%
Telugu	1,077	0.02%
Ukrainian or other Slavic languages	1,058	0.02%
Other and unspecified languages	993	0.02%
Portuguese	978	0.02%
Ilocano, Samoan, Hawaiian, or other Austronesian languages	961	0.02%
Urdu	960	0.02%
Other Native languages of North America	925	0.02%

FACTOR 3: IMPORTANCE

The nature and importance of the program, activity or service provided by the SMTP to people’s lives.

The more important the activity, information, service or program or the greater the possible consequences of the contact to the LEP individuals, the greater the need for language assistance services. The SMTP project staff determined whether denial or delay of access to services or information had serious implications for the LEP individual. Generally, programs providing information and services related to accessing benefits, opportunities, or rights are considered high importance.

VITAL DOCUMENTS

Vital documents are paper or electronic written material containing information that is:

- Critical for accessing programs, services, benefits, or activities;
- Directly and substantially related to public safety; or
- Required by law.

Whether a document (or the information it solicits) is “vital” may depend upon the importance of the program, information, encounter or service involved, and the consequence to the LEP person if the information in question is neither accurate nor timely. Sometimes a large document may include both vital and non-vital information. For these documents, vital information may include providing notice in the necessary non-English languages explaining where an LEP individual can obtain an interpretation or translation of the document.

Although the SMTP is required by law to be completed and contains information for policy direction related to transportation safety, MnDOT has opted to take the following approach:

1. The document will be made available online at MinnesotaGO.org. The Minnesota GO website can be translated using Google Translate.

2. The Commissioner’s Letter will be translated into Spanish, Hmong and Somali and included following the English version at the beginning of the document.

3. The following LEP notice will be placed on the inside cover of the SMTP in English, Spanish, Hmong and Somali.

To request this document in another language, please send an e-mail with the document attached to languageservices.dot@state.mn.us.

Para pedir este documento en otro idioma, envíe un correo electrónico y adjunte el documento a languageservices.dot@state.mn.us.

Yog xav kom muab daim ntawv no sau ua lwm hom lwm, thov sau ntawv nrog daim ntawv tuaj rau ntawm languageservices.dot@state.mn.us.

Si aad u codsato dukumeentigan oo ku qoran luqad kale, fadlan e-mail u soo dir oo ku soo lifaaq dukumiintiga languageservices.dot@state.mn.us.

MnDOT took this approach to language assistance for the SMTP because of (1) the significant time and resources required to translate a document of this size, and (2) the nominal impact on the lives of the LEP public caused by this information not being readily available in non-English languages. However, MnDOT is committed to providing meaningful access to LEP individuals and will promptly respond to any requests for specific SMTP information in non-English languages.

Within the SMTP document development process, the vital documents were the notices of public engagement.

LEP Notice

To request this document in another language, please send an e-mail with the document attached to languageservices.dot@state.mn.us.

Para pedir este documento en otro idioma, envíe un correo electrónico y adjunte el documento a languageservices.dot@state.mn.us.

Yog xav kom muab daim ntawv no sau ua lwm hom lwm, thov sau ntawv nrog daim ntawv tuaj rau ntawm languageservices.dot@state.mn.us.

Si aad u codsato dukumeentigan oo ku qoran luqad kale, fadlan e-mail u soo dir oo ku soo lifaaq dukumiintiga languageservices.dot@state.mn.us.

FACTOR 4: RESOURCES

MnDOT's available resources and the costs of providing language assistance services may impact the steps taken to provide meaningful access to LEP individuals. Generally, MnDOT should have sufficient resources to provide meaningful access through reasonable language assistance measures. However, language assistance measures may cease to be reasonable where the costs imposed substantially exceed the benefits.

The four-factor analysis necessarily implicates a spectrum of language assistance measures. For instance, written translations can range from translation of an entire document to translation of a short description of the document, and interpretation services may range from using telephone-based interpretation services to providing in-person interpretation at a public event. Language assistance measures should be based on what is necessary and reasonable after considering the four-factor analysis.

For the SMTP, staff ensured any resource limitations were documented and explained before using this factor as a reason to limit language assistance.

MnDOT staff proactively identified how to provide language assistance services efficiently and cost-effectively while ensuring meaningful access to LEP individuals. An example of this was through SMTP Phase 2 public engagement. MnDOT coordinated with the consultant to provide VideoAsk, an online platform, with questions in Hmong, Spanish and Somali in addition to English. Another example was during Phase 2 engagement Let's Talk Transportation Trivia discussion events, where MnDOT provided a Spanish interpreter at the meeting with a community-based organization that had a strong Spanish speaking population.

COMPLIANCE WITH LANGUAGE ASSISTANCE PLAN

The SMTP update process was conducted in accordance with [MnDOT's Language Assistance Plan](#).

NEXT STEPS

The SMTP applies to all types of transportation and all transportation partners. While the plan identifies work plan activities for MnDOT, it does not identify project- or program-specific activities for MnDOT or any transportation partners. Instead, the SMTP provides the policy direction for MnDOT and transportation partners.

Given the current disparities that exist, there is a risk of disproportionate impacts on EJ and Title VI populations. MnDOT and transportation partners must ensure that the actions taken to implement the plan’s objectives, strategies and actions – the individual program and project decisions – do not result in disproportionately high and adverse impacts on EJ and Title VI populations.

For MnDOT, the objectives, strategies and actions identified in this plan provide the policy direction for the modal and system plans. These plans identify specific policies, project-level and program recommendations and performance measures for their respective transportation system. The SMTP includes several strategies to avoid, reduce or minimize negative impacts in its policies and programs such as:

SYSTEM STEWARSHIP

5. Provide training and resources for a diverse and inclusive transportation workforce.

5.1 Examine current hiring practices and policies to reduce biases.

5.2 Identify opportunities to attract, retain, develop and promote Black, Indigenous and People of Color, people with disabilities, women and people from other underserved communities.

5.3 Set and meet equity goals in awarding contracts and build community capacity to fulfill contracting goals.

5.4 Analyze and reduce barriers to contracting such as project size, performance bonding, insurance requirements and capital access.

5.5 Provide consistent equity messaging and training opportunities in the transportation sector.

6. Promote transportation trades and technical careers.

6.1. Promote careers in transportation including job fairs, partnering with schools and other activities.

6.2. Support organizations to create a diverse pipeline of qualified applicants for construction and transportation operations.

6.3. Work with partners to develop training and apprenticeship programs in transportation-related occupations with high demand.

6.4. Create new partnerships to expand recruitment efforts that address transportation needs and the pool of bus, commercial and volunteer drivers.

HEALTHY EQUITABLE COMMUNITIES

2. Eliminate burdens and reduce structural inequities for people and communities disproportionately impacted by transportation.

2.1 Work with community partners to identify and remove barriers to participating in transportation planning and decision making.

2.2 Identify disparities in mobility and access and develop plans to reverse or eliminate these impacts through multimodal transportation solutions.

2.3 Implement equity reviews for transportation or land use policies, planning, programs and projects.

2.4 Develop and support community resources to reduce inequities in transportation.

2.5 Accelerate technology solutions for accessible and reliable transportation.

2.6 Pursue strategies to mitigate past effects of transportation construction.

3. Reduce combined housing and transportation costs for cost-burdened households.

3.1 Improve first- and last-mile connections in neighborhoods and job centers.

3.2 Support the construction of complete streets and a connected network to accommodate walking, rolling, bicycling and transit.

3.3 Educate people on the impacts transportation decisions have on housing costs.

3.4 Expand and enhance public transportation to improve access across the state.

3.5 Promote infill development and land use practices that support walkable and bikeable communities.

4. Develop and support a diverse workforce in Minnesota.

4.1 Promote job retention and creation in the core of communities to support community vitality.

4.2 Ensure the transportation system supports job access for second and third shift workers.

4.3 Collaborate with multisector partners to identify, understand and address gaps in workforce skills for current and future demand.

4.4 Connect people to education, training and workforce development centers.

5. Leverage transportation solutions to improve public health.

5.1 Integrate health and equity considerations in transportation planning, programming and project delivery using a Health in All Policies approach.

5.2 Support opportunities for physical activity through walking, rolling and bicycling.

5.3 Implement programs and investments that improve air quality and reduce noise especially for people experiencing the greatest impacts.

5.4 Ensure convenient multimodal access to open space, parks and recreation areas.

5.5 Increase equitable access to healthy, culturally appropriate and sustainable food through transportation options.

5.6 Align transportation assets and services with community needs during public health emergencies.

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OPEN DECISION MAKING

1. Ensure people have opportunities to play an active and direct role in transportation decision making.
 - 1.1 Start transportation processes by working with communities to identify strategies that support people’s vision, priorities and needs.
 - 1.2 Determine community demographics for plans, programs and projects and tailor public engagement approach to increase broad community participation and input.
 - 1.3 Create public engagement plans that clearly articulate decision points, who will be involved at each step of the process and who has authority over each decision.
 - 1.4 Include those impacted by transportation decisions as members of decision-making teams.
 - 1.5 Actively engage in community-centered conversations and use community wisdom to inform decision making.
 - 1.6 Create and implement processes and systems to monitor and evaluate effectiveness in achieving shared outcomes.
2. Build and strengthen lasting relationships to ensure that people are engaged in transportation projects and activities especially with underserved communities.
 - 2.1 Commit to regular two-way communication with partners, stakeholders and the public to continuously gather feedback.
 - 2.2 Hire and involve community-based organizations to conduct and lead engagement activities with underserved populations.
 - 2.3 Identify and connect with Tribal Governments, local elected officials and community leaders through project scoping and delivery.
 - 2.4 Collaborate with partners to include transportation-related questions in their surveys and other data collection efforts with underserved communities.
 - 2.5 Coordinate with partners to ensure people’s priorities and needs are considered including for those without reliable transportation choices.
 - 2.6 Provide education opportunities and programs for community members and transportation partners to understand each other on how to participate in transportation decision making together.
3. Provide consistent, transparent, fair, just and equitable communication.
 - 3.1 Partner with the public and stakeholders to identify, develop and implement communication and engagement approaches.
 - 3.2 Use culturally appropriate communication and engagement methods and techniques.
 - 3.3 Set plain language and accessibility standards for agency and contractor deliverables and provide training for staff.
 - 3.4 Provide training for different communication methods including storytelling.
 - 3.5 Increase staff ability and provide resources to improve engagement for people with disabilities and limited English proficiency.
 - 3.6 Provide the public with clear information about overarching policy and project goals to help frame community engagement.

4. Understand and learn from personal and community experiences on how the transportation system can negatively and positively affect communities.

4.1 Co-create and share narratives about transportation in collaboration with communities that have been harmed by decisions related to the transportation system and built environment.

4.2 Use the wisdom from community narratives to inform plans, manuals, training content, etc.

4.3 Provide training and resources to build staff capacity to understand cumulative historical impacts of transportation decision making.

See Chapter 5 for a complete list of strategies and actions.

MnDOT reviews and will continue to review the modal and system plan recommendations to ensure they do not result in disproportionately high and adverse human health or environmental effects Environmental Justice and Title VI populations.

APPENDIX F - TRANSPORTATION FUNDING

Many stakeholders are involved in funding Minnesota’s transportation system. Local, tribal, regional, state, federal and private sector and non-profit partners all provide transportation funding or help decide how money is spent. However, the specific role each partner plays is different. Some provide money through one or more funding sources. Others only provide direction for how money from certain sources should be spent. Most partners do both. For each mode of transportation, the mix of funding partners is different. For example, local units of government provide the largest portion of funding for Minnesota roadways, whereas the state’s rail system is primarily supported through funding from private corporations.

Funding sources can be grouped into two categories based on where the money comes from – transportation revenue or general revenue. Transportation revenue describes funding raised using the transportation system or it’s related activities. This includes taxes, fees and profits connected to transportation. Examples of transportation revenue are fuel taxes or money collected from passenger fares. Conversely, general revenue describes funding that is not directly tied to a transportation activity, such as property taxes. All transportation modes are funded to some extent by transportation revenue and general revenue.

Different rules guide how money can be spent. Generally speaking, funds from public sources are distributed to specific projects and activities through programs (Figure C-1). A funding source may contribute to only one program or many.

Specific projects are often funded from more than one program. Putting it all together is a complex puzzle. General funding for any given project depends on a variety of factors such as the project purpose, transportation mode, scope, lead organization and timing.

Transportation projects can be grouped into different categories based on the type of activity. At a high level, the main types of activities are:

- Capital, which includes the construction of facilities and purchase of equipment. It can also include activities necessary to deliver capital projects such as planning, purchase of land, design, etc.
- Maintenance, which includes the rehabilitation of existing facilities and equipment such as roadway repair.
- Operations, which includes activities that support the safe use of the system such as inspections, bus driving, plowing, traffic control, etc.

In addition to funding, financing is also an important tool used to support Minnesota’s transportation system. Funding refers to money available at the time of a project, such as having \$20 in one’s wallet. Financing is money provided with the expectation that it will be paid back, usually with interest. This is like charging something to a credit card or taking out a loan. The money eventually needs to be repaid to a funding source. An example of financing is bonding. State of Minnesota sells General Obligation (GO) Tax Exempt Bonds and other types of bonds. The proceeds from the sales of the bonds are used to pay the cost of building capital projects that are approved by the Legislature. Funding and financing are both useful, but it is important to understand the difference between them.

FUNDING FLEXIBILITY

This summary of transportation funding presents information by type of transportation. However, some funding sources used for transportation can fund multiple types of transportation. For example, one of the largest sources of funding for transportation in Minnesota is local funding allocated by cities and counties often derived by property taxes. City councils and county boards have broad discretion on how to spend those funds. Several federal funding programs can fund many different things. For example, the Federal Surface Transportation Block Grant Program can fund construction projects on roads, bridges, trails, bus

or light rail purchases, transit station construction, truck parking and more. As a result, many programs are listed multiple times.

Other funding sources can only be used on one type of transportation. Restrictions on the use of specific funds may be constitutional, statutory or from some other source. For example, the state motor fuel tax is constitutionally dedicated to roads and bridges, specifically interstates, US and Minnesota highways, as well as county and city roads part of the state aid system.

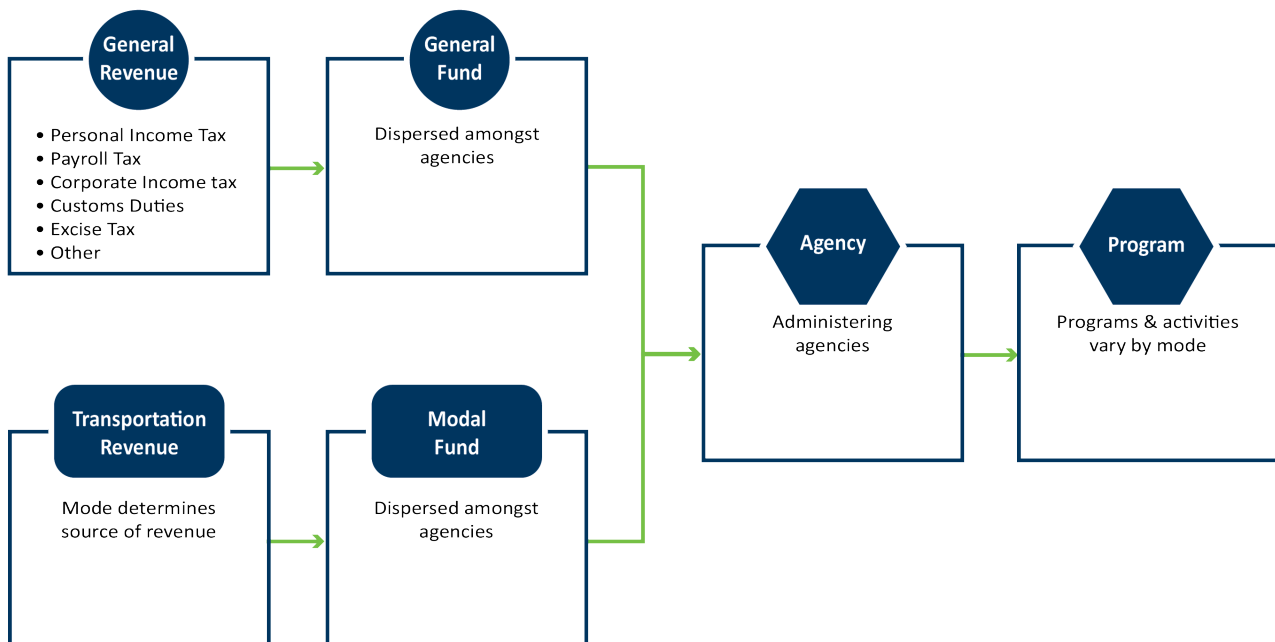
HOW TO READ THIS DOCUMENT

The information in this document represents a snapshot in time. It reflects current funding conditions, which may change as new laws or guidance are developed or as the use of the system changes. This document is not an accounting of every dollar spent on transportation in Minnesota. Rather, it focuses on identifying the key funding sources and programs and the relationships between them. It also focuses primarily on public sources of funding due to information availability.

and programs. Figure C-2 explains what is included in each graphic. Circle graphics equate to general revenue and general funds. Rounded rectangles are associated with transportation revenue and modal funds. Hexagons are representative of agencies administering funding and the associated funding programs.

How the funding and financing pieces come together to build, maintain and operate the system is different for each mode of transportation. Although every mode has the potential to receive GO bonds, these funds are approved on a project- or program-level. The following sections identify the key funding sources and programs for each mode of the transportation system: air, rail, roads and trails, transit and water. Each section also includes a graphic that highlights the relationships between the different federal and state funding sources

Figure C-2: How to read the transportation funding graphics



AIR TRANSPORTATION

GENERAL AVIATION

Most of Minnesota’s public airports are the responsibility of local units of government. They receive most of their capital funding from federal transportation revenue. State and local sources also contribute to capital projects and are the primary resource for airport maintenance and operations activities. The State Airports Fund is the main state funding source and is made up of transportation revenue, specifically revenue from aviation activities. Local funding sources include a mix of transportation and general revenue. Additionally, airports can receive funding from private investment, including occasional public-private partnerships.

COMMERCIAL AIRLINE SERVICE

Commercial passenger service in Minnesota is primarily set up and funded by the airlines serving the state. Some federal transportation revenue is used to support commercial service as part of the Essential Air Service program.

AIR TRANSPORTATION AT A GLANCE

305 AIRPORTS IN MINNESOTA

- 133 are publicly owned and receive state funds.
- Nine have commercial airline service.
- Three are privately owned, with public use.
- 37 are privately owned, for private use.
- A total of 69 seaplane bases and 95 heliports, including hospital heliports.

USE

- Airports in Minnesota support general aviation activities (e.g. agricultural spraying, business travel, firefighting), air cargo and commercial airline service.

RESPONSIBILITY

- Local units of government are responsible for public airports in Minnesota.

FEDERAL FUNDING

Federal funding for air transportation comes primarily from transportation revenues. Federal sources mostly support general aviation activities and the sources are Airport and Airway Trust Fund, Federal General Fund and Overflight Fees. Airport & Airway Trust Fund dedicates aviation revenue, including domestic airline taxes, air cargo waybills, international arrival/departure tax, aviation fuel tax, etc. Federal General Fund is the non-dedicated federal revenue, including personal income tax, payroll tax, corporate income tax, customs duties, excise tax, etc. Overflight fees on foreign aircraft also are part of the funding sources. These federal funding sources fund the following federal programs.

FEDERAL PROGRAMS

The programs are grouped by administering agency

U.S. DOT - OFFICE OF THE SECRETARY (OST)

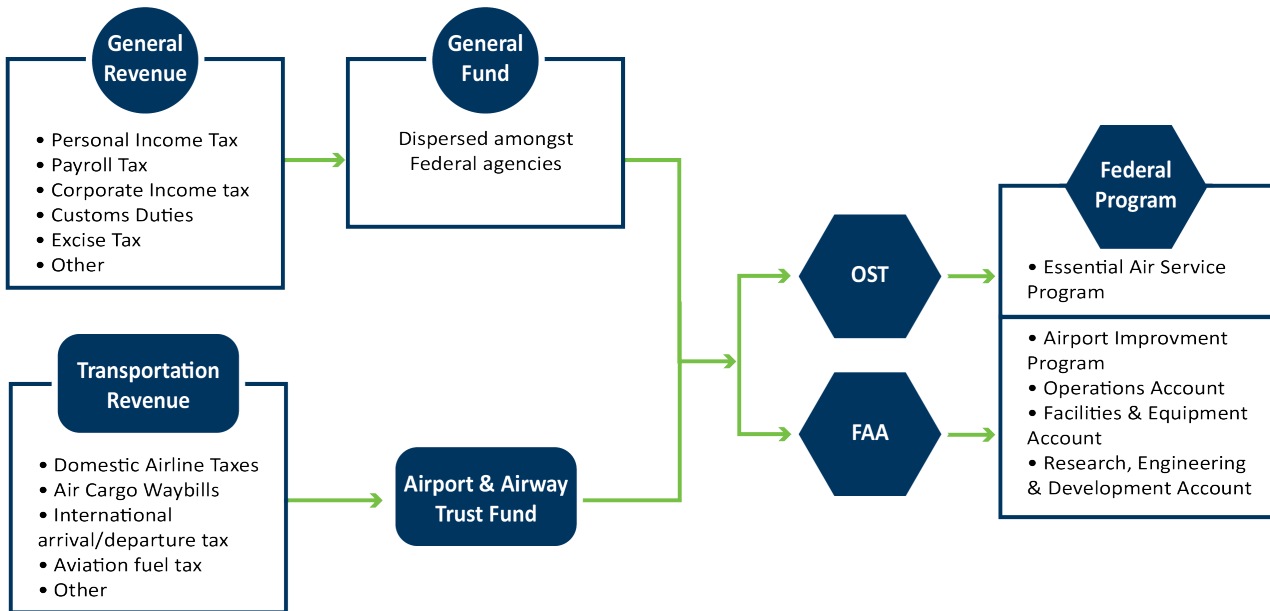
- Essential Air Service Program

FEDERAL AVIATION ADMINISTRATION (FAA)

- Airport Improvement Program
- FAA Operations Account
- FAA Facilities & Equipment Account
- FAA Research, Engineering & Development Account

Figure C-3 shows the relationship between these sources and programs.

Figure C-3: Federal air transportation funding sources & programs



STATE FUNDING

State funding for air transportation comes primarily from transportation revenues. State sources mostly support general aviation activities and the sources are Hangar Loan Revolving Account, State Airports Fund and State General Fund. Hangar Loan Revolving Account is funded by loan repayment receipts from previous loans. The State Airports Fund is a dedicated aviation state revenue which includes airflight property tax, aircraft sales tax, aircraft registration fees & aviation fuel tax. The third fund is the State General Fund, which is a non-dedicated state revenue, including personal income tax, retail sales tax, business taxes, etc. These state funding sources fund the following state programs.

STATE PROGRAMS

The programs are grouped by administering agency.

DEPARTMENT OF TRANSPORTATION

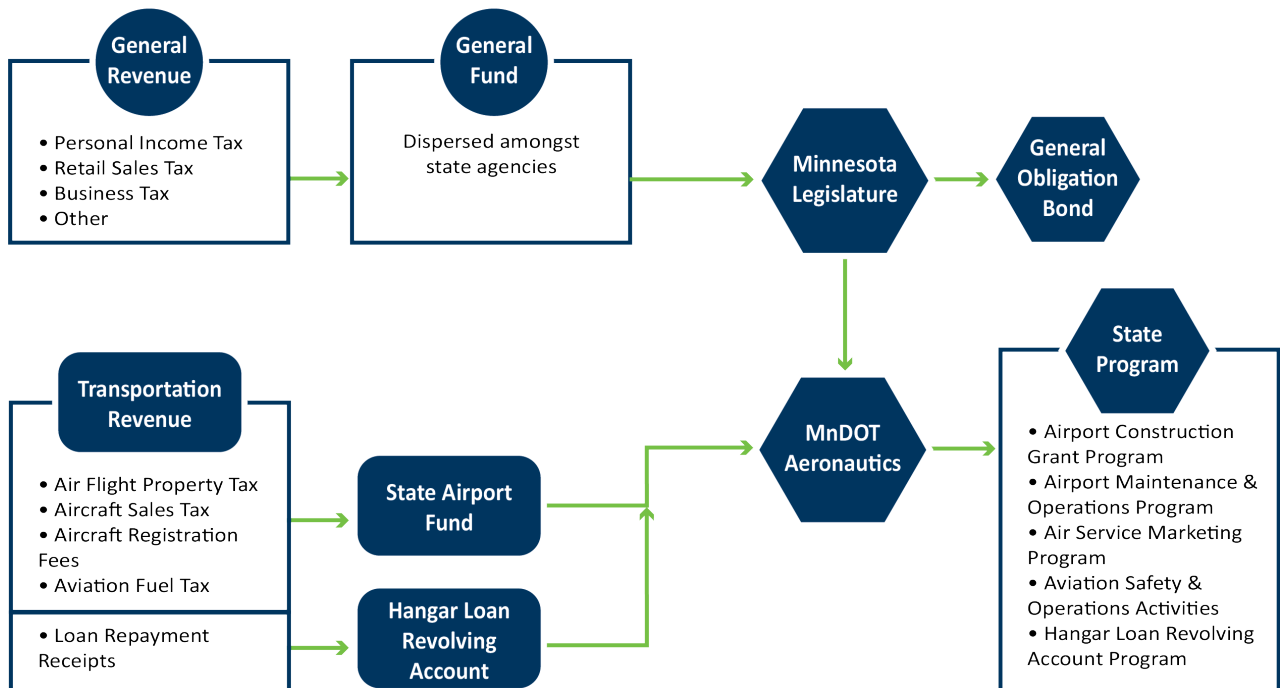
- Hangar Loan Revolving Account Program
- Airport Construction Grant Program
- Airport Maintenance & Operations Program
- Air Service Marketing Program
- Other aviation safety & operations activities

MINNESOTA LEGISLATURE

- State legislative General Obligation (GO) bonding

Figure C-4 shows the relationship between these sources and programs.

Figure C-4: State air transportation funding sources & programs



LOCAL FUNDING

Local funding plays an important role in supporting Minnesota’s aviation system. Airports are typically the responsibility of local units of government and require significant local investment to maintain and operate. Also, many federal and state funding sources require matching funds, which often come from local sources. The primary local funding sources are airport generated revenues (e.g., fuel systems, hangar rental, vending machines, land rental and landing fees), passenger facility charges at the nine airports with scheduled airline service and municipal and airport authority revenues (e.g., local taxes). Local sources include transportation revenue and general revenue.

OTHER FUNDING

Minnesota’s publicly funded aviation system receives revenue each year from the airlines that operate in the state. Private businesses occasionally provide funding assistance for improvements at public airports in Minnesota related to their needs. Minnesota’s aviation system consists of many privately owned facilities. The most common example in the state are hospital heliports, privately owned and operated airports and seaplane bases. These facilities are primarily funded through private sources.

COVID 19 FUNDING

The Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA) (Public Law 116-260) (PDF), signed into law on December 27, 2020, includes nearly \$2 billion in funds to be awarded as economic relief to eligible U.S. airports and eligible concessions at those airports to prevent, prepare for and respond to the COVID-19 pandemic. Additionally, the Coronavirus Aid, Relief and Economic Security (CARES) Act provided funds to increase the federal share to 100% for Airport Improvement Program (AIP) and supplemental discretionary grants for fiscal year 2020. Under normal circumstances, AIP grant recipients contribute a matching percentage of the project costs. Providing this additional funding and eliminating the local share allowed critical safety and capacity projects to continue as planned regardless of airport sponsors’ current financial circumstance.

RAIL TRANSPORTATION

FREIGHT RAIL

Private funding from the 21 freight railroad companies operating in Minnesota is the main source for capital, maintenance and operations activities on the state’s rail system. Publicly owned railways rely on federal, state and local sources of funding in addition to public-private partnerships. Typically, public funding for the rail system comes from general revenue.

PASSENGER RAIL

Passenger rail operations for Amtrak’s Empire Builder are largely funded through Amtrak revenue, such as ticket sales and advertising and federal general revenue. Capital and maintenance activities related to train equipment are also funded through these same sources. Capital and maintenance activities related to rail tracks are mostly funded through the private railroad companies, occasionally in partnership with states. Planning and development of future passenger rail service is primarily supported by state general revenue.

RAIL TRANSPORTATION AT A GLANCE

4,444 RAIL SYSTEM ROUTE MILES IN MINNESOTA

- 381 miles are passenger rail service.
- 40 miles are commuter rail service.

USE

- The rail system primarily supports 21 freight railroad companies, 1 passenger rail line (Amtrak’s Empire Builder) and 1 commuter rail line (Metro Transit’s Northstar).

RESPONSIBILITY

- Minnesota’s rail system is mostly owned by private railroad companies. Passenger and commuter rail services have rights/agreements with the railroads for the use of the tracks.

FEDERAL FUNDING

Federal funding for rail transportation comes primarily from general revenue. Federal sources mostly support passenger rail activities and the sources are the Federal General Fund and Amtrak revenue. The Federal General Fund is non-dedicated federal revenue, including personal income tax, payroll tax, corporate income tax, customs duties, excise tax, etc. Amtrak revenue includes ticket sales, advertising, etc. These federal funding sources fund the following federal programs and processes.

FEDERAL PROGRAMS

The programs are grouped by administering agency.

FEDERAL RAILROAD ADMINISTRATION (FRA)

- Consolidated Infrastructure and Safety Improvement (CRISI)
- Restoration and Enhancement (R&E) Grant Program

AMTRAK

- National Railroad Passenger Corporation (Amtrak) annual budget

CONGRESS

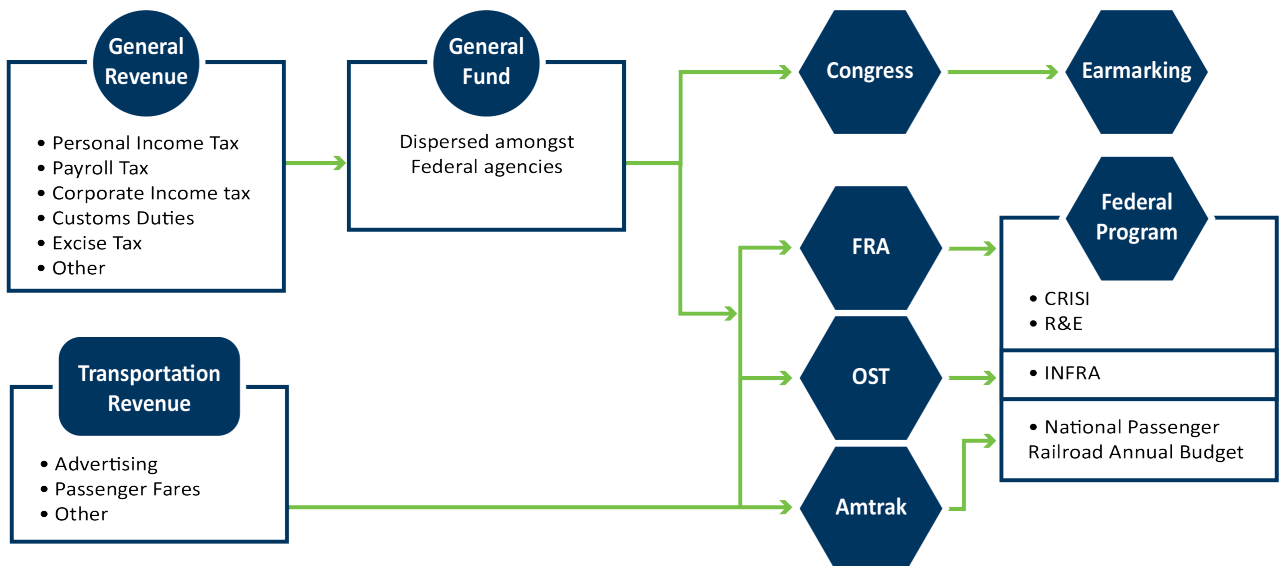
- Congressional earmarking for passenger rail projects

U.S. DOT – OFFICE OF THE SECRETARY (OST)

- Nationally Significant Multimodal Freight and Highway Projects program (INFRA)

Figure C-5 shows the relationship between these sources and programs.

Figure C-5: Federal rail transportation funding sources & programs



STATE FUNDING

State funding for rail comes from transportation and general revenue. The State rail funding sources are the State General Fund and special assessments on Class I and Class II railroads collected by Minnesota Department of Transportation (MnDOT). These funding sources support freight, passenger and commuter rail activities. The following are the programs and processes that are funded.

STATE PROGRAMS

The programs are grouped by administering agency.

DEPARTMENT OF TRANSPORTATION

- MnDOT Passenger Rail Office work plan
- Rail Safety Inspection Program
- Minnesota Rail Service Improvement Program

MINNESOTA LEGISLATURE

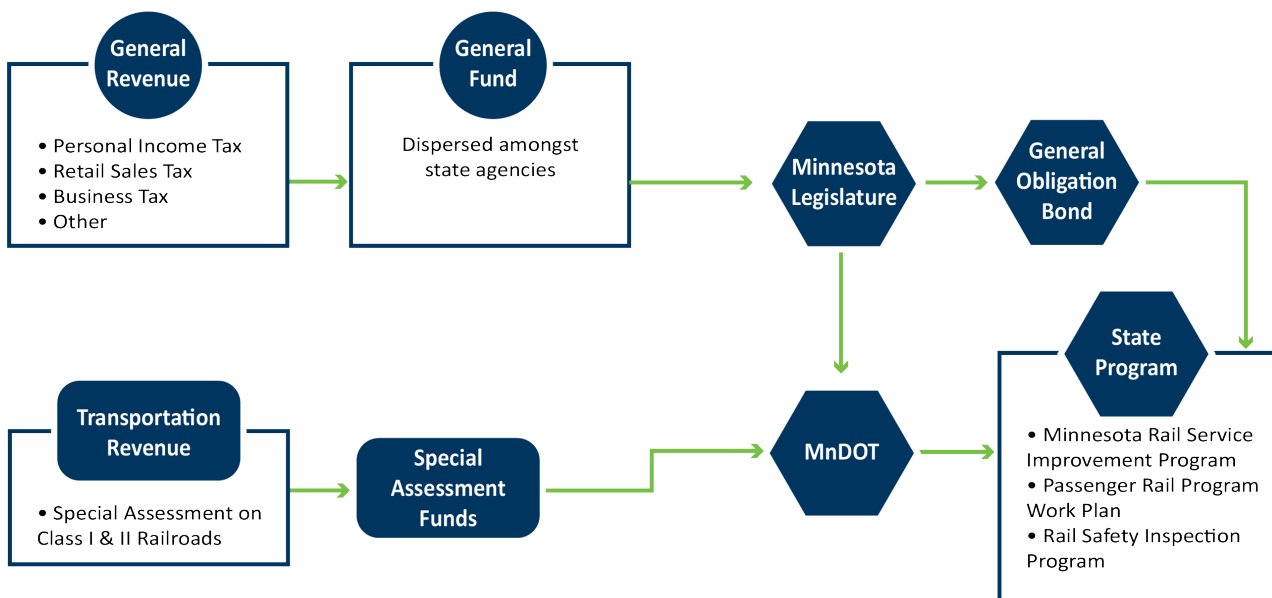
- State legislative General Obligation (GO) bonding

METROPOLITAN COUNCIL

- Metro Transit annual commuter rail budget

Figure C-6 shows the relationship between these sources and programs.

Figure C-6: State rail transportation funding sources & programs



LOCAL FUNDING

Funding for freight rail projects at the local level varies from location to location. Some local governments have economic development or other types of programs to support freight rail. Others may choose to contribute matching funds to state or federal grants for freight rail projects. Generally speaking, at the local level rail transportation funding comes from general tax revenues.

When local investment in passenger rail occurs, it is primarily through the county Regional Railroad Authority (RRA) revenues. County RRAs have taxing authority to levy for rail development purposes.

OTHER FUNDING

The railroad companies operating in Minnesota make significant investments in rail infrastructure and freight rail service each year. Additionally, other private businesses may help support projects that increase their access to the freight rail system. Public-private partnerships offer a funding opportunity when there are quantifiable benefits to both public and private sectors. However, this type of funding is not commonly used for freight rail in Minnesota.

Public-private partnerships also offer an opportunity to support passenger rail development. However, currently there are no examples of this type of investment in passenger rail in Minnesota.

ROADWAY & TRAIL TRANSPORTATION

ROADWAYS

The majority of roadways in Minnesota are the responsibility of local units of government – cities, counties, townships. Capital, maintenance and operations activities on these roadways are primarily funded by local general revenue, such as property taxes. State transportation revenue also supports some local roadways through the State Aid for Local Transportation program. Additionally, some federal programs target funding to local roadways. Funding levels are affected by things such as the amount of money set aside by Congress or the Legislature, bonding and how well the proposed projects compete in various program solicitations.

The state highway system consists of interstates, U.S. highways and Minnesota highways. These roadways make up about 8% of the total roadway miles in Minnesota. For these roadways, under current tax rates, tab fees are expected to consistently surpass state motor fuel tax revenue later this decade. The reason for this is that tab fees reflect vehicle values and consequently incorporate inflation, while the per-gallon fuel tax is fixed and does not change with gas prices. Federal programs are also a significant source of funding for the state system. Federal revenue makes up the majority of funding for capital projects.

In addition to motor vehicles, bicyclists and pedestrians are legal users of Minnesota roadways, except where explicitly prohibited. Some roadways include specific bicycle and pedestrian elements to encourage safety for all users. Examples of these elements include bicycle lanes, sidewalks and widened or paved shoulders. Since these elements are often included as part of roadway projects, they are typically funded by many of the same sources that fund general roadway projects.

ROADWAY & TRAIL TRANSPORTATION AT A GLANCE

FACILITY MILES IN MINNESOTA

- 142,865 roadway miles
- 1,320 miles of designated U.S. Bicycle Routes
- 698 miles of sidewalk along the State Trunk Highway system and many more along local roadways
- More than 4,000 miles of trails

USE

- 57.1 billion vehicle miles traveled (VMT) in 2021 on Minnesota roadways
- Minnesota roadways also carry bicycle and pedestrian traffic, as do trails

RESPONSIBILITY

- The majority of roadways, including on-road bicycle and pedestrian facilities, are owned by cities, counties and townships
- Most shared-use paths are also owned by local units of government; state trails are the responsibility of the Minnesota Department of Natural Resources (DNR).

TRAILS AND SHARED USE PATHS

In addition to on-road bicycle and pedestrian facilities (described in the previous section), trails and shared-use paths also provide important connections for those bicycling and walking. In Minnesota, trails and shared use paths are funded through a variety of programs at the federal, state and local levels. There are consistent funding programs for these projects at all levels, but the specific amount available from each source varies year by year.

FEDERAL FUNDING

Federal funding for roadway and trail transportation comes primarily from transportation revenue. The two sources include the Transportation Trust Fund and Federal General Fund. Approximately 85% of the Transportation Trust Fund revenue is the Highway Account. These federal funding sources support the following roadway-related activities and programs.

FEDERAL PROGRAMS

Some programs can also support trails, transit, bicycle and pedestrian transportation. Travel demand management and other modal activities are denoted by an asterisk. The programs are grouped by administering agency.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA)

- Section 402 Formula Grants
- Section 405 National Priority Safety Programs

FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION (FMCSA)

- Motor Carrier Safety Assistance Program
- New Entrant Assurance Program

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

- National Highway Performance Program
- Surface Transportation Block Grant (STBG)*
 - Transportation Alternatives (TA)*
- FHWA STBG Set-aside Program
- Highway Safety Improvement Program (HSIP)*
- Railroad-Grade Crossing Safety Improvement Program
- Congestion Mitigation & Air Quality Program (CMAQ)*
- State Planning & Research Program (SP&R)*
- National Highway Freight Program (Freight)*
- Metropolitan Planning funds
- Congestion Relief Program*
- Carbon Reduction Program*

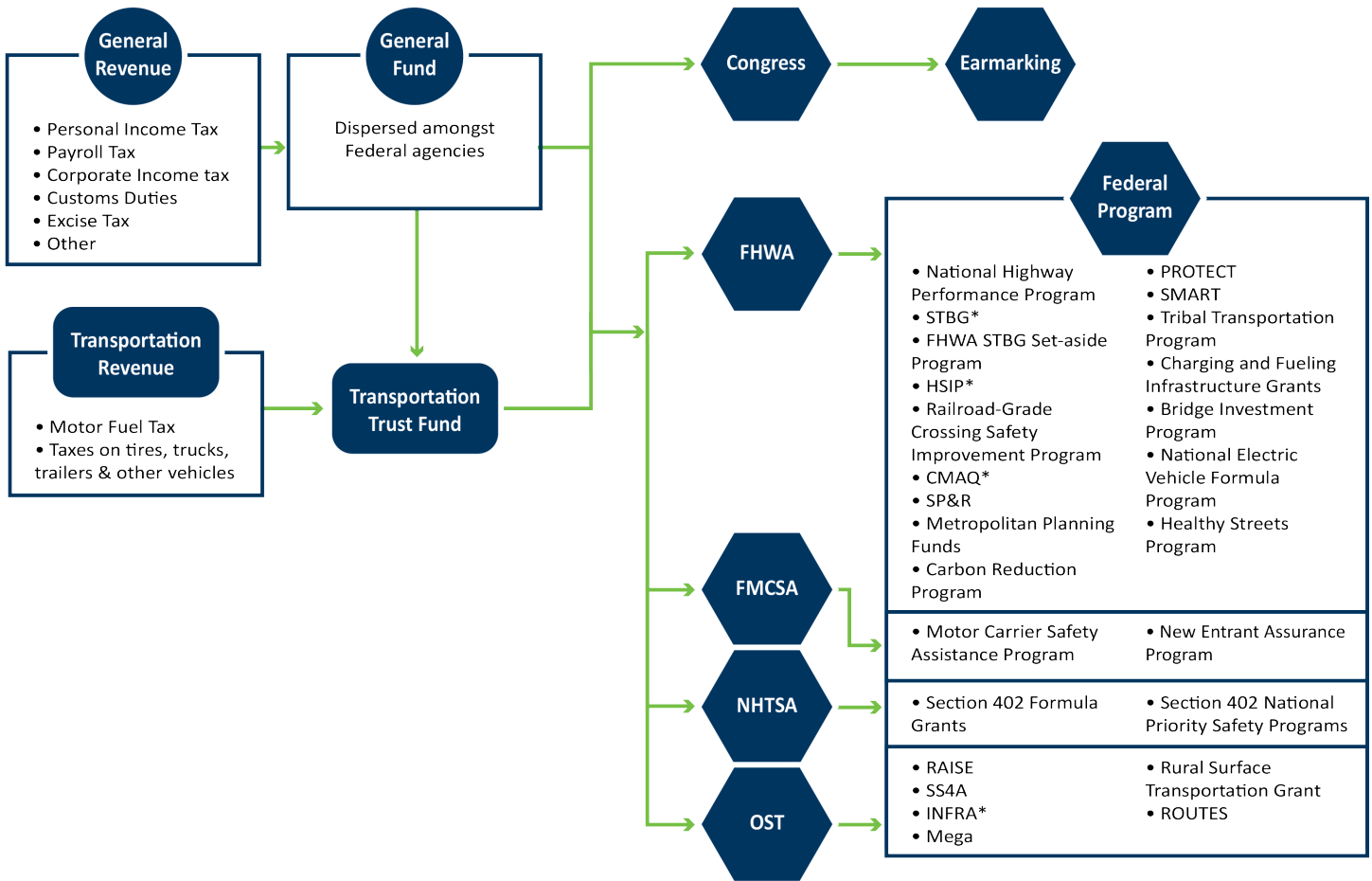
- Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT)*
- Strengthening Mobility and Revolutionizing Transportation Grant (SMART)*
- Tribal Transportation Program
- Reconnecting Communities Pilot Program*
- Wildlife Crossings Pilot Program
- Charging and Fueling Infrastructure Grants
- Bridge Investment Program
- National Electric Vehicle Formula Program
- Healthy Streets Program*

U.S. DOT - OFFICE OF THE SECRETARY (OST)

- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)*
- Safe Streets and Roads for All (SS4A)*
- Nationally Significant Multimodal Freight and Highway Projects program (INFRA)*
- National Infrastructure Project Assistance grant program (Mega)
- Rural Surface Transportation Grant
- Rural Opportunities to Use Transportation for Economic Success (ROUTES)

Figure C-7 shows the relationship between these sources and programs. Other programs are listed below the graphic.

Figure C-7: Federal roadway & trail transportation funding sources & programs



Other programs not identified in the graphic include the Congestion Relief Program, the Reconnecting Communities Pilot Program and the Wildlife Crossings Pilot Program. These are all administered by the FHWA.

STATE FUNDING

State funding for roadways, trails and shared use paths comes primarily from transportation revenue. Minnesota's state transportation funding comes from five funding sources, which supports roadway, trail and shared use path activities throughout the state.

These state funding sources support the following roadway-related activities and programs.

STATE GENERAL FUND

The State General Fund is a fixed portion of revenue from the general sales tax on motor vehicle repair or replacement parts and revenue from taxes collected on short-term motor vehicle rentals. It also includes non-dedicated state revenue, including personal income tax, retail sales tax, business taxes, etc.

HIGHWAY USER TAX DISTRIBUTION FUND (HUTD)

HUTD is dedicated transportation revenue, which includes 97% of the state's motor vehicle fuel tax, 60% of motor vehicle sales tax (MVST) and vehicle registration tax and fees, etc. HUTD distributes 95% of its revenue through the County State-aid Highway (CSAH) Fund, Municipal State-aid System (MSAS) Fund and Trunk Highway (TH) Fund. CSAH receives 29% of the 95% of HUTD. MSAS receives 9% of the 95% of HUTD. TH receives 62% of the 95% of HUTD. There is a set-aside for the remaining 5% of HUTD which allots 30.5% to the Town Road Account, 16% to the Town Bridge Account and 53.5% to the Flexible Highway Account.

MOTOR VEHICLE LEASE SALES TAX (MVLST)

MVLST is reallocated for transportation purposes. 38% is transferred to CSAH, 13% is transferred to the Minnesota Transportation Fund to be used for the Local Bridge Program and 11% is transferred to

HUTD to be used for CSAH, MSAS and TH funds. The remaining 38% is distributed to transit through the Greater Minnesota Transit Account.

CLEAN WATER, LAND & LEGACY AMENDMENT (LEGACY AMENDMENT): PARKS AND TRAILS FUND

In 2008, Minnesota voters passed the Legacy Amendment to the Minnesota Constitution. This increased state sales tax by 3/8 of 1% beginning July 1, 2009 through 2034. The additional sales tax revenue is distributed into 4 funds as follows: 33% to the Clean Water Fund, 33% to the Outdoor Heritage Fund, 19.75% to the Arts and Cultural Heritage Fund and 14.25% to the Parks and Trails Fund.

Of the 14.25%, the Parks and Trails Fund is divided into 3 subcategories:

- Department of Natural Resources (DNR) State Parks & Trails receives 40%
- Metropolitan Regional Parks & Trails receives 40%
- Greater Minnesota Regional Parks & Trails receives 20%

LOTTERY IN LIEU (LIL) ACCOUNTS: MINNESOTA LOTTERY PROCEEDS

The LIL is split between the Minnesota Environment and Natural Resources Trust Fund (ENRTF) and the Minnesota General Fund. The ENRTF receives 40% of the LIL and 60% goes to the General Fund. The ENRTF administers funds through the Legislative-Citizen Commission on Minnesota Resources (LCCMR) as a competitive, multi-step proposal and selection process for funding projects.

STATE PROGRAMS

Some programs also support trails and other modal activities and are denoted by an asterisk. The programs are grouped by administering agency.

COUNTY SCREENING BOARD

- State-aid for Local Transportation (SALT) CSAH Program*

MUNICIPALITY SCREENING BOARD

- State-aid for Local Transportation (SALT) MSAS Program*

METROPOLITAN COUNCIL

- Metropolitan Parks & Trails Legacy Program*
- Metropolitan Parks & Trails Grants*

GREATER MINNESOTA REGIONAL PARKS & TRAILS COMMISSION

- Greater Minnesota Regional Parks & Trails Legacy Fund Program*

DEPARTMENT OF NATURAL RESOURCES (DNR)

- State Park Road Account
- DNR Parks & Trails budget*
- Regional Trail Grant Program*
- Local Trail Connections Program*

DEPARTMENT OF PUBLIC SAFETY (DPS)

- DPS State Patrol budget
- DPS Office of Traffic Safety budget

DEPARTMENT OF TRANSPORTATION

- MnDOT State Highway Operations & Maintenance budget
- Grade Crossing Account (GCA) Program
- Antiquated Grade Crossing Safety Equipment Program
- Active Transportation Program*
 - Active Transportation Infrastructure Program*
 - Active Transportation Non-infrastructure Program
- Safe Routes to School (SRTS) Program*
 - SRTS Infrastructure Program*
 - SRTS Non-infrastructure Program
- State Legislative Trunk Highway (TH) Bonding
- State Road Construction Program
 - Statewide Performance Program (SPP)
 - District Risk Management Program (DRMP)
 - District C funding
 - Corridors of Commerce Program
 - Other small programs
- Transportation Economic Development (TED) Program, jointly administered with the Department of Employment and Economic Development

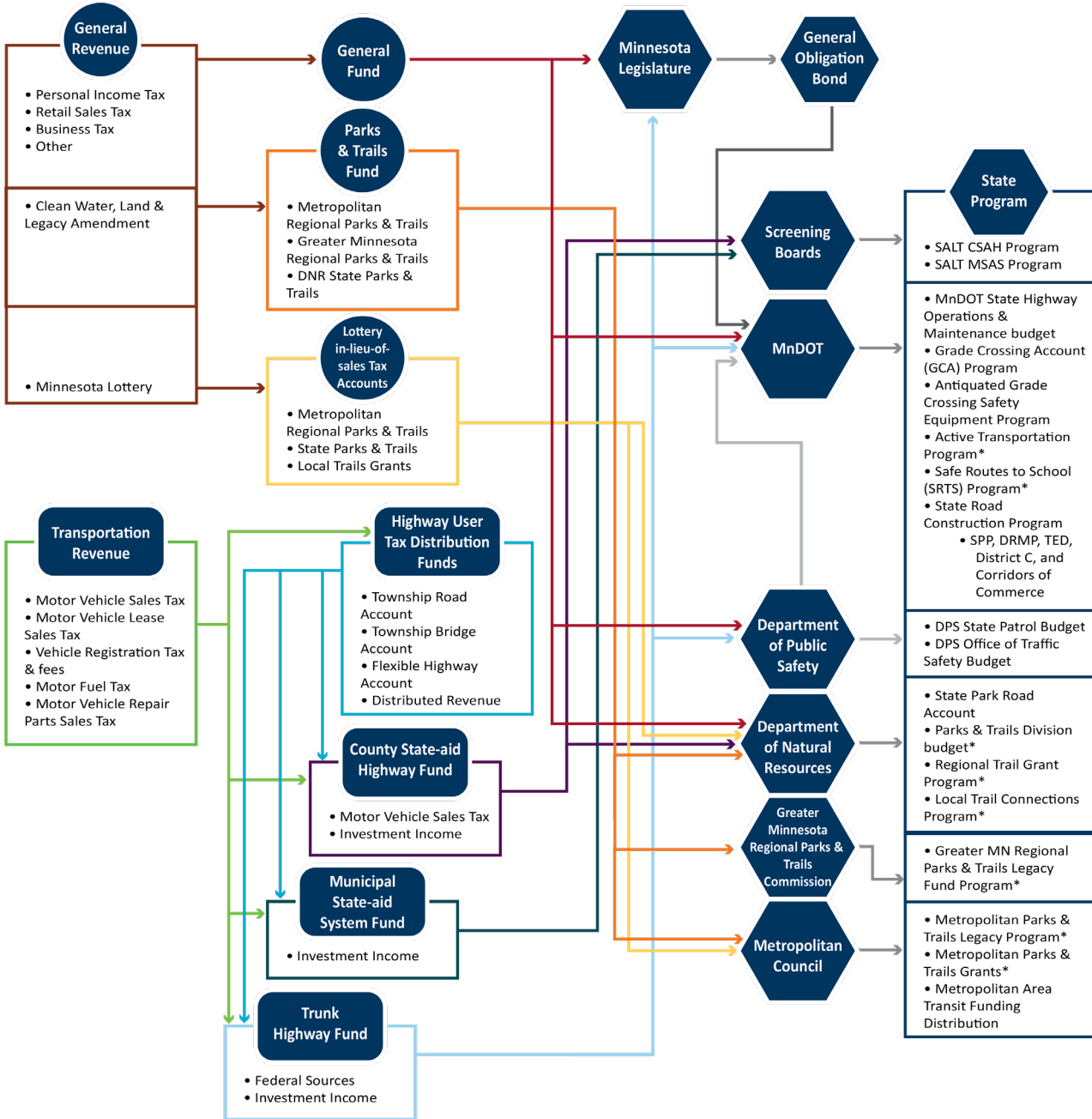
MINNESOTA LEGISLATURE

- State legislative General Obligation (GO) bonding

Figure C-8 shows the relationship between these sources and programs.

APPENDIX F | TRANSPORTATION FUNDING

Figure C-8: State roadway & trail transportation funding sources & programs



LOCAL FUNDING

Local units of government provide substantial funding for roadway and trail transportation. The primary sources of local funding include general revenue at the county and city level, such as property tax and sales tax. Counties also levy wheelage taxes on vehicles registered to properties in their geography. Since the majority of roadways in Minnesota are locally owned, property taxes make-up the single largest funding source for Minnesota roadways.

Local funding for trails and other roadway bicycle and pedestrian improvements also comes from county and city general revenue. In addition to support for bicycle and pedestrian capital investments, maintenance of these facilities is primarily the responsibility of local government.

In addition to the direct local investments, many federal and state funding sources require matching funds, which often come from local sources.

OTHER FUNDING

Private investment in roadway and trail transportation does occur. However, it does not make up a significant portion of funding sources. When private investment does occur, it is typically in the form of public-private partnerships on specific projects. Additionally, there are a small number of privately owned roadways and trails in Minnesota.

TRANSIT & INTERCITY BUS TRANSPORTATION

TRANSIT

In the seven county metro area, transit includes regular and express bus service, ADA and general public dial-a-ride bus service, bus rapid transit, light rail transit and commuter rail. The other types of transit are considered surface transportation since they operate on the roadway network or within roadway right-of-way. For these modes, capital projects are largely funded by federal transportation revenue.

Transit maintenance and operations are funded by passenger fares and state-level taxes, such as the motor vehicle sales tax (distributed through the Metropolitan Transit Account). For major transitway projects, such as the METRO Green Line, significant funding for capital and operations comes from county transportation sales tax revenue. Under Minnesota statute, each county is authorized to implement up to a half-cent sales tax for transportation purposes. In the seven-county metropolitan area, all the counties have implemented this tax. Upon implementation, the county must identify specific projects which the sales tax funding will be used to support. In Hennepin and Ramsey Counties, the vast majority of the of sales tax revenue is designated to support transitway capital and operations. Anoka, Dakota and Washington Counties also have designated a portion of their sales tax funds to transitways. Scott County uses sales tax funding to support general transit operations.

In Greater Minnesota, the majority of public transit activities are funded through state sources. These include motor vehicle sales tax and general revenue. Local sources make up approximately a quarter of Greater Minnesota transit. Federal programs also provide revenue for capital and operations activities.

TRANSIT & INTERCITY BUS TRANSPORTATION AT A GLANCE

SYSTEM IN MINNESOTA

- 204 regular bus routes, two light rail lines and four bus rapid transit routes and dial-a-ride service in the Twin Cities
- 40 Greater Minnesota public transit systems, plus five tribal systems
- Intercity bus connections to 87 destinations

USE

- 38.4 million rides on Twin Cities transit (2020)
- 6.3 million rides on Greater Minnesota transit (2020)
- 52,823 rides on Minnesota intercity bus routes (2020)

RESPONSIBILITY

- Transit service in the Twin Cities is primarily operated by the Metropolitan Council (other providers include Southwest Transit, Minnesota Valley Transit Authority, Maple Grove Transit, Plymouth Transit and the University of Minnesota)
- Transit services in Greater Minnesota are operated at the regional, county or city level (there are 42 public transit systems across Greater Minnesota offering scheduled transportation services)

Previously, MnDOT provided state funding for transit services offered by Tribal Nations in Minnesota. In recent years, MnDOT has not provided funding to Tribal Nations because they receive a direct annual apportionment of federal funds for transit services.

For all transit systems, money collected from passenger fares makes up a portion of the funding available for capital, maintenance and operations activities. However, the amount varies widely among different transit services throughout the state.

INTERCITY BUS

Most intercity bus services in Minnesota are owned and operated by private companies and funded through private sources. However, some carriers receive public funding assistance to support their operations and create or enhance access to small towns across the state. This public funding assistance comes primarily from federal and state transportation revenue through the Minnesota Intercity Bus Program.

COMMUTER RAIL

Northstar commuter rail capital, maintenance and operations are funded as part of Metro Transit's budget. In addition to money from passenger fares, funding also comes from state transportation revenue through the Metropolitan and Greater Minnesota Transit Accounts. Light rail and streetcar services are considered transit and included in the Surface Transportation section of this document.

FEDERAL FUNDING

Federal funding for transit and intercity bus transportation comes primarily from transportation revenue through the Mass Transit Account, which is 15% of the Transportation Trust Fund. Funding is also provided by the Federal General Fund. These funding sources fund the following federal programs.

FEDERAL PROGRAMS

The programs are grouped by administering agency.

FEDERAL TRANSIT ADMINISTRATION (FTA)

- Joint Development Program
- Urbanized Area Formula Grants (5307)
- New Starts / Small Starts (5309)
- Enhanced Mobility of Seniors & Individuals with Disabilities (5310)
- Formula Grants for Rural Areas (5311)
- Rural Transit Assistance Program (5311(b)(3))
- Intercity Bus Program (5311(f))
- Tribal Transit Program (5311(j))
- State of Good Repair Grants (5337)
- Bus & Bus Facilities Competitive Program (5339(b))
- Capital Investment Grant (CIG)
- Low and No Emissions Vehicles Grant (5339(c))
- Growing States / High Density Program (5340)

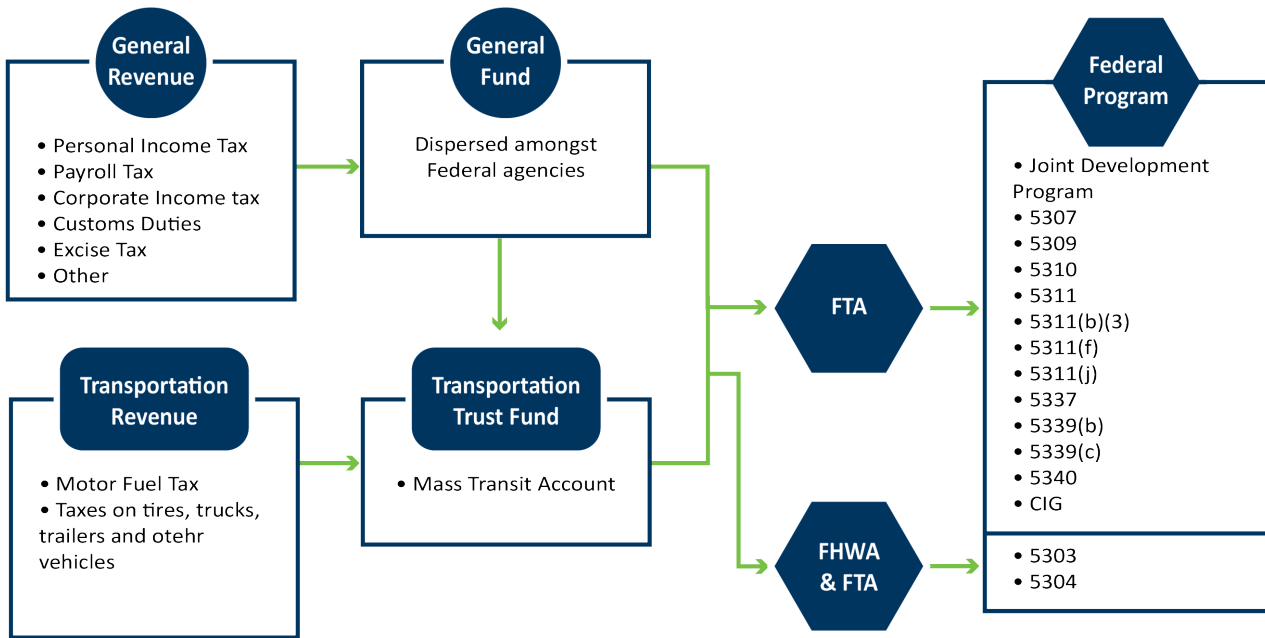
FHWA & FTA JOINTLY

- Metropolitan Planning Program (5303)
- Statewide & Non-metropolitan Planning (5304)

Figure C-9 shows the relationship between these sources and programs.

APPENDIX F | TRANSPORTATION FUNDING

Figure C-9: Federal transit & intercity bus transportation funding sources & programs



STATE FUNDING

State funding for transit and intercity bus transportation comes primarily from the State General Fund, Motor Vehicle Sales Tax (MVST) Transit Assistance Fund and the Motor Vehicle Lease Sales Tax.

MOTOR VEHICLE LEASE SALES TAX (MVLST)

MVLST is reallocated for transportation purposes. 38% is distributed to transit the Greater Minnesota Transit Account. The remaining 62% is allocated to CSAH, the Minnesota Transportation Fund to be used for the Local Bridge Program and HUTD to be used for CSAH, MSAS and TH funds.

MOTOR VEHICLE SALES TAX (MVST) TRANSIT ASSISTANCE FUND

The MVST Transit Assistance Fund is 40% of the revenue collected from MVST. The other 60% is allocated to the Highway User Tax Distribution Fund (HUTDF) as seen in the Roadway & Trail Transportation section of this document. Ten percent of the MVST Transit Assistance Fund is allocated to the Greater Minnesota Transit Account and is administered by MnDOT's Office of Transit and Active Transportation. The remaining 90% of the MVST Transit Assistance Fund is allocated to the Metropolitan Transit Account and is administered by the Metropolitan Council for the seven-county metropolitan area.

STATE PROGRAMS

The programs are grouped by administering agency.

DEPARTMENT OF TRANSPORTATION

- Greater Minnesota Public Transit Participation Program
- Minnesota Intercity Bus Program

MINNESOTA LEGISLATURE

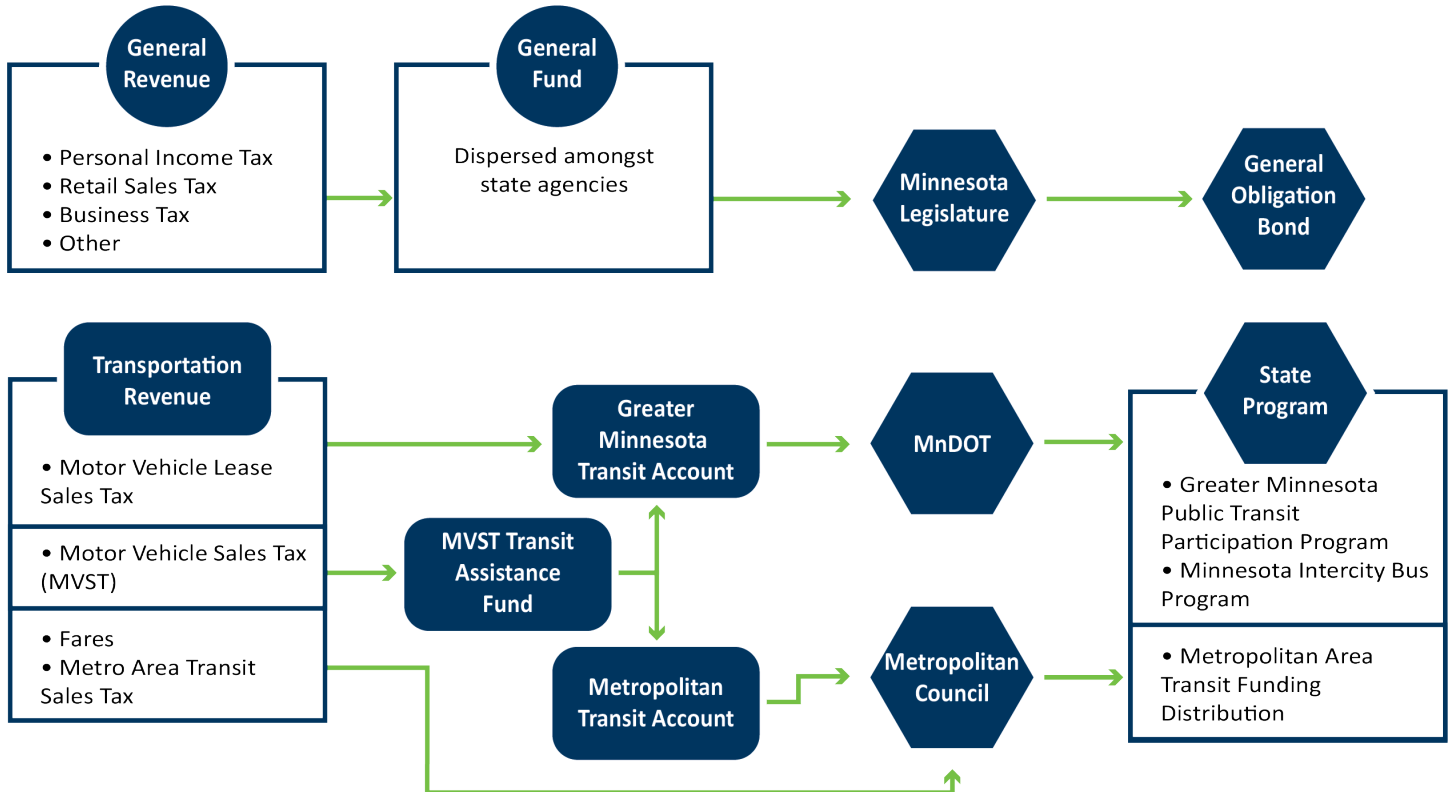
- State legislative General Obligation (GO) bonding

METROPOLITAN COUNCIL

- Metropolitan Area Transit Funding Distribution

Figure C-10 shows the relationship between these sources and programs.

Figure C-10: State transit & intercity bus transportation funding sources & programs



LOCAL FUNDING

Transit funding at the local level comes from county and city general revenue. Two sources of local property tax revenues are used for transit purposes - the Metropolitan Council levies for general transit capital purposes and Regional Railroad Authorities levy for a portion of the county share of transitway development. The Metropolitan Council also receives other revenue used for transit operations from sources including advertising, investment income and from Sherburne County and MnDOT to pay the Greater Minnesota share of operating the Northstar commuter rail. Additionally, county sales tax revenues for transportation purposes can be used for transit. Counties in the Twin Cities have Regional Railroad Authorities (RRAs). RRAs have taxing authority, which allows them to levy taxes for rail transit development purposes. Each county is responsible for passing resolutions to identify the transportation project that will be funded through its sales tax revenues. Hennepin and Ramsey Counties have indicated the vast majority of their sales tax revenues will be used for transitway capital and operating purposes. Anoka, Dakota and Washington Counties will use the sales tax revenues for transportation purposes that include transit and other modes. Scott County uses sales tax funding to support general transit operations.

In addition to the direct local investments, many federal and state funding sources require matching funds, which often come from local sources.

OTHER FUNDING

Private investment in transit and intercity bus transportation does occur. However, it does not make up a significant portion of the funding sources. The most common use in the Twin Cities metro area is to support special event service like sporting events or holiday free-ride promotions. When private investment does occur, it is typically in the form of public-private partnerships on specific projects. Additionally, there are a small number of privately owned transit services in Minnesota.

Private investments and transit agency fare box recovery are also funding sources for commuter rail in Minnesota.

WATER TRANSPORTATION

PORTS

Most port terminals in Minnesota are privately owned and funded entirely through private sources. Public port authorities often lease port land to private companies to operate port terminals. Additional funding for public port authorities comes from state general revenue and is available for capital projects as part of the Port Development Assistance Program. Operations and maintenance activities are funded almost exclusively through revenue received from use of the ports.

WATERWAYS

Minnesota's navigational channels and locks and dams also require investment to stay operational. This funding comes through the U.S. Army Corps of Engineers and includes federal transportation and general revenue.

WATER TRANSPORTATION AT A GLANCE

SYSTEMS IN MINNESOTA

- 2 waterway systems (Mississippi River and Great Lakes-St. Lawrence Seaway)
- 195 navigable river miles along the Mississippi River
- 7 ports
- 10 active locks and dams

USE

- Ports and waterways are primarily used to move bulk freight but also support recreational activities.

RESPONSIBILITY

- The majority of port terminals are privately owned. The federal government is responsible for all locks and dams.

FEDERAL FUNDING

Federal funding for ports and waterway transportation comes primarily from the Harbor Maintenance Trust Fund, Inland Waterways Trust Fund, Federal General Fund and Special Recreation User Fees. The Harbor Maintenance Trust Fund is dedicated federal revenue that includes imports tax, domestic shipments tax, cruise line passenger tickets tax and interest earned. Inland Waterways Trust Fund is dedicated federal revenue, which includes waterway fuel tax and interest earned. These federal sources mostly support waterway capital, operations and maintenance activities. These funding sources fund the following federal programs.

FEDERAL PROGRAMS

The programs are grouped by administering agency.

U.S. ARMY CORPS OF ENGINEERS

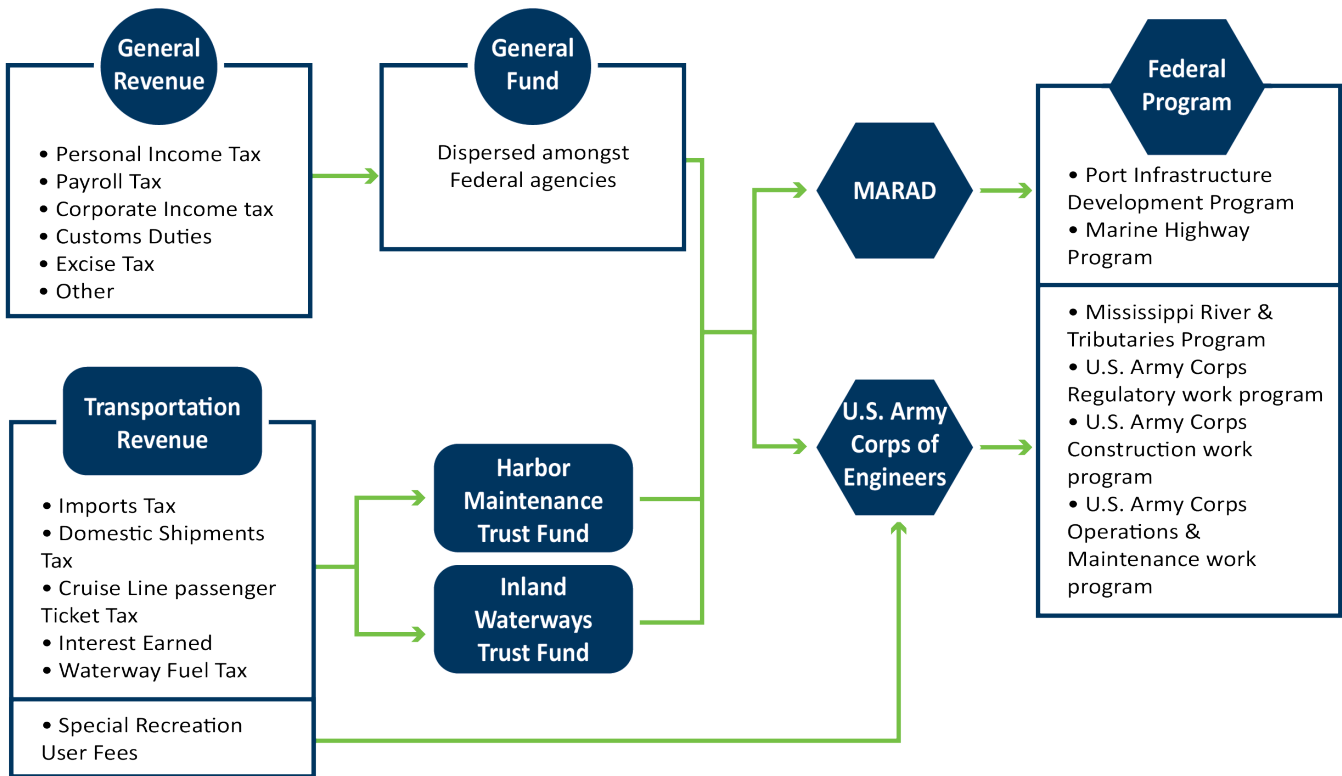
- Mississippi River & Tributaries Program
- U.S. Army Corps Regulatory work program
- U.S. Army Corps Construction work program
- U.S. Army Corps Operations & Maintenance work program

U.S. DOT MARITIME ADMINISTRATION (MARAD)

- Port Infrastructure Development Program
- Marine Highway Program

Figure C-11 shows the relationship between these sources and programs.

Figure C-11: Federal waterway transportation funding sources & programs



STATE FUNDING

State funding for ports and waterway transportation comes from the State General Fund and funds capital activities at Minnesota ports. The following are the Minnesota ports and waterway transportation programs.

STATE PROGRAMS

The programs are grouped by administering agency.

DEPARTMENT OF TRANSPORTATION

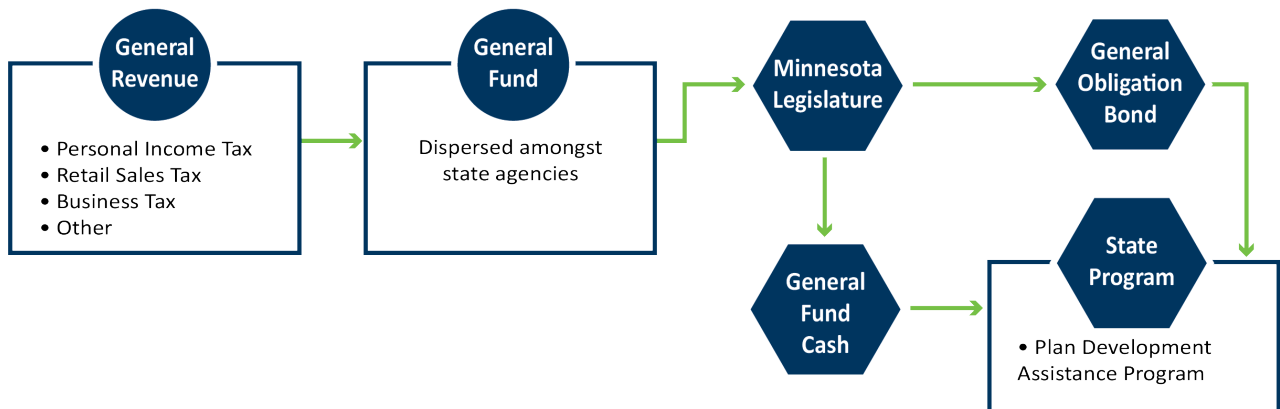
- Port Development Assistance Program

MINNESOTA LEGISLATURE

- State legislative General Obligation (GO) bonding

Figure C-12 shows the relationship between these sources and programs.

Figure C-12: State waterway transportation funding sources & programs



LOCAL FUNDING

Local funding for public port authority operations generally comes from the revenues received from leases with port tenants.

OTHER FUNDING

Most terminals along Minnesota’s waterways are privately owned and are on private land. They operate for private benefit and are supported by substantial private investment. Public-private partnerships can be a funding option for ports and waterway transportation.

APPENDIX G - ENGAGEMENT SUMMARY

Public engagement is key to ensuring the Statewide Multimodal Transportation Plan (SMTP) reflects Minnesotans' transportation priorities. People have a right and deserve to be involved in decisions that impact their lives. Transportation has a vast impact on people, the environment and our economy. The Minnesota Department of Transportation (MnDOT) provided a variety of inclusive and meaningful ways for people to help deliver the best transportation system possible through engagement for the SMTP.

The engagement process for the plan update was unlike any that MnDOT had done before. MnDOT recognized the extraordinary circumstances surrounding the plan process. However, the goal to engage Minnesotans meaningfully in this project remained. MnDOT committed to a flexible, phased approach to respond to the changing context. MnDOT created opportunities to hear directly from people regarding what transportation issues they face..

Due to the COVID-19 pandemic, the plan update relied primarily on virtual engagement methods rather than in-person. All in-person engagement was deferred to the end of the plan update when immunization rates began to increase, but ultimately had to be cut short due to the Delta and Omicron variants. Even when in-person engagement was underway, online engagement was also available.

MnDOT based the engagement approach for the plan update on the following principles:

- Identify clearly when stakeholders and the public can influence transportation decisions.
- Implement an appropriate timeline and process for the public and stakeholders to engage based on capacity and time available.
- Use a variety of methods and platforms.
- Inform policies, strategies and investment direction (as applicable).
- Use easy to understand language and graphics and culturally responsive practices.
- Comply with federal and state requirements.

This document outlines how and who MnDOT connected with. More information about public engagement can be found in collection of summaries and reports at [MinnesotaGO.org](https://www.mn.gov).

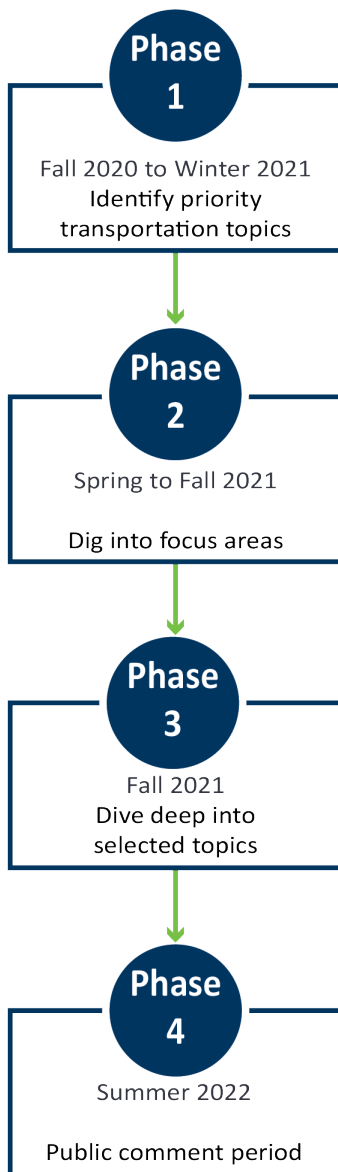
- [Overall Engagement Summary](#)
- [Phase 1 Engagement Summary](#)
- [Phase 2 Engagement Summary](#)
- [Phase 3 Engagement Summary](#)
- [Phase 4 Engagement Summary](#)
- [Transportation Equity Definition Summary](#)
- [Council of Old and New Wisdom Report](#)
- [Policy Panel Survey and Discussion Forum Report](#)
- [Stakeholder Forum Summary](#)

HOW DID WE CONNECT WITH PEOPLE

ENGAGEMENT PHASES

The SMTP had a four-phased engagement approach. See the Overall Engagement Summary for a brief overview of Phase 1-3 engagement activities. Figure G-1 highlights the four phases of engagement and the focus of each phase.

Figure G-1: Four Phases of SMTP Engagement



PHASE 1

Phase 1 began in October 2020 and ended February 2021. The first phase of engagement focused on connecting with the general public and transportation partners. This phase prioritized partnerships with community-based organizations and promoted input opportunities with communities and people who have been underserved by transportation decision making. Activities built a broad understanding of Minnesotans’ transportation challenges and priorities over the next 20 years. MnDOT asked participants to identify up to six focus areas for this plan update. See the [Phase 1 Engagement Summary](#) for more information on activities, demographics and what MnDOT learned.

PHASE 2

Phase 2 began in March 2021 and ended in October 2021. The second phase of engagement dove deep into each of six focus areas to understand impacts to the transportation system. People were asked to share ideas that evolved into draft strategies and actions for the six focus areas—aging infrastructure, climate change, economy and employment, equity, safety and transportation options. See the [Phase 2 Engagement Summary](#) and [Transportation Equity Definition Report](#) for more information on activities, demographics and what MnDOT learned.

APPENDIX G | ENGAGEMENT SUMMARY

PHASE 3

Phase 3 began in September 2021 and ended in December 2021. The aim was to get feedback on select topics where MnDOT and transportation partners needed more information on how to proceed. Phase 3 included both virtual and in-person engagement activities. The circumstances around COVID-19 briefly provided an opportunity for staff to connect with people at in-person community events. Phase 3 included a collaboration with MnDOT's Artist-in-Residence, Marcus Young 楊墨, to facilitate the Council of Old and New Wisdom. See the [Phase 3 Engagement Summary](#), [Council of Old and New Wisdom Report](#), [Policy Panel Survey and Discussion Forum Report](#) and [Stakeholder Forum Summary](#) for more information on activities, demographics and what MnDOT learned.

PHASE 4

Phase 4 was the public comment period and hearing for the draft SMTP. MnDOT held an eight-week public comment period from July 25 to September 18, 2022. An open house and public hearing occurred in St. Paul on September 7, 2022, from 4:00 to 6:00 pm, and was connected to seven video conference locations throughout Minnesota. The public comment period, open house and public hearing were announced in the State Register, in a press release, on social media and through earned media.

DELIVERY METHODS

ONLINE

Due to the limitations caused by the COVID-19 restrictions, online tools were extensively used to give Minnesotans an opportunity to shape the future of their transportation system. Overall, online tools and information varied by phase. Most online activities took place during Phases 1 and 2. Even when in-person engagement opportunities were available during Phase 3, online was also used to expand the efforts.

IN-PERSON

Phase 3 provided the first opportunity to connect with people in-person. The purpose of in-person engagement was to supplement online input activities and techniques. Not everyone could or preferred to engage virtually. In-person events offered the opportunity to be present in communities. Techniques and methods were sometimes altered due to MnDOT's engagement policy, existing restrictions, Minnesota Department of Health and CDC guidance and staff comfort.

ENGAGEMENT ACTIVITIES

The following sections include details about the engagement activities used between fall 2020 and summer 2022 to support the SMTP. Because of COVID-19 policies, MnDOT had to rely on non-traditional means of public engagements to give Minnesotans the opportunity to shape the future of their transportation system. As a result, the MinnesotaGO.org website became a key public engagement tool. The website was supplemented by virtual events, in-person engagement and a Minnesota GO newsletter that updated the public on key progress of the plan. The project team also partnered with several community organizations to advance the public engagement goals of the SMTP.

Table G-1 shows engagement activities by engagement phase. Some activities occurred during all phases. Other activities were used in specific phases to help tailor the engagement approach through the plan update. The selection of each activity was informed by the decision at hand and the best way to connect given current engagement considerations in the pandemic.

Table G-1: Engagement activity by engagement phase

ACTIVITY	PHASE 1	PHASE 2	PHASE 3	PHASE 4
Project website	X	X	X	X
Social media	X	X	X	X
Newsletter	X	X	X	X
Partner and stakeholder meetings	X	X	X	X
Surveys	X	X	X	
Let's Talk Transportation Trivia discussion events		X		
In-person community events			X	
Policy panel online discussion board			X	
Stakeholder forums			X	
Council of Old and New Wisdom			X	
Public comment period				X
Public hearing				X

PROJECT WEBSITE

The MinnesotaGO.org website served as the online home for the SMTP. The website included general project information and highlighted opportunities to provide input. Features of the site included links to surveys and input activities, a calendar of events, links to key documents or background information, reports on overall project progress and summaries of input.

APPENDIX G | ENGAGEMENT SUMMARY

SOCIAL MEDIA

The social media strategy focused on MnDOT’s Facebook page. The frequency of social media activity varied based on the project phase. The most active social media presence occurred during Phases 1 and 2 of engagement. Overall, the strategy used organic and targeted advertisements via zip codes with focused work to connect with underserved communities.

NEWSLETTER

The project team developed a Minnesota GO newsletter to help communicate progress updates to the public on statewide transportation planning topics and projects. People who signed up for the monthly email newsletter received SMTP engagement and project updates as details available to share. Periodic SMTP updates were also shared in the Air Mail newsletter from the Minnesota Pollution Control Agency.

PARTNER AND STAKEHOLDER MEETINGS

MnDOT staff met with partners and stakeholders throughout the duration of the project. Generally, MnDOT attended regularly scheduled virtual meetings to provide project updates and gather input. The focus of each presentation depended on the project stage. Partner and stakeholder meetings began in October 2019 and continued through November 2022. However, most meetings and presentations were concentrated in Phases 2-4.

Table G-2 summarizes internal and external engagement numbers through November 3, 2022.

Table G-2: Summary of internal & external meetings held for the SMTP

GROUP TYPE	TOTAL EVENTS	TOTAL ATTENDEES
Area Transportation Partnership	18	382
Business or special interest	11	234
City	3	26
Community-based organization	2	25
County	6	199
MnDOT (internal)	127	2,078
MnDOT organized	80	1,502
Metropolitan Planning Organization	47	797
Other	13	261
Public	8	123
Regional Development Organization	13	207
Tribal	9	145

*Note that “Total Attendees” reflects the total number of people who attended events by each group type not unique individuals.

SURVEYS

The project team relied on virtual surveys to facilitate public input on the SMTP. The project team gathered input in four ways:

- Mode Lib
- Partner Survey
- VideoAsk
- Policy Panel Survey

MODE LIB SURVEY

A fill-in-the-blank-story activity was used to explore the impact of transportation through personal experiences and stories. The activity encouraged Minnesotans to tell MnDOT in their own words about their transportation experiences and wishes for their communities. This activity was directed towards public audiences during Phase 1 online.

PARTNER SURVEY

The survey focused on which trends or policy areas have changed, which areas transportation partners need more guidance and how important the policy topics are as the various agencies continue to plan for the future. The survey was sent to agencies and organizations, community organizations, non-profits, other public agencies, local organizations and transportation advocacy organizations during Phase 1 to be completed online.

VIDEOASK

This input opportunity targeted multicultural communities throughout Minnesota, specifically those with oral story telling traditions. The recordings were offered in Somali, Hmong, Spanish and English throughout Phases 1 and 2 online. The VideoAsk questions provided opportunity to have more direct conversations with individual respondents. The questions were intentionally left open-ended.

POLICY PANEL SURVEY

MnDOT commissioned a statewide virtual market research panel with a representative sample of Minnesotans to aid decision making about policies, strategies, targets and related messaging. Specifically, the goals of this research were to understand top of mind perspectives and preferences related to MnDOT goals and targets for:

- Commuter delays
- Greenhouse gas emissions
- Vehicle miles traveled reduction

The research also aimed to understand attitudes about:

- Technology and transportation
- Transportation modes and options
- Community engagement, safety and equity
- Trade-offs and priorities

The policy panel had two parts within Phase 3. The quantitative online survey was conducted in October 2021 and followed by a qualitative online discussion board, which wrapped up in November 2021.

LET’S TALK TRANSPORTATION TRIVIA DISCUSSION EVENTS

Let’s Talk Transportation trivia and storytelling aimed at getting input on six focus areas. Information was shared about each topic then people were asked open-ended questions. The trivia and visuals served as conversations prompts. The input received helped MnDOT understand Minnesotans’ experiences and priorities for the future. Because of the limitations imposed by the COVID-19 pandemic, virtual trivia was one of the most effective tools available to engage communities. MnDOT relied on three ways to deliver the trivia and discussion questions:

- Community-hosted events
- MnDOT-hosted events
- Online at MinnesotaGO.org

MNDOT-HOSTED EVENTS

MnDOT hosted 31 virtual events similar to the community-hosted events. Five of these events were for MnDOT staff. The rest were open to the public. The goal of the MnDOT-hosted events was to allow people to help shape the decisions around the transportation system.

ONLINE AT MINNESOTAGO.ORG

An online self-paced trivia format was available at MinnesotaGO.org. People were able to select from one of the six focus areas to read content and comics and answer trivia and open-ended discussion questions. This version was available on the website for those who were not able to share comments at a live, virtual gathering.

COMMUNITY-HOSTED EVENTS

MnDOT partnered with community-based organizations representing people underserved in transportation decision making. Staff provided these organizations with tools, content and support needed to host an online trivia-themed virtual gathering for their members. Community-based organizations received a stipend for their participation depending on the scope and scale of what they were able to do. The following are the organizations that hosted events:

- Central Minnesota Council on Aging
- Health Empowerment Resource (HER) Center – Urban hope Ministries
- Hispanic Advocacy and Community Empowerment through Research (HACER)
- Lakes and Prairies Communities Action Partnership (CAPLP)
- Mahube-Owa Community Action Partnership
- North Shore Area Partners
- PartnerSHIP 4 Health
- Project FINE
- Sister of Synergy
- United Church of God in Christ
- Vietnamese Social Services

Nine events were hosted in partnership with community-based organizations.

IN-PERSON COMMUNITY EVENTS

The purpose of in-person engagement was to supplement online input activities and techniques. Not everyone can or prefers to engage virtually and the project team wanted to offer an option for in-person engagement and to be present in communities. People were asked to provide their feedback on the SMTP's six objectives. MnDOT used the following criteria to guide engagement decisions:

- Provide opportunity for conversations (space for comment, feedback, and guidance).
- Meet people where they are.
- Engage with targeted communities and groups (Black, Indigenous and People of Color, children/youth, people with low-income in urban communities, low-income communities, older adults, people with disabilities, new immigrants).
- Prioritize outdoor events.

POLICY PANEL ONLINE DISCUSSION BOARD

The policy panel had two parts within Phase 3. The quantitative online survey was conducted in October 2021 and followed by a qualitative online discussion board, which wrapped up in November 2021. Following the completion of the online survey, participants were told about an opportunity to participate in a follow-up discussion that would dig deeper into some of the content areas. The follow-up online discussion was the qualitative segment of the study and included approximately 50 individuals using a bulletin board research platform. The discussion was moderated over a few days. Note that not every topic from the quantitative survey was discussed in-depth during the qualitative discussion.

STAKEHOLDER FORUMS

Stakeholders and partners were invited to participate in one of two interactive stakeholder forums held in December 2021. Participants had the opportunity to review, discuss and make recommendations to changes to objectives, performance measures, strategies and actions in the SMTP. Participants provided feedback on six topics where MnDOT could use additional guidance on how to proceed:

- Planning for CAV readiness
- Mitigating and adapting to climate change
- Developing policy strategies to reduce vehicle miles traveled
- Supporting freight and economic competitiveness
- Applying a Safe System approach to transportation safety
- Implementing transportation equity

The forums included presentations, live polling and small group discussions. Both forums were hosted virtually and 125 stakeholders attended.

APPENDIX G | ENGAGEMENT SUMMARY

COUNCIL OF OLD AND NEW WISDOM

MnDOT staff in collaboration with a team of artists and community members answered questions in a series of conversations rooted in what the artist team called “auntie and grandma wisdom.” The discussions, known as the Council of Old and New Wisdom, allowed participants to speak plainly about transportation challenges and opportunities ahead.

This group included representation across race, class, gender and geography. The project centered voices from Black and Indigenous communities to address those who have endured the most harm throughout American history, having stolen land and labor, and with awareness that the path to liberation for those communities is the path to liberation for all. The goal was to facilitate intimate conversations to provide guidance and material for the creative and artistic expression as part of the SMTP. See the [Council of Old and New Wisdom Report](#) to hear clips from the discussions and prompts to connect with the illustrations and wisdom in the words.

This work was led by Marcus Young 楊墨, a behavioral artist. He makes participatory work at the intersection of art, spirit and social movement.

PUBLIC COMMENT PERIOD

MnDOT held an eight-week public comment period from July 25 to September 18, 2022. The public hearing occurred in St. Paul on September 7, 2022. The public comment period and public hearing were announced in the State Register, in a press release, on social media and through earned media.

A total of 327 comments were received at MinnesotaGO.org, by email and by letter. Sixteen agencies submitted comment letters:

- Association of Minnesota Counties
- Carver County
- City Engineers Association of Minnesota
- City of Minneapolis
- Metropolitan Council
- Minneapolis Regional Chamber/Move Minneapolis
- Minnesota Association of Convention and Visitors Bureaus
- Minnesota Chamber of Commerce
- Minnesota County Engineers Association
- Minnesota Department of Agriculture
- Minnesota Freight Advisory Committee
- Minnesota Ports Association
- Move Minnesota
- Natural Resources Defense Council
- Saint Paul Port Authority
- Transportation Alliance

A response to comments was posted at MinnesotaGO.org when the SMTP was adopted.

OPEN HOUSE AND PUBLIC HEARING

MnDOT hosted an open house and public hearing for the SMTP on September 7, 2022. The open house was in person at eight locations around Minnesota:

- Duluth – 1123 Mesaba Avenue
- Bemidji – 3920 Highway 2 West
- Baxter – 7694 Industrial Park Road
- Detroit Lakes – 1000 Highway 10 West
- Rochester – 2900 48th Street NW
- Mankato – 2151 Bassett Drive
- St. Paul – 395 John Ireland Boulevard
- Willmar – 2505 Transportation Road

The public hearing was a hybrid event with people able to attend at the same eight locations and via web conference. This document provides a summary of the information available during the open house and public hearing, how many people attended and the comments received.

The open house occurred in person from 4:00 to 5:00 p.m. at eight locations around Minnesota. The intent of the open house was for people to learn more about the plan, talk with staff and submit written comments.

One member of the public attended in person in District 3 in Baxter, Minnesota.

The public hearing occurred in person at the same eight locations and virtually as a web conference from 5:00 to 6:00 p.m. Commissioner Daubenberger welcomed participants. Hally Turner, Policy Planning Director, shared a short presentation. Assistant Commissioner Tim Sexton presided over the public testimony.

Three members of the public attending in person; one person in District 1 in Duluth, one person in District 3 in Baxter and one person in District 8 in Willmar. Five members of the public attended via web conference. One person provide testimony via the web conference chat.

TRANSPORTATION EQUITY DEFINITION ACTIVITIES

MnDOT staff worked with the members of the State Transportation Plans Equity Work Group to draft a working definition of transportation equity. MnDOT staff connected with Minnesotans to discuss the transportation equity working definition using two primary methods. Staff attended presentations to share information about the SMTP and to discuss their reactions to the working definition. Also, Minnesotans were invited to share their feedback at MinnesotaGO.org.

Staff engaged with internal and external stakeholders during summer 2021 to gather feedback on a working definition to ensure the final version is grounded on the lived experiences of Minnesotans. Most of the conversations focused on the transportation equity working definition to ensure ample time and opportunity for people to weigh in on the proposed language. Information shared typically included background on the SMTP and is included in overall SMTP engagement results. This summary includes sections that will provide information specific to engagement for the transportation equity definition.

MnDOT connected with people from:

- Community-based organizations
- Disadvantaged Business Enterprise & Workforce Collaborative
- Metropolitan planning organizations
- MnDOT employee resource groups and Diversity & Inclusion committees
- Regional development organizations
- Transportation professional organizations
- Tribal staff
- And more

Based on that feedback, the Equity Work Group recommended a revised definition for MnDOT leadership to consider. MnDOT leadership built on that recommendation to clarify what transportation equity means to the agency resulting in a statement of commitment to transportation equity.

ACKNOWLEDGMENT OF PAST HARMS

MnDOT acknowledges the transportation system and agency decisions have underserved, excluded, harmed and overburdened some communities. We understand some of our past decisions denied Black and Indigenous communities as well as people with disabilities the full participation of transportation benefits. These and other underserved communities have historically carried disproportionate burdens of transportation decisions.

WHAT TRANSPORTATION EQUITY MEANS TO MNDOT

MnDOT is committed to creating an equitable transportation system.

Transportation equity means the benefits and burdens of transportation systems, services and spending are fair and just, which historically has not been the case. Transportation equity requires ensuring underserved communities, especially Black, Indigenous and People of Color, share in the power of decision making.

The journey of transforming our transportation systems, services and decision-making processes will require ongoing listening, learning, changing, implementing and adapting.

Everyone in our agency regardless of position or work assignment has a role to advance transportation equity. We will partner with community members, community based organizations, transportation service providers, Tribal Nations and government institutions to evolve our work and to change outcomes for our communities.

WHO DID WE CONNECT WITH

AUDIENCES

MnDOT understands that not every person shares the same ability, capacity and level of interest in the planning process. It was important to offer a variety of opportunities for different levels of involvement. The project team worked to connect with interested people in ways that are meaningful and accessible to them. It was important to distinguish public, stakeholder, partner and internal input. All are important, but the expectations and tactics for participation differed.

PUBLIC

The public was a key audience for this plan and is the ultimate beneficiary of the outcomes. MnDOT scaled opportunities for Minnesotans to connect with this planning process to their interest and capacity to participate. All levels of interest had the opportunity to learn about the plans and provide input. MnDOT used a variety of outreach techniques, as listed in the How did we connect with people? section, with the goal of reaching a broad and inclusive audience.

The project team paid special attention to hearing from voices underserved in transportation decision making, including Black people, Indigenous people, people of color, people with low-income, people with limited-English proficiency and youth. The project team designed engagement strategies with these people in mind and identified specific strategies to hear and include these voices.

STAKEHOLDERS

A stakeholder was a person, group or organization with a specific interest in the project, but not necessarily in a decision-making role. The project team developed a list of stakeholders for the SMTP update based on previous planning processes. Key stakeholder groups included bicycle associations, environmental groups, neighborhood associations, etc.

PARTNERS

Minnesota has a range of partners working on transportation. There are agencies and organizations that play a key role in collaborating with MnDOT to advance transportation in Minnesota. These include metropolitan planning organizations (MPOs), regional development organizations (RDOs), local governments (i.e., townships, cities and counties), transit agencies and agencies responsible for tourism, land use management, natural resources, environmental protection, conservation and historic preservation. These groups are partners since they are decision makers, along with MnDOT, in planning and developing a strong transportation system for Minnesota. Partners were generally those identified in the consult and cooperate categories by federal regulations.

External partners include but are not limited to:

- Boards and councils, such as:
 - Area Transportation Partnerships
 - Minnesota Council on Transportation Access
 - Minnesota Freight Advisory Committee
 - Regional Transportation Coordinating Councils
- Federal and state agencies
- Legislators
- MPOs
- Public Transportation Operators
- RDOs
- Townships, cities, and counties
- Tribal staff and governments

APPENDIX G | ENGAGEMENT SUMMARY

TRIBAL GOVERNMENTS

There are twelve federally recognized tribes with eleven reservations in Minnesota (See Figure G-2). Chippewa tribes, also called Ojibwe or Anishinabe tribes, are located in the northern part of the State. Minnesota's Dakota Sioux tribes are located in the southern portion of the State. Minnesota is also home to the Minnesota Chippewa Tribe (MCT). The Minnesota Chippewa tribe is a federally recognized tribal government for its member tribes (Bois Forte, Fond du Lac, Grand Portage, Leech Lake, Mille Lacs and White Earth). In addition, Minnesota contains lands owned by the Ho-Chunk Nation which does not have a reservation. The Ho-Chunk Nation's lands are primarily located in Wisconsin. See Appendix J – Tribal Coordination and Consultation for more details.

MNDOT

The SMTP is a plan for all modes of transportation for the state of Minnesota. In addition, the SMTP helps fulfill state and federal transportation planning requirements for MnDOT when combined with other MnDOT plans. As the state's transportation agency, MnDOT plays a critical role in implementing the planning direction. It is important that MnDOT employees engage in the planning process, so they have buy-in and support for the transportation policy and investment direction. Staff will be responsible for the ongoing implementation of the plan. Accordingly, MnDOT staff were also included through the engagement process.

COMMITTEES & WORK GROUPS

The project team created several advisory committees and work groups that helped to guide the planning process. These groups included individuals from a variety of audiences.

POLICY ADVISORY COMMITTEE

The project team established a Policy Advisory Committee (PAC) to guide the overall SMTP update process, including advising on engagement activities. PAC members included advocacy organizations, boards, councils, stakeholders and partners who represent different perspectives and modes. A list of PAC members is included in Appendix A – Acknowledgments.

TECHNICAL ADVISORY COMMITTEE

The project team established a Technical Advisory Committee (TAC) to provide guidance on the plan update process, including input on engagement activities. The TAC helped ensure the final policy strategies reflect the priorities and needs of MnDOT and partners. TAC members included staff from MnDOT and partner organizations. A list of TAC members is included in Appendix A – Acknowledgments.

WORK GROUPS

The project team created work groups related to the six focus areas identified in Phase 1 engagement – one work group for each focus area. These groups addressed technical issues and drafted strategies for MnDOT and partners to address transportation priorities. Members included staff from MnDOT and partner agencies with subject matter expertise in each topic. A list of work group members is included in Appendix A – Acknowledgments.

WHAT DID WE HEAR

Information for each phase of engagement, transportation equity definition engagement and policy panel included a written summary of activities, demographics (if available) and feedback received. These summaries are available at MinnesotaGO.org.

- [Overall Engagement Summary](#)
- [Phase 1 Engagement Summary](#)
- [Phase 2 Engagement Summary](#)
- [Phase 3 Engagement Summary](#)
- [Phase 4 Engagement Summary](#)
- [Transportation Equity Definition Summary](#)
- [Council of Old and New Wisdom Report](#)
- [Policy Panel Survey and Discussion Forum Report](#)
- [Stakeholder Forum Summary](#)

APPENDIX H - TRANSPORTATION EQUITY

The Minnesota Department of Transportation (MnDOT) has aimed to better understand how the transportation system, services and decision-making processes help or hinder the lives of people in underserved and underrepresented communities in Minnesota through the [Advancing Transportation Equity Initiative](#). The initiative took a high-level look at transportation equity from a statewide perspective. Work completed as part of the initiative has ranged from equity-focused conversations with stakeholders in Greater Minnesota, policy and program equity reviews, research and more. Insights include:

- Lack of an agency-wide transportation equity definition or specific target populations is a challenge.
- Equitable engagement is necessary but not sufficient.
- Statewide solutions to advance equity can help address broader transportation challenges and vice versa.
- Need to move beyond research to implementation.

The 2022 Statewide Multimodal Transportation Plan (SMTP) process included several activities to embed transportation equity in the planning approach to address these and other lessons from the Advancing Transportation Equity Initiative. The sections below share examples of transportation inequities in Minnesota, what transportation equity means to MnDOT and MnDOT's commitment to transportation equity. Additionally, the Transportation Equity in the SMTP section provides information on how equity was included in the plan process and the Sample Transportation Equity Strategies & Actions section offers equity-related policy direction from Chapter 5. More information about the engagement process around transportation equity is available in the Transportation Equity Engagement Summary.

TRANSPORTATION EQUITY IN MINNESOTA

Policy, design and operations in housing and transportation have led to inequities. For example, construction of the interstate system in the 1950s displaced homes, businesses, places of faith and more. This mostly took place in communities where loans were denied or housing was restricted by deed, which led to much lower property values. Highway development was favored over investment in public transit for decades. As a result, housing development has been happening farther from key destinations, further compounding issues of equity and access to jobs and essential services. These and other practices have exacerbated segregation and income inequity over generations, creating a harmful legacy of past decisions. These inequities combined with the killing of Philando Castile in 2016, George Floyd in 2020 and Daunte Wright in 2021 have highlighted the need to focus on racial and social justice. This legacy has strengthened Minnesota's commitment to advance transportation equity today.

In 2021, staff started an effort to define what transportation equity means to MnDOT. The need for a unified definition for transportation equity emerged from community and stakeholder feedback from the Advancing Transportation Equity Initiative. There is a wide variety of perspectives and definitions of transportation equity, and it was clear that MnDOT's ongoing efforts needed a common understanding of its meaning and implications.

MnDOT staff worked with the members of the State Transportation Plans Equity Work Group to draft a definition of transportation equity. Staff engaged with over 1,000 people both within MnDOT and with community members and representatives of community-based organizations to provide feedback on the draft definition. This engagement process took over three months. People commented it is important for MnDOT to acknowledge historic harms of transportation while also taking steps to address historic injustices and affectively working

towards making an equitable transportation future.

Some of the key takeaways from the conversations and feedback include:

- Be bold and provide strong support for Black, Indigenous and People of Color (BIPOC) communities getting a seat at the decision-making table.
- Keep the acknowledgment of historic harms in the final definition.
- Emphasize the active work needed for specific outcomes that repair the past.
- Replace or define the word fair.
- Address urban vs. rural resource needs and distribution.
- Include people with disabilities and people with low incomes.

Based on that feedback, the Equity Work Group recommended a revised definition for MnDOT leadership to consider. MnDOT leadership built on that recommendation to clarify what transportation equity means to the agency resulting in a statement of commitment to transportation equity.

TRANSPORTATION EQUITY STATEMENT OF COMMITMENT

ACKNOWLEDGMENT OF PAST HARMS

MnDOT acknowledges the transportation system and agency decisions have underserved, excluded, harmed and overburdened some communities. We understand some of our past decisions denied Black and Indigenous communities as well as people with disabilities the full participation of transportation benefits. These and other underserved communities have historically carried disproportionate burdens of transportation decisions.

WHAT TRANSPORTATION EQUITY MEANS TO MNDOT

MnDOT is committed to creating an equitable transportation system.

Transportation equity means the benefits and burdens of transportation systems, services and spending are fair and just, which historically has not been the case. Transportation equity requires ensuring underserved communities, especially Black, Indigenous and People of Color, share in the power of decision making.

The journey of transforming our transportation systems, services and decision-making processes will require ongoing listening, learning, changing, implementing and adapting.

Everyone in our agency regardless of position or work assignment has a role to advance transportation equity. We will partner with community members, community-based organizations, transportation service providers, Tribal Nations and government institutions to evolve our work and to change outcomes for our communities.

TRANSPORTATION EQUITY KEY TERMS

What transportation equity means to MnDOT includes several key terms and statements including:

BENEFITS

Transportation benefits are positive impacts of all modes of transportation, including access to affordable, reliable and safe transportation options. Other benefits of transportation include access to affordable housing, employment opportunities, healthy food, clean air and clean water. Transportation benefits are best defined by impacted communities.

BURDENS

Transportation burdens are negative impacts of all modes of transportation including lack of or limited access to affordable, reliable and safe transportation options. Other transportation burdens include exposure to air pollution and related poor health outcomes as well as lack of or limited access to affordable housing and employment opportunities. Transportation burdens are best defined by impacted communities.

TRANSPORTATION SYSTEMS, SERVICES AND SPENDING

Transportation systems, services and spending refer to different transportation funding and decision-making processes that impact people. Transportation systems refer to the various elements and networks that constitute the overall state transportation system such as state and local road networks, sidewalks and trails, transit systems, rail networks, ports and airports, etc. Transportation services refer to various programs that transportation agencies manage. Transportation spending refers to the decisions that lead to the allocation of funds for specific activities like snow removal and projects such as spending of capital projects to construct interchanges or spending for maintenance on state highways.

FAIR

Fairness in transportation means everyone has access to transportation outcomes that are free from bias and discrimination. Fairness in transportation requires a proportionate distribution of transportation benefits and burdens.

JUST

Justice in transportation means taking proactive measures to ensure transportation benefits are adequately accessible to underserved communities especially Black, Indigenous and People of Color, who often bear disproportionate transportation burdens. Justice in transportation requires transforming current inequitable systems so no person is denied accessing the transportation opportunities they need to lead a dignified life.

UNDERSERVED COMMUNITIES

Underserved communities refer to populations that share a particular characteristic, as well as geographic communities, that have been systematically denied through public and private discriminatory practices and neglect the full opportunity to participate in aspects of economic, social and civic life. This includes Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. These characteristics can and do overlap, which can magnify and increase the impact experienced.

APPENDIX H | TRANSPORTATION EQUITY

BLACK, INDIGENOUS AND PEOPLE OF COLOR (BIPOC)

Transportation equity requires acknowledging past harms by intentionally naming and centering the experiences of communities that faced the most profound transportation harms and racism. While BIPOC includes all people of color, it leads with Black and Indigenous identities to counter anti-Black racism and erasure of Native communities.

SHARING POWER

Sharing power means creating opportunities for underserved communities to access decision making power. This includes institutional and structural power. Institutional power is the ability to create or greatly influence and shape the rules, policies and actions of an institution. Structural power is the ability to create or greatly influence and shape the rules, policies and actions that govern multiple and intersecting institutions or an industry. Sharing power requires engaging early and often with underserved communities to better understand community needs and incorporating those needs to transportation initiatives that lead to real, measurable change in the lives of community members. Shared power framework recognizes and addresses the power imbalance that often leads to poor and uninformed decisions that perpetuate harms on underserved communities especially Black, Indigenous and People of Color.

Examples of sharing power include:

- Prioritizing solutions that combat the most pressing issues of our time that have disproportionate impact on underserved communities. Rethinking I-94 is a new model of corridor planning to prioritize community needs and co-create solutions to meet the challenges of the transportation system.

- Meaningfully engaging those communities most impacted by structural racism in the creation and implementation of the programs and projects that impact their daily lives. MnDOT recently created a community ambassador position to build better relationships with BIPOC communities.
- Collaborating with partners on projects that meet social and economic priorities for communities. MnDOT regularly partners with jurisdictions on locally initiated and led projects such as transit and interchanges.
- Reforming programs, policies and procedures to deconstruct institutional and structural barriers. The Office of Transportation System Management's Transportation Equity Labs explore programs, policies and procedures with a commitment to advancing transportation equity. Participants can include external partners depending on the focus of the lab.
- Creating a workforce at all levels that is representative of the communities we serve. MnDOT has been expanding partnerships with education partners (e.g., MnDOT's CAV Career Pathways Camp) to ensure our future transportation workforce is representative of our communities and capable of meeting the challenges arising.

Ultimately, MnDOT cannot share decision-making power in all instances, as other agencies also have authority to make key transportation decisions. For example, sovereign Tribal Nations hold authority to make transportation decisions for programs, projects, studies and other efforts for tribal lands. Metropolitan planning organizations, federal and state regulatory agencies, and local units of government all have clear legal charges to make key decisions. Also, the Minnesota Legislature sets spending levels and allowable uses of funds.

TRANSPORTATION EQUITY IN THE SMTP

The 2022 SMTP process included several activities to embed transportation equity in the planning approach. First, staff collaborated with the Minnesota Department of Health to complete a Health in All Policies review of the 2017 SMTP. Several recommendations from the analysis have been included in the policy direction found in Chapter 5. Additionally, equity was one of six focus areas, which resulted in the Equity Work Group that advised the process and draft policy direction.

HEALTH IN ALL POLICIES REVIEW

The 2017 SMTP was cross-referenced with the corresponding [2016 Health Impact Assessment \(HIA\)](#). The review focused on confirming areas where the SMTP included health recommendations and identifying opportunities for greater inclusion in the SMTP update process. Equity was a key theme resulting from the review and included the following recommendations:

- Define what equity means in transportation and include transportation equity in the Minnesota GO Vision.
- Study, document and report on inequities in Minnesota’s transportation system and define MnDOT’s role in reducing those inequities.
- Prioritize investments in communities that have faced historical disinvestment.

The summary of the Health in All Policies review is in Appendix D – Planning Reviews.

EQUITY FOCUS AREA & WORK GROUP

Equity was one of six focus areas, which resulted in the Equity Work Group that advised the process and draft policy direction. The scope of the Equity Work Group was bigger than the other five work groups. The Equity Work Group guided planning considerations for two statewide transportation plans—the SMTP and the 20-year State Highway Investment Plan (MnSHIP). In addition to helping draft policy direction like the other work groups, the Equity Work Group also provided oversight on planning considerations and processes beyond the SMTP. This work group helped develop:

- A list of resources available at the end of this appendix.
- Transportation equity statement of commitment and list of terms.
- Updates to the Plan Development Guidelines that document requirements and expectations for MnDOT’s Family of Plans.
- An equity review process applied to the SMTP draft policy direction.
- An accountability plan for implementing transportation equity after the adoption of the SMTP.

POLICY DIRECTION EQUITY REVIEW

The Equity Work Group coordinated an equity review of the draft strategies that are emerging from the other five work groups advising the SMTP. The review was completed in three parts—initial evaluation, equity workshop and staff review of strategies. The review process was guided by discussions and input with the Equity Work Group.

During the initial evaluation, each of the six work groups prioritized which of the draft strategies would go through the equity review. Work groups then evaluated their prioritized strategies using the following questions:

- Who are the intended beneficiaries of the strategy?
- Does the strategy include an intentional focus on increasing transportation equity? If so, explain.
- Who is potentially burdened, or excluded, from this strategy?
- Who has been burdened by past decisions related to this strategy? How and why?
- What are some ways that this strategy could be changed so that it increases transportation equity?

Comments were consistent across work groups and included changes to strategies that focused on:

- Prioritizing people (specifically BIPOC), historically excluded communities and people disadvantaged in transportation decision making.
- Acknowledging who has been harmed by past decisions.
- Reducing barriers to participation and decision making.
- Considering who are the most vulnerable users of the transportation system.

During the equity workshop, participants discussed a mix of strategies from the equity review and some flagged for further review. In the first breakout discussion, people shared feedback on how the strategies advanced transportation equity and how the strategies fell short from an equity perspective. In the second breakout discussion, participants shared feedback on actions to reduce racial disparities, to build capacity to advance transportation equity and to make actions more equitable.

Following the workshop, staff completed a thorough review of draft strategies and actions to amend language to advance transportation equity. Feedback from the equity review was shared with the TAC and PAC, and both committees completed further review of the language.

SAMPLE TRANSPORTATION EQUITY STRATEGIES & ACTIONS

The 2022 SMTP includes strategies and actions that will help advance transportation equity throughout Minnesota. See the policy direction in Chapter 5 for the complete list of objectives, performance measures, strategies and actions, many of which aim to advance transportation equity. The following Healthy Equitable Communities and Open Decision Making strategies and actions are reiterated below as they most directly relate to transportation equity.

HEALTHY EQUITABLE COMMUNITIES

STRATEGY: ELIMINATE BURDENS AND REDUCE STRUCTURAL INEQUITIES FOR PEOPLE AND COMMUNITIES DISPROPORTIONATELY IMPACTED BY TRANSPORTATION.

Related actions:

- Work with community partners to identify and remove barriers to participating in transportation planning and decision making.
- Identify disparities in mobility and access and develop plans to reverse or eliminate these impacts through multimodal transportation solutions.
- Implement equity reviews for transportation or land use policies, planning, programs and projects.
- Develop and support community resources to reduce inequities in transportation.
- Accelerate technology solutions for accessible and reliable transportation.
- Pursue strategies to mitigate past effects of transportation construction.

STRATEGY: REDUCE COMBINED HOUSING AND TRANSPORTATION COSTS FOR COST-BURDENED HOUSEHOLDS.

Related actions:

- Improve first- and last-mile connections in neighborhoods and job centers.
- Support the construction of complete streets and a connected network to accommodate walking, rolling, bicycling and transit.
- Educate people on the impacts transportation decisions have on housing costs.
- Expand and enhance public transportation to improve access across the state.
- Promote infill development and land use practices that support walkable and bikeable communities.

APPENDIX H | TRANSPORTATION EQUITY

STRATEGY: LEVERAGE TRANSPORTATION SOLUTIONS TO IMPROVE PUBLIC HEALTH.

Related actions:

- Integrate health and equity considerations in transportation planning, programming and project delivery using a Health in All Policies approach.
- Support opportunities for physical activity through walking, rolling and bicycling.
- Implement programs and investments that improve air quality and reduce noise especially for people experiencing the greatest impacts.
- Ensure convenient multimodal access to open space, parks and recreation areas.
- Increase equitable access to healthy, culturally appropriate and sustainable food through transportation options.
- Align transportation assets and services with community needs during public health emergencies.

OPEN DECISION MAKING

STRATEGY: ENSURE PEOPLE HAVE OPPORTUNITIES TO PLAY AN ACTIVE AND DIRECT ROLE IN TRANSPORTATION DECISION MAKING.

Related actions:

- Start transportation processes by working with communities to identify strategies that support people's vision, priorities and needs.
- Determine community demographics for plans, programs and projects and tailor public engagement approach to increase broad community participation and input.
- Create public engagement plans that clearly articulate decision points, who will be involved at each step of the process and who has authority over each decision.
- Include those impacted by transportation decisions as members of decision-making teams.
- Actively engage in community-centered conversations and use community wisdom to inform decision making.
- Create and implement processes and systems to monitor and evaluate effectiveness in achieving shared outcomes.

STRATEGY: BUILD AND STRENGTHEN LASTING RELATIONSHIPS TO ENSURE THAT PEOPLE ARE ENGAGED IN TRANSPORTATION PROJECTS AND ACTIVITIES ESPECIALLY WITH UNDERSERVED COMMUNITIES.

Related actions:

- Commit to regular two-way communication with partners, stakeholders and the public to continuously gather feedback.
- Hire and involve community-based organizations to conduct and lead engagement activities with underserved populations.
- Identify and connect with Tribal Governments, local elected officials and community leaders through project scoping and delivery.
- Collaborate with partners to include transportation-related questions in their surveys and other data collection efforts with underserved communities.
- Coordinate with partners to ensure people’s priorities and needs are considered including for those without reliable transportation choices.
- Provide education opportunities and programs for community members and transportation partners to understand each other on how to participate in transportation decision making together.

STRATEGY: PROVIDE CONSISTENT, TRANSPARENT, FAIR, JUST AND EQUITABLE COMMUNICATION.

Related actions:

- Partner with the public and stakeholders to identify, develop and implement communication and engagement approaches.
- Use culturally appropriate communication and engagement methods and techniques.
- Set plain language and accessibility standards for agency and contractor deliverables and provide training for staff.
- Provide training for different communication methods including storytelling.
- Increase staff ability and provide resources to improve engagement for people with disabilities and limited English proficiency.
- Provide the public with clear information about overarching policy and project goals to help frame community engagement.

STRATEGY: UNDERSTAND AND LEARN FROM PERSONAL AND COMMUNITY EXPERIENCES ON HOW THE TRANSPORTATION SYSTEM CAN NEGATIVELY AND POSITIVELY AFFECT COMMUNITIES.

Related actions:

- Co-create and share narratives about transportation in collaboration with communities that have been harmed by decisions related to the transportation system and built environment.
- Use the wisdom from community narratives to inform plans, manuals, training content, etc.
- Provide training and resources to build staff capacity to understand cumulative historical impacts of transportation decision making.

APPENDIX H | TRANSPORTATION EQUITY

STRATEGY: USE RESEARCH AND DATA TO DRIVE DECISION MAKING IN PURSUIT OF LOCAL, REGIONAL, TRIBAL, STATEWIDE AND NATIONAL GOALS.

Related actions:

- Ensure key transportation data is kept up-to-date, usable and easily accessible to transportation partners and the public.
- Track and share information about transportation needs and system performance to inform decision making.
- Increase use of accessible mapping tools and data visualization in communications with the public.
- Analyze and present data broken out by community and demographic segments to allow for meaningful analysis.
- Use qualitative data to advance transportation equity.

RESOURCES

This is a short list of resources about intersectionality and transportation equity. More information is being created and released regularly. Consider exploring each topic more deeply to build an understanding about transportation equity in your community.

RACE & TRANSPORTATION

Before Minnesota was settled, extensive trade and travel routes were established by Dakota and Ojibwe people. [Why Treaties Matter](#) explains the history of these routes and how transportation was a key interest for U.S. signers of treaties.

Historically, transportation in Minnesota played a role in denying opportunities to BIPOC. The transportation system was a tool used by institutions to uphold racist systems. An often-cited event in Minnesota is when I-94 displaced the residents of [Saint Paul's Rondo neighborhood](#), a prospering African American community. Similarly, the construction of [I-35W disrupted an African American neighborhood](#) in South Minneapolis.

Today, the harms of transportation infrastructure continue to disproportionately harm BIPOC. For example, the siting of interstates through BIPOC neighborhoods has led to high rates of asthma and other issues discussed in [The Air We Breathe: The State of Minnesota's Air Quality](#) from the Minnesota Pollution Control Agency.

INCOME & TRANSPORTATION

For many, transportation takes up a large share of their household's budget. Owning a car is often a necessity but can be an expensive burden, especially for low-income people. [Growth and Justice](#) explains that when households have good access to transit, the share of the average budget drops from about 20% to 10%. Additionally, access to transportation can increase a person's access to job opportunities.

GENDER & TRANSPORTATION

Research has demonstrated that there are gender differences in how people use transportation. Women typically take on more care-related travel tasks leading to [“trip chaining”](#). Trip chaining is the idea where instead of traveling to one place and then back home, a person stops at many places before going home. Those who visit several destinations in one trip, like running errands for example, have different transportation needs.

Further, there are gender disparities related to transportation. Ania McDonnell explains [three issues that disproportionately face women](#). The first issue is safety concerns such as how women are vulnerable when using public transit. Second is women’s economic opportunity. Specifically, McDonnell explains how trip chaining for women who rely on public transit takes up a significant portion of the day and prohibits other activities. Finally, there is a lack of diverse data to inform initiatives that address specific gender issues in transportation especially when considering gender diversity beyond the male-female binary.

DISABILITY & TRANSPORTATION

Access to good, reliable and accessible transportation is important for persons with disabilities to live independently. [“Exploring Public and Private Transportation Accessibility in the Twin Cities Area”](#) explains that while there are legal protections such as the American Disability Act (ADA), access remains an issue for those who have physical disabilities.

Other challenges exist as well for those who have developmental disabilities. [Wasfi, Levinson & El-Geneidy](#) studied the transportation behaviors and needs of people with developmental disabilities in Hennepin County. Participants in their study noted that there were barriers to owning cars due to their condition as well as barriers to using public transit such as access, safety and reliability.

AGE & TRANSPORTATION

Age plays a factor in how people use transportation and how the transportation system affects them. Youth (people age 17 and younger) and older adults (people age 65 and older) are vulnerable populations in the transportation system. For youth, transportation is key for getting to and from school, jobs and other opportunities. [Minnesota Alliance with Youth](#) explains that inequities in access to transportation play a large role in gaps in achievement, school completion and postsecondary success between student groups.

For older adults, access to transportation greatly influences quality of life. [The National Center for Mobility Management](#) explains older adults may experience many significant life changes at once such as retirement, death of a spouse or important friends and family and changes in health. Lacking access to reliable and affordable transportation makes it harder for older adults who may be struggling to reach the community and services they need.



APPENDIX I - PERFORMANCE MEASURES

Minnesota Department of Transportation (MnDOT) began using performance measures to inform management and investment decisions in the mid-1990s. In 2003, MnDOT adopted the first performance-based statewide transportation plan in the nation. Performance measures show how well the system is functioning. Targets communicate desired outcomes or the achievement of an objective. Performance measures cover all modes, system assets and operations. A few examples include crash rates, fatalities, roadway and bridge condition and age of transit vehicles. MnDOT carefully considers existing commitments, priorities and tradeoffs when adding or changing performance measures and targets. All adopted performance measures and targets are included in MnDOT's annual performance report.

Performance measures provide useful feedback and are integrated into MnDOT and its partners' practices.

- At a strategic level, performance measures help to establish and inform goals, objectives, strategies and actions in the Statewide Multimodal Transportation Plan (SMTP). The SMTP then guides other performance-based plans, such as the State Highway Investment Plan, the Transportation Asset Management Plan, Statewide Pedestrian System Plan, Statewide Bicycle System Plan, Statewide Ports and Waterways Plan, State Aviation System Plan, State Rail Plan and the State Freight Plan. Performance measures also communicate progress toward achieving goals to agency leadership, elected officials, partners and the public.
- At the decision-making level, performance measures are used to inform the allocation of funds among programs such as safety, highway preservation, operations and maintenance, system expansion and public transportation.
- At the project delivery level, performance measures help to monitor the efficiency and effectiveness of projects and services in the State Transportation Investment Program (STIP), District 10-year Capital Highway Investment Plans (CHIPs) and in the capital plans of other agencies and partners. The measures also help identify organizational and operational improvements.

At the federal level, the 2012 Moving Ahead for Progress in the 21st Century Act established national performance measures related to the National Highway System, safety, congestion, emissions and freight movement. MAP-21 required states to develop performance-based plans and to coordinate with metropolitan planning organizations when developing performance targets. These requirements were continued under the 2015 Fixing America's Surface Transportation Act and 2021 Infrastructure Investment and Jobs Act. Federal Highway Administration (FHWA) has three performance measure categories—safety, bridge and pavement condition, and system reliability and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). Federal Transit Administration (FTA) has two performance measure categories—Transit Asset Management (TAM) Plans and Public Transportation Agency Safety Plans (PTASP).

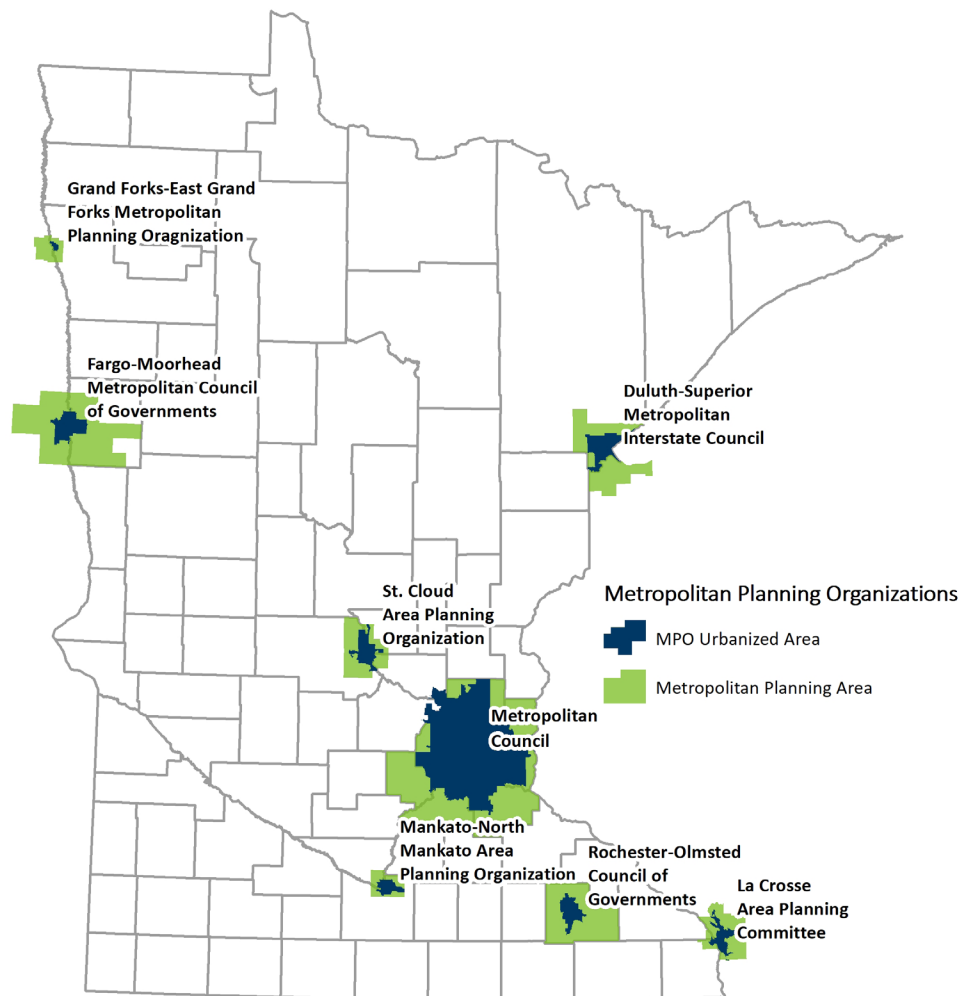
In addition to each state setting its federal performance measure targets, the metropolitan planning organizations (MPOs) within each state have 180-days from the date that the state or transit agency sets their federal performance measure targets to adopt targets for their metropolitan planning area. Minnesota has eight MPOs within the state. Five are bi-state MPOs, which means that part of the planning area is located within Minnesota and North Dakota or Wisconsin.

MPOs have two boundaries. The Urbanized Area (UZA) is an adjusted boundary that is determined by

the Decennial Census population counts. UZAs that have populations over 50,000 are MPOs and designated following the release of Decennial Census data. The Metropolitan Planning Area (MPA) is the broad area that encompasses the UZA and that is anticipated to become urbanized over the next twenty years. The MPA is the area in which planning work is conducted using federal planning dollars. Minnesota’s eight MPOs are below in alphabetical order and their boundaries are depicted in Figure I-1.

- Duluth-Superior Metropolitan Interstate Council (MIC) – bi-state with Wisconsin
- Fargo-Moorhead Metropolitan Council of Governments (Metro COG) – bi-state with North Dakota
- Grand Forks – East Grand Forks Metropolitan Planning Organization (GFEGF MPO) – bi-state with North Dakota
- La Crosse Area Planning Committee (LAPC) – bi-state with Wisconsin
- Mankato-North Mankato Area Planning Organization (MAPO)
- Metropolitan Council (Met Council) – bi-state with Wisconsin
- Rochester-Olmsted Council of Governments (ROCOG)
- St. Cloud Area Planning Organization (APO)

Figure I-1 : Minnesota Metropolitan Planning Organizations, 2022



APPENDIX I | PERFORMANCE MEASURES

Performance management ensures the most efficient investment of transportation funds by increasing accountability, providing transparency and linking investment decisions to key outcomes. Below are the state and federal performance measures and targets. The state measures are grouped by SMTP objective. The federal measures are identified by performance measure rule.

STATE PERFORMANCE MEASURES

Below are the 2022 SMTP six objectives and the performance measures supporting each objective. Each section has a table of measures, their targets and how the measure is reported. Following the tables are brief descriptions of the measures and targets and how they support the objective.

Each table has four columns:

- Measure – a quantifiable assessment of condition or performance.
- Measure Description – a more detailed explanation of the measure.
- Target or Desired Direction – a target is a specific performance level representing the achievement of a goal, outcome or objective. If no target has been established, a desired direction indicates the preferred trend line (increasing or decreasing).
- Reporting – identifies how the measure is conveyed on the Performance Measure Dashboard (percentage, number, average, etc.). The annual performance measure report card is another location in which performance measures are reported.

The state performance measures are a mix of metrics MnDOT has authority over and some MnDOT does not. Some of the measures influence annual decision-making processes. Other measures help to understand how the transportation system is functioning over time but are beyond any one agency to directly influence. To clarify the difference between the performance measures, the tables below include a column titled “MnDOT’s Role.” The agency’s role may be a mix of Lead, Partner and Support reflecting the following considerations:

- Lead: MnDOT has authority to influence the measurable outcomes that help to meet SMTP objectives.
- Partner: MnDOT collaborates with key partners to measure system performance over time.
- Support: MnDOT has limited direct authority and focus may be on long-term outcomes.

It’s important to note that some measures are being developed further through the implementation of the 2022 SMTP Work Plan. More information on these targets can be found in Chapter 6.

TRANSPORTATION SAFETY

Safeguard transportation users as well as the communities the system travels through. Apply proven strategies to reduce fatalities and serious injuries for all modes. Foster a culture of transportation safety in Minnesota.

PERFORMANCE MEASURES

Transportation safety is a top priority for Minnesota. It includes the safety of people travelling and the safety of the communities connected by the system. By measuring fatalities and serious injuries by mode, MnDOT can understand how and where to prevent crashes. When crashes occur, it is important to be able to quickly and safely clear a crash site to ensure the safety of people traveling and those clearing the area and to prevent more crashes. Transportation safety also includes the perception of safety, which MnDOT measures through the Omnibus Survey every two years. Understanding the perception of how safe transportation is helps transportation partners to foster a culture of transportation safety in Minnesota.

Table I-1 outlines the specific Transportation Safety performance measures. More information can be found on [MnDOT's Performance Dashboard under Transportation Safety](#).

FATALITIES

In 2021, 488 people were killed on Minnesota roads. The number of annual fatalities counted are results of crashes involving motor vehicles. This is the highest number of fatalities since 2007. Motorcyclists and people walking were more prevalent in crashes resulting in death and serious injury in 2020 and 2021 than in prior years. In 2021, more younger drivers were involved in crashes resulting in death or serious injury. MnDOT is seeking ways to better address the factors contributing to fatalities on Minnesota roads. Influencing the cultural norms that drive these

factors will take sustained and widespread focus from MnDOT and partners.

The target of no more than 225 traffic fatalities by 2025 is aligned with the 2020-2024 Minnesota Strategic Highway Safety Plan (SHSP). The SHSP is developed with the coordination of MnDOT and the Minnesota Department of Public Safety. The SHSP states the long-term goal is to eliminate deaths on Minnesota roads.

SERIOUS INJURIES

Serious injuries are classified by first responders at the scene of the crash. In 2021, 1,722 people were seriously injured on Minnesota roadways. Understanding the number, causes, type and locations of crashes is necessary in order to develop effective countermeasures to improve transportation safety. The number of annual serious injuries counted are results of crashes involving motor vehicles. MnDOT is seeking ways to better address major factors contributing to roadway injuries.

The target of no more than 980 serious injuries by 2025 is aligned with the 2020-2024 SHSP. The SHSP also states the long-term goal is to eliminate serious injuries on Minnesota roads.

PEDESTRIAN FATALITIES AND SERIOUS INJURIES

People walking who have suffered a serious injury or fatality in a crash with a vehicle are tracked to continually improve the safety for all on the transportation network. In 2021, 55 pedestrians were killed in crashes with motor vehicles and 168 were seriously injured. For more information about crash facts see the [2020 Minnesota Motor Vehicle Crash Facts report](#).

The target of zero pedestrian fatalities and serious injuries is aligned with the 2020-2024 SHSP.

APPENDIX I | PERFORMANCE MEASURES

Table I-1: Transportation Safety Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Fatalities	Annual traffic fatalities on Minnesota roadways	488 traffic fatalities (2021)	≤225 by 2025 Decreasing to 0	Lead & Partner	Number and trend
Serious Injuries	Annual traffic serious injuries on Minnesota roadways	1,722 serious injuries (2021)	≤980 by 2025 Decreasing to 0	Lead & Partner	Number and trend
Pedestrian Fatalities and Serious Injuries	Annual fatalities and serious injuries of people walking on Minnesota roadways	55 pedestrians killed and 168 seriously injured (2021)	Decreasing to 0	Lead & Partner	Number and trend
Bicycle Fatalities and Serious Injuries	Annual fatalities and serious injuries of people bicycling on Minnesota roadways	Nine bicyclists killed and 52 seriously injured (2021)	Decreasing to 0	Lead & Partner	Number and trend
Perception of Safe Walking and Bicycling	Percent of MnDOT Omnibus Survey respondents perceiving safe environments for walking/bicycling	84% of respondents felt safe bicycling 78% of respondents felt safe walking (2020)	≥80% overall and for all demographic segments	Partner	Percent and trend; report by different demographic segments
Aviation Fatalities and Crashes	Total number of aviation fatalities and incidents	Four fatalities in four crashes (2021)	0	Partner	Number and trend
Rail Derailments	Annual total number of rail derailments	18 (2020)	0	Partner	Number and trend
Rail Grade Crossing Fatalities and Serious Injury Crashes	Annual number of crashes at highway-rail grade crossings that result in a fatality or serious injury	4 fatalities and 11 serious injuries (2021)	0	Lead & Partner	Number and trend
Rail Grade Crossings	Annual percent of highest risk crossings receiving improvements	Under Redevelopment	≥5% annually	Lead & Partner	Percent and trend
Incident Clearing Time	Average incident clearance time	≤35 minutes since 2010	≤35 minutes	Lead	Number and trend
Transit Safety Events	Urban transit operators (i.e., 5307) safety events	In development	Decreasing number of events	Partner	Under consideration through SMTP Work Plan

BICYCLE FATALITIES AND SERIOUS INJURIES

Bicycling is key component of the transportation network in Minnesota. Understanding vehicle and bicycle crashes helps Minnesota move towards a safer transportation network for all. In 2021, nine bicyclists were killed in crashes with motor vehicles and 52 were seriously injured. Of the total bicycle-motor vehicle crashes in 2020, 92% occurred in urban areas with populations over 5,000. Additionally, 58% of the crashes occurred from 3 p.m. to 6 p.m. on any day of the week. Knowing the circumstances of the fatalities and injuries can help to improve the overall safety of the system for all people. For more information about crash facts see the [2020 Minnesota Motor Vehicle Crash Facts report](#).

The target of zero bicyclist fatalities and serious injuries is aligned with the 2020-2024 SHSP.

PERCEPTION OF SAFE WALKING AND BICYCLING

Understanding the perception of how safe transportation feels to people, MnDOT and partners can work to foster a culture of transportation safety in Minnesota. Respondents to MnDOT's Omnibus Survey are asked to rate their perception of safety for bicycling and walking. In 2020, 84% of respondents found their environment safe for bicycling and 78% found it safe for walking. This information provides MnDOT and transportation partners with a baseline to track how projects and engagement can increase the public's perception that it is safe to walk and bicycle. The 2020 Omnibus Survey provided some demographic breakdowns, but additional demographic segments will begin in the 2022 Omnibus Survey to help MnDOT further understand the demographics associated with the data.

AVIATION FATALITIES AND CRASHES

MnDOT provides for aviation safety through the inspection and licensing of airports, permitting of tall towers, licensing of commercial operators, registering aircraft and ensuring regulatory compliance. It also provides education and training programs, pilot safety programs and information services (such as navigational charts) which enhance the overall safety of the aviation system. In 2021, there were four fatalities in four fatal crashes.

Air travel is among the safest modes of transportation. Establishing a target of zero is reasonable considering aviation fatalities and crashes rarely occur.

RAIL SAFETY

The Federal Railroad Administration (FRA) defines a derailment as when on-track equipment leaves the rail for a reason other than a collision, explosion or highway-rail grade crossing impact. Railroads are required to report all derailments with total reportable damages exceeding \$10,700 to the FRA. Derailments are most often caused by track conditions, human error or mechanical defects. MnDOT uses FRA data to track the number of derailments in Minnesota.

MnDOT rail inspectors ensure that railroad track and equipment are in compliance with federal safety regulations, which are designed to reduce equipment and track related derailments. Additionally, MnDOT invests in improvements at rail grade crossings in an effort to prevent train-vehicle collisions at crossings, which can lead to derailments.

APPENDIX I | PERFORMANCE MEASURES

RAIL CROSSING FATALITIES AND SERIOUS INJURY CRASHES

Minnesota's grade crossing safety improvement program provides funding for installation of new highway-rail grade crossing signal systems, interconnection of highway-rail grade crossing signals with roadway traffic signals and replacement of existing antiquated warning devices. Activities include installation of improved or additional warning devices, crossing consolidations, crossing closures and sign changes. All these investments in safety improvements are efforts to prevent train-vehicle collisions at crossing, which can cause fatalities and lead to derailments.

RAIL CROSSINGS

Minnesota's grade crossing safety improvement program provides funding to install warning devices or other roadway improvements at railroad highway grade crossings. Activities include installation of improved or additional traffic control devices, improvements to roadway alignments, crossing consolidations, crossing closures, improvement of parallel roads and sign changes. All these investments in improvements are efforts to prevent train-vehicle collisions at crossing, which can also lead to derailments.

Targeting 5% of high-risk ranked crossings to be addressed annually will mean that every 20 years all the high-risk crossings will be addressed. Additionally, the useful life of crossing equipment is approximately 20-years, which makes this a sustainable target over the long term.

INCIDENT CLEARING TIME

Incident clearance time represents the total time from the report of an incident to the time the last vehicle clears the roadway. The quicker the clearance time, the less likely a secondary crash will occur. Incident clearance time can vary depending on the response time of MnDOT's Freeway Incident Response Safety Team trucks, state patrol, emergency services and tow trucks. It can also depend on the severity and type of incident. Since 2010, incident clearance times have been below the target of 35 minutes.

TRANSIT SAFETY EVENTS

A transit safety event is defined by FTA as the total number of reportable incidents. The rate of the transit safety events is calculated per total vehicle revenue miles by mode. Safety events are indicators of system challenges that lead to fatalities and serious injuries. Rural transit systems have different safety challenges than urban systems. MnDOT in coordination with transit systems throughout Minnesota track the number of safety events each transit operator has.

Each urbanized area (5307) transit operator in Minnesota is federally required to develop a Public Transportation Agency Safety Plan (PTASP). Within the PTASP there are seven safety performance targets per mode. One of these targets is the number of safety events per vehicle revenue miles. Each 5307 transit operator tracks and records the data needed for the targets. The goal is that these targets are being met and there is a decreasing trend to indicate that the systems are safe and taking appropriate steps to ensure the safety of the operators and riders on the system. This performance measure is under development and will be refined through the work plan.

SYSTEM STEWARDSHIP

Strategically build, maintain, operate and adapt the transportation system based on data, performance and community needs. Ensure effective and efficient use of resources.

PERFORMANCE MEASURES

The transportation system includes all the ways people travel and the various assets that make up the system. The condition of each asset plays a role in how people experience their transportation journey. With a changing climate and other disruptive events, there is a focus on resiliency of the transportation system. Each of these components plays a key role in ensuring the transportation network is reliable for people. Developing the transportation workforce can provide opportunities for new ideas to leverage innovation and technology. Innovation is critical to get the most out of transportation investments. Each measure's target indicates a portion of the overall system. When transportation system works people experience smooth and reliable trips that work for and are present for the communities the system serves.

Table I-2 outlines the specific System Stewardship performance measures. More information can be found on [MnDOT's Performance Dashboard under System Stewardship](#).

PAVEMENT CONDITION

Measuring pavement quality on MnDOT roads helps the agency plan for areas that need the most improvement. Pavement condition indicates the overall condition of the roadway system it is assessing, which helps MnDOT and transportation partners strategically build, manage, maintain, operate and adapt the transportation system. See Chapter 2 Figure 2-1 for a map of the Minnesota State Highway network.

Pavement quality on the National Highway System (NHS) is measured and reported by Interstate and by Non-Interstate NHS. Every year, a van with specialized equipment drives each road measuring the pavement quality. The roadways are given a ride quality score based on those measurements. Poor ride quality looks like uneven surfaces to significant cracks in the road. Good ride quality can look like even surfaces and pavement that provides safe driving experiences.

Poor ride quality on the roadway system in Minnesota is projected to increase slightly in the next three years, but condition is expected to remain better than targets (i.e., lower percentages of the system). Good ride quality on the Interstate and Non-Interstate NHS has been consistent over the years with conditions above targets (i.e., higher percentages of the system). However, good ride quality is projected to decline in the next three years.

MnDOT also measures and reports pavement condition on the Non-NHS portion of the state highway system. Poor ride quality on the Non-NHS improved in 2020 and has continued to maintain levels better than the 8% target. Good ride quality on the Non-NHS also improved in 2020 and is projected to remain steady for the next four years, meeting or exceeding the 60% target.

APPENDIX I | PERFORMANCE MEASURES

Table I-2: System Stewardship Performance Measures, 1 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Pavement Condition	Annual percent of state highways with good and poor ride quality	<ul style="list-style-type: none"> • Interstate Good: 92.5% • Interstate Poor: 0.4% • NHS Good: 82.2% • NHS Poor: 0.5% • Non-NHS Good: 77.2% • Non-NHS Poor: 2.0% (2021) 	<ul style="list-style-type: none"> • Interstate Good: ≥70% • Interstate Poor: ≤2% • NHS Good: ≥65% • NHS Poor: ≤4% • Non-NHS Good: ≥60% • Non-NHS Poor: ≤8% 	Lead	Percent, trend and predicted future
Bridge Condition	Annual percent of state bridges in good and poor condition as a percent of total bridge deck area	<ul style="list-style-type: none"> • NHS Good: 30.4% • NHS Poor: 6.3% • Non-NHS Good: 30.5% • Non-NHS Poor: 4.4% (2021) 	<ul style="list-style-type: none"> • NHS Good: ≥55% • NHS Poor: ≤5% • Non-NHS Good: ≥50% • Non-NHS Poor: ≤8% 	Lead	Percent, trend and predicted future
Bridge Inspections	Annual percent of routine bridge inspections completed on time	99.5% (2020)	100%	Lead	Percent and trend
Culvert Condition	Annual percent of highway culverts in poor or severe condition	17% (2020)	≤10%	Lead	Percent and trend
ADA Compliance	Total percent of state-owned sidewalks, signals, curbs and driveways substantially compliant with ADA standards	<ul style="list-style-type: none"> • Sidewalk 66% compliant • Signals 76% compliant • Curb Ramp 61% compliant (2021) 	100% by 2037	Lead	Percent and trend
Airport Pavement Condition	Measure identifying the condition and quality of the airport infrastructure across the state	Under Redevelopment	≤4%	Lead & Partner	Percent and trend

Table I-2: System Stewardship Performance Measures, 2 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Rural Transit Vehicle Condition	Percent of 5311 vehicles exceeding Useful Life Benchmark (ULB)	7.5% (2020)	<10%	Partner	Percent and trend
Rest Area Condition	Share of buildings in poor condition	8% (2021)	<4%	Lead	Percent and trend
Native Seeding and Plantings	Percentage of acres planted with native seeds and plants as part of large projects	<ul style="list-style-type: none"> Seeding: 61% (2020) Planting: 50% of projects planted with native plantings (2021) 	<ul style="list-style-type: none"> Seeding: ≥75% Planting Urban: ≥80% Planting Rural: ≥90% 	Lead	Percent and trend
Road Salt Chloride Use	Rate of liquid to solid de-icing chemicals applied to reduce overall chlorides used on the roadway for snow and ice control	41 gallons of liquid chlorides used for every ton of salt (2020-2021)	200 gallons of liquid per ton of solid by 2027	Lead	Rate and trend
Workforce Participation	Annual percent ethnic representation and women in the highway-heavy construction workforce	12.9% of people working on a federal aid highway project were ethnic representation and 11.1% were women (July 2021)	Increasing	Partner	Percent and trend
Representation within MnDOT	Annual percent racial and ethnic representation and women in MnDOT's workforce	11% ethnic representation and 22% women in MnDOT's workforce	Increasing	Lead	Percent and trend

BRIDGE CONDITION

Bridge condition is assessed during inspections, which are performed at least every two years on all state highway bridges. Ratings combine deck, substructure and superstructure evaluations. Bridges rated poor are safe to drive on, but they are near the point where significant investment in repair or replacement is necessary. The cost and disruption of repairing or replacing large, heavily used bridges are also greater compared to bridges that are smaller and less traveled.

A lower target for poor bridge condition is positive, while having higher percentages of bridges in good condition is also positive. MnDOT has tried in recent years to increase the quality and standards of inspection efforts, resulting in more accurate assessments of condition. Having accurate data allows transportation partners and MnDOT to better plan for improvements, maintenance and operations for bridges throughout the state. In 2021, 6.3% of NHS bridges were in poor condition, while 30.4% of NHS bridges were in good condition.

APPENDIX I | PERFORMANCE MEASURES

BRIDGE INSPECTIONS

All of Minnesota's MnDOT-owned bridges receive scheduled safety inspections as required by state and federal rules and regulations. In general, bridge inspections typically occur on two-year cycles. Some structures are on shorter or longer inspection cycles. A bridge inspection is considered on-time if it is completed within 30 days of its calendar due date. Since 2013, MnDOT has completed bridge inspections on time over 99% of the time. Occasionally, delays can occur due to weather, conflicting construction activities or high priority reactive maintenance activities.

Continuing to strive for 100% of on-time bridge inspections provides accurate data that allows transportation partners and MnDOT to better plan for improvements, maintenance and operations for bridges throughout the state.

CULVERT CONDITION

The culvert condition performance measure tracks the percentage of highway culverts in poor or severe condition. Highway culverts include culverts smaller than a 10-foot span that are under state highway traffic lanes and function to move surface water through a roadway embankment and/or away from the highway. Since 2014 the percentage of culverts in severe or poor condition has been holding steady between 15% to 17%.

Maintaining a target of less than or equal to 10% is important to clearly indicate to MnDOT and transportation partners throughout Minnesota that replacing and improving the quality of these culverts is an important aspect of the transportation system. Further information about investments can be found in the Transportation Asset Management Plan and the Minnesota State Highway Investment Plan.

ADA COMPLIANCE

MnDOT's Americans with Disabilities Act (ADA) Transition Plan details how the department will ensure that its facilities, services, programs and activities are accessible to all individuals. As part of this plan, MnDOT adopted the national Public Right-of-Way Accessibility Guidelines as a basis for updates to facility design standards and policies. MnDOT also dedicated additional staff to evaluate the accessibility of construction projects, respond to complaints and manage an ADA investment program.

Consistent with the ADA Transition Plan, intersections are selected for conversion to accessible pedestrian signals using a rating tool that considers, among other things, pedestrian use, surrounding properties, transit availability and user requests. For sidewalks and curb ramps, MnDOT is using inventory data to identify barriers and prioritize need. MnDOT is also working at a policy level to include accessibility standards earlier in the design and right-of-way acquisition phases of project development. Facilities that are accessible, but do not meet current standards will continue to be improved through MnDOT's routine construction program. Facilities that are inaccessible but will not be improved in the course of a typical roadway project will be prioritized by districts as part of a separate barrier removal program.

In 2021, MnDOT adopted its first Statewide Pedestrian System Plan. This plan directs MnDOT's efforts to increase the safety and mobility of people walking along the state highway network. It also establishes performance measures that track progress toward pedestrian-related goals, including ADA compliance. In 2018, MnDOT identified 348 of 620 total sidewalk-miles along state highways that comply with the American with Disability Act. This represents 56% of sidewalk-miles along state highways. Driveways with excessive slope are the most common deficiency in the network. MnDOT expects near-term changes in sidewalk condition to be modest due to limited budget and the long life-cycle of sidewalks.

AIRPORT PAVEMENT CONDITION

Adequate approaches for airports ensure that planes can take off and land safely. Monitoring pavement condition and implementing timely investments to maintain runway surfaces is one way to ensure that air travel is safe and reliable in Minnesota. The number of Minnesota airports with adequate approaches has been growing steadily. The target is to have 100% of all airports' approaches in an adequate or higher condition.

The Office of Aeronautics maintains an Airport Pavement Management system for 103 paved airports in Minnesota. Airports are surveyed on a three-year cycle. The measure focuses on runway and parallel taxi pavement quality for airports across the state of Minnesota. The goal of measuring pavement quality is to identify pavements that will receive the most benefit from an optimally timed repairs and avoid higher rehabilitation costs caused by excess deterioration. Overall, this information provides a planning tool for MnDOT and airports to help identify pavement needs, optimize the selection of projects and treatments over a multi-year period and understand the significance of these plans. See the MnDOT Aeronautics and Aviation website for information on [airport pavement condition](#).

RURAL TRANSIT VEHICLE CONDITION

Transit Asset Management (TAM) Plans are required by FTA for rural transit providers (5311 transit operators). In 2018, the statewide TAM Plan set a target for all rolling stock (e.g., revenue vehicles) that no more than 10% exceed their useful life benchmark (ULB). This is the rural transit vehicle condition performance measure.

In 2020, 7.5% of the 5311 transit vehicles exceeded their ULB, which is below the target. When all vehicles are divided out by category, buses account for 95% of all 5311 vehicles providing transit service, while vans account for the remaining 5%. In 2020, 62.5% of the 5311 operators' vans exceeded their ULB. Understanding this breakdown can help MnDOT coordinate with 5311 operators to know which vehicles need to be replaced and when to maintain a reliable transit system.

REST AREA CONDITION

Rest areas provide strategic locations to support the economy including tourism. Facilities are often sited on high volume roads at reasonable intervals. Rest areas eliminate unsafe stops on shoulders, provide information to travelers, reduce driver fatigue and promote transportation safety. The facilities play a key role in the management and operation of the transportation system.

NATIVE SEEDING AND PLANTINGS

Roadside vegetation serves critical functions for operating a transportation system, including safety, drainage, erosion control, stormwater treatment and invasive species control. Native species are more effective in accomplishing these functions and create a diverse ecological system and healthy environment.

MnDOT started tracking native plantings in 2021 as part of project installations. As data is collected over time, an increased understanding through trends will help MnDOT set informed targets that indicate the environmental health of the transportation system.



APPENDIX I | PERFORMANCE MEASURES

ROAD SALT CHLORIDE USE

Salt chlorides play a key role in keeping roads safe during winter months because it lowers the freezing point of water. MnDOT is working to better manage pollutants, such as chlorides, by switching to liquid chlorides instead of dry ones applied to roadways. By switching to liquid chlorides, the overall chlorides applied to Minnesota roadways is reduced by at least 25% without sacrificing safety or chloride performance on roadways.

MnDOT's target is to significantly increase the rate of liquid chlorides in relation to dry over the next five years. In the 2020-21 winter season, 41 gallons of liquid were used for every ton of salt. MnDOT looks to increase the rate of using liquids to 200 gallons per ton by 2027. This will reduce total chloride use on state highways no matter how severe a given winter is in the state.

WORKFORCE PARTICIPATION

MnDOT proactively works with contractors, education institutions, women and ethnic community members and career fairs throughout the state to increase participation, retention and advancement for workers placed through these recruitment programs. Contractors working on a federal aid highway construction project during the last payroll period in July must report their workforce by job category, gender, race and ethnicity. During the last week of July 2021, 12.9% of people working on a federal aid highway construction project were ethnic representation and 11.1% were women. By comparison, 12.6% of people working on a federal aid highway construction project were ethnic representation and 11.3% were women during the last week of July 2020. Women and ethnic representation highway construction participation rates are also tracked at the county level to determine compliance with goals established through state and federal regulations.

Minnesota's transportation workforce should match the demographics for the state overall. Changes in workforce participation can indicate the need to make changes to recruitment and retention practices. Understanding trends over time can help strengthen MnDOT's ability to recruit, hire, develop, promote and retain talent and remove barriers to equal opportunity. Further examination and determination of regional targets is to be refined through the work plan and coordination with MnDOT's Office of Civil Rights and Minnesota Department of Human Rights.

REPRESENTATION WITHIN MNDOT

MnDOT strives to have a diverse, well qualified and inclusive workforce that reflects the populations of Minnesota. A goal of MnDOT's Unified Diversity & Inclusion Plan is that the diversity of the state is reflected in the workforce at all levels and in all roles throughout the organization. Representation within MnDOT is tracked annually and is measured as the annual percent ethnic representation and women in MnDOT's workforce.

The workforce statistics have remained stagnant for the past 10 years. New recruitment strategies and emphasis on underserved and underrepresented communities is a renewed focus in recent years. At this time, the target is to increase the percentages towards a workforce more reflective of the populations in Minnesota.

CLIMATE ACTION

Advance a sustainable and resilient transportation system. Enhance transportation options and technology to reduce emissions. Adapt Minnesota's transportation system to a changing climate.

PERFORMANCE MEASURES

As the climate changes the transportation system must adapt. A resilient transportation system withstands increasing extreme weather events. Through evaluation of the system's resilience MnDOT and transportation partners can better prepare. Similarly, asset resilience is important to ensure the reliability of the system for the public. Further the transportation sector is the number one producer of greenhouse gas (GHG) emissions, which is a major cause of climate change. MnDOT has a responsibility to reduce GHG emissions in Minnesota. Tracking zero emission vehicle (ZEV) registration and sales are just a few ways to enhance transportation options and reduce GHG.

Table I-3 outlines the specific Climate Action performance measures. The Climate Action objective is new to the 2022 SMTP and doesn't yet have a corresponding section on the Performance Dashboard.

GREENHOUSE GAS EMISSIONS

Transportation is the largest contributor of GHG emissions in Minnesota. The transportation sector for GHG includes tail pipe emissions from cars and trucks on the road as well as aviation, rail and marine emissions. Per the Next Generation Energy Act, Minnesota has a goal of reducing GHG from 2005 levels by 30% by 2025 and 80% by 2050. In 2021, President Biden signed the Paris Agreement committing to reducing GHG by 26-28% by 2025 from 2005 levels and by 2030 the GHG levels should be 50-52% below 2005 levels.

To support both these sets of goals, MnDOT is setting targets for the reduction of GHG emissions in the transportation sector to 29.5 million metric tons CO₂e (30%) by 2025, 20.1 million metric tons CO₂e (50%) by 2030, 14.1 million metric tons CO₂e (65%) by 2035 and 8.0 million metric tons CO₂e (80%) by 2040. MnDOT is looking at various strategies on how to achieve these goals. Strategies include increasing the number of electric vehicles and zero emission vehicles on the road, implementing a clean fuels standard, decreasing per capita vehicle miles traveled (VMT) and increasing the use of public transportation and non-motorized transportation.

ZERO EMISSION VEHICLES REGISTERED IN MINNESOTA

Light-duty vehicles are the largest portion of transportation GHGs in the state. While federal fuel economy standards will lower emissions in the future, electrifying and having zero emission light duty vehicles are important strategies to meet the goal. Zero Emissions vehicle (ZEVs) registrations continue to increase in Minnesota. ZEVs include electric vehicles, hydrogen fuel cell powered vehicles and other non-carbon-based fueled vehicles. Transitioning away from gasoline and diesel vehicles and toward EVs and other clean fuels will play an important role in reaching state goals.

As of December 2021, 23,897 electric vehicles (EVs) were registered in Minnesota. Growth in battery electric vehicle registrations outpaced growth in plug-in hybrid electric vehicle registrations at 55% and 37%, respectively, between 2019 and 2020. Over 80% of the EVs are registered in the seven-county metro area. Significantly more EVs are needed in the next 10 years to achieve the state goal of 20% of light-duty vehicles in Minnesota are electric by 2030.

APPENDIX I | PERFORMANCE MEASURES

ZERO EMISSION VEHICLES SOLD IN MINNESOTA

Vehicles sold in Minnesota do not always stay and are not always registered in the state. People from all over purchase vehicles in Minnesota. The number of ZEVs sold in Minnesota indicates the change in overall market and transportation sector demand. As of 2021, about 2% of all light-duty vehicles sold in Minnesota were EVs.

Having 5-year targets out of the total number of all vehicles sold for 2030, 2035 and 2040 provide indicators to the shift in overall transportation sector GHG emission reduction. These target percentages are higher than ZEVs registered in Minnesota because registration is always going to be a portion of the total vehicles sold.

Table I-3: Climate Action Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Greenhouse Gas Emissions	Total annual greenhouse gas emissions from the transportation sector (percentages shown in parenthesis reflect percent reduction from 2005)	40.3 million metric tons CO2e (2018)	<ul style="list-style-type: none"> • 29.5 million metric tons CO2e (30%) by 2025 • 20.1 million metric tons CO2e (50%) by 2030 • 14.1 million metric tons CO2e (65%) by 2035 • 8.0 million metric tons CO2e (80%) by 2040 	Lead & Partner	Number and trend
Zero Emission Vehicles (ZEV) Registered in Minnesota	Percent of all light-duty vehicles registered in Minnesota that are electric or another type of ZEV	23,897 EVs registered, 0.4% of total vehicles (December 2021)	<ul style="list-style-type: none"> • 5% by 2025 • 20% by 2030 • 45% by 2035 • 65% by 2040 	Support	Percentage and trend
Zero Emission Vehicles (ZEV) Sold in Minnesota	Percent of new light-duty vehicles registered in Minnesota that are electric or another type of ZEV	About 2% (2021)	<ul style="list-style-type: none"> • 20% by 2025 • 60% by 2030 • 100% by 2035 • 100% by 2040 	Support	Percentage and trend
System Resilience	Measure that evaluates resilience at a system level (i.e., not just individual assets)	In development	Work plan item	Lead	Under consideration through SMTP Work Plan
Asset Resilience	Resilience of assets by type (e.g., bridges, culverts, etc.)	In development	Work plan item	Lead	Under consideration through SMTP Work Plan

SYSTEM RESILIENCE

MnDOT's Resilience Advisory Committee has begun the process of developing a suite of measures for resilience. The advisory committee hopes to complete its work and produce a recommendation for measures by summer 2022. This work will springboard a refined measure and target that will be determined through a work plan item. See more information in Chapter 6.

This measure once developed will contribute vital information for performance-based risk management planning and practice. Risk management helps to identify threats and opportunities to the transportation system. A system resilience measure aims to look beyond individual assets to help MnDOT understand risk at a program and organizational level.

ASSET RESILIENCE

MnDOT has measures of asset condition and asset maintenance but does not currently have resilience measures. MnDOT is working to define what resilience means for its assets and to develop measures that can assist in decision making. A refined measure and target will be determined through a work plan item. See more information in Chapter 6.

Like a system resilience measure, this measure will contribute vital information for performance-based risk management planning and practice. Risk management helps to identify threats and opportunities to the transportation assets. An asset resilience measure aims to understand which assets are at risk for different types of events, how to optimize assets to changing conditions and data to inform post-event recovery.



CRITICAL CONNECTIONS

Maintain and improve multimodal transportation connections essential for Minnesotans’ prosperity and quality of life. Strategically consider new connections that help meet performance targets and maximize social, economic and environmental benefits.

PERFORMANCE MEASURES

Transportation ensures critical connections for people throughout Minnesota. Maintaining and improving the multimodal elements of the transportation system increases the quality of life for Minnesotans. Measuring travel time reliability and transit on time performance, as well as other measures for bicycling, driving and flying help MnDOT and transportation partners understand the modal performance of the transportation system. Other performance measures, such as VMT and job accessibility can help to meet broader goals and maximize social, economic and environmental benefits.

Table I-4 outlines the specific Critical Connections performance measures. More information can be found on [MnDOT’s Performance Dashboard under Critical Connections](#).

TRAVEL TIME RELIABILITY

Travel Time Reliability measures the consistency of time it takes to go a specific distance on the NHS. This measure indicates the percent of all person-miles traveled on the NHS that are reliable. The reliability of travel is an important consideration for individuals and freight. Lower percentages of reliability mean increased delays and inconsistent travel times for people and goods. Reliability on the NHS statewide were 83.7% in 2017, 86.2% in 2018, 84.9% in 2019 and 97.5% in 2020. Then reliability improved dramatically during the COVID-19 pandemic as reflected with 2020 data. For more information on travel time reliability see the [Minnesota GO Performance Dashboard](#).

Table I-4: Critical Connections Performance Measures, 1 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT’S ROLE	REPORTING
Travel Time Reliability	Percent of person-miles traveled on the National Highway System (NHS) that are considered reliable	<ul style="list-style-type: none"> 84.9% in 2019 95.4% in 2021 	≥90%	Lead	Percent and trend
Truck Travel Time Reliability	Index measuring the consistency of commercial truck travel times on the Interstate system	<ul style="list-style-type: none"> 1.48 in 2019 1.24 in 2021 	≤1.5	Lead	Number and trend
Vehicle Miles Traveled per Capita	Number of miles traveled across Minnesota per capita (percentages shown in parentheses are the percent reduction from 2019)	<ul style="list-style-type: none"> 10,691 miles per capita (2019) 9,957 miles per capita (2021) 	<ul style="list-style-type: none"> 10,263 (-4%) by 2025 9,835 (-8%) by 2030 9,515 (-11%) by 2035 9,195 (-14%) by 2040 	Partner	Number and trend and by urban, suburban and rural

Table I-4: Critical Connections Performance Measures, 2 of 2

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Job Accessibility by Bicycle, Car and Transit	Average annual number of jobs accessible within 30-minutes during morning peak traffic by bicycle (on medium stress roads), driving and transit	<ul style="list-style-type: none"> • 40,967 jobs accessible by bicycle (on medium stress roads) • 586,940 jobs accessible by car • 13,069 jobs accessible by transit (2019) 	Increasing	Lead & Partner	Number and trend by mode
Traveler Delay	Average delay per person in the Twin Cities	9.7 minutes (2018)	≤9 minutes per weekday	Lead & Partner	Number and trend
Transit On-time Performance	Annual transit on-time performance within the Twin Cities and within Greater Minnesota	<ul style="list-style-type: none"> • Twin Cities: Metro Transit Bus: 84.8% (2021) • Greater Minnesota: 95.2% (2021) 	<ul style="list-style-type: none"> • Twin Cities: Metro Transit Bus: ≥90% • Greater Minnesota: ≥90% 	Partner	Percent and trend
Transit Span of Service	Measure communicating the percentage of public transportation services that meet minimum service guidelines for access in the Twin Cities and Greater Minnesota	Under Redevelopment	≥90%	Partner	Percent and trend
Transit Ridership	Boardings recorded by public transit providers	<ul style="list-style-type: none"> • Urban: 91.6 million (2019); 38.1 million (2021) • Rural: 11.5 million (2019); 6.2 million (2021) 	Increasing	Partner	Number and trend by Twin Cities Metropolitan Area and in Greater Minnesota
Air Transportation	Annual number of available seat miles offered from commercial service airports	<ul style="list-style-type: none"> • MSP: 24.3 million (2019); 16.8 million (2021) • Greater Minnesota: 181,447 (2019); 131,952 (2021) 	Increasing	Support	Number and trend

APPENDIX I | PERFORMANCE MEASURES

TRUCK TRAVEL TIME RELIABILITY

Travel Time Reliability measures the consistency of time it takes to go a specific distance on the NHS. This measure indicates the percent of all person-miles traveled on the NHS that are reliable. The reliability of travel is an important consideration for individuals and freight. Lower percentages of reliability mean increased delays and inconsistent travel times for people and goods. Reliability on the NHS statewide were 86.2% in 2018, 84.9% in 2019, 97.5% in 2020 and 95.4% in 2021. Reliability improved dramatically during the COVID-19 pandemic as reflected with 2020 data. For more information on travel time reliability see the [Minnesota GO Performance Dashboard](#).

VEHICLE MILES TRAVELED PER CAPITA

VMT measures the amount of travel for all vehicles in a geographic area over a period of time, usually daily or annually. Over the last three decades, VMT in Minnesota has increased almost twice as fast as the population has grown. The exception to this is around the 2008 recession when VMT flatlined. Much of the VMT on Minnesota roads is useful, but relatively high capita VMT suggests that Minnesotans do not have effective transportation options to get to their destinations. It also suggests that people drive farther to get to the places they need to go, such as work and grocery stores. VMT reduction is also a key component to reducing GHG emissions.

As part of the SMTP, MnDOT is establishing targets consistent with reducing per capita VMT by 20% by 2050 (equivalent to a 7% reduction in total VMT if the current population forecast holds). Increasing the quality of access to walking, bicycling and transit are key strategies for advancing this target. Improving multimodal options and reducing per capita VMT will also reduce GHG emissions in the transportation sector.

JOB ACCESSIBILITY BY BICYCLE, CAR AND TRANSIT

Accessibility measures evaluate how easily people can reach destinations within a given amount of time by various modes of travel. Accessibility reflects the progress in connecting people to destinations that matter. Job accessibility measures the number of jobs reachable within a given travel time for various modes. Access to destinations such as jobs, education and health care is a factor for people when choosing a place to live. The Accessibility Observatory at the University of Minnesota produces an annual accessibility dataset along with statewide and MPO maps of average job accessibility by automobile, bicycle and public transit. Destination types will be expanded in coming years to include education and health care.

TRAVELER DELAY

Highway mobility (the ability of people and goods to move efficiently and reliably along highways) is a core element of the transportation system, regional vitality and quality of life. While congestion is a sign of a healthy economy, excessive amounts of delay can dampen economic competitiveness and reduce quality of life. The purpose of measuring traveler delay is not to eliminate congestion, but to limit the amount of delay people experience to reasonable levels. The target of nine minutes per weekday (or 40 hours of annual delay per person) represents about a 5% improvement from 2018 levels.

TRANSIT ON-TIME PERFORMANCE

Transit on-time performance is tracked at the service level (e.g., fixed route or on-demand). As reliability increases, the more a person can depend on a system to get them to their destination on time. This is true for transit and other modes. Targeting to increase on-time performance within the seven-county metro area and Greater Minnesota transit systems aims to improve transit experiences throughout the state. Minnesota's Olmstead Plan sets a goal of improving to 90% within a 45-minute timeframe for Greater Minnesota. The baseline for Greater Minnesota on-time performance was 76% in 2014 and has improved to over 95% in 2021. A measure for the entire Twin Cities transit system is in development, Metro Transit's on-time bus performance is being utilized in the interim. On-time transit service allows people to predict arrival and departure times, as well as the time it should take to travel between locations. The target indicates increasing dependability of transit as a mode statewide.

TRANSIT SPAN OF SERVICE

Transit providers across Minnesota are subject to minimum guidelines for the frequency per hour per day of service. The guidelines are dependent on the individual community and vary across the state. Compliance with the guidelines is important to ensure residents in communities across the state have reliable access to destinations via transit.

TRANSIT RIDERSHIP

Transit ridership is broken out into two subcategories: Twin Cities and Greater Minnesota.

Twin Cities transit ridership is measured by the annual number of boardings recorded by all Twin Cities transit providers including Met Council, University of Minnesota and the four suburban transit systems. Public transit experienced a dramatic drop in ridership in 2020 and 2021 due to changes in service and travel patterns caused by the COVID-19 pandemic. Prior to the pandemic, ridership was declining on fixed routes.

However, rail and bus rapid transit ridership grew in 2019 and transit providers continue to adjust services to match changing demands.

Greater Minnesota's 40 public transit systems are operated by local governments, joint powers organizations, non-profits and tribal governments. Five of these are tribal systems, 7 are small urban (5307) systems and 28 are rural area (5311) systems. The number of passenger boardings (rides) is recorded daily by all transit systems. MnDOT supports these systems through planning, research, technical assistance and management of state and federal transit funding programs. Consistent with the Greater Minnesota Transit Investment Plan, MnDOT's first priority is continuation of financial assistance to systems meeting performance standards, then expanding transit service into new areas and finally to expand the frequency, coverage and daily duration of service currently provided. Greater Minnesota transit ridership decreases from the COVID-pandemic remained in 2021 with 6.2 million boardings compared to 11.5 million boardings in 2019.

Further review of transit ridership following the COVID-19 pandemic will need to occur to determine the validity of transit ridership as a successful measure of transit system effectiveness.

AIR TRANSPORTATION

Air transportation is one of the many modes in Minnesota that connects people within and beyond the state boundaries. Ensuring seat availability on scheduled service nonstop flights from Minneapolis-St. Paul (MSP) airport and Greater Minnesota airports is an important indicator of how economically competitive the state is nationally and globally. The number of available seat miles at MSP increased between 2013 and 2019. The desired direction is to keep increasing these numbers. The number of available seat miles decreased dramatically in 2020 due to the COVID-19 pandemic causing airlines to drastically reduce scheduled service for a large portion of the year.

HEALTHY EQUITABLE COMMUNITIES

Foster healthy and vibrant places that reduce disparities and promote healthy outcomes for people, the environment and our economy.

PERFORMANCE MEASURES

Transportation has the ability to enhance and encourage healthy equitable communities for people throughout Minnesota. Measuring air quality and physical activity can help MnDOT and transportation partners understand the physical impacts of the transportation system on people.

Other performance measures, like transportation cost, helps quantify the economic impacts transportation can have on people. Multimodal accessibility provides a broader picture of the impact of transportation on people’s time. Finally, measuring how MnDOT can increase transportation equity helps reduce disparities.

Table I-5 outlines the specific Healthy Equitable Communities performance measures. More information can be found on [MnDOT’s Performance Dashboard under Healthy Equitable Communities](#).

Table I-5: Healthy Equitable Communities Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT’S ROLE	REPORTING
Air Quality	Number of criteria pollutants below National Ambient Air Quality Standards (NAAQS) threshold each year	Minnesota is in compliance with NAAQS	All criteria pollutants below threshold	Partner	Number of and which pollutants not meeting standards
Physical Activity	Percent of Minnesotans who bicycle or walk at least weekly	35% of Minnesotans bicycle or walk at least weekly (2019)	<ul style="list-style-type: none"> • 40% by 2025 • 45% by 2030 • 50% by 2035 • 60% by 2040 	Partner	Percent and by demographic segments
Transportation Cost	Measure of how much household income goes to transportation	In development	Work plan item	Support	Under consideration through SMTP Work Plan
Multimodal Accessibility	(i.e., destination access) for walking, bicycling and transit at a project- and program-level	In development	Work plan item	Lead & Partner	Under consideration through SMTP Work Plan
Increase in Transportation Equity	Transportation equity is directly influenced by improving multimodal access, reducing transportation costs and improving transportation safety	In development	Work plan item	TBD	Under consideration through SMTP Work Plan

AIR QUALITY

The Clean Air Act requires the U.S. EPA to set national standards for six common air pollutants, called “criteria pollutants.” The National Ambient Air Quality Standards (NAAQS) are set to protect health, the environment and property. The criteria pollutants are ground-level ozone, fine particles, lead, nitrogen dioxide, carbon monoxide and sulfur dioxide. Each state must demonstrate it is complying with these standards by monitoring its air quality. If a state fails to comply with one of the standards, it must develop a plan to come into compliance.

Air quality is not the same in all parts of Minnesota and doesn’t affect all Minnesotans equally. People in some areas either experience pollution levels that worsen serious health conditions or are exposed to pollutants that don’t have federal standards. In addition, health inequities mean some populations are more susceptible to the harmful effects of air pollution. Black people, Indigenous people, people of Color and people with low incomes often do not have adequate access to the conditions that support healthy living, including quality schooling, healthcare and clean surroundings. When equitable access to these is limited, poor air quality often contributes to and worsens health disparities.

Minnesota is complying with all of the NAAQS although levels of air pollution in compliance can still affect people’s health. It is important to track this measure to comply with regulations, but also to ensure people are not impacted by poor air quality.

PHYSICAL HEALTH

MnDOT is using the work plan in Chapter 6 and the Statewide Pedestrian System Plan to help increase the percentage of people walking, bicycling or both. MnDOT is able to calculate these measures by using results from the Omnibus Survey question “How frequently did you use the following modes of transportation for traveling to and from places (for example, to work, school, the grocery store, other places you travel for errands and entertainment as well as vacations)?”

TRANSPORTATION COST

Minnesota Department of Employment and Economic Development (DEED) creates a statewide [Cost of Living Tool](#) that is updated annually. The tool provides a yearly estimate of the basic-needs cost of living in Minnesota by county, region and statewide.

Through the work plan in Chapter 6, MnDOT will explore formalizing a measure and target(s) similar to DEED’s tool, but the measure will look at how much household income goes to transportation. DEED’s transportations costs are tied to survey data conducted every three to four years. As part of the work plan development of this measure, MnDOT will be looking at what data sources are available and updated most frequently.

MULTIMODAL ACCESSIBILITY

Multimodal accessibility measures access to destinations by walking, bicycling and transit at a project and program level. Access to jobs is the most common destination to measure, but access to other destinations, such as healthcare, education, grocery stores and childcare can also be measured. Destination access is directly impacted by changes to the transportation network. This measure focuses on how MnDOT construction projects impact job accessibility by walking, bicycling and transit. The program-level portion of this measure is to be developed further as part of the SMTP Work Plan and more information can be found in Chapter 6.

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INCREASE IN TRANSPORTATION EQUITY

MnDOT uses multiple measures to evaluate transportation equity. MnDOT is currently developing additional measures to evaluate impacts for specific people and places. Measures that significantly influence the equitability of the transportation system are multimodal access (see regional multimodal access measure already available), safety (see multimodal safety measures) and transportation cost (work plan item).

Equitably access is most directly measured by distribution of multimodal options (walking, bicycling and transit) as well as ADA compliance for people with disabilities. Safe infrastructure that is equitably distributed is also a significant measure of transportation equity. Finally, ensuring that people in Minnesota are not spending more on their transportation costs than is reasonable helps MnDOT understand transportation equity.

OPEN DECISION MAKING

Make equitable transportation decisions through inclusive and collaborative processes that are supported by data and analysis. Ensure effective and efficient use of resources.

PERFORMANCE MEASURES

Open decision making is about trust. The public needs to be able to trust that MnDOT will plan, program, build, maintain and operate so that there is an effective and efficient use of resources. That trust and confidence can be measured and evaluated using surveys and tools to collect and analyze data. Understanding who is being engaged and how they're being engaged helps MnDOT improve coordination, consultation and collaboration on projects at the planning and programming levels.

Table I-1 outlines the specific Open Decision Making performance measures. More information can be found on [MnDOT's Performance Dashboard under Open Decision Making](#).

PUBLIC TRUST AND CONFIDENCE

MnDOT's Omnibus Survey is a biennial public opinion survey that provides department leadership, managers and program staff with public feedback on MnDOT's core operations. The results help inform department strategies, resource allocation and communication, outreach and education efforts based on the public's preferences, priorities and concerns. MnDOT uses the results at all levels of decision making to reflect the public's perception of MnDOT's effectiveness overall, as well as performance and trust levels in key service areas, such as maintenance, safety, infrastructure reliability and convenience. The survey is conducted every two years.

The 2021 Omnibus Survey indicated that 59% of respondents agreed that MnDOT acts in a fiscally responsible manner. In 2021, 67% of the public agreed that MnDOT communicates accurate information to Minnesotans about the state's transportation plans and projects. The 2021 Omnibus Survey provided some demographic breakdowns, but additional demographic segments will begin in the 2022 Omnibus Survey to help MnDOT further understand the demographics associated with the data.

PROJECT-LEVEL PUBLIC ENGAGEMENT MEASURES

MnDOT is in the process of developing a consistent way to collect public and stakeholder opinions. Having a standardized survey tool to collect data in a consistent way allows MnDOT to understand how effective its communications and engagement efforts are at the project and state levels. By understanding the effectiveness, MnDOT can make improvements where necessary and build upon successes. A challenge of this measure is that public engagement is not one-size-fits-all and needs to be scaled to the specific participants and resources available. The goal is that the tool will be able to provide a baseline of data to gauge engagement effectiveness.

Improving public involvement processes to eliminate participation barriers and engage underserved populations is a major goal of this measure. Once baseline data is determined, MnDOT will have a better understanding of public engagement and communications-related efforts across the agency. A target for this measure can be set after the baseline and trends have been reviewed. The work related to the development of this measure, the target and reporting will be further developed through as a work plan item.

Table I-6: Open Decision Making Performance Measures

MEASURE	DESCRIPTION	CURRENT CONDITION	TARGET OR DESIRED DIRECTION	MNDOT'S ROLE	REPORTING
Public Trust and Confidence	Annual percent of respondents that agree with the following statements: <ul style="list-style-type: none"> • "I feel MnDOT understands my needs (and the needs of others like me) and has developed a transportation system that works well for me." • "MnDOT acts in a financially responsible manner." • "How confident are you today in MnDOT's ability to do a good job at communicating accurate information to Minnesota citizens about their transportation plans and projects?" 	74% felt MnDOT understood their needs, 64% felt MnDOT acts in a financially responsible manner and 82% felt MnDOT was communicating accurately about transportation plans and projects (2020)	≥80% overall and for each demographic segments	Lead	Percent and trend; report by different demographic segments
Project-Level Public Engagement Measures	e.g., post-project surveys	In development	Work plan item	Lead	Percent and trend
Partner Coordination	Measure MnDOT coordination with external partners during planning and programming	In development	Work plan item	Lead	Under consideration through SMTP Work Plan

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PARTNER COORDINATION

SMTF outreach identified an opportunity to measure coordination or communication with partners during planning and programming. The purpose is to ensure that there is transparency and continued coordination between MnDOT and transportation partners. The coordination needs to be inclusive and collaborative to ensure the efficient and effective use of resources available. The development of this measure, targets and reporting will occur as a work plan item. The measure will focus on frequency and timing of coordination.





FEDERAL PERFORMANCE MEASURES

There are 5 federally required performance measures with specific targets that each state DOT and MPO must set.

- Safety (FHWA)
- Bridge and Pavement Condition (FHWA)
- System Performance (FHWA)
- Transit Asset Management (FTA)
- Public Transportation Agency Safety Plan (FTA)

SAFETY

The FHWA Safety Performance Measure Rule (PM1) incorporates five measures:

- Number of Fatalities
- Rate of Fatalities per 100 million VMT
- Number of Serious Injuries
- Rate of Serious Injuries per 100 million VMT
- Number of Non-motorized Fatalities and Serious Injuries

Each safety measure is based upon a five-year rolling average with targets for the next year established annually. Thus, 2020 performance is based on the totals for 2016, 2017, 2018, 2019 and 2020 then

divided by five. With each year, the average changes based on removing the oldest year’s data and including a new year of data.

MnDOT calculates VMT for the state and shares data with its transportation partners, such as the MPOs, to assist them in calculating their own FHWA PM1 measures and targets for their planning areas.

Table I-7 outlines the specific safety performance measure and displays the 2014 – 2018 baseline, 2020 performance, and the MnDOT 2020 - 2022 targets for the measure.

Table I-7: FHWA PM1 Safety - State performance & targets

MEASURE	2014-2018 BASELINE*	2020 PERFORMANCE (2016-2020)	2020 TARGET (2016-2020)	2021 TARGET (2017-2021)	2022 TARGET (2018-2022)
Number of Fatalities	380.6	377.8	375.4	352.4	352.4
Rate of Fatalities per 100 million VMT	0.648	0.65	0.626	0.582	0.582
Number of Serious In-juries	1,534.4	1,718.0	1,714.2	1,579.8	1,463.4
Rate of Serious Injuries per 100 million VMT	2.596	2.948	2.854	2.606	2.470
Number of Non-Motorized Fatalities & Serious Injuries	261.8	294.4	317.0	281.2	258.4

*Note: All performance results and targets are based on five-year rolling averages.

MINNESOTA'S REASON FOR TARGETS

When setting the targets for the five safety performance measures MnDOT must coordinate with transportation partners. Targets for three measures (fatalities, fatality rate and serious injuries) must align with targets submitted by Minnesota Department of Public Safety (DPS) to the National Highway Traffic Safety Administration (NHTSA).

The 2020-2024 Strategic Highway Safety Plan (SHSP) is Minnesota's plan to reduce fatalities and serious injuries on all public roads. The plan set a bold target of no more than 225 traffic deaths and no more than 980 serious injuries by 2025--a nearly 35% reduction from 2019. Targets in 2021 were established based on a trend from the 2019 outcome to the 2025 goal.

Based on feedback from additional transportation partners, no 2022 target should be set higher than the prior year, which means that the following determined the targets for each measure below.

- Number of fatalities: 2022 Target = 2021 Target
- Fatality rate: 2022 Target = 2021 Target
- Number of serious injuries: based on progression from 2019 to 2025 Strategic Highway Safety Plan goal
- Serious injury rate: based on progression from 2019 to 2025 Strategic Highway Safety Plan goal
- Number of non-motorists killed or seriously injured: based on progression from 2019 to 2025 Strategic Highway Safety Plan goal, scaled by the prevalence of non-motorists in fatalities and serious injuries.

MINNESOTA'S ACHIEVEMENT

In 2020, Minnesota did not meet or make significant progress toward its safety performance targets. To do so requires at least four of the five safety performance targets to have been met or the actual outcome be better than baseline performance. For 2020, the baseline performance is the five-year average from 2014 to 2018. FHWA made the official determination when it completed its assessment for

calendar year 2020 safety performance targets in spring of 2022.

2020 was not a typical year. Fatalities were on the rise, VMT were down and the world paused due to the global pandemic of COVID-19. Despite these challenges, MnDOT continues to work toward zero deaths and increase the safety of transportation in Minnesota. The Highway Safety Improvement Program (HSIP) in Minnesota targets all the federal HSIP funds to safety improvement projects throughout the state. MnDOT shares 50-65% of HSIP funds with local entities throughout the state depending on the need and year.

In Greater Minnesota, the local funding solicitation prioritization is typically focused on projects with a wide scale that are regionally deployable and have shown to have proven measures. Conversely, local units of government in the Twin Cities metro area typically apply for roundabouts and whole intersection improvements with multiple safety components, such as bump-outs, wide sidewalks, pedestrian signaling and even three-lane conversions. For Greater Minnesota districts, there typically is a focus on proactive and reactive projects related to shoulder widening, roundabouts and cable median barriers. MnDOT's Metro District typically works on reduced conflict intersections (RCI), cable median barriers and roundabouts. Overall, the HSIP solicitation selection looks for the approaches that will affect the most change, which means MnDOT sees quite the mix of strategies applied and implemented.

Although significant progress in 2020 targets was not achieved, Minnesota has shown progress and continually achieved the safety performance measure targets set in previous years (2018 and 2019). Table I-8 outlines the calendar year 2018-2020 targets achieved and not achieved by indicating with a green check mark if the measure's target was met or better than baseline for that calendar year.

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Table I-8: FHWA PM1 Safety - State target historic trends

MEASURE	MNDOT CY2018 TARGET	MNDOT CY2019 TARGET	MNDOT CY2020 TARGET
Number of Fatalities	375 ✓	372.0 ✓	375.4 ✓
Rate of Fatalities per 100 million VMT	0.620 ✓	0.620 ✓	0.626
Number of Serious In-juries	1,935 ✓	1,711 ✓	1,714.2 ✓
Rate of Serious Injuries per 100 million VMT	3.19 ✓	2.850 ✓	2.854
Number of Non-Motorized Fatalities & Serious Injuries	348 ✓	267.5	317 ✓

*Note: All targets are based on five-year rolling averages.

MPO TARGETS ACROSS THE STATE OF MINNESOTA

Of the eight MPOs in Minnesota, three chose to set their own safety targets. Table I-9 indicates the Safety Performance Measure Targets set by those MPOs for calendar year 2021. The other five MPOs in Minnesota adopted MnDOT’s safety performance measure targets and agreed to plan and program projects so that they contribute to the accomplishment of the state targets. These include the MIC, Metro COG, LAPC, MAPO and ROCOG.

Safety targets are adopted annually between October 1 and February 26 of the year leading up to the calendar year the targets are in. As an example, between October 1, 2021 and February 26, 2022 the MPOs adopted their calendar year 2022 Safety Performance Measure Targets.

The APO’s 2022-2025 Transportation Improvement Program (TIP) indicates that their rolling averages are: 9.0 (fatalities); 0.731 (rate of fatalities); 24.8 (serious injuries); 2.006 (rate of serious injuries); and 8.6 (non-motorized fatalities and serious injuries). The APO’s TIP states that “electing to pursue targets more relevant to the regional baseline, the APO can better evaluate the effectiveness of its roadway safety and more efficiently monitor changes in this and other roadway safety numbers.”

The Met Council identifies in their 2022-2025 TIP that they are working on various studies to improve safety within their planning area. The TIP also includes \$78.8 million in FHWA Highway Safety Improvement Program (HSIP) funds to improve high-incident project locations (reactively) and new design locations to preemptively address safety (proactively).

The GFEGF MPO also has chosen to adopt its own safety targets. Within the GFEGF MPO 2022-2025 TIP there are several projects funded with HSIP funding to improve the safety of the transportation system.

More specific information on how each MPO is achieving their targets can be found in their annual TIP documents.

Table I-9: FHWA PM1 Safety - MPO Calendar Year 2021 targets (2017-2021)

MPO	NUMBER OF FATALITIES	RATE OF FATALITIES PER 100 MILLION VMT	NUMBER OF SERIOUS INJURIES	RATE OF SERIOUS INJURIES PER 100 MILLION VMT	NUMBER OF NON-MOTORIZED FATALITIES & SERIOUS INJURIES
APO	8.6	0.730	23.0	1.946	8.2
Met Council	106	0.36	738	2.49	181
GFEFG MPO	3 or fewer	0.599	15 or fewer	5.296	4 or fewer

*Note: All targets are based on five-year rolling averages.

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PAVEMENT & BRIDGE CONDITION

The FHWA Pavement and Bridge Condition Performance Measure Rule (PM2) established performance measures to assess pavement condition and bridge condition for the National Highway Performance Program. Pavement and bridge condition performance is assessed and reported over a four-year performance period. The first performance period was January 1, 2018 through December 31, 2021. The second four-year performance period will cover January 1, 2022 to December 31, 2025, with additional performance periods following every four years. PM2 includes six measures:

- Percentage of Interstate Pavement in Good Condition
- Percentage of Interstate Pavement in Poor Condition
- Percentage of Non-Interstate NHS Pavement in Good Condition
- Percentage of Non-Interstate NHS Pavement in Poor Condition
- Percentage of NHS Bridges in Good Condition
- Percentage of NHS Bridges in Poor Condition

These six performance measures can be broken into two categories: pavement condition and bridge condition.

Two- and four-year targets are established at the beginning of the four-year performance period, with the option to update four-year targets at the two-year mark mid-cycle. Two-year targets for the current performance cycle represent expected reliability at the end of calendar year 2019, while the four-year targets represent expected condition at the end of calendar year 2021. Results are reported at the mid-point and end of the performance period, and four-year targets can be adjusted at the mid-point.

PAVEMENT CONDITION

Each year, MnDOT collects pavement condition data on the entire trunk highway system and calculates several different metrics related to pavement performance. For the federal measure, the overall condition of each pavement section on the NHS is determined based on a number of identified metrics and whether they are excellent, good, fair or poor. These are then calculated into the percentage of lane miles in good condition and poor condition. Note that the federal measure calculations are different from how MnDOT calculates its pavement condition measures, resulting in different numbers even though both measures report the percentage of lane miles in good and poor condition.

Table I-10 outlines the pavement condition performance measures, MnDOT’s baseline performance (2017), MnDOT’s performance (2019), MnDOT’s performance (2021), the MnDOT 2-year targets and the MnDOT four-year targets.

MNDOT’S REASON FOR TARGETS

Federal pavement performance targets were set using predicted condition trends and existing targets for MnDOT’s state pavement measure based on the Ride Quality Index (RQI). These data and targets were used as reference points. At the time of initial target setting in 2018, MnDOT had limited (2014, 2015 and 2017) data to calculate the federal pavement measure. Additionally, MnDOT is unable to forecast three of the four components used for the federal measure calculation. The federal targets are conservative estimates for pavement conditions based on the programmed pavement projects over the time frame of the performance period. MnDOT coordinated with MPOs when establishing these targets through presentations and regular correspondence.

MNDOT'S ACHIEVEMENT

MnDOT continues to follow its investment direction for pavement condition and met its two-year pavement performance targets. While the MnDOT pavement management system is not able to make predictions for the federal measure, the predicted values of MnDOT's state measures and their observed relationship to the federal measures indicate MnDOT will meet the four-year federal targets.

The Minnesota State Legislature approved new funding in 2017 and MnDOT spent a large portion of it on long life pavement projects on the NHS to bring them out of poor condition. This increased investment both improved the current NHS conditions and extended their remaining service life. MnDOT has also increased preventive maintenance spending on the Interstate and NHS pavements to increase their life. MnDOT continues to use

preventive maintenance strategies, such as crack sealing, chip seals and microsurfacing, to prolong pavement life. More extensive pavement fixes also help bring NHS pavements back into good condition.

MPO TARGETS ACROSS THE STATE OF MINNESOTA

Of the eight MPOs in the state of Minnesota, three chose to set their own pavement condition targets. Table I-11 indicates the Performance Measure 2 Pavement Condition Targets set by APO, Met Council and GFEGF MPO for 2019 and 2021. The other five MPOs in Minnesota adopted MnDOT's pavement condition targets and agreed to plan and program projects so that they contribute to the accomplishment of the state NHS pavement condition targets for the performance period 2018 through 2021. These include in the MIC, Metro COG, LAPC, MAPO and ROCOG.

Table I-10: FHWA PM2 Pavement Condition - State performance & targets

MEASURE	2017 PERFORMANCE	2019 PERFORMANCE	2021 PERFORMANCE	2-YEAR TARGET (2019)	4-YEAR TARGET (2021)
Percentage of Interstate Pavement in Good Condition	N/A*	63.5%	92.5%	Not required for the first performance period	55%
Percentage of Interstate Pavement in Poor Condition	N/A*	0.9%	0.4%	Not required for the first performance period	2%
Percentage of Non-Interstate NHS Pavement in Good Condition	*	59.1%	82.2%	50%	50%
Percentage of Non-Interstate NHS Pavement in Poor Condition	*	1.1%	0.5%	4%	4%

*Note: Baseline Performance (2017) is not displayed in this table. For the first reporting period only, Interstate pavement condition baseline and two-year targets were not required. MnDOT chose to report non-Interstate NHS condition using more elements than was required the first reporting period (full distress + International Roughness Index (IRI)), and baseline condition was not reported by FHWA.

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Table I-11: FHWA PM2 Pavement Condition - MPO targets

MPO	INTERSTATE 2-YEAR TARGET (2019)	INTERSTATE 2-YEAR TARGET (2019)	INTERSTATE 4-YEAR TARGET (2021)	INTERSTATE 4-YEAR TARGET (2021)
	% GOOD CONDITION	% POOR CONDITION	% GOOD CONDITION	% POOR CONDITION
APO	85%	1%	85%	1%
Met Council	N/A	N/A	55%	2%
GFEGF MPO	75.6%	3%	75.6%	3%

MPO	NON-INTERSTATE 2-YEAR TARGET (2019)	NON-INTERSTATE 2-YEAR TARGET (2019)	NON-INTERSTATE 4-YEAR TARGET (2021)	NON-INTERSTATE 4-YEAR TARGET (2021)
	% GOOD CONDITION	% POOR CONDITION	% GOOD CONDITION	% POOR CONDITION
APO	60%	1%	60%	1%
Met Council	50%	4%	53%	3%
GFEGF MPO	50%	4%	50%	4%

For the Metro COG, LAPC and MIC, these pavement condition targets are only for the Minnesota portion of their planning area. The GFEGF MPO agreed to program across the entire metropolitan planning area for the Interstate pavement condition measure. MAPO does not have any Interstate miles within its planning area, so this MPO does not plan and program for the Interstate specific performance measures.

APO specifies in its 2022-2025 TIP that planning area data indicates 96.3% of the Interstate system is classified as in good condition, while 0% is classified as poor condition. The data also identified that 72.9% of the Non-Interstate NHS is classified as in good condition and 0% is classified as poor condition. The APO’s MTP states that they will “prioritize the maintenance and preservation of the existing transportation network.”

Met Council indicated in its 2022-2025 TIP that the “metro area is performing at a level greater than the (pavement condition) targets”. There are projects programmed within that TIP to ensure pavement condition remains better than targets.

GFEGF MPO identifies in its 2022-2025 TIP that the projects programmed in the TIP align with their 2045 Street/Highway Plan, which emphasizes projects that support a State of Good Repair for pavement and bridges on the Interstate and Non-Interstate NHS and federal aid eligible system.

More specific information on how each MPO is achieving their targets can be found in their annual TIP documents.

BRIDGE CONDITION

For the bridge condition measures, each bridge on the NHS system is inspected on an established schedule based on type of bridge and its condition. In general, bridge inspections typically occur on two-year cycles. The score is entered into the National Bridge Inventory (NBI). The score is based on the inspection rating of the bridge’s deck, superstructure and substructure. Each bridge is given an overall rating based on the lowest score of the three elements and is rated Good (7-9), Fair (5-6), or Poor (0-4). Bridges rated poor are safe to drive on, but they are near the point where significant investment in repair or replacement is necessary. Note that the federal measure calculations are similar to how MnDOT calculates its bridge condition measure. The difference is that the federal measure applies to bridges with spans larger than 20 feet, but the state measure includes bridges with spans of 10 ft and greater.

Table I-12 outlines the bridge condition performance measures, MnDOT’s baseline performance (2017), MnDOT’s mid-period performance (2019), MnDOT’s performance (2021), the MnDOT two-year targets and the MnDOT four-year targets.

MNDOT’S REASON FOR TARGETS

Federal bridge performance targets were set based on conservative estimates for projected bridge condition in two and four years. Conservative targets manage the risk of one of MnDOT’s large bridges falling into poor condition sooner than expected causing the percent poor to be higher than predicted. Though the federal and state measures are not exactly the same, the results track closely enough that MnDOT can set federal targets based on its projection of the state measure.

MnDOT adjusted its four-year target for percent good from 50% to 35% at the mid-point in the performance period. While 50% looked achievable when the initial targets were set in 2018, MnDOT has increased the accuracy of bridge data through training, review and quality control of bridge inspections. The increased scrutiny of inspection data is providing a more realistic picture of the bridge inventory in the state making a four-year federal target of 35% more appropriate for this measure.

Table I-12: FHWA PM2 Bridge Condition - State performance & targets

MEASURE	2017 PERFORMANCE	2019 PERFORMANCE	2021 PERFORMANCE	2-YEAR TARGET (2019)	4-YEAR TARGET (2021)
Percentage of NHS Bridges in Good Condition	48%	37.3%	30.4%	50%	35%
Percentage of NHS Bridges in Poor Condition	1.9%	3.2%	6.3%	4%	4%

APPENDIX I | PERFORMANCE MEASURES

MNDOT'S ACHIEVEMENT

MnDOT met its two-year percent NHS bridges in poor condition target, but did not meet its four-year target. There was an increase in the percent of NHS bridges in poor condition between 2017 and 2021. This increase in percent poor is not due to Blatnik Bridge in Duluth, which fell into poor condition following the 2021 inspection. Instead, it is due to the combination of all bridges rated in poor condition.

MnDOT did not meet its two-year percent good target and made an adjustment from 50% to 35% for the four-year target. MnDOT also did not meet its adjusted four-year percent good target. MnDOT is now subject to additional reporting that will include a description of actions to be taken to achieve bridge targets for both good and poor condition. This additional documentation will be submitted with the Full Performance Progress Report due to FHWA on October 1, 2022. Further reasoning for the adjustment of targets can be found in the section above "MnDOT's Reason for Targets."

MnDOT continues to follow its investment direction for bridge condition. A large portion of the new funding MnDOT received from the Minnesota State Legislature in 2017 is going toward bridge rehabilitation and reconstruction projects on the NHS. This increased investment both improved the current NHS conditions and extended their remaining service life. MnDOT will continue to invest in preventive maintenance strategies such as such as flushing, crack sealing, joint sealing, rail sealing and joint maintenance.

MPO TARGETS ACROSS THE STATE OF MINNESOTA

Of the eight MPOs throughout the state of Minnesota, only one chose to set their own bridge condition targets. Table I-13 indicates the Performance Measure 2 Bridge Targets set by the APO for 2019 and 2021. The other seven MPOs in Minnesota adopted MnDOT's bridge performance measure targets and agreed to plan and program projects so that they contribute to the accomplishment of the state NHS bridge condition targets. These are the MIC, Metro COG, GFEGF MPO, LAPC, MAPO, Met Council and ROCOG.

APO specifies in its 2022-2025 TIP that 65.4% of the NHS bridges in the planning area are classified as in good condition, while 0% are classified as poor condition. The APO's Metropolitan Transportation Plan states that they will "prioritize the maintenance and preservation of the existing transportation network."

More specific information on how each MPO is achieving their targets can be found in their annual TIP document.

Table I-13: FHWA PM2 Bridge Condition - MPO targets

MPO	2- YEAR TARGET (2019)	2- YEAR TARGET (2019)	4- YEAR TARGET (2021)	4- YEAR TARGET (2021)
	% OF BRIDGES IN GOOD CONDITION	% OF BRIDGES IN POOR CONDITION	% OF BRIDGES IN GOOD CONDITION	% OF BRIDGES IN POOR CONDITION
APO	60%	1%	60%	1%

SYSTEM PERFORMANCE

The FHWA System Performance, Freight and CMAQ Measure Rule (PM3) incorporates six measures. These six performance measures can be broken into two categories:

HIGHWAY RELIABILITY

- Percentage of Person Miles Traveled on the Interstate that are reliable
- Percentage of Person Miles Traveled on the Non-Interstate NHS that are reliable
- Truck Travel Time Reliability Index

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ) PROGRAM

- Annual hours of peak hour excessive delay per capita (PHED)
- Percent of non-single occupant vehicle travel (Non-SOV)
- Cumulative two-year and four-year reduction of on-road mobile source emissions for CMAQ funded projects (CMAQ Emission Reduction)

Reliability is defined by the consistency or dependability of travel times from day to day or across different times of the day.

These three highway reliability performance measures can be broken into two categories: travel time reliability and freight movement reliability.

Two- and four-year targets are established at the beginning of the four-year performance period, with the option to update four-year targets at the two-year mark mid-cycle. Two-year targets for the current performance cycle represent expected reliability at the end of calendar year 2019, while the four-year targets represent expected condition at the end of calendar year 2021. Results are reported at the mid-point and end of the performance period, and four-year targets can be adjusted at the mid-point.

These three highway reliability performance measures can be broken further into two categories:

- Travel time reliability
- Freight movement reliability

TRAVEL TIME RELIABILITY

For the travel time reliability measures, FHWA provides states access to the National Performance Management Research Data Set (NPMRDS) to calculate the travel reliability for each roadway segment. Level of Travel Time Reliability (LOTTR) is defined as the ratio of the 80th percentile travel time to a “normal” travel time (50th percentile) per 23 CFR § 490.511. Reliable segments of roadway are considered to have a ratio of 1.50 or less, whereas segments of roadway with a ratio above 1.50 are considered unreliable.

NPMRDS uses passive travel data (probe data) to anonymously track how people travel and at what speed the vehicle travels. Data is collected in 15-minute segments during all time periods other than 8 p.m.- 6 a.m. (overnight) local time. The measures are the percent of person-miles traveled on the relevant NHS system that are reliable. Person-miles considers all the occupants of vehicles travelling on the NHS. Data to reflect the users can include bus, auto and truck occupancy levels.

Table I-14 outlines travel time reliability performance measures, MnDOT’s baseline performance (2017), MnDOT’s mid-period performance (2019), MnDOT’s performance (2021), the MnDOT two-year targets and the MnDOT four-year targets.

Due to the COVID-19 pandemic 2021 data depicts a higher level of travel time reliability than previous years.

APPENDIX I | PERFORMANCE MEASURES

MNDOT'S REASON FOR TARGETS

MnDOT selected its Interstate reliability targets in 2018 based on trend data from 2013 to 2017 that indicated that reliability is near 80% every year. For the Non-Interstate NHS, MnDOT selected conservative reliability targets in 2018 due limited data availability and consistency prior to 2017 and not knowing the actual values or trend. At the mid-point of the performance period with three years of consistent data, a four-year target of 90% looked more appropriate and the target was adjusted.

MNDOT'S ACHIEVEMENT

MnDOT met its two-year federal reliability measure targets for reliable person miles on the Interstate. Reliability on the highway system increased dramatically due to the pandemic in 2020. Even with some potential bounce back in 2021 MnDOT expects to meet four-year targets.

Due to the new funding from the Minnesota State Legislature in 2017, MnDOT is able to continue investing in Twin Cities Mobility through the full 20 years of the 2018-2037 State Highway Investment Plan. Twin Cities Mobility investment was originally scheduled to end in 2023 as the investment direction shifted to a primary focus of maintaining the existing system. MnDOT also continues operational strategies to improve reliability including robust statewide snow and ice operations; incident

clearance from metro area freeways; active traffic management strategies; and a network of managed lanes. The Met Council's Congestion Management Process (CMP) planning and implementation for the Minneapolis-St. Paul metropolitan area should also have a positive effect on these measures. The Congestion Management Process is a system of strategies facilitated by MPOs to improve the transportation system's performance and reliability by reducing the adverse impacts of congestion. Though these measures are reported at the state level, results are driven by performance in the metro area.

MPO TARGETS ACROSS THE STATE OF MINNESOTA

MnDOT provides NPMRDS data to MPOs for Interstate and Non-Interstate NHS Reliability calculations. Of the eight MPOs throughout Minnesota, three chose to set their own travel time reliability targets. Table I-15 shows the PM3 Highway Reliability: Travel Time Reliability measures' targets set by the APO, Met Council and GFEGF MPO for 2019 and 2021. The other five MPOs in Minnesota adopted MnDOT's Highway Reliability: Travel Time Reliability measures' targets and agreed to plan and program projects so that they contribute to the accomplishment of the state's targets. These include the MIC, Metro COG, LAPC, MAPO and ROCOG.

Table I-14: FHWA PM3 Travel Time Reliability - State performance & targets

MEASURE	2017 PERFORMANCE	2019 PERFORMANCE	2021 PERFORMANCE	2-YEAR TARGET (2019)	4-YEAR TARGET (2021)
Percentage of Person Miles Traveled on the Interstate that are reliable	80.2%	81.2%	94.4%	80%	80%
Percentage of Person Miles Traveled on the Non-Interstate NHS that are reliable	*	89%	96.1%	Not required for the first performance period	90%

APO specifies in its 2022-2025 TIP that within their planning 100% of person miles traveled on the Interstate are reliable and 96.5% reliability for person miles traveled on the Non-Interstate NHS.

The Met Council’s 2022-2025 TIP indicates its targets were chosen to improve reliability in the immediate future and prioritized highway projects integrated within the TIP. Data shown in the TIP illustrates that there is currently 69.5% reliability for person miles traveled on the Interstate and 79.6% reliable for person miles traveled on the Non-Interstate NHS. Projects programmed in the TIP were prioritized based on the effort to achieve the set four-year targets.

GFEGF MPO identified in its 2022-2025 TIP the need for reliability in the region. Traffic signal replacements are noted to improve the coordination and overall system reliability between East Grand Forks and Grand Forks.

More information on how each MPO is achieving their targets can be found in their annual TIP document.

Table I-15: FHWA PM3 Travel Time Reliability - MPO targets

MPO	2- YEAR TARGET (2019) % OF PERSON MILES TRAVELED ON THE INTERSTATE THAT ARE RELIABLE	2- YEAR TARGET (2019) % OF PERSON MILES TRAVELED ON THE NON-INTERSTATE NHS THAT ARE RELIABLE	4- YEAR TARGET (2021) % OF PERSON MILES TRAVELED ON THE INTERSTATE THAT ARE RELIABLE	4- YEAR TARGET (2021) % OF PERSON MILES TRAVELED ON THE NON-INTERSTATE NHS THAT ARE RELIABLE
APO	100%	90%	100%	90%*
Met Council	70%	75%	>70%	>80%
GFEGF MPO	90%	85%	90%	90%*

*Note: APO and GFEGF MPO have set individual MPO performance measure targets for the travel time reliability measures, but their percentage of person miles traveled on the Non-Interstate NHS that are reliable performance measure target is 90% reliability, which is the same as the state target.

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TRUCK FREIGHT RELIABILITY

The freight reliability measure is the truck travel time reliability index (TTTRI) for the Interstate. The TTTRI is calculated using truck travel time ratios comparing the 95th percentile time to the normal time (50th percentile) for each segment on the Interstate per 23 CFR § 490.611. For this measure, a lower number is better.

Table I-16 outlines TTTRI performance measures, MnDOT’s baseline performance (2017), MnDOT’s mid-period performance (2019), MnDOT’s performance (2021), the MnDOT two-year targets and the MnDOT four-year targets.

Due to the COVID-19 pandemic 2021 data depicts a higher level of truck travel time reliability than previous years.

MNDOT’S REASON FOR TARGETS

MnDOT selected conservative reliability targets in 2018 due to limited data availability and consistency prior to 2017. Targets were revisited during the mid-point of the performance period when three years of consistent data were available and determined the 1.5 target looked appropriate.

MNDOT’S ACHIEVEMENT

MnDOT met its two-year truck travel time reliability target and expects to meet its four-year target as well. MnDOT has used the National Highway Freight Program federal funds to address truck freight mobility. MnDOT has also identified and planned several improvements needed at truck bottleneck sites over the next 10 years. These are further

refined within the STIP and the Capital Highway Investment Plan (CHIP). These improvements align with the investment direction from the Minnesota State Highway Investment Plan (MnSHIP).

MPO TARGETS ACROSS THE STATE OF MINNESOTA

Of the eight MPOs throughout Minnesota, two chose to set their own freight reliability targets. Table I-17 indicates the PM3 TTTRI targets set by the APO and Met Council for 2019 and 2021. The other six MPOs in Minnesota adopted the state’s target and agreed to plan and program projects so that they contribute to the accomplishment of the state reliability target. These are the MIC, Metro COG, GFEGF MPO, LAPC, MAPO and ROCOG.

AAPO specifies in its 2022-2025 Transportation Improvement Program (TIP) a 1.15 TTTRI on the Interstate System in their planning area. There are currently no projects programmed for the APO planning area. The Interstate is under capacity within the APO planning area, so there is no evidence that travel time reliability will see adverse impacts.

Met Council specifies in its 2022-2025 TIP that its planning area would find it hard to achieve a 1.5 TTTRI given the increased traffic in the metro area compared to Greater Minnesota. The Met Council’s planning area currently indicates a 2.32 TTTRI, which is less reliable than 1.5 TTTRI. Its adopted target aims for improvement over existing conditions.

More information on how the each MPO is achieving their targets can be found in their annual TIP document.

Table I-16: FHWA PM3 Truck Travel Time Reliability - State performance & targets

MEASURE	2017 PERFORMANCE	2019 PERFORMANCE	2021 PERFORMANCE	2-YEAR TARGET (2019)	4-YEAR TARGET (2021)
Truck Travel Time Reliability Index (TTTRI)	1.43	1.48	1.24	1.5	1.5

Table I-17: FHWA PM3 Travel Time Reliability - MPO targets

MPO	2- YEAR TARGET (2019)	4- YEAR TARGET (2021)
	TRUCK TRAVEL TIME RELIABILITY INDEX	TRUCK TRAVEL TIME RELIABILITY INDEX
APO	1.24	1.24
Met Council	2.2	2.2

CMAQ PROGRAM

CMAQ measures apply to urbanized areas that are in nonattainment or maintenance for ozone, carbon monoxide (CO), or particulate matter. The Minneapolis-St. Paul, MN-WI adjusted urbanized area came into attainment for CO in November 2019. Before the mid-performance period reporting in October 2020, MnDOT and the Met Council were required to set a PM10 target due a small maintenance area in Ramsey County from a stationary (non-transportation) source. The CMAQ performance measure reporting requirements will apply until the 20-year maintenance period for PM10 ends in September 2022.

Table I-18 outlines the joint MnDOT and Met Council’s CMAQ performance measures, MnDOT’s baseline performance (2017), MnDOT’s mid-period performance (2019), MnDOT’s performance (2021), the MnDOT two-year targets and the MnDOT four-year targets.

MNDOT & MET COUNCIL’S REASON FOR TARGETS

For Peak Hour Excess Delay, MnDOT and the Met Council set an ambitious target of 8.5 hours in 2018 reflecting the Minneapolis-St. Paul region’s desire to improve hours of delay. In 2018, just one year of data (2017) from a new provider was available for target setting. By the mid-point of the performance period with three years of consistent

Table I-18: FHWA PM3 Travel Time Reliability - State performance & targets

MEASURE	2017 PERFORMANCE	2019 PERFORMANCE	2021 PERFORMANCE	2-YEAR TARGET (2019)	4-YEAR TARGET (2021)
Annual hours of peak hour excessive delay per capita	Not required for the first performance period	8.5	3.2*	Not required for the first performance period	8.5
Percent of non-single occupant vehicle travel	23.2%	23.9%	26.7% (2020)	25%	25%
Emissions reductions for CO through CMAQ projects (kg/day)	10,402	2,648	2,648	6,800	2,647
Emissions reductions for PM10 through CMAQ projects (kg/day)	Not reported until mid-performance period	0.0	0.0	Not set until mid-performance period	0.0

*Note: Due to the COVID-19 pandemic 2021 data depicts a higher annual hour of excessive delay per capita than previous years.

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data available MnDOT and the Met Council revisited the performance targets and decided to keep the 8.5-hour target.

Non-SOV travel has been incrementally improving in the Minneapolis-St. Paul, MN-WI urbanized area. The 25% target reflects a desire to improve non-SOV travel in the region.

Emission reduction varies based on the amount of reduced VMT from the projects. The reduction in CO emissions (in kg/day) from federally funded CMAQ projects in years 2009-2017 displayed no clear pattern. As these funds are awarded to projects that are submitted to the Regional Solicitation, there is no way to predict which projects will be selected each year. Therefore, the two-year target for the emission measures was set at 6,800 kg/day, which is the average CO reduction for 2009 - 2017. The four-year target was adjusted at the mid-point of the performance period to the rounded value of kg/day reduction based on projects with quantitative 2018-2019 CO emissions reductions estimates. The actual emissions reduction value is higher and would likely exceed the target. Four projects have no quantitative data available, so they rely on qualitative descriptions only and are therefore not included in the estimate. Since Minnesota is in attainment as of November 2019, only a couple of months of 2020-2021 CMAQ project emissions reductions would be in a maintenance area since from that point forward it is an attainment area. Therefore, MnDOT is assuming zero additional qualifying emission reductions in 2020-2021.

For PM10 emissions, MnDOT and the Met Council are responding to requirements to set a PM10 emissions reduction target for a small area of Ramsey County that is a maintenance area due to a stationary source. Though on-road emissions are not a significant contributor to the issue, the federal Clean Air Act does not provide any exceptions from transportation conformity requirements. PM10 emissions data is not estimated by CMAQ project proposers for the Regional Solicitation. MnDOT and Met Council discussed whether any 2018 or 2019 regional CMAQ projects might have a PM10 benefit to this area and determined that realistically benefits to this maintenance area are 0.0 kg/day reduction in PM10.

MNDOT & MET COUNCIL'S ACHIEVEMENT

MnDOT and the Met Council set ambitious federal targets the PHED and SOV travel targets. Three years of pre-pandemic data for the PHED measure indicate performance should be close to the four-year target. There was little peak hour excessive delay in 2020 and even with some potential bounce back in 2021, four-year targets should be met. Non-SOV travel has been incrementally improving in the Minneapolis-St. Paul area over the past several years. Even if the region does not meet this target, the increasing rate of non-SOV travel over the past four years indicates that the region likely will make significant progress on this measure by matching or improving upon baseline results for this measure.

TRANSIT ASSET MANAGEMENT (TAM)

In addition to the federal measures already discussed, a separate set of performance measures is required to be developed and maintained by transit agencies receiving federal funding assistance. Known as Transit Asset Management (TAM), public transit agencies must establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance. Transit agencies must also establish performance measures that will help the respective transit agency maintain a state of good repair, which aligns with the Useful Life Benchmark (ULB) for each asset. ULB is defined as the expected lifecycle of a capital asset or the acceptable period of use in service. State of good repair must be documented for the following assets:

- Equipment: Non-revenue support-service and maintenance vehicles
- Rolling Stock: Revenue vehicles by mode
- Infrastructure: Only rail-fixed guideway, track, signals and systems
- Facilities: Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities. Facilities are measured on the Transit Economic Requirements Model (TERM) scale which assigns a numerical rating (1-5) based on conditions.

The FTA established four performance measures to evaluate state of good repair for transit assets:

- Rolling Sock: Percentage of revenue vehicles exceeding useful life benchmark
- Equipment: Percentage of non-revenue service vehicles exceeding useful life benchmark
- Facilities: Percentage of facilities rated under 3.0 on the TERM scale
- Infrastructure: Percentage of track segments under performance restriction

TAM Plan requirements fall into two tiers of public transportation operators:

- Tier I: Operates rail OR ≥ 101 vehicles across all fixed route modes OR ≥ 101 vehicles in one non-fixed route mode
- Tier II: Subrecipient of 5311 funds OR American Indian Tribe OR ≤ 100 vehicles across all fixed route modes OR ≤ 100 vehicles in one non-fixed route mode

Table I-19: FTA Tier I Operator - TAM Plans

TIER I OPERATOR	MOST RECENT TAM PLAN ADOPTION
City of East Grand Forks	November 2018
City of La Crescent	June 2021
City of Mankato	June 2018
City of Moorhead	October 2018
City of Rochester	October 2017
Duluth Transit Authority	August 2018
St Cloud Metropolitan Transit Commission	September 2018

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MNDOT'S REASON FOR TARGETS

Within the Minnesota, there are both Tier I and Tier II operators.

Tier I Operators

The Tier I operators are located within the MPO areas and have adopted their own TAM Plans (Table I-19). Each small urban (5307) public transit provider worked with its partner MPO and MnDOT staff to develop individual TAM Plans. Each TAM Plan established both State of Good Repair targets and TERM scale targets for their facilities. Refer to each of the Tier I operators' TAM Plans for specifics about their adopted targets.

Each MPO programs a significant number of the transit projects in its 2022-2025 TIP. These transit projects consist mainly of operating funds for fixed-route and paratransit services. Although, there are also several vehicle replacement and other capital purchase projects.

Tier II Operators

All 30 Tier II operators (5311 Transit Systems) were asked and agreed to be part of the MnDOT-sponsored Group TAM Plan. More information about that plan can be found on [MnDOT's Transit website](#). MnDOT and the Tier II Transportation Operators developed the performance targets for the TAM measures illustrated in Table I-20. Currently, no equipment meets the greater than \$50,000 threshold for reporting and is thus not included in the table.

MINNESOTA'S ACHIEVEMENT

Shortly following TAM Plan approval in Fall 2018, MnDOT formed a Transit Advisory Committee (TAC) and continues to collaborate with the TAC on how to invest and work toward achieving TAM Plan targets. Together, MnDOT and the TAC completed a program development process to identify appropriate investment areas and funding amounts needed to meet appropriate metrics and targets. This process included identification of investment in rolling stock and facilities, which work toward achieving TAM Plan targets.

MnDOT currently invests \$9 million annually in rolling stock vehicles and \$7.5 million annually in facilities and large capital projects. Working with the TAC, MnDOT identified and has implemented asset management metrics to score, prioritize and award annual rolling stock and facility projects. For example, rolling stock are scored and prioritized based on a weighted score for age, mileage and maintenance costs.

Additionally, MnDOT inspects all transit facilities and a percentage of rolling stock annually to ensure assets are being properly maintained. Inspection results are documented and provide another metric to aid in how assets are prioritized for improvements or replacements to achieve targets.

Table I-20: FTA Tier II Operator - State targets

MEASURE	SUBCATEGORY	ULB (YEAR)	TARGET
Rolling Stock	Heavy-Duty Large Bus	14	<10% exceeding ULB
Rolling Stock	Heavy-Duty Small Bus	14	<10% exceeding ULB
Rolling Stock	Medium-Duty & Purpose-Built Bus	10	<10% exceeding ULB
Rolling Stock	Light-Duty Mid-sized Bus	10	<10% exceeding ULB
Rolling Stock	Light-Duty Small Bus	10	<10% exceeding ULB
Rolling Stock	Vans, Support Vehicles	10	<10% exceeding ULB
Facilities	Maintenance Facility (Service & Inspection)	40	<10% rated less than 3 on FTA TERM Scale
Facilities	General Purpose Maintenance Facility/Depot	40	<10% rated less than 3 on FTA TERM Scale
Facilities	Combined Administrative & Maintenance	40	<10% rated less than 3 on FTA TERM Scale
Facilities	Passenger or Parking	20	<10% rated less than 3 on FTA TERM Scale
Equipment	Equipment \$50,000+	N/A	<10% exceeding ULB

PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (PTASP)

The Public Transportation Agency Safety Plan (PTASP) regulation requires 5307 public transportation providers and state DOTs to establish safety performance targets to address the safety performance measures identified in the [National Public Transportation Safety Plan](#).

MNDOT'S REASON FOR TARGETS & ACHIEVEMENT

MnDOT did not prepare PTASP as the 5307 systems opted out of a statewide plan. MnDOT assisted the operators in how to calculate the targets. Refer to each 5307 public transportation providers' specific PTASP.

MPO TARGETS ACROSS THE STATE OF MINNESOTA

MPOs have 180 days from their specific public transportation operator's PTASP adoption to adopt targets for their metropolitan planning area. The public transportation operator is required to update the PTASP on an annual basis, but MPOs are not required to adopt the public transportation safety targets on an annual basis. Only when a new PTASP is adopted (at least once every four years) does the MPO have to adopt new targets.

APPENDIX J - TRIBAL COORDINATION & CONSULTATION

We live in a place the Dakota call “Mni Sota”, which is not only our state’s name but can be translated to “where the sky reflects off the water.” MnDOT acknowledges that the Dakota and Ojibwe people who have historically called this place home, are still here. To discuss land acknowledgement, we must recognize that historic events on this land had serious consequences to Tribal Nations, including the Dakota and Ojibwe people, and MnDOT, as a state agency, must not only be willing to verbally acknowledge but go beyond and take action.

After 163 years, Minnesota state elected leaders have not only recognized that Tribal Nations are still here but also codified the government-to-government relationship between Tribal Nations and the State of Minnesota. MnDOT acknowledges Dakota and Ojibwe self-governance, self-determination, and that they adopted the first and most effective sustainability laws.

MnDOT not only verbally acknowledges land issues that paint a shared past but is also taking action with Dakota and Ojibwe Nations to forge a new future around these lands we call home.

The Ojibwe and Dakota people believe you live with the land. It is not something you own but rather an animate being, full of living things, all equally important to human beings. So we must take advantage of this opportunity to move past our historic social norms to truly acknowledge the historic events around these lands we call Mni Sota, home of the Dakota and Anishinaabe.

One opportunity for the SMTP is to demonstrate that our work will be different. The objectives, strategies and actions in Chapter 5 emphasize investing time and resources in relationships with the eleven Tribal Nations in Minnesota. Building better relationships helps to ensure a transportation system that works for all Minnesotans. Early coordination is key to meaningful consultation with Tribal Nations.

RECENT CASE STUDIES FROM WORK WITH TRIBAL PARTNERS

NATIVE PLANTINGS IN THE CITY OF GARRISON

A joint venture between the Mille Lacs Band of Ojibwe, City of Garrison and MnDOT is underway to restore beauty to Pike Point Landing using native flowers and plantings. This is a great relationship building effort between partners.

SIGNS ACKNOWLEDGING 1854 TRIBAL TREATY BOUNDARIES

MnDOT has installed the first of 12 signs to permanently mark the boundaries of the 1854 Treaty between the United States and three Anishinaabe Tribal Nations—Grand Portage Band of Lake Superior Chippewa, Bois Forte Band of Chippewa and Fond du Lac Band of Lake Superior Chippewa. The first sign was erected on southbound Highway 61, just south of the Canadian border and entrance to Grand Portage State Park. The signs help educate people about treaties, jurisdiction and acknowledge land ceded by Tribal Governments by treaties. [Read Why Treaties Matter.](#)

NEVER HOMELESS BEFORE 1492

The Native American Community Development Institute (NACDI) has partnered with All My Relations Arts and MnDOT to create a public art installation along the Franklin-Hiawatha noise wall. The installation, titled “Never Homeless Before 1492,” was created by Courtney Cochran—an Anishinaabe multidisciplinary artist, filmmaker and community organizer—to address factors that have contributed to homelessness within the Native American community. This installation will be displayed for two years starting in 2021 and located near Highway 55 and Franklin Avenue in Minneapolis at the Franklin-Hiawatha encampment site. The site has been central to community dialogue and action addressing American Indian homelessness in a culturally responsive manner.

BUILD BETTER RELATIONSHIPS WITH TRIBAL NATIONS

You must work with the tribes over the entire development, construction and maintenance of the project. The method of communication with Tribal Nations is unique and can differ from Nation to Nation. The project’s level of impact on tribal interests (main access to the reservation or resurfacing) may require different levels of involvement with the tribe. Cultural resources impacts represent a major risk (cutting a tree, dirt moving, etc.).

NECESSARY CONCEPTS ABOUT JURISDICTION IN INDIAN COUNTRY

To understand jurisdiction in Indian Country, there are a few basic concepts that you need to know about first. To that end, this section will explain that tribes are sovereign nations and that “Indian” is a legal status, not just a race. This section will also explore the definitions of the terms “jurisdiction” and “Indian Country,” as well as how jurisdiction in Indian Country impacts transportation.

TRIBES ARE SOVEREIGN NATIONS.

Sovereignty is the authority of a political entity to govern itself. A tribe determines its own government structures and laws.

“INDIAN” IS A LEGAL STATUS, NOT SIMPLY A RACE.

You might think of “Indian” as a race. It is true that individuals can self-identify as belonging to the race “American Indian” on Census Bureau surveys. However, “Indian” is also a legal status.

WHAT IS JURISDICTION?

Jurisdiction is the power and authority of a government or court to make or enforce law. The federal government, state government, and tribal governments all have different jurisdiction (i.e., different powers to make and enforce law). When determining what kind of jurisdiction a government has, where you are located geographically is important.

WHAT IS INDIAN COUNTRY?

The most commonly used definition of Indian Country comes from federal criminal law, but courts often use the same definition in civil (non-criminal) court cases. Indian Country includes more than just reservations. Here is a simplified version of the most commonly used definition of Indian Country: reservations; allotments; and “dependent Indian communities” (i.e., land that is federally supervised and set aside for the use of Indians, this is usually found on trust land). You can find the complete – more nuanced – definition of Indian Country at 18 U.S.C. § 1151.

COORDINATION WITH TRIBAL NATIONS

Due to inherent Tribal sovereignty, each Tribal Nation has a unique legal relationship with the United States Government and with the State of Minnesota. Eleven Tribal Nations call what we now know as Minnesota, home. Their self-governing, sovereign status predates the arrival of European Nations and the creation of the United States. The U.S. Constitution and the U.S. Supreme Court recognize that Tribes are sovereign.

Because Tribal Nations are sovereign, their citizens democratically elect leaders who constitute the legislative and executive branches, govern and pass Tribal laws. In addition, most Tribal Nations have a Tribal Court, a Tribal Police and exercise jurisdiction over people and land (Indian Country). Each Tribal Nation is independent and unique. Therefore, when Tribal interests are impacted, Coordination with Tribal Officials in planning, development and administration of organization activities is necessary.

Coordination must occur at a similar level of leadership (technical staff or executive level) and must happen early in the decision-making process to provide sufficient time for Tribal Officials to confer with leadership. Coordination must be meaningful to ensure that Tribal perspectives are represented in the final decision.

Adequate coordination ensures effective decision making and invests in long term, positive relationships.

SMTP TRIBAL COORDINATION & CONSULTATION

There are twelve federally recognized tribes with eleven reservations in Minnesota (See Figure J-1). Chippewa tribes, also called Ojibwe or Anishinabe tribes, are located in the northern part of the State. Minnesota's Dakota Sioux tribes are located in the southern portion of the State. Minnesota is also home to the Minnesota Chippewa Tribe (MCT). The Minnesota Chippewa tribe is a federally recognized tribal government for its member tribes (Bois Forte, Fond du Lac, Grand Portage, Leech Lake, Mille Lacs, and White Earth). In addition, Minnesota contains lands owned by the Ho-Chunk Nation which does not have a reservation. The Ho-Chunk Nation's lands are primarily located in Wisconsin.

The following section provides some information on Indian tribes in Minnesota. The information in this section is by no means exhaustive, so links to each tribe's website are also provided to allow each tribal government to share its story in its own words.

MNDOT DISTRICT RESERVATIONS/TRIBAL LANDS

- District 1: Bois Forte, Leech Lake, Fond du Lac, Grand Portage, Mille Lacs
- District 2: Leech Lake, Red Lake, White Earth
- District 3: Leech Lake, Mille Lacs
- District 4: White Earth
- District 6: Prairie Island, Ho-Chunk
- District 7: None (However, note that the annual Dakota 38 Memorial Ride occurs in District 7.)
- District 8: Lower Sioux, Upper Sioux
- Metro District: Shakopee Mdewakanton

BOIS FORTE BAND OF CHIPPEWA

The Bois Forte Reservation is located in MnDOT District 1 in Koochiching and St. Louis counties. [Visit the tribe's website to learn more.](#)

FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA

The Fond du Lac Reservation is located in MnDOT District 1 in Carlton and St. Louis Counties. [Visit the tribe's website to learn more.](#)

GRAND PORTAGE BAND OF CHIPPEWA

The Grand Portage Reservation is located in MnDOT District 1 in Cook County. [Visit the tribe's website to learn more.](#)

HO-CHUNK NATION (OF WISCONSIN)

The Ho-Chunk Nation has tribal lands located in MnDOT District 6. The Ho-Chunk Nation does not have a reservation. Its tribal lands are primarily located in Wisconsin. If you need to coordinate with the Ho-Chunk nation you should contact MnDOT's tribal liaison. [Visit the tribe's website to learn more.](#)

LEECH LAKE BAND OF OJIBWE

The Leech Lake Reservation is located in MnDOT Districts 1, 2 and 3. [Visit the tribe's website to learn more.](#)

LOWER SIOUX COMMUNITY

The Lower Sioux Community is located in MnDOT District 8 in Redwood County. [Visit the tribe's website to learn more.](#)

MILLE LACS BAND OF OJIBWE

The Mille Lacs Reservation is located in Mille Lacs County mostly in MnDOT District 3 with a small portion of the reservation in MnDOT District 1. [Visit the tribe's website to learn more.](#)

PRAIRIE ISLAND INDIAN COMMUNITY

The Prairie Island Indian Community is located in MnDOT District 6 in Goodhue County. [Visit the tribe's website to learn more.](#)

RED LAKE NATION

The Red Lake Reservation is located in MnDOT District 2 and is primarily located in Beltrami County with a small portion in Clearwater County. In addition to the Reservation, the tribe owns the majority of the land in the Northwest angle and additional land scattered between the reservation and the Northwest angle (Lake of the Woods County, Roseau County, Koochiching County, Marshall County and Pennington County). [Visit the tribe's website to learn more.](#)

SHAKOPEE MDEWAKANTON SIOUX COMMUNITY

The Shakopee Mdewakanton Sioux Community (SMSC) is located in MnDOT's Metro District in Scott County. [Visit the tribe's website to learn more.](#)

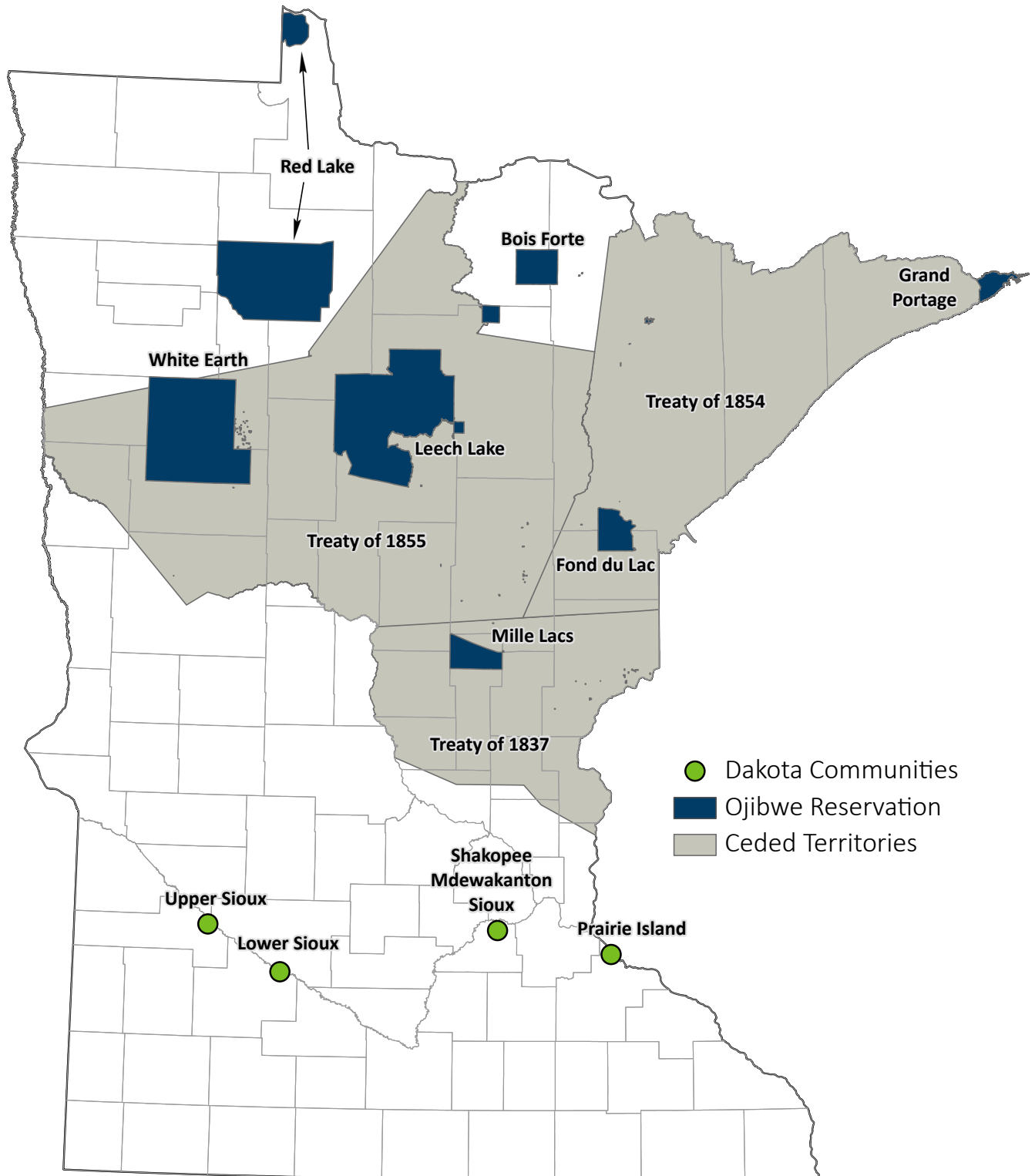
UPPER SIOUX COMMUNITY

The Upper Sioux Community is located in MnDOT District 8 in Yellow Medicine County. [Visit the tribe's website to learn more.](#)

WHITE EARTH NATION

The White Earth Reservation is located in MnDOT Districts 2 and 4. The Reservation covers all of Mahnommen County and portions of Becker and Clearwater Counties. [Visit the tribe's website to learn more.](#)

Figure J-1: Tribal reservations & communities in Minnesota, 2021



It is important to recognize the long history and enduring relationship between Indigenous peoples' connection to "Mni Sota" and the lasting impacts of policies detrimental to the balance of nature. Mutually respectful relations between Indigenous and non-Indigenous peoples are founded on long-term relationship-building, learning processes and developing solutions. Each tribe is a separate sovereign nation — unique unto itself and distinct from all other federally recognized tribes. Each tribe has an independent relationship with the United States and the State of Minnesota. Meaningful consultation assists in building better relationships and ensuring a transportation system that works for all Minnesotans.

For this update of the SMTP, MnDOT engaged with Tribal Nations through a government-to-government process. To ensure Tribal Nations interests are included in these high-level decisions, Minnesota Indian Affairs Council helped to designate representatives to serve on three advisory committees (see Appendix A – Acknowledgments):

- State Transportation Plans Policy Advisory Committee (a joint committee for SMTP and the Minnesota State Highway Investment Plan (MnSHIP))
- SMTP Technical Advisory Committee
- Equity Work Group (a joint committee for SMTP and MnSHIP)

Tribal Nations were asked to provide tribal transportation plans as part of the planning review process. No new plans were available for review during the SMTP update process. Three Tribes participated in staff-to-staff coordination meetings: Bois Forte, Prairie Island Indian Community and White Earth Nation.

Staff presented to the Advisory Council for Tribal Transportation a key decision points:

- Project start to review coordination and consultation process and to request tribal transportation plans.
- Public launch for recommendations for advisory committee representatives.
- Strategy development to provide input of SMTP focus areas and the transportation equity working definition.
- Review draft SMTP policy direction.
- Review of MnDOT's statement of commitment to transportation equity and SMTP draft plan.
- Plan adoption and implementation.

APPENDIX K - PLANNING REQUIREMENTS

The Statewide Multimodal Transportation Plan (SMTP) update process is guided by federal and state requirements. The Minnesota Department of Transportation (MnDOT) also has policies and initiatives that inform the planning process. Below outlines where that guidance and requirements can be found in the 2022 SMTP.

FEDERAL REQUIREMENTS

Statewide long-range transportation plans are guided by requirements set out in the code of federal regulations (CFR). Title 23 part 450 subpart B covers the Statewide and Nonmetropolitan Transportation Planning and Programming.¹ The state must demonstrate how the requirements are met with the long-range transportation plan. How the SMTP meets the requirements are categorized by federal planning factors, performance-based planning, cooperation, coordination and consultation, environmental mitigation, Environmental Justice, Title VI and plan content.

PLANNING FACTORS

Minnesota must carry out a continuous, cooperative and comprehensive statewide transportation planning process. The process is used when considering and implementing projects, strategies and services that address 10 federal planning factors. The factors must be considered and reflected, as appropriate, in the statewide transportation planning process.

Table K-1 shows how federal planning factors for the transportation system influenced the development of the SMTP objectives.² Further details on each of the objectives can be found in Chapter 5.

¹ 23. Statewide and nonmetropolitan transportation planning, u.S. Code § 135(f)(1), (f)(3), [https://www.Ecfr.Gov/current/title-23/chapter-i/subchapter-e/part-450/subpart-b#450.216](https://uscode.house.gov/view.xhtml?Req=(title:23%20section:135%20edition:prelim); code of federal regulations, development and content of the long-range statewide transportation plan, 23 cfr 450.216, <a href=).

² 23. statewide and nonmetropolitan transportation planning, u.s. code § 135(d)(1), [https://www.ecfr.gov/current/title-23/chapter-i/subchapter-e/part-450/subpart-b#450.206](https://uscode.house.gov/view.xhtml?req=(title:23%20section:135%20edition:prelim); code of federal regulations, scope of the statewide and nonmetropolitan transportation planning process, 23 cfr 450.206(a), <a href=).

Table K-1: Federal planning factors & related SMTP objectives

FEDERAL PLANNING FACTOR	RELATED OBJECTIVE(S)
Support the economic vitality of the United States, the states, metropolitan areas, and non-metropolitan areas, especially by enabling global competitiveness, productivity and efficiency.	Critical Connections Healthy Equitable Communities
Increase the safety of the transportation system for motorize and non-motorized users.	Transportation Safety
Increase the security of the transportation system for motorized and non-motorized users.	Transportation Safety Open Decision Making
Increase accessibility and mobility of people and freight.	System Stewardship Critical Connections Healthy Equitable Communities
Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	System Stewardship Climate Action Critical Connections Healthy Equitable Communities
Enhance the integration and connectivity of the transportation system, across and between modes throughout the state, for people and freight.	Critical Connections Healthy Equitable Communities
Promote efficient system management and operation.	Transportation Safety System Stewardship Critical Connections Open Decision Making
Emphasize the preservation of the existing transportation system.	System Stewardship Critical Connections
Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.	System Stewardship Climate Action Critical Connections
Enhance travel and tourism.	Critical Connections Healthy Equitable Communities



PERFORMANCE-BASED PLANNING

Statewide transportation plans must establish and use a performance-based approach to transportation decision making that supports the national goals as identified in Figure K-1.³

Federal performance measure target selection must be coordinated with metropolitan planning organizations (MPOs) to ensure consistency. In areas not represented by MPOs, the selection of public transportation performance measure targets must be coordinated with public transportation providers.

The statewide planning process must integrate, either directly or by reference, the goals, objectives, performance measures and targets developed to meet federal requirements. Details on how Minnesota considers these federal requirements when developing policies, programs and investment priorities can be found in Appendix I – Performance Measures and is also included at a high level in Chapter 5.

COOPERATION, COORDINATION & CONSULTATION

Statewide transportation plans must be developed in coordination with MPOs, cooperation with nonmetropolitan officials, and in consultation with tribal governments and state, tribal and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation.⁴ Additionally, statewide transportation planning processes are required to develop and use a documented public involvement process that provides opportunities for public review and comment at key decision points.⁵ Information on how MnDOT coordinated, cooperated and consulted with transportation partners and the public can be found in Chapter 4 with detailed information regarding the public engagement process found in Appendix G – Engagement Summary. MnDOT completed a review of plans from more than 100 transportation partners including peer agencies, MPOs, RDOs and others.

³ 23. statewide and nonmetropolitan transportation planning, U.S. Code § 135(d)(2), [https://uscode.house.gov/view.xhtml?req=\(title:23%20section:135%20edition:prelim\);codeofregulations,scopeofthestatewideandnonmetropolitantransportationplanningprocess,23cfr450.206\(c\),https://www.ecfr.gov/current/title-23/chapter-i/subchapter-e/part-450/subpart-b#450.206;codeoffederalregulations,developmentandcontentofthelong-rangestatewidesubpart-b#450.216\(f\),https://www.ecfr.gov/current/title-23/chapter-i/subchapter-e/part-450/subpart-b#450.216](https://uscode.house.gov/view.xhtml?req=(title:23%20section:135%20edition:prelim);codeofregulations,scopeofthestatewideandnonmetropolitantransportationplanningprocess,23cfr450.206(c),https://www.ecfr.gov/current/title-23/chapter-i/subchapter-e/part-450/subpart-b#450.206;codeoffederalregulations,developmentandcontentofthelong-rangestatewidesubpart-b#450.216(f),https://www.ecfr.gov/current/title-23/chapter-i/subchapter-e/part-450/subpart-b#450.216).

⁴ 23. Statewide and nonmetropolitan transportation planning, U.S. Code § 135(f)(2), [https://uscode.house.gov/view.xhtml?req=\(title:23%20section:135%20edition:prelim\);CodeofFederalRegulations,Coordinationofplanningprocessactivities,23CFR450.208,https://www.ecfr.gov/current/title-23/chapter-i/subchapter-E/part-450/subpart-B#450.208](https://uscode.house.gov/view.xhtml?req=(title:23%20section:135%20edition:prelim);CodeofFederalRegulations,Coordinationofplanningprocessactivities,23CFR450.208,https://www.ecfr.gov/current/title-23/chapter-i/subchapter-E/part-450/subpart-B#450.208).

⁵ Code of Federal Regulations, Interested parties, public involvement, and consultation, 23 CFR 450.210, <https://www.ecfr.gov/current/title-23/chapter-i/subchapter-E/part-450/subpart-B#450.210>.

ENVIRONMENTAL MITIGATION

Statewide transportation plans must include a discussion of potential environmental mitigation activities and potential areas to carry out these activities. Further, the plans must include activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion may focus on policies, programs or strategies, rather than at the project level. This must be developed in consultation with applicable federal, state, regional, local and Tribal land management, wildlife and regulatory agencies. The state may establish reasonable timeframes for performing this consultation.⁶⁷ The SMTP has components of climate change mitigation and resiliency throughout its objectives. Additionally, Climate Action is an objective with supporting strategies and actions related to climate change and resiliency. System Stewardship includes practicing environmental stewardship to protect and improve natural resources. Detailed information on the objectives can be found in Chapter 5.

ENVIRONMENTAL JUSTICE

Statewide transportation plans must identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations.⁸ Compliance is demonstrated through the public participation plan and an analysis of the plan's recommendations.

A summary of how MnDOT complied with the federal environmental justice components can be found in Chapter 4. Details for the public engagement process are found in Appendix G – Engagement Summary and an environmental justice review in Appendix E – Environmental Justice and Title VI.

⁶ 23. Statewide and nonmetropolitan transportation planning, U.S. Code § 135(f)(4), [⁷ Code of Federal Regulations, Development and content of the long-range statewide transportation plan, 23 CFR 450.216\(k\), <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450/subpart-B#450.216>.](https://uscode.house.gov/view.xhtml?req=(title:23%20section:135%20edition:prelim); Code of Federal Regulations, Development of programmatic mitigation plans, 23 CFR 450.214, https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450/subpart-B#450.214.</p></div><div data-bbox=)

⁸ William J. Clinton, Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income, February 16, 1994, United States Environmental Protection Agency, <https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice>; U.S. Department of Transportation, Final DOT Environmental Justice Order 5610.2(a), May 12, 2012, <https://www.transportation.gov/transportation-policy/environmental-justice/department-transportation-order-56102a>; U.S. Department of Transportation, Federal Highway Administration, FHWA Order 6640.23A, June 14, 2012, <https://www.fhwa.dot.gov/legisregs/directives/orders/664023a.cfm>; U.S. Department of Transportation, Federal Transit Administration, Environmental Justice Policy Guidance for Federal Transit Administration Recipients 4703.1, July 17, 2012, <https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/environmental-justice-policy-guidance-federal-transit>.

TITLE VI

The plan’s recommendations and public outreach activities cannot result in discriminatory efforts or disparate impacts on the basis of race, color and national origin, including the denial of meaningful access for limited English proficient persons.⁹ Compliance is demonstrated through the public participation plan and the environmental justice analysis of the plan’s recommendations.

A summary of how MnDOT complied with Title VI requirements can be found in Chapter 4. Details for the public engagement process are found in Appendix G – Engagement Summary and an environmental justice review in Appendix E – Environmental Justice and Title VI.



⁹ 42. The Public Health and Welfare, U.S. Code § 2000d, <https://www.govinfo.gov/app/details/USCODE-2011-title42/USCODE-2011-title42-chap21-subchapV-sec2000d>; Code of Federal Regulations, Part 200 – Title Vi Program and Related Statutes – Implementation and Review Procedures, 23 CFR 200, 23 CFR §200 Title Vi Program And Related Statutes - Implementation And Review Procedures - Code of Federal Regulations ([ecfr.io](https://www.ecfr.gov)); Code of Federal Regulations, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964, 49 CFR 21, <https://www.ecfr.gov/current/title-49/subtitle-A/part-21?toc=1>; William J. Clinton, Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, August 11, 2000, The U.S. Department of Justice, <https://www.justice.gov/crt/executive-order-13166>; U.S. Department of Transportation, Federal Transit Administration, Title VI Requirements and Guidelines for Federal Transit Administration Recipients 4702.1B, October 1, 2012, <https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/title-vi-requirements-and-guidelines-federal-transit>.

PLAN CONTENT

Statewide long-range transportation plans are required to cover specific content. The list below highlights how the SMTP covers content requirements.

- Have a minimum 20-year planning horizon at time of adoption, that provides for the development and implementation of the multimodal transportation system for the state.
 - Consider and include, as applicable, elements and connections between public transportation, non-motorized modes, rail, commercial motor vehicles, waterway and aviation facilities, particularly with respect to intercity travel
- Integrate the priorities, goals, countermeasures, strategies or projects contained in the Highway Safety Improvement Program (HSIP)¹⁰ and Public Transportation Agency Safety Plan (PTASP).

Appendix I – Performance Measures identifies federal and state performance measures, targets and the how Minnesota is achieving the targets. Information on Highway Safety Improvement Program and Public Transportation Agency Safety Plan is included in Appendix I – Performance Measures.

This update of the SMTP has a planning horizon of 2042. As a multimodal plan, plan elements throughout the document cover all modes and connections.

- Reference, summarize or contain any applicable short-range planning studies; strategic planning and/or policy studies; transportation needs studies; management system reports; emergency relief and disaster preparedness plans; and any statements of policies, goals and objectives on issues as appropriate that were relevant to the development of the plan.

MnDOT staff reviewed over 100 partner and stakeholder plans as part of the SMTP background and baseline assessment. A summary of the plans reviewed is noted in Appendix D – Planning Reviews.
- Include a security element that incorporates or summarizes the priorities, goals or projects set forth in other transit safety and security planning and review processes, plans and programs, as appropriate.

Chapter 5 contains the plan’s six objectives, strategies and actions. System security strategies and actions can be found in the System Stewardship, Climate Action and Critical Connections objectives.
- Include performance-based planning.

Appendix I – Performance Measures identifies federal and state performance measures, targets and the how Minnesota is achieving the targets. See Performance-Based Planning section in this appendix for more information.

¹⁰ Minnesota Department of Transportation, “Highway Safety Improvement Program,” Office of Traffic Engineering, date accessed March 17, 2022, <https://www.dot.state.mn.us/trafficeng/safety/hsip.html>.

APPENDIX K | PLANNING REQUIREMENTS

- Cooperate with metropolitan planning organizations (MPOs) and nonmetropolitan area local officials responsible for transportation, which may include regional development organization (RDO) cooperation.

Chapter 4 provides a summary and Appendix G – Engagement Summary provides a detailed description of the cooperation, consultation and coordination that occurred for the SMTP.

- Develop plan, as appropriate, in consultation with state, Tribal and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation. This consultation shall involve comparison of transportation plans to State and Tribal conservation plans or maps, if available, and comparison of transportation plans to inventories of natural or historic resources, if available.

Appendix G – Engagement Summary and Appendix J – Tribal Coordination and Consultation provide detailed descriptions of the cooperation, consultation and coordination that occurred for the SMTP. More information about the Tribal Consultation that occurred can be found in the Tribal Consultation section in this appendix.

- Include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion may focus on policies, programs or strategies, rather than at the project level. The state shall develop the discussion in consultation with applicable Federal, State, regional, local and Tribal land management, wildlife and regulatory agencies. The state may establish reasonable timeframes for performing this consultation.

Appendix G – Engagement Summary and Appendix J – Tribal Coordination and Consultation provide detailed descriptions of the cooperation, consultation and coordination that occurred for the SMTP. More information about the Tribal Consultation that occurred can be found in the Tribal Consultation section in this appendix. Additional information on specific environmental mitigation activities can be found in the section Environmental Mitigation section in this appendix.

- Provide a reasonable opportunity for the RDOs, nonmetropolitan local elected officials, interested parties and the general public an opportunity to participate and comment on the plan.

Chapter 4 provides a summary and Appendix G – Engagement Summary provides a detailed description of the cooperation, consultation and coordination that occurred for the SMTP.

- Be published in electronically accessible formats and means, such as the World Wide Web.

The adopted SMTP will be published online in an American with Disabilities Act (ADA) accessible format. The document will be available to be downloaded in a PDF format that is also ADA accessible.

- Continually evaluate, revise and periodically update the long-range statewide transportation plan, as appropriate, using the procedures in this section for development and establishment of the long-range statewide transportation plan.

After adoption, MnDOT and transportation partners work together to implement the SMTP. Chapter 5 identifies the policy direction through objectives, strategies and actions. Chapter 6 outlines a five-year work plan for MnDOT. Per Minnesota statute, the SMTP is updated every five years and at that time the plan is evaluated, revised and updated.

- Provide copies of any new or amended long-range statewide transportation plan documents to the FHWA and the FTA for informational purposes.

The draft and adopted SMTP will be shared with the FHWA and FTA for informational purposes. Additional modal plans are also shared with FHWA and FTA as those plans are adopted.

STATE REQUIREMENTS

The State of Minnesota has established additional guidance for the SMTP. This guidance includes the incorporation of 16 legislative goals for transportation statewide, transportation elements from the Olmstead Plan, tribal consultation and plain language throughout the SMTP.

STATUTORY REQUIREMENTS FOR THE SMTP

Minnesota statute requires MnDOT to update the SMTP every five years and establish objectives, policies and strategies for achieving the statutory goals for transportation in Minnesota. The Minnesota Legislature has identified 16 goals for transportation. These goals are listed in Table K-2. The SMTP must also identify performance targets for measuring progress and achievement of the goals, objectives or policies.

Table K-2 outlines the state transportation goals and the related SMTP objectives, strategies and actions that support the goal. Further details on each of the objectives can be found in Chapter 5.

OLMSTEAD PLAN

The Minnesota Olmstead Plan states that “Transportation is a key aspect in an individual’s independence and quality of life. Transportation is also part of a community’s foundation and recognizes the importance, significance and context of place— not just as destinations, but also where people live, work, learn and enjoy life regardless of socioeconomic status or individual ability.” The Olmstead Plan goes on to state that MnDOT in conjunction with Department of Human Services will integrate the Olmstead principles in the state’s transportation system. MnDOT can do this by continuing to provide accessibility improvements in the right-of-way and improving transit access and ridership. Additionally, Minnesota can ensure that transportation is as integrated as possible and that transportation allows people with disabilities to participate in their communities.

MnDOT ensured that multimodal accessibility was integrated throughout the documents policy objectives, strategies and actions in Transportation Safety, System Stewardship, Climate Action, Critical Connections and Healthy Equitable Communities. Critical Connections includes performance measure for job accessibility by bicycle, car and transit. Further, MnDOT will be developing a multimodal accessibility performance measure as part of the work plan. Beyond accessibility, Open Decision Making focuses on the transparent communication with people to participate in their community, regional and statewide transportation projects and decisions.

Table K-2: State transportation goals & related SMTP objectives & key strategies, 1 of 3

STATE GOALS FOR THE TRANSPORTATION SYSTEM	RELATED OBJECTIVE(S)	KEY STRATEGIES & ACTIONS
Minimize the fatalities and injuries for transportation users throughout the state.	Transportation Safety (TS)	All TS strategies and actions
Provide multimodal and intermodal transportation facilities and services to increase access for all persons and businesses and to ensure economic well-being and quality of life without undue burden placed on any community.	Critical Connections (CC) Healthy Equitable Communities (HEC)	CC Strategy 1: all actions CC Strategy 2: all actions CC Strategy 3: all actions CC Strategy 4: all actions CC Strategy 6: all actions All HEC strategies and actions
Provide a reasonable travel time for commuters.	Critical Connections (CC)	CC Strategy 1: Action 1.3 CC Strategy 2: all actions CC Strategy 4: all actions CC Strategy 5: all actions
Enhance economic development and provide for the economical, efficient, and safe movement of goods to and from markets by rail, highway, and waterway.	Transportation Safety (TS) Critical Connections (CC) Healthy Equitable Communities (HEC)	TS Strategy 4: all actions CC Strategy 2: all actions CC Strategy 3: Action 3.1 CC Strategy 4: Action 4.1 CC Strategy 5: all actions HEC Strategy 1: Action 1.3
Encourage tourism by providing appropriate transportation to Minnesota facilities designed to attract tourists and to enhance the appeal, through transportation investments, of tourist destinations across the state.	System Stewardship Critical Connections (CC) Healthy Equitable Communities (HEC)	SS Strategy 2: Actions 2.1, 2.2 SS Strategy 3: Actions 3.3, 3.4 SS Strategy 4: Actions 4.1, 4.2, 4.5 CC Strategy 1: Action 1.1 CC Strategy 3: Actions 3.1, 3.2 HEC Strategy 1: Action 1.3
Provide transit services to all counties in the state to meet the needs of transit users.	Critical Connections (CC) Healthy Equitable Communities (HEC)	CC Strategy 1: all actions CC Strategy 2: all actions CC Strategy 3: all actions HEC Strategy 3: Action 3.4
Promote accountability through systematic management of system performance and productivity through the utilization of technological advancements.	System Stewardship (SS) Critical Connections (CC) Healthy Equitable Communities (HEC)	SS Strategy 1: all actions CC Strategy 2: Action 2.4 CC Strategy 5: Action 5.2 HEC Strategy 2: Action 2.5
Maximize the long-term benefits received for each state transportation investment.	System Stewardship (SS) Climate Action (CA)	SS Strategy 1: all actions SS Strategy 3: Action 3.3 CA Strategy 4: Action 4.1

APPENDIX K | PLANNING REQUIREMENTS

Table K-2: State transportation goals & related SMTP objectives, 2 of 3

STATE GOALS FOR THE TRANSPORTATION SYSTEM	RELATED OBJECTIVE(S)	KEY STRATEGIES & ACTIONS
Provide for and prioritize funding of transportation investments that ensures that the state’s transportation infrastructure is maintained in a state of good repair.	System Stewardship (SS) Climate Action (CA)	SS Strategy 1: all actions SS Strategy 2: Action 2.2 CA Strategy 4: Action 4.1
Ensure that the planning and implementation of all modes of transportation are consistent with the environmental and energy goals of the state.	System Stewardship (SS) Climate Action (CA) Healthy Equitable Communities (HEC)	SS Strategy 1: Action 1.3 SS Strategy 4: all actions CA Strategy 1: all actions CA Strategy 3: all actions CA Strategy 5: Action 5.1, 5.2, 5.3 HEC Strategy 5: Action 5.3
Promote and increase the use of high-occupancy vehicles and low-emission vehicles.	Climate Action (CA) Critical Connections (CC)	CA Strategy 1: all actions CC Strategy 1: all actions CC Strategy 3: all actions CC Strategy 5: Action 5.1, 5.2 CC Strategy 6: all actions
Provide an air transportation system sufficient to encourage economic growth and allow all regions of the state the ability to participate in the global economy.	Critical Connections (CC)	CC Strategy 3: Actions 3.1, 3.2
Increase use of transit as a percentage of all trips statewide by giving highest priority to the transportation modes with the greatest people-moving capacity and lowest long-term economic and environmental cost.	Critical Connections (CC) Healthy Equitable Communities (HEC)	CC Strategy 1: all actions CC Strategy 2: all actions CC Strategy 5: Actions 5.1, 5.3 CC Strategy 6: all actions HEC Strategy 3: Actions 3.1, 3.2, 3.4
Promote and increase bicycling and walking as a percentage of all trips as energy-efficient, nonpolluting, and healthy forms of transportation.	Critical Connections (CC) Healthy Equitable Communities (HEC)	CC Strategy 1: all actions CC Strategy 3: all actions CC Strategy 5: Actions 5.1, 5.3 CC Strategy 6: all actions HEC Strategy 3: Actions 3.2, 3.3, 3.5

Table K-2: State transportation goals & related SMTP objectives, 3 of 3

STATE GOALS FOR THE TRANSPORTATION SYSTEM	RELATED OBJECTIVE(S)	KEY STRATEGIES & ACTIONS
Reduce greenhouse gas emissions from the state’s transportation sector.	System Stewardship (SS) Climate Action (CA) Critical Connections (CC)	SS Strategy 1: Action 1.3 CA Strategy 1: all actions CA Strategy 2: all actions CC Strategy 1: all actions CC Strategy 5: Actions 5.1, 5.2, 5.3 CC Strategy 6: all actions
Accomplish these goals with minimal impact on the environment.	System Stewardship (SS) Climate Action (CA)	SS Strategy 1: Action 1.3 SS Strategy 4: all actions CA Strategy 1: all actions CA Strategy 2: all actions

TRIBAL CONSULTATION

Beyond the federal requirement to consult with Tribes, Minnesota Executive Order 19-24 directs MnDOT to develop and maintain ongoing consultation with the 12 federally recognized sovereign governments located in Minnesota related to each area where MnDOT’s work intersects with Minnesota Tribal Nations. See later in this document section “MnDOT Policies & Initiatives” more about Tribal consultation.

PLAIN LANGUAGE

All state agencies must communicate using plain language. Plain language is communication that an audience can understand the first time they read it or hear it. The goal of using plain language is to provide Minnesotans better state services by reducing confusion, saving time and improving customer satisfaction.¹¹

In the SMTP, MnDOT has attempted to use language commonly understood by the public. At times this is difficult as there is transportation terminology that cannot be easily replaced by common terms. Despite this challenge, MnDOT has tried to present information in a format that is easy-to-find and easy-to-understand. Additionally, at the beginning of the document, MnDOT has included a “How to Use the SMTP” section that focuses on how the plan may be applicable and usable to different users.

¹¹ “Implementing Plain Language in the Executive Branch,” Executive Order 14-07, Mark Dayton, Governor of the State of Minnesota, March 4th, 2014, <https://www.leg.mn.gov/archive/execorders/14-07.pdf>.

MNDOT POLICIES & INITIATIVES

MnDOT has adopted policies and initiatives that guide the direction of the agency. The Strategic Plan, Complete Streets Policy, state performance measures and tribal consultation expand upon state and federal requirements to create a comprehensive approach to the development of the SMTP.

STRATEGIC PLAN

MnDOT’s mission is to connect and serve all people through a safe, equitable and sustainable transportation system. The agency’s core values are safety, service, equity, sustainability, innovation and collaboration. To advance this mission and demonstrate these core values, the 2022-2025 Strategy Plan includes five overarching strategic goals:

- Promote A Safety Culture
- Advance Transportation Equity
- Champion Sustainability Actions
- Maximize Stewardship of Resources
- Foster a Thriving Workforce

The Strategic Plan is led by MnDOT leadership and guides their decision making. As a short-term plan, it integrates the key long-term transportation system objectives from the SMTP. As MnDOT advances the goals in the Strategic Plan, SMTP objectives become closer to fruition.

COMPLETE STREETS

MnDOT’s Complete Streets policy commits the department to addressing the safety and accessibility needs of users of all ages and abilities.¹² MnDOT must follow a complete streets approach in all stages of planning, scoping, design, construction, operation and maintenance activities. Complete streets consider the needs of pedestrians, bicyclists, transit users, motorists, commercial vehicles and emergency vehicles moving along and across roads, intersections and crossings. The approach is sensitive to local context and recognizes that needs vary across urban, suburban and rural settings.

The SMTP addresses throughout the document the core principles of a complete streets approach: multimodal perspective, collaboration across disciplines, movement across and along the corridor and network considerations. The policy direction in Chapter 5 is consistent with these principles.

¹² Minnesota Department of Transportation, “Complete Streets Policy OP004,” Office of Transportation System Management, revised May 20, 2016, <http://www.dot.state.mn.us/policy/operations/op004.html>.

PERFORMANCE MEASURES

MnDOT formally adopts performance measures and targets through public planning processes or through review and approval by designated management groups. In those processes, MnDOT carefully considers existing commitments, relative priorities and tradeoffs when adopting or modifying performance measures and targets.¹³ MnDOT maintains a performance dashboard and publishes annual transportation scorecards, in keeping with the federal progress reporting requirements.¹⁴

MnDOT's performance measure and target adoption provides a uniform process for evaluating performance measures and targets that affect transportation system outcomes critical to achieving the Minnesota GO Vision and statutory goals for transportation.¹⁵ Performance measures that evaluate and affect transportation system outcomes include those that:

- Measure progress toward goals or objectives identified in the SMTP or another statewide transportation plan.
- Guide investment on the state highway system or the development or improvement of a modal system.
- Assess the effectiveness or efficiency of MnDOT products and services.

The SMTP identifies and incorporates performance measures in alignment with the six objectives guiding the plan. See Chapter 5 for summary of the objectives, performance measures, strategies and actions. The performance measures each have targets, a desired direction or have been identified as needing further development through the MnDOT work plan. In Chapter 6, there is more detailed information on work plan specific items and performance measures. Finally, Appendix I – Performance Measures provides a complete breakdown of state and federal performance measures.

¹³ Minnesota Department of Transportation, "Performance Measure and Target Adoption AD006," Office of Transportation System Management, effective September 30, 2015, <https://dot.state.mn.us/policy/admin/ad006.html>.

¹⁴ Minnesota GO, "Performance Dashboard," date accessed March 17, 2022, <https://performance.minnesotago.org/>.

¹⁵ Minnesota Department of Transportation, "Performance Measure and Target Adoption AD006," Office of Transportation System Management, effective September 30, 2015, <https://dot.state.mn.us/policy/admin/ad006.html>.

TRIBAL CONSULTATION

MnDOT seeks to foster and facilitate positive government-to-government relations between MnDOT and all federally recognized Minnesota Tribal Nations. MnDOT requires that the principles of the *Minnesota Tribal Nations* policy are considered at all phases of planning and project development in the establishment, development, operation and maintenance of a comprehensive, integrated and connected multimodal transportation system.¹⁶

To be consistent with Minnesota Executive Order 19-24, MnDOT concentrates on three focus areas:

- Transportation System
- Employee Training and Outreach
- Additional Resources

Within the Transportation System focus area, planning is identified. Specifically, MnDOT must employ early, continuous and meaningful involvement of the public and the full range of affected stakeholders throughout its planning processes and must reach out to populations who may be under-represented or under-served by the transportation system. Additionally, Tribal Nation interests will be addressed using transparent, effective and project appropriate public involvement processes. Tribal engagement occurs through consultation, collaboration and coordination.

CONSULTATION is government-to-government communication in a timely manner by all parties about a proposed or contemplated decision to secure meaningful tribal input and involvement in the decision-making process and to advise the tribe of the final decision and provide an explanation.

COLLABORATION is when all parties involved in carrying out planning and project development work together in a timely manner to achieve a common goal or objective.

COORDINATION is when each party shares and compares in a timely manner its transportation plans, programs, projects and schedules with the related plans, programs, projects and schedules of the other parties; and adjusts its plans, programs, projects and schedules to optimize the efficient and consistent delivery of transportation projects and services.

For this update of the SMTP, MnDOT engaged with Tribal Nations through a government-to-government process. Tribal Nations were asked to provide tribal transportation plans as part of the planning review process. To ensure Tribal Nations interests are included in these high-level decisions, Minnesota Indian Affairs Council helped to designate representatives to serve on three advisory committees (see Appendix A – Acknowledgments). Three tribes participated in staff-to-staff coordination meetings: Bois Forte, Prairie Island Indian Community and White Earth Nation. Additionally, staff presented to the Advisory Council for Tribal Transportation a key decision points: project start, public launch, strategy development, policy direction coordination and public comment period. More details about coordination and consultation with Tribal Nations can be found in Appendix G – Engagement Summary and Appendix J – Tribal Coordination and Consultation.

¹⁶ Minnesota Department of Transportation, “Minnesota Tribal Nations Government-to-Government Relationship with MnDOT AD005,” Office of Government Affairs, effective February 25, 2014, <http://www.dot.state.mn.us/policy/admin/ad005.html#:~:text=Policy%20statement,-The%20Minnesota%20Department&text=MnDOT%20requires%20that%20the%20principles,and%20connected%20multimodal%20transportation%20system>.

KEY TOPIC AREAS FOR THE 2022 SMTP

Many of the laws, rules, regulations, policies, plans and initiatives described in the previous sections are not new. They helped direct the 2012 and 2017 SMTPs. However, some key topic areas that were identified during the plan review portion of the 2022 SMTP update process. The new areas include:

- [Adoption of the project selection policy](#)
- [Connected and Automated Vehicle planning](#)
- [Advancing Transportation Equity Initiative](#)
- [Office of the Legislative Auditor audit on financial effectiveness](#)
- [Creation of the Office of Sustainability and Public Health](#)
- [One Minnesota Strategic Plan](#)
- [Strategic Plan](#)
- [Creation of the Office of Tribal Affairs](#)
- [Transportation Systems Management and Operations planning](#)

These priorities can be seen integrated throughout the SMTP in the objectives, performance measure, strategies and actions identified in Chapter 5.