



EXECUTIVE SUMMARY

The Statewide Multimodal Transportation Plan 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 the economy.

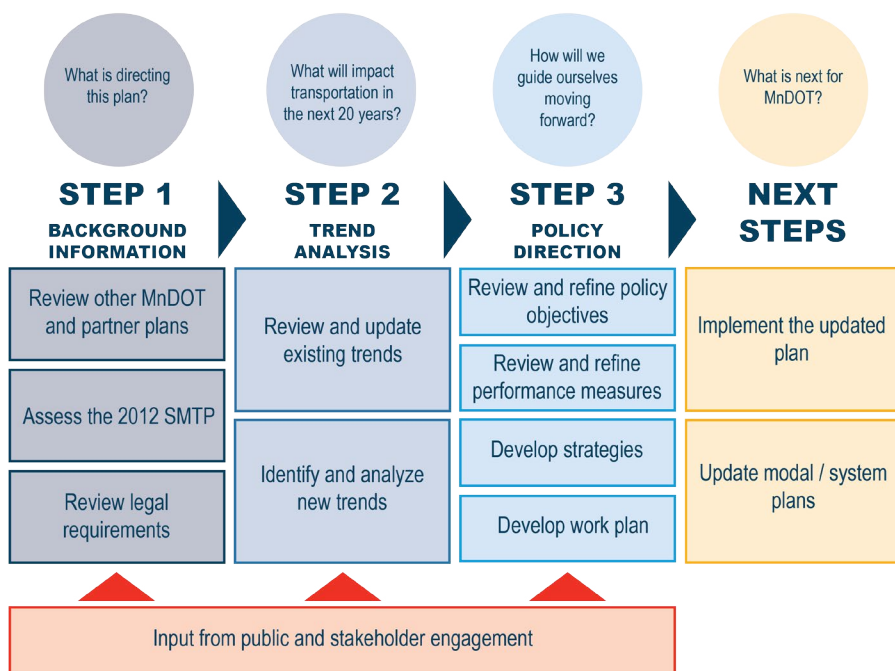
The plan is for all types of transportation and all transportation partners. It is about more than just roadways and more than just the Minnesota Department of Transportation. It evaluates the status of the entire transportation system, takes into account what is changing and provides direction for moving forward over the next 20 years.

HOW IS THE PLAN UPDATED?

MnDOT is required by state and federal law to plan for 20 years into the future but also to update the plan every four years. The SMTP was last updated in 2012.



Figure 1: Statewide Multimodal Transportation Plan Update Process



PLAN UPDATE PROCESS

1. BASELINE ASSESSMENT

The process began with a review of other MnDOT plans and plans from transportation partners. It also included a review of the changes in law and policy since the plan's last update in 2012. Information was collected about what MnDOT and other transportation partners are currently doing and what is already planned for the future. Finally, MnDOT evaluated the progress made so far in implementing the 2012 SMTP. More information from the baseline assessment is available in the **Appendices**.

2. TREND ANALYSIS

The next step focused on how Minnesota's population, economy, environment, transportation behavior and technology are changing. It included reviewing the recent past, making educated guesses about the future and analyzing what the future changes might mean for transportation in Minnesota. **Chapter 3** provides a summary of the twenty trends analyzed. During this step, Minnesotans prioritized the trends based on how important it is for MnDOT to plan for the changes and suggested potential responses. A summary of input is included in **Chapter 4**.

3. REVISE POLICY DIRECTION

Using the baseline assessment, trend analysis and input from the public and partners, MnDOT updated the objectives and strategies of the 2012 SMTP. Additionally, key performance measures were identified for each objective. The updated objectives, performance measures and strategies are listed in **Chapter 5**. A near-term work plan for MnDOT was also developed. The work plan includes a list of activities MnDOT will do in the next four years and can be found in **Chapter 6**.

Throughout the entire update process, MnDOT sought input from the public and transportation partners. A summary of the input received is included in **Chapter 4**. A detailed report of the public engagement activities is available in **Appendix D**.

Figure 2: Percent of Respondents Identifying a Trend Category as Their Top Priority

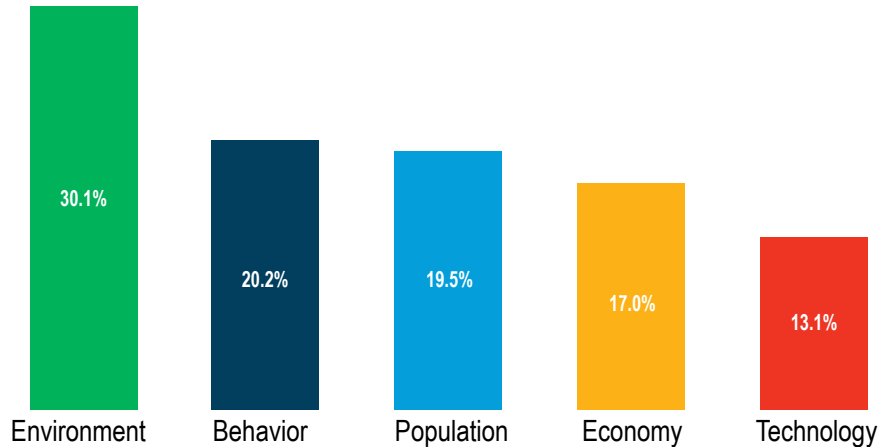


Figure 3: Top 5 Most Important Individual Trends



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 the economy

Quality of Life

The system:

- 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

Environmental Health

The system:

- Is designed in such a way that it enhances the community around it and is compatible with natural systems
- Minimizes resource use and pollution

Economic Competitiveness

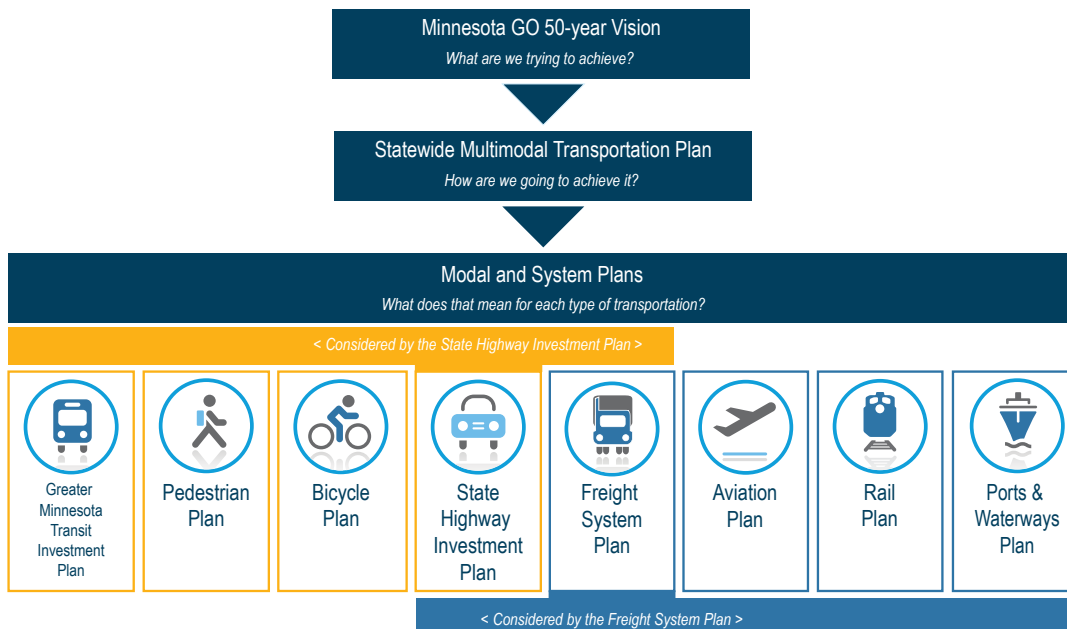
The system:

- 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

FAMILY OF PLANS

The SMTP provides a framework for a full set of statewide transportation plans. MnDOT plans for all the ways people and goods move throughout Minnesota—individually for each mode and together as a multimodal system. The SMTP identifies overarching guidance and priorities for the entire transportation system. The other statewide transportation plans offer mode-specific strategies, guidance and investment priorities for each part of the system. These plans include aviation, bicycle, freight, highway, pedestrian, ports and waterways, rail and transit. Additional plans provide more detail related to safety, accessibility, operations, technology and more. Together the “family of plans” directs investments, maintenance, operations, modal programs and services for the all types of transportation.

Figure 4: MnDOT’s Family of Plans



MINNESOTA'S TRANSPORTATION SYSTEM

Minnesota has a vast multimodal transportation system that includes roads, rail lines, airports, ports, waterways, pipelines, transit systems, trails, paths, sidewalks and more. MnDOT and local, regional, state, tribal and federal government partners, along with private sector and non-profit partners keep the system running.

Table 1: Snapshot of Minnesota's Transportation System, January 2017

Characteristics	Current Status
All Streets, Roads & Highways	142,914 centerline miles
State Trunk Highways	11,814 miles
County Roads	44,821 miles
City Streets	22,414 miles
Township Roads	58,686 miles
Other Public Roads	4,405 miles
Sidewalk Miles	620 miles along state highways, plus thousands more along local roadways
National and State Designated Bicycle Routes	1,133 miles (Mississippi River Trail and North Star Route)
Designated Trails	More than 4,000 miles
Bicycle Sharing	One provider (Nice Ride MN) operating in Minneapolis and St. Paul; other informal systems in communities statewide
Twin Cities Transit (seven-county area)	212 bus routes (110 local routes, 102 express routes), two light rail transit corridors, one highway bus rapid transit route, one arterial bus rapid transit route and dial-a-ride service
Greater Minnesota Transit	76 of 80 (non-Twin Cities) counties with county-wide transit service, four counties with municipal service only, seven fixed-route systems and seven small urban systems
Intercity Bus	87 destinations served in the state and connections to every metropolitan area in the Midwest
Freight Rail	4,485 track miles served by 21 railroad companies
Commuter Rail (see transit section for light rail information)	Northstar commuter rail line (Big Lake to Minneapolis)
Intercity Passenger Rail	Amtrak Empire Builder (Chicago to Seattle)
Airports	388 airports in Minnesota, including 135 public airports, nine with commercial airline service
Great Lakes Ports	Four ports on Lake Superior
River Ports	Four public ports on 219 miles of the Mississippi River system (including the Minnesota and St. Croix rivers)
Pipelines	9,347 miles
Carsharing	Two systems (HOURCAR and Zipcar) operating in Minneapolis, St. Paul, Winona and Mankato
Ride-hailing	Many local taxi companies, along with emerging ride-hailing companies such as Lyft and Uber



PARTNERS

The key partners that will help implement this plan include:

Local partners: Agencies and organizations responsible for transportation systems and decisions at the local level.

Regional partners: Metropolitan planning organizations and regional development organizations.

State partners: All state agencies and organizations in Minnesota with a statewide mission and transportation interests or impacts.

Tribal partners: The 12 sovereign nations of American Indian peoples with jurisdiction over lands and resources in the state.

Federal partners: Agencies that provide funding and have policies that impact the delivery of the transportation system.

Private sector and non-profit partners: Transportation advocates, developers, chambers of commerce, construction companies, consultants and private industry.

In addition to the partners identified above, many boards, committees and councils contribute to transportation decisions. State and federal legislators, community leaders and the general public are also active participants in the state's transportation system.

OBJECTIVES, PERFORMANCE MEASURES & STRATEGIES

This plan focuses on five objectives. Each objective includes related strategies for MnDOT and transportation partners. Taken together, the objectives and strategies support the Minnesota GO Vision and help address the changes affecting Minnesota.

All transportation partners are engaged in many different activities that help to realize the vision on a daily basis. The purpose of this plan is not to list every possible activity, but to focus on key areas where additional emphasis is needed.

The objectives and related strategies are listed in no particular order. All are critical focus areas for the upcoming years.



DEFINITIONS

- **Objective statement** – a few key phrases that describe the goal that MnDOT and transportation partners are working toward
- **Performance measures** – existing performance measures that track progress toward the objective
- **Strategies** – a list of actions to help MnDOT and transportation partners achieve the objective. The bold text of each indicates the strategy statement and is followed by additional description and examples.



OPEN DECISION MAKING

Make transportation system decisions through processes that are inclusive, engaging and supported by data and analysis. Provide for and support coordination, collaboration and innovation. Ensure efficient and effective use of resources.

Table 2: Open Decision-Making Performance Measures

Measure	Target
Annual percentage of respondents that agree with the following statements: <ul style="list-style-type: none"> • “MnDOT can be relied upon to deliver Minnesota’s transportation system.” • “MnDOT considers customer concerns when developing transportation plans.” • “MnDOT acts in a fiscally responsible manner.” 	80% - for each statement
Annual percentage of survey respondents indicating they are confident in MnDOT: <ul style="list-style-type: none"> • Building roads and bridges • Maintaining roads and bridges • Communicating accurate info to MN citizens about their transportation plans and projects • Providing alternative transportation options for the future 	
Annual percentage of minorities and women in the highway-heavy construction workforce	No target
Annual percentage of minorities and women in MnDOT’s workforce	No target
Annual percentage of MnDOT construction projects let in the year scheduled (defined as projects in the first year of the Statewide Transportation Improvement Program let in that year)	90%



What are the strategies?

- Engage with users and those otherwise affected by the system throughout all transportation processes.
- Communicate project-level information and impacts to the public and partners in a timely manner.
- Educate the public and partners on system-wide and modal questions in addition to project-specific transportation information.
- Improve early coordination in planning, project-selection and scoping to more effectively and efficiently use resources and maximize benefits.
- Develop and support a diverse workforce within the transportation sector.
- Use performance measurement to inform decision-making and show progress toward national, statewide, regional and local goals.
- Ensure key transportation data is kept up-to-date, usable and easily accessible to transportation partners and the public.
- Use research to inform decision-making and foster innovation within the transportation sector.

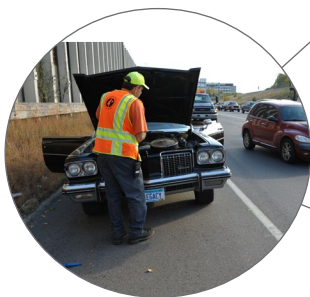


TRANSPORTATION SAFETY

Safeguard transportation users and 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.

Table 3: Transportation Safety Performance Measures

Measure	Target
Total number of fatalities and serious injuries on Minnesota roadways resulting from crashes involving a motor vehicle each year	300 fatalities and 850 serious injuries by 2020
Total number of aviation fatalities and incidents each year	No target
Total number of rail derailments each year	No target
Annual percentage of at-grade rail crossings meeting grade-separation guidelines	No target
Total percentage of the Allied Radio Matrix for Emergency Response buildout complete	100%



What are the strategies?

- Increase participation in and continue support for the collaborative safety initiative Toward Zero Deaths.
- Explore new opportunities to improve safety for all modes of transportation.
- Develop and share critical safety information and support educational initiatives to reduce unsafe actions by all transportation users and operators.
- Emphasize enforcement techniques with proven safety benefits.
- Plan, design, build, operate and maintain transportation infrastructure and facilities to improve the safety of all users and the communities they travel through.
- Implement strategic engineering and technology solutions to improve transportation safety.
- Work with emergency medical and trauma services to reduce response time and increase survivability.
- Collaborate with local, regional, state and federal planning efforts to ensure efficient and coordinated response to special, emergency and disaster events.
- Enhance and maintain emergency communications infrastructure across the state.



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.

Table 4: Critical Connections Performance Measures

Measure	Target
Placeholder for system reliability and delay measures for the Interstate and National Highway System	To be determined
Average annual aircraft delay compared to scheduled departure time at MSP	No target
System airports with adequate approaches appropriate for their airport classification	100%
Annual transit on-time performance within the Twin Cities and Greater Minnesota	No target
Percentage of state-owned sidewalk miles substantially compliant with ADA standards	100%
Annual number of available seat miles offered on scheduled service nonstop flights from MSP and Greater Minnesota airports	No target
Population within 30 minutes surface travel time to a paved and lighted runway	No target
Percentage of state's communities whose span of transit service meets the minimum guidelines each year	90%
Average annual number of jobs accessible within a 30-minute drive during AM peak	No target
Average annual number of jobs accessible within a 30-minute transit commute during AM peak	No target



What are the strategies?

- Define priority networks for all modes based on connectivity and access to destinations, and integrate the networks into decision-making.
- Identify and prioritize multimodal solutions that have a high return on investment.
- Identify and prioritize low-cost improvements to accelerate social, economic and environmental benefits when large-scale solutions cannot be implemented in the foreseeable future.
- Support and develop multimodal connections that provide equitable access to goods, services, opportunities and destinations.
- Provide greater access to destinations and more efficient, affordable and reliable movement of goods and people throughout the Twin Cities metropolitan area.
- Improve freight operations and intermodal connections for better access to the transportation system.
- Provide transportation options that improve multimodal connections between workers and jobs.
- Develop and improve multimodal transportation options within and between cities and regions.
- Develop and improve connections between modes of transportation.

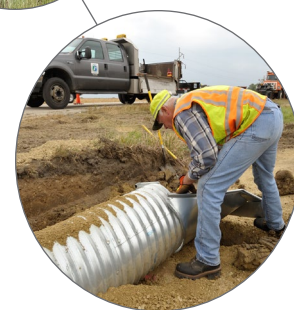
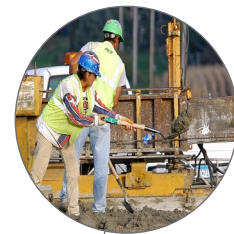


SYSTEM STEWARDSHIP

Strategically build, manage, maintain and operate all transportation assets. Rely on system data and analysis, performance measures and targets, agency and partners' needs, and public expectations to inform decisions. Use technology and innovation to get the most out of investments and maintain system performance. Increase the resiliency of the transportation system and adapt to changing needs.

Table 5: System Stewardship Performance Measures

Measure	Target
Annual percentage of state highway miles with poor ride quality in the travel lane	Interstate: 2% National Highway System (NHS): 4% Non-NHS: 10%
Annual percentage of state bridges in poor condition as a percent of total bridge deck area	NHS: 2% Non-NHS: 8%
Placeholder for transit vehicle condition measure	To be determined
Annual percentage of runway and parallel taxiway pavement in poor condition at all paved airports	4%
Annual percentage of routine bridge inspections completed on time	100%
Annual percentage of routine culvert inspections completed on time	80%
Annual percentage of bridges with posted weight restrictions	To be determined



What are the strategies?

- Give asset management priority to infrastructure on identified priority networks.
- Maximize the useful life of transportation assets while considering system performance, costs and impacts to the state's economy, environment and quality of life.
- Incorporate asset management principles in capital, maintenance and operations decisions.
- Better align ownership and operations of Minnesota's transportation assets with statewide, regional and local priorities.
- Better coordinate the management of all assets connected to the transportation system.
- Proactively identify risks to the transportation system and surrounding communities to prioritize mitigation and response activities.
- Support regional approaches to mitigating identified risks to the transportation system and surrounding communities.
- Use recovery efforts to reduce system vulnerabilities.
- Providing ongoing training to transportation professionals.
- Conduct regular inspections of transportation infrastructure, facilities and equipment to monitor conditions and identify risks.



HEALTHY COMMUNITIES

Make fiscally-responsible transportation system decisions that respect and complement the natural, cultural, social and economic context. Integrate land use and transportation to leverage public and private investments.

Table 6: Healthy Communities Performance Measures

Measure	Target
Annual greenhouse gas emissions from the transportation sector	29.5 million tons CO ₂ e by 2025
Number of criteria pollutants below National Ambient Air Quality Standards each year	All criteria pollutants below threshold
Total percentage of acres planted with native seeds on MnDOT projects	To be determined
Total percentage of light fixtures using LED luminaries on MnDOT roadways	100%
Annual percentage of MnDOT omnibus survey respondents perceiving safe environments for bicycling / walking	No target
Annual total road salt used for snow and ice control on the state highway system compared to modeled optimal salt use	Less than 10% more than modeled optimal quantity



What are the strategies?

- Plan, design, develop and maintain transportation infrastructure and facilities in a way that reflects and is informed by the surrounding context.
- Give higher priority to transportation improvements in areas with complementary existing or planned land uses.
- Coordinate land use and transportation planning within communities to ensure consistency, maximize benefits and limit long-term costs.
- Use a complete streets approach to assess trade-offs to better serve both users and those affected by the transportation system.
- Support and implement approaches that preserve Minnesota’s natural resources, avoid causing environmental harm and improve environmental quality.
- Make transportation decisions that minimize and reduce total greenhouse gas emissions.
- Support economic vitality and create and maintain jobs through transportation infrastructure investments.
- Develop a transportation system that is respectful of cultural resources and maintains those resources for generations to come.
- Identify and give priority to infrastructure improvements, services and education that increase the number of people who bicycle, walk and take transit.

MnDOT WORK PLAN 2017-2020

MnDOT will do the activities listed below before the Statewide Multimodal Transportation Plan is updated again in four 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.



ENGAGEMENT, EDUCATION & COMMUNICATIONS

- Increase the transparency of MnDOT's project selection processes
- Provide more continuous engagement with partners and the public
- Develop and update new, more inclusive public engagement resources
- Develop and improve educational materials to answer key questions of interest to Minnesotans
- Develop and execute safety education campaigns



ADVANCING EQUITY

- Study how transportation affects equity and identify transportation strategies and approaches that will meaningfully reduce disparities
- Pilot tools and strategies to better incorporate equity into project-level decision-making



ASSET MANAGEMENT

- Expand and improve asset management planning
- Identify vulnerabilities and assess risks to the transportation system



LAND USE & TRANSPORTATION

- Develop tools and resources to support transportation decisions that reflect the surrounding context
- Update MnDOT technical guidance to incorporate new practices and policy direction



PLANNING

- Review existing and potential new National Highway System intermodal connectors
- Refine the methodology used for calculating return on investment
- Maintain the MnDOT Trend Analysis Library.
- Study and work with transportation partners to prepare for connected and autonomous vehicles



CLIMATE CHANGE

- Work with transportation partners to identify and advance statewide strategies for reducing greenhouse gas emissions
- Study and implement new and improved practices to reduce negative environmental impacts from state highway maintenance and operations



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