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# EXECUTIVE SUMMARY

## Overview

Minnesota's 12,000-mile state highway system plays a critical role in supporting the state's economic vitality and quality of life. Economic vitality, as well as quality of life, depends upon a strong, well-connected transportation network. To compete economically and to position Minnesota for the future, MnDOT needs to maintain the state highway system. The size and the age of Minnesota's transportation system demonstrate the scope of the state highway system's investment need:

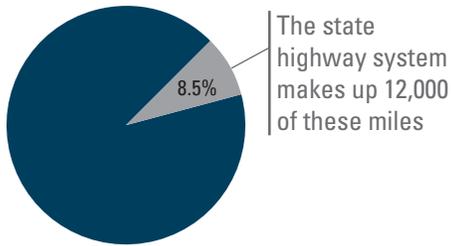
- 50 percent of state highway pavements are more than 50 years old.
- 35 percent of state highway bridges are more than 50 years old.
- Compared to other states, Minnesota ranks in the bottom half for Interstate pavement condition (38<sup>th</sup> out of 50).
- Minnesota ranks 9<sup>th</sup> nationally for bridge condition on state highways.

The Minnesota Department of Transportation (MnDOT) is directly charged with constructing, operating, maintaining, and managing this system, which is 74 percent of the State's capital assets. The **Minnesota 20-Year State Highway Investment Plan (MnSHIP)** is MnDOT's vehicle for deciding and communicating capital investment priorities for the system for the next 20 years. MnSHIP is a fiscally constrained plan, meaning its planned expenditures must align with expected revenues, which total \$18 billion. Meanwhile, the projected transportation needs on the state highway system total \$30 billion.

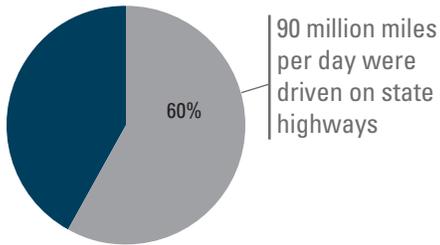
MnDOT must account for many factors when setting priorities, including federal and state law, system conditions, and public input. The result is a set of investment priorities that vary over the next 20 years. MnDOT's priorities for the next 10 years balance preservation of existing infrastructure with investments in safety, new connections for multiple modes of transportation, and other projects that advance economic development and quality of life objectives.

However, investments in the second 10 years focus almost exclusively on preserving existing infrastructure. Despite this focus, the number of roads and bridges in poor condition will more than double and perhaps even triple within 20 years. Given the projected \$12 billion funding gap, there will be many unfunded priorities within the 20-year horizon.

There are more than 141,000 miles of roadways in Minnesota



In 2010, more than 155 million miles per day were driven on Minnesota's roads



## Minnesota's State Highway System

Minnesota's state highway system includes the **National Highway System (NHS)** as well as other important roads. The NHS includes Interstates, most U.S. highways, and other principal arterials (see **Figure ES-1**). Like most transportation systems, state highways are aging and require a significant level of investment to simply maintain existing infrastructure.

The importance of the state highway system is demonstrated by its use. It comprises just 8.5 percent of Minnesota's total roadway miles, yet carries almost 60 percent of the miles traveled as well as the majority of the freight being moved on Minnesota's roads. It connects people to school, work, healthcare, and recreational activities. It is the system businesses rely on to move their goods to store shelves; raw materials to manufacturers; and agricultural products to processors and markets throughout the state, country, and world. The multimodal network serves many transportation users—passenger vehicles, freight carriers, transit providers, bicyclists and pedestrians—and connects them to other transportation options and networks.





## The Purpose of MnSHIP

The **Minnesota 20-Year State Highway Investment Plan (MnSHIP)** is MnDOT's vehicle for deciding and communicating capital investment priorities for the system for the next 20 years. MnSHIP is a fiscally constrained plan and is updated every four years to respond to changing conditions and assumptions. MnSHIP details how MnDOT will use available resources efficiently and effectively in addressing agency objectives.

Notable changes and improvements in MnSHIP relative to the last state highway investment plan update—completed in 2009—include:

- Evolving revenue distribution and programming processes to respond to a new federal transportation bill that focuses federal money on the National Highway System and establishes performance requirements to make progress in seven national goal areas;
- Identifying planned projects for three years beyond commitments in the four-year **State Transportation Improvement Program (STIP)** to respond to a 2010 state law as well as to improve coordination with local units of government;
- Classifying projects into 10 investment categories to better track and analyze the impact of investments on performance targets and other goals;
- Pursuing a more robust public input process to influence planning decisions—an approach to decision-making that reflects the feedback MnDOT received during the multi-year Minnesota GO outreach process;
- Integrating risk-based planning as a means to better understand the trade-offs associated with various funding levels; and
- Identifying two new investment categories, Bicycle Infrastructure and Accessible Pedestrian Infrastructure, to better account for investments that support non-motorized modes of travel.



## Key Factors and Assumptions

MnDOT accounted for several key factors in setting investment priorities for the state highway system.

### Key Factor: Minnesota GO Policy Direction for MnSHIP

MnSHIP is part of a multi-year planning and outreach process—and connects policy to improvements made on the state highway system. The process began with the [Minnesota GO 50-Year Statewide Vision](#)<sup>1</sup>, adopted in 2011, which established eight guiding principles for a multimodal transportation system that maximizes the health of people, the environment, and the economy.

### Minnesota GO Guiding Principles

**Leverage public investments to achieve multiple purposes.** The transportation system should support other public purposes, such as environmental stewardship, economic competitiveness, public health, and energy independence.

**Ensure accessibility.** The transportation system must be accessible and safe for users of all abilities and incomes and provide access to key resources and amenities.

**Build to a maintainable scale.** Consider and minimize long-term obligations – do not overbuild; reflect and respect the surrounding physical and social context.

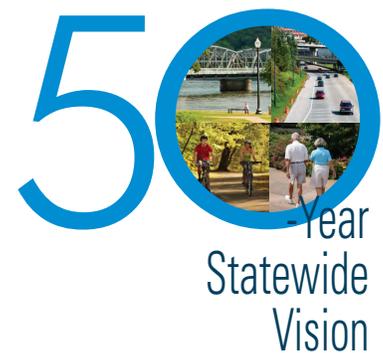
**Ensure regional connections.** Key regional centers need to be connected to each other through multiple modes of transportation.

**Integrate safety.** Systematically and holistically improve safety for all forms of transportation; be proactive, innovative, and strategic in creating safe options.

**Emphasize reliable and predictable options.** The reliability of the system and predictability of travel time are frequently as important as or more important than speed.

**Strategically fix the system.** Some parts of the system may need to be reduced while other parts are enhanced or expanded to meet changing demand.

**Use partnerships.** Coordinate across sectors and jurisdictions to make transportation projects and services more efficient.



<sup>1</sup> <http://www.dot.state.mn.us/minnesotago/index.html>

The [Statewide Multimodal Transportation Plan](#)<sup>2</sup>, adopted in 2012, identified objectives and strategies to make progress toward the **Minnesota GO Vision**. The plan focused on multimodal solutions that ensure a high return-on-investment.

### Statewide Multimodal Transportation Plan Objectives

**Accountability, transparency, and communication.** Make transportation system decisions through processes that are open and supported by data and analysis; provide for and support coordination, collaboration, and innovation; and ensure efficient and effective use of resources.

**Traveler safety.** Safeguard travelers, transportation facilities, and services; apply proven strategies to reduce fatalities and serious injuries for all modes of travel.

**Transportation in context.** Make fiscally responsible decisions that respect and complement the context of place; integrate land uses and transportation systems.

**Critical connections.** Identify essential transportation connections; maintain and improve these connections; consider new connections.

**Asset management.** Strategically maintain and operate transportation assets; rely on system data, partners' needs, and public expectations to inform decisions; put technology and innovation to work to improve efficiency and performance; and recognize that the system should change over time.

**System security.** Reduce system vulnerability and ensure system redundancy to meet essential travel needs during emergencies.

#### Key Factor: New Federal and State Requirements

At both the federal and state levels, evolving transportation law establishes policy guidance and performance requirements for the state highway system.

##### *General Policy Requirements*

At the federal level, the new surface transportation bill, **Moving Ahead for Progress in the 21st Century (MAP-21)**, established new requirements for federal highway programs. MAP-21 expanded the number of highways in the NHS to now include Interstates, most U.S. Highways, and other principal arterials in Minnesota, totaling about 45 percent of the state highway system. The bill establishes national goals and requires USDOT to establish performance measures for the NHS in several categories.

2 <http://www.dot.state.mn.us/minnesotago/SMTP.html>



A 2010 state law defined requirements for MnSHIP. In part, MnDOT must analyze and track the impact of recent investments, identify needs, establish priorities for projected revenue, and identify strategies to ensure the efficient use of resources.

#### *Performance Requirements*

MAP-21 requires states to report progress in achieving performance targets for each of the yet-to-be established measures. As a leader in performance-based planning, MnDOT is well positioned to meet this requirement. Under USDOT's current schedule for MAP-21 implementation, draft national performance measures are to be proposed in stages starting in late 2013. A single effective date for all MAP-21 measures is expected in Spring 2015. MnDOT made assumptions about pending performance criteria based on available information, but many requirements will not be integrated into MnSHIP until the next update. A performance measure assessing freight movement on Interstates is one example of a yet-to-be-defined requirement.

At the state level, Minnesota adopted the **Government Accounting Standards Board Statement 34 (GASB 34)** financial reporting requirements for the value and condition of its major infrastructure assets in 2001. MnDOT set performance thresholds for highway infrastructure, such as the condition of pavements and bridges. This infrastructure must be at or above GASB 34 thresholds or resulting financial actions could negatively affect Minnesota's future bond rating, which could negatively impact state and local units of government by increasing the cost of borrowing money. In addition, system conditions falling below GASB 34 thresholds would be indicative of other adverse outcomes occurring system-wide, such as pavement failures requiring expensive fixes, more bridges with weight restrictions, and increased travel costs for all users.

#### **Key Factor: Construction Costs and Slow Revenue Growth**

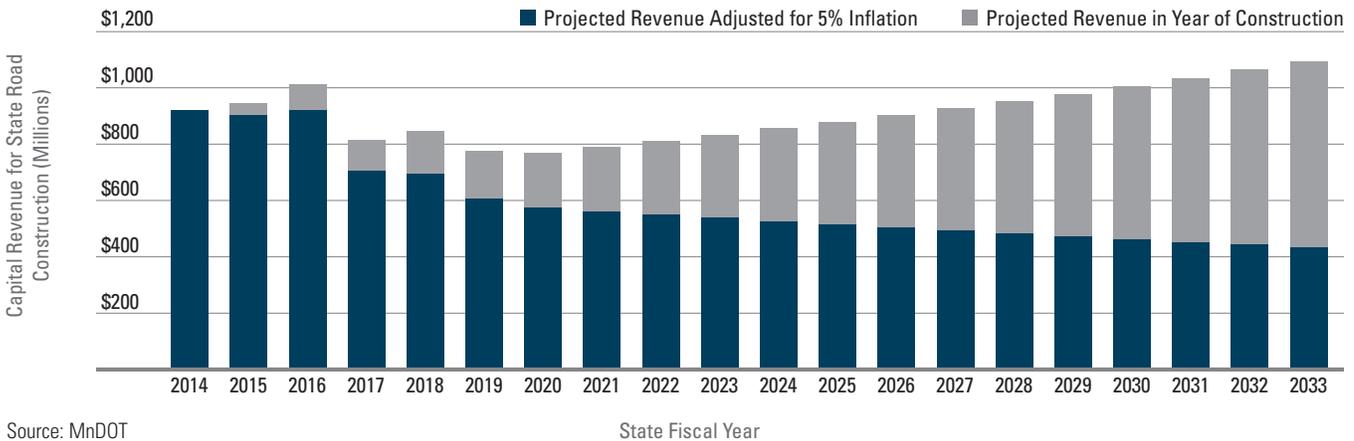
MnDOT estimates that it will have approximately \$18 billion in federal and state revenues to invest toward capital highway improvements over the next 20 years. This amount will lose buying power over time as unit construction costs (e.g. fuel, raw materials, equipment, and labor) continue to grow at an annual rate of approximately five percent, exceeding the annual revenue growth rate of approximately two percent. **Figure ES-2** shows anticipated nominal, year of construction revenue (grey bars) and illustrates the impact of inflation on annual buying power (blue bars), demonstrating how buying power will be reduced by nearly 60 percent by 2033 given the above assumptions. MnDOT would need approximately \$4 billion to maintain today's buying power over the next 20 years.

Federal and state performance requirements have a strong influence on MnDOT's priorities for the state highway system.



Lower revenues and rising costs will result in a funding gap of approximately \$12 billion over the next 20 years.

Figure ES-2: Anticipated Construction Revenue by Year Including Adjustments for Inflation



Source: MnDOT

Trends that are contributing to slow revenue growth include the following:

- Fuel efficiency is improving for all vehicles, leading to less available revenue for highway improvements. While fewer emissions are a positive trend for the environment, motor vehicle gas tax is one of the major sources of both federal and state revenue and less revenue is available for highway improvements.
- The usage of the highway system, as measured by **vehicle miles traveled (VMT)**, peaked in 2004 and has since declined slightly. An aging population and a younger generation that is driving less suggest this trend could continue, limiting growth in gas tax revenues for state highway improvements.
- Vehicle sales tax revenues are expected to grow slowly – in the two to three percent range – over the next 20 years. While this growth is an improvement over past years, it is not enough to compensate for falling gas tax revenues.



## Transportation Needs

MnDOT's capital improvement needs span 10 categories of investment. An estimated \$30 billion is needed across all categories over the next 20 years (see **Figure ES-3**). This level of investment would ensure the state highway system meets all federal and state performance requirements and makes progress toward realizing the **Minnesota GO Vision**. Below is a brief summary of each investment category. Given \$18 billion in revenue over the same period, a funding gap exists of approximately \$12 billion.

Figure ES-3: Transportation Needs Over Next 20 Years by Investment Category

Investment Category		20-Year Outcomes Based on Aspirational Performance Targets or Other Key System Goals	20-Year Need	Total (%)
Asset Management	Pavement Condition	Meet pavement performance targets of 2% Poor condition and 70% Good condition on NHS and 3% Poor condition and 65% Good condition on non-NHS roads.	\$10.76 billion	35.6%
	Bridge Condition	Invest in state highway bridges at optimal points in their life cycles; meet performance targets of ≤2% Poor condition and ≥84% Good or Satisfactory condition on NHS bridges, ≤8% Poor and ≥80% in Good or Satisfactory condition on non-NHS bridges.	\$5.11 billion	16.9%
	Roadside Infrastructure Condition	Reduce the number of poor culverts, maintain rest areas, and meet federal standards.	\$1.71 billion	5.7%
Traveler Safety		Meet an aggressive traffic fatalities target by implementing District Safety Plans more quickly than current rate (2012), address most sustained crash rate locations, and invest \$3 million/year for Toward Zero Deaths programming.	\$1.34 billion	4.4%
Critical Connections	Twin Cities Mobility	Implement the Metropolitan Council's Transportation Policy Plan, which includes Active Traffic Management, spot mobility improvements, implement the MnPASS system vision, and strategic capacity enhancements.	\$3.90 billion	12.9%
	Interregional Corridor Mobility	Meet system performance targets by completing major improvements on three of four underperforming corridors (I-94, US 10, US 63, and MN 210).	\$810 million	2.7%
	Bicycle Infrastructure	Strategically improve the bicycle network and continue implementing bicycle accommodations as part of pavement and bridge projects.	\$540 million	1.8%
	Accessible Pedestrian Infrastructure	Install accessible pedestrian signals at all signalized intersections by 2030, bring all intersections into compliance with Americans with Disabilities Act (ADA) curb ramp standards, and fund identified priority pedestrian projects.	\$490 million	1.6%
Regional + Community Improvement Priorities (RCIP)		Partner with stakeholders to address regional and local priorities through several stand-alone projects and design add-ons, deliver projects that respond to non-performance-based needs and enhance the state's transportation network, and allocate money for statewide and district-level programs.	\$1.75 billion	5.8%
Project Support		Efficiently deliver projects through adequate consultant services, supplemental agreements, construction incentives, and right-of-way acquisition.	\$2.88 billion	9.5%
Small Programs		Continue to fund unforeseen issues and one-time specialty program needs.	\$900 million	3.0%
<b>TOTAL = \$30.19 BILLION</b>				



## Plan Development Process and Public Input

In the process of developing MnSHIP, MnDOT built on the previous Minnesota GO planning efforts and accounted for many factors, including state and federal law, MnDOT policy, current and projected conditions, risk-based planning, and stakeholder input. There were three central planning approaches that MnDOT used to develop MnSHIP:

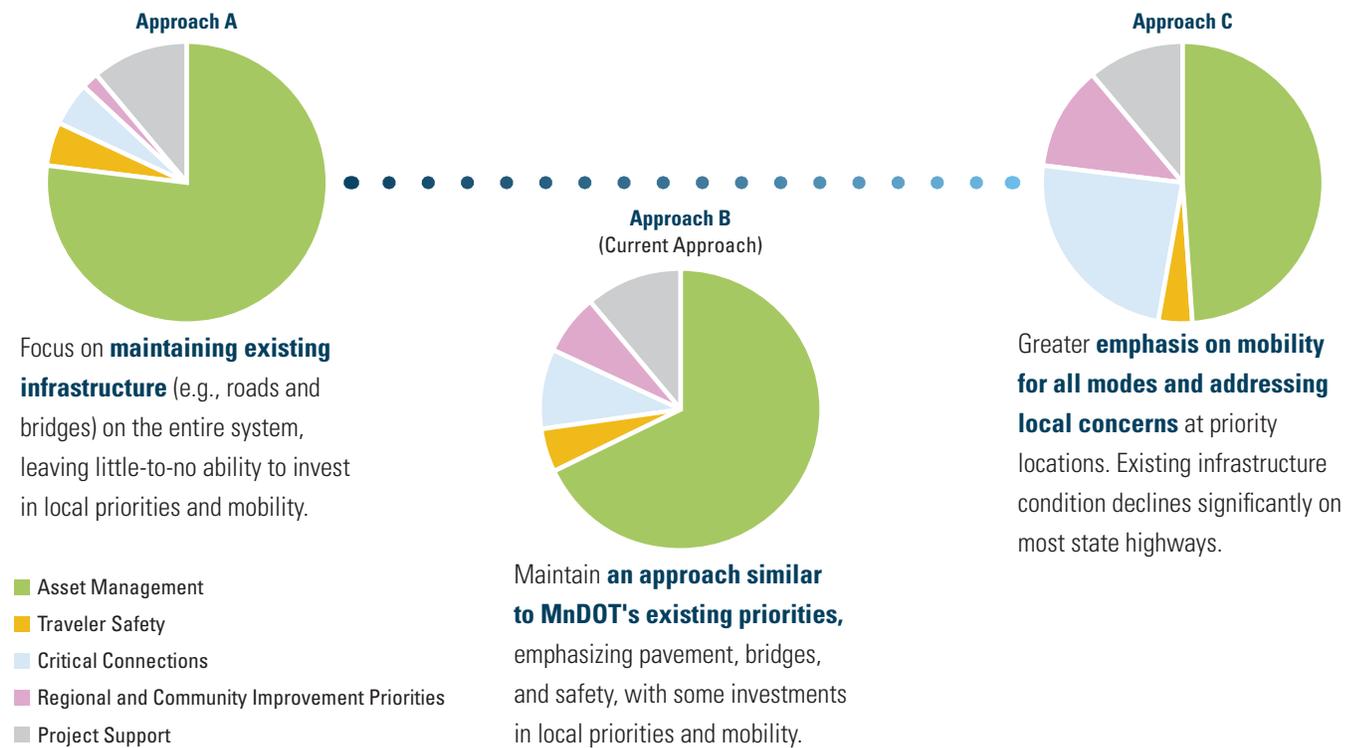
- **Performance-based planning:** MnDOT used performance measures, targets, and trends to identify its future investment needs on the state highway system and examine its ability to meet its performance goals;
- **Scenario planning:** To evaluate the performance and risk trade-offs associated with different funding levels, MnDOT developed three alternative investment approaches (Approach A, B, and C [see **Figure ES-4**]) for internal and external evaluation; and
- **Risk-based planning:** MnDOT systematically identified the likelihood and impact of different risks (defined in MnSHIP as uncertain events related to policy objectives, finance, infrastructure condition, and stakeholder input) to assess the trade-offs associated with various investment mixes.

### PUBLIC INPUT

In the fall of 2012, MnDOT engaged the public and transportation stakeholders in an innovative scenario planning and outreach process to inform the MnSHIP investment priorities. MnDOT used a variety of communication and outreach techniques to educate and receive feedback from the public, including statewide public outreach meetings, an interactive website tool, and educational webinars. In the meetings and on the online tool, stakeholders selected their preferred approach from Approaches A, B, and C and gave feedback on what they liked and disliked about the outcomes associated with each. MnDOT also established a Partnership Advisory Committee composed of representatives of **Metropolitan Planning Organizations (MPOs)**, **Regional Development Commission (RDCs)**, counties, cities, and other key stakeholders from across the state. The 30-person committee helped to steer the public outreach process and general plan development, and to ensure consistency with other plans.

Interested stakeholders were updated on participation opportunities and plan updates via web, e-mail, and social media.

Figure ES-4: Investment Approaches Developed for Scenario Planning



## 20-Year Investment Priorities Summary

MnDOT established different investment priorities for the first 10 years of MnSHIP than the second 10 years. This approach differs from previous updates, which adopted a single set of priorities for the entire 20-year period. The two primary reasons for this change are 1) greater certainty associated with the assumptions for the first 10 years and 2) the need to respond to and manage risk related to federal and state performance requirements. The result is a diversified approach that makes progress in all investment areas in the early years and focuses on maintaining existing infrastructure in the later years.

### Years 1-10 (2014-2023): Making Progress in All Investment Areas

The first 10 years represents a direction similar to the approach taken in the past four years, which addressed high-priority improvements in all investment categories (see **Figure ES-5**). This approach reflects stakeholder input and adequately manages key capital investment risks in the near-term. MnDOT will honor its commitment to building the projects listed in the 2014-2017 STIP. The projects anticipated for 2018-2023 represent a general plan of improvements, which are not yet commitments and are subject to change. If a major capacity-adding project is not listed in the first 10 years, MnDOT does not anticipate having the budget available to complete the project. In these

Figure ES-5: Investment Priorities, Years 1-10

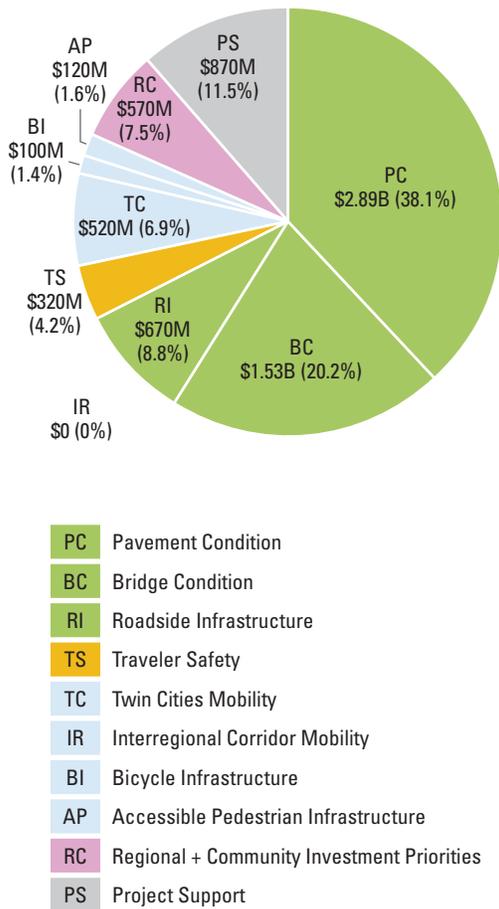
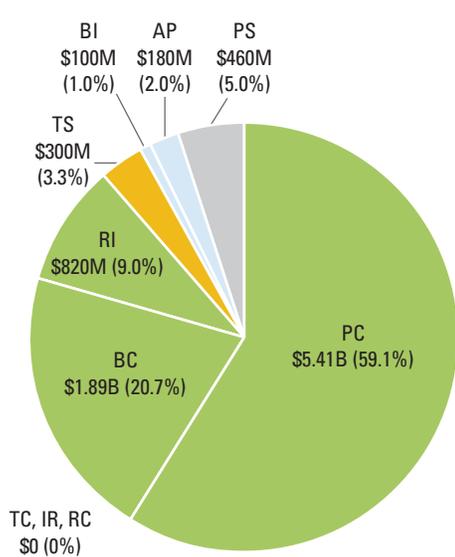


Figure ES-6: Investment Priorities, Years 11-20



instances, MnDOT could further study the feasibility and scope of the project. However, the **Federal Highway Administration (FHWA)** will not sign environmental documents for projects that do not have at least one future post-**National Environmental Policy Act (NEPA)** phase (right-of-way purchase or construction) listed in the STIP.

*Biggest Strengths*

This approach makes progress toward goals in all investment areas, excluding Project Support.

- **Asset Management:** Conditions of roads, bridges, and roadside infrastructure remain stable on NHS routes (45 percent of the system). Known and anticipated federal and state performance requirements are met.
- **Traveler Safety:** Continuation of focus on lower cost, proactive treatments aimed at preventing fatalities and serious injuries.
- **Critical Connections:** Pedestrians and bicyclists accommodated at priority locations. A few investments to improve vehicular system capacity and economic vitality are implemented.
- **Regional and Community Improvement Priorities:** Address local concerns through partnerships, design add-ons, and a few stand-alone projects to support economic competitiveness and quality of life.

*Biggest Drawbacks*

This approach offers a limited response to growing infrastructure and multimodal needs.

- **Asset Management:** Conditions of roads, bridges, and roadside infrastructure decline on non-NHS routes (55 percent of the system).
- **Traveler Safety:** Only a select number of locations with a sustained crash history are addressed.
- **Critical Connections:** Number and scope of system capacity improvements decrease.
- **Regional and Community Improvement Priorities:** Number and scope of projects to address local concerns do not match stakeholder expectations as expressed during outreach.

## Years 11-20 (2024-33): Asset Management Focus

The approach for the second 10 years reflects a narrower set of priorities and completes a gradual shift toward a primary focus on the preservation of existing assets (see **Figure ES-6**). This approach is necessary to respond to and manage risks related to federal and state performance and finance requirements, and to ensure that MnDOT's asset conditions do not negatively affect Minnesota's bond rating. Specific projects are not listed in this period, but not being listed does not preclude a project being considered or programmed in the future as priorities change or more revenue becomes available.

### *Biggest Strengths*

The investment mix for Years 11-20 places assets at GASB 34 condition thresholds and is assumed to meet MAP-21 targets.

- **Asset Management:** Federal and state performance and finance requirements are met.
- **Traveler Safety:** Continuation of focus on lower cost, proactive treatments aimed at preventing fatalities and serious injuries.
- **Critical Connections:** Required pedestrian and bicyclist accommodations implemented concurrently with pavement and bridge projects to best leverage funds and address legal requirements.
- **Regional and Community Improvement Priorities:** Address those concerns which can be handled through project timing of asset management projects.

### *Biggest Drawbacks*

MnDOT will be unable to make appreciable progress toward non-asset management goals. Assets will continue to decline faster than they can be repaired or replaced. The investment mix is not well-aligned with the public's preferences.

- **Asset Management:** Conditions of existing roads, bridges, and roadside infrastructure worsen on NHS routes, leading to increased pressure on maintenance activities to keep system infrastructure in a safe and operable condition.
- **Traveler Safety:** Annual fatalities and serious injuries are likely to decline but at a slower rate. Unable to respond to locations with a sustained crash history.
- **Critical Connections:** No capacity is added across all modes.
- **Regional and Community Improvement Priorities:** No flexibility to partner or address specific local concerns and opportunities.



During the second 10 years, MnDOT will focus investments primarily on existing roads and bridges.

## Investments and Outcomes by Investment Category (2014-2033)

Figure ES-7 summarizes the level of investment and associated outcomes in each of the 10 investment categories for both time periods.

Figure ES-7: Investments and Outcomes by Investment Category for the Next 20 Years

Investment Category	Years 1-10 (2014-2023) Investment	Anticipated Outcome in 2023	Years 11-20 (2024-2033) Investment	Anticipated Outcome in 2033	Total 20-Year Investment	
Asset Management	Pavement Condition	\$2.89 billion	NHS conditions remain stable; 2% of Interstates and about 4% of other NHS routes are in Poor condition. Non-NHS condition worsens from 7-8% today to 11-12% Poor.	\$5.41 billion	Interstates are at 2% Poor; other NHS and non-NHS roads are at 11-13% Poor, which is 2-3 times worse relative to today. Negative impact on freight movement, vehicles, and bicycles.	\$8.30 billion
	Bridge Condition	\$1.53 billion	NHS bridge conditions remain stable at 2-3% Poor. Non-NHS conditions worsen from 2% today to 4-6% Poor.	\$1.89 billion	NHS bridges decline to 6-8% Poor and Non-NHS bridges decline to 8-10% Poor. Some weight restrictions and closures impact freight movement.	\$3.42 billion
	Roadside Infrastructure Condition	\$670 million	The condition of more culverts, signals, signs, lighting, rest areas, and retaining walls are expected to deteriorate.	\$820 million	The condition of more culverts, signals, signs, lighting, and retaining walls is expected to deteriorate further. Several rest areas likely to close.	\$1.49 billion
Traveler Safety		\$320 million	Annual fatalities likely to continue decline. Investments emphasize lower cost, high benefit treatments. Address several locations with a crash history. Continue to partner in TZD initiative.	\$300 million	Annual fatalities likely to continue decline, but at a slower rate. Investments focus almost exclusively on lower cost, high-benefit treatments. Continue to partner in TZD initiative.	\$620 million
Critical Connections	Twin Cities Mobility	\$520 million	Congestion and reliability issues likely to worsen. Focus on Active Traffic Management, spot mobility improvements, implementation of MnPASS system, and strategic capacity improvements.	\$0	Congestion and reliability issues worsen. No ability to address spot or operational issues.	\$520 million
	Interregional Corridor Mobility	\$0	IRC system performance target met, although several corridors see decreasing average speeds.	\$0	IRC system performance target not met due to decreasing average speeds on four corridors.	\$0

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Investment Category		Years 1-10 (2014-2023) Investment	Anticipated Outcome in 2023	Years 11-20 (2024-2033) Investment	Anticipated Outcome in 2033	Total 20-Year Investment
Critical Connections (cont.)	Bicycle Infrastructure	\$100 million	Bridge and pavement projects accommodate bicyclists as appropriate. Stand-alone projects are focused at high-priority locations.	\$100 million	Investments to accommodate bicycles are concurrent with pavement and bridge projects only. No stand-alone bicycle improvements are made.	\$200 million
	Accessible Pedestrian Infrastructure	\$120 million	Investments to accommodate pedestrians are generally concurrent with pavement and bridge projects. Most curb ramps and signalized intersections are maintained to ADA standards.	\$180 million	Investments to accommodate pedestrians are generally concurrent with pavement and bridge projects and focus investment to meet ADA requirements.	\$310 million
Regional + Community Improvement Priorities		\$570 million	Address economic vitality and quality of life through partnerships, design add-ons, and a few stand-alone projects each year.	\$0	MnDOT districts have little-to-no ability to address local concerns, partner, add capacity, or spur economic development.	\$570 million
Project Support		\$870 million	Invest the amount necessary to deliver projects in the other categories. Expenditures are consistent with recent averages but expected to decrease by 2023.	\$460 million	Invest the amount necessary to deliver projects in the other categories. Expenditures decline with a shift toward an asset-focused program.	\$1.33 billion
Small Programs		\$370 million	Maintain flexibility to respond to unforeseen issues, one-time needs, or changes in policy/funding.	\$530 million	Maintain flexibility to respond to unforeseen issues, one-time needs, or changes in policy/funding.	\$900 million
<b>TOTALS</b>		<b>\$8 billion</b>		<b>\$10 billion</b>		<b>\$18 billion</b>

## Implementing MnSHIP

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To implement the plan, MnDOT will face many difficult decisions given the constrained funding. MnDOT will pursue targeted actions and strategies in a cost-effective manner and will seek to leverage available revenues to achieve multiple purposes. These strategies will help MnDOT manage investment risks and ensure projects provide a high return on investment.

### EVOLVE THE CONNECTION BETWEEN PLANNING, PROGRAMMING, AND PROJECT SELECTION

For many years, MnDOT has allocated most revenue to its eight districts to make progress toward performance targets and key objectives and to address district-specific risks. With the passage of MAP-21, federal policy and performance requirements direct the majority of federal funds to the NHS. Continuing to allocate all revenue to the districts may not meet statewide NHS targets in an optimal way. In addition, MnDOT must manage the risk that deteriorating state highway assets could negatively affect Minnesota's bond rating. MnDOT developed the **Statewide Performance Program (SPP)** and **District Risk Management Program (DRMP)** to respond to these changes.

The SPP focuses on federal performance requirements identified in MAP-21, which require MnDOT to make progress toward pavement, bridge, safety, and congestion performance targets. Failure to do so results in the loss of some federal funding flexibility. MnDOT's functional and district offices work collaboratively to select SPP projects, which primarily include rehabilitation and replacement fixes for existing pavement, bridges, and roadside infrastructure on NHS roads. The SPP also funds select projects that improve safety and mobility.

The DRMP focuses on non-NHS highways and addresses unique conditions at the district level. The DRMP allocates funding to MnDOT districts, which identify and prioritize projects under this program. However, project selections are evaluated statewide through a collaborative process to ensure that each district is balancing district-level risks while making progress toward statewide goals. DRMP projects focus on pavement, bridge, roadside infrastructure on low-volume roads, and fund the majority of safety and mobility improvements.

As with the previous programming process, project selection in both programs (SPP and DRMP) will continue to require coordination with local and regional units of government and the eight **Area Transportation Partnerships (ATPs)** as well as outreach and information sharing with other stakeholders and the general public.

## OPTIMIZE AVAILABLE RESOURCES IN EACH INVESTMENT CATEGORY

MnDOT has identified strategies that help make progress toward performance targets and key objectives in the 10 investment categories. The strategies were identified from several sources, including policy plans such as the **Statewide Multimodal Transportation Plan**, supporting documents such as the **Strategic Highway Safety Plan**, or as a part of the development of MnSHIP. These strategies apply only to improvements on the state highway network.

### Examples

**Pavement Condition.** Design and schedule fixes to align with a roadway's life-cycle needs whenever possible.

**Traveler Safety.** Pursue system-wide, cost-effective safety investments on the state highway system that address fatal and serious injury crashes.

## Moving Forward

Each MnSHIP update is a snapshot in time and responds to changes in policy and plan assumptions. As with the 2009 MnSHIP update, maintaining the existing condition of today's infrastructure requires significant investment. Even greater investment in all categories is necessary to meet goals and objectives consistent with the **Minnesota GO Vision**. Given the projected \$12 billion funding gap, there will be many unfunded priorities within the next 20 years.

## SOURCES OF REVENUE

New revenue for state highway improvements can come from one-time, temporary, or permanent sources. An example of a one-time source is a solicitation from the Federal Highway Administration for projects that meet certain criteria. Issuing trunk highway bonds is an example of a common source of a temporary increase, but bonds need to be repaid with interest. While bonding is a key financing tool to expedite the delivery of projects, there are practical limits on debt. In the absence of new revenue, MnDOT will approach its current policy limit of 20 percent of annual state revenues going toward debt repayment in the next 10 years. An example of a permanent revenue increase is raising the state motor vehicle fuel tax.

## PRIORITIES FOR ADDITIONAL REVENUE

The **Transportation Finance Advisory Committee (TFAC)** was established by Governor Mark Dayton in 2012 to analyze potential revenue sources and non-traditional approaches to transportation funding and finance. The committee recommended pursuing a revenue increase that supports an

MnDOT will implement new and proven strategies in each investment category that optimize resources while making progress toward its goals and objectives.

## Chapter 6 Moving Forward

For more information on TFAC and its work, please visit <http://www.dot.state.mn.us/tfac>.

economically competitive, world-class transportation system. For capital improvements on the state highway system, this means closing the \$12 billion funding gap. Consistent with TFAC recommendations, **Appendix I: Illustrative List of Unmet Needs** contains a list of the types of projects that could be supported if the \$12 billion funding gap were closed. While this list is illustrative and totals less than \$12 billion, it demonstrates that there are unmet needs in all investment categories, including existing infrastructure, new connections for all modes, and investments to improve economic vitality.

**Corridors of Commerce** is a new Minnesota program, established by the Legislature in 2013, that targets transportation routes identified as vital links for regional and statewide economic growth. The Legislature authorized \$300 million in trunk highway bonds focused on statewide expansion and completion projects determined from objective criteria and return on investment analysis, among other factors. In the absence of any new, non-bond revenue, the bonds would have to be repaid, with interest, from the \$18 billion in revenue available for MnSHIP. MnDOT will communicate additional information over the coming months and anticipates completing initial project selection by winter 2013.

## POLICY-ORIENTED STRATEGIES TO STRETCH PROJECTED REVENUE

In the absence of or in addition to new revenue, MnDOT will pursue a mix of internally and externally oriented strategies that would stretch existing revenue to accomplish additional priorities beyond those identified in the plan. In some instances, MnDOT could not or would not pursue a strategy without significant collaboration with other transportation stakeholders. Examples would include:

- Adjusting performance expectations where possible.
- Continuing to employ performance-based designs.
- Reporting life-cycle cost of highway system improvements.
- Focusing one-time additional funding on highest risks.
- Reevaluating the jurisdictional alignment of the state highway system
- Initiating a review of GASB 34 thresholds.
- Reviewing the federal program and allocation of revenues as MAP-21 rulemaking concludes.
- Advocating for flexible design standards and specifications.

## NEXT STEPS

By state law, MnDOT must update MnSHIP again by 2017. Between now and then and independent of any revenue increases and policy changes, MnDOT will continue to refine its planning and programming processes and investment priorities to best address evolving conditions. MnDOT will work to better define improvements that benefit freight and non-motorized users as well as those investments that improve the economy and quality of life in communities. MnDOT will continue to pursue innovative solutions to get a high return on the dollars invested in state highways. MnDOT will also continue to keep an open dialogue with stakeholders, pursue transparent planning processes, and be accountable in its decision-making. Pursuing these actions, as well as other strategies identified in the **Statewide Multimodal Transportation Plan**, will be critical to MnDOT's success in its stewardship of the state highway system.



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