DEPARTMENT OF TRANSPORTATION

Guide to MnDOT Highway Project Selection

September 2022

This document is the technical companion to the Minnesota Department of Transportation's Project Selection Policy, required by Minnesota Laws 2017, 1st Special Session, Chapter 3, Article 3, Section 124.

More information about MnDOT project selection is available at: www.mndot.gov/projectselection

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Plain Language Summary of MnDOT Project Selection

The Minnesota Department of Transportation prioritizes investments to keep the state highway system[1] in a good repair. MnDOT's 20-year State Highway Investment Plan (MnSHIP) distributes funding to address a range of goals and objectives.[2] MnSHIP determines the amount of money available for different types of improvements such as safety, mobility, repair and replacement of existing roads and bridges, and other goals. MnSHIP dedicates the majority of funding to fixing pavement and bridges.

As required by MnDOT's Project Selection Policy, MnDOT uses scores to prioritize and select highway construction projects. Project selection is the decision to fund a project and add it to the list of projects to be constructed. Selected projects are listed in the 10-year Capital Highway Investment Plan and 4-year State Transportation Improvement Program. The score assigned to candidate projects is a key factor in the project selection decision, but MnDOT may consider other factors in addition to the score. MnDOT will provide a short explanation when a high scoring project is not selected or when a lower scoring project is selected.

MnDOT scores and selects stretches of pavement and specific bridges that need work typically five to ten years before construction. Once selected, MnDOT identifies and evaluates alternatives as well as other legal requirements, opportunities to advance legislative goals,[3] objectives in state plans, and other repairs and improvements that make sense to do at the same time. The department follows a complete streets approach, which considers the needs of all the different types of vehicles and people who will use the road or bridge. MnDOT balances all of the identified needs and opportunities against the funding guidance of MnSHIP and looks for cost-effective and affordable solutions. MnDOT also works with local and regional partners, metropolitan planning organizations, tribal governments and regulatory agencies and seeks public input during the development of the project.

For other types of projects, such as targeted safety improvements or major expansions of the system, MnDOT usually selects projects three to six years before construction. MnDOT manages a variety of special programs with specific objectives. Each program scores candidate projects against a set of criteria. Cities, counties and other groups may apply for funding or suggest specific project ideas for many of these programs. Examples include the Highway Safety Improvement Program, Transportation Economic Development Program, and Corridors of Commerce Program.

MnDOT also sets aside funding to fix and maintain things like rest areas, traffic cameras and ramp meters, historic roadside properties, truck weigh stations, noise walls, and other infrastructure. Each of these programs has its own selection process. Projects are typically scored and selected two to five years before construction.

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[1] The approximately 12,000 mile state highway system includes all roads labeled Interstate, US and MN (examples include I-94, US 169, and MN 55)

[2] For more information about MnSHIP, go to: http://minnesotago.org/final-plans/mnship-final-plan

[3] The Minnesota Legislature has established 16 goals for the transportation system: https://www.revisor.mn.gov/statutes/cite/174.01

Finally, MnDOT holds a small amount of funding to fix damage caused by each winter season or to make emergency repairs. The department selects these projects the same year they are constructed. They are not selected using numeric scoring.

Introduction and Overview

This document is the technical companion to the MnDOT Project Selection Policy (Policy OP016), which was required by Minnesota Laws 2017, First Special Session, Chapter 3, Article 3, Section 124.

What this Document Covers and Does Not

This guide discusses the evaluation and prioritization of capital construction projects on state owned highways either delivered by or selected by MnDOT. It primarily discusses the decision to add a project to either the 10-year Capital Highway Investment Plan (CHIP)[4] or the State Transportation Improvement Program (STIP).[5]

It does not cover prioritization and selection of:

- Non-capital construction projects
- Capital projects on locally owned streets and roads, transit systems, airports, river and lake ports, freight rail lines, and trails and shared use paths outside of MnDOT owned right of way

It also does not describe how transportation is funded or provide details on the processes MnDOT uses to determine how much money is available for specific types of projects and how much money goes to each part of the state.

What is Project Selection?

Project selection is the decision to fund a project and add it to the list of projects to be constructed. Under the MnDOT Project Selection Policy, project selection is specifically the decision to add a project to either the CHIP or the STIP.

The selection of a project is one decision point in a long series of decisions that shape what gets constructed. Project development refers to the process of taking a project from an identification of a need through construction. The level of project development that has occurred at the time a project is selected varies by project selection process. While MnDOT selects projects as much as ten years in advance of construction, most project development activities do not start until five to six years before construction.

The chart on the next page compares project selection and project development.

This guide focuses on the project selection decision, not the full range of decisions that are part of the project development process.

[4] The current CHIP is available at: http://www.dot.state.mn.us/planning/10yearplan/index.html

[5] The current STIP is available at: http://www.dot.state.mn.us/planning/program/stip.html

Decisions Made Before Project Selection

MnDOT's selection of state highway construction projects follows the policy direction established in the Statewide Multimodal Transportation Plan and the investment guidance in the 20-Year State Highway Investment Plan (MnSHIP).[6]

The Statewide Multimodal Transportation Plan establishes overarching objectives, strategies and performance measures for the state highway system as well as the rest of the transportation system in Minnesota. For urbanized areas with populations greater than 50,000, the long range plans of Metropolitan Planning Organizations[7] establish objectives, strategies, performance measures and investment priorities for the transportation system, including the state highway system.

[6] For more information about the Statewide Multimodal Transportation Plan and the 20-Year Minnesota State Highway Investment Plan, go to: http://www.minnesotago.org

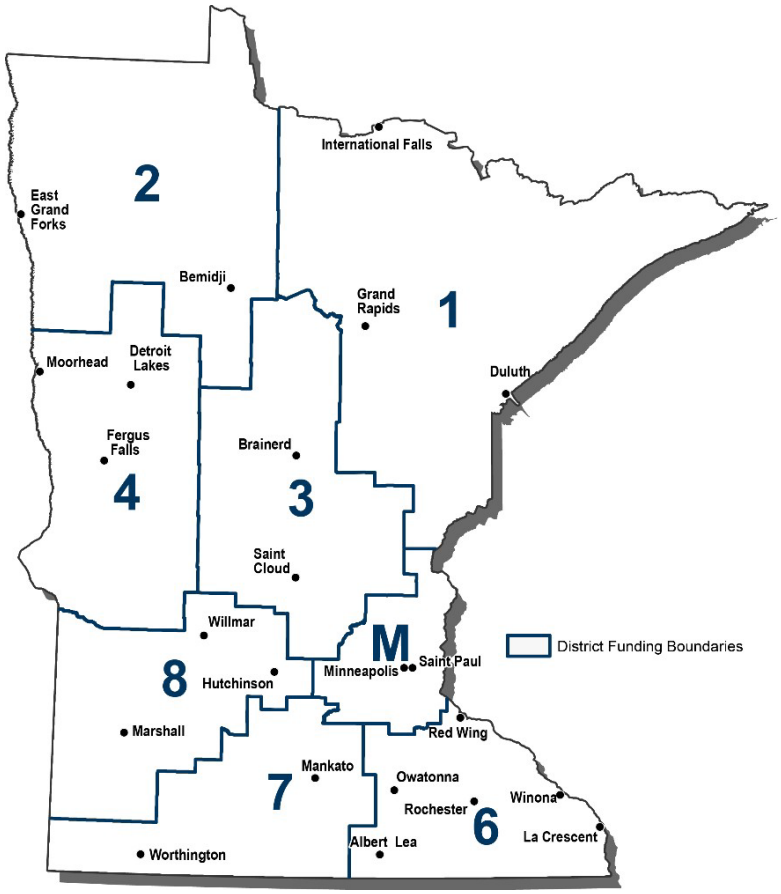
[7] For a list of the eight MPOs in Minnesota, visit: https://www.dot.state.mn.us/planning/program/mpordcatp.html

MnSHIP establishes an overall distribution of expected revenue to meet the objectives, strategies and performance measures in the Statewide Multimodal Transportation Plan on the state highway system. The plan also includes expected outcomes and performance targets the agency uses to inform project selection. MnSHIP dedicates the majority of funding to fixing pavement and bridges, but also allocates funding to other categories such as safety, congestion relief, other roadside infrastructure, and improvements for pedestrians, bicyclists and freight.

The strategies and objectives in the Statewide Multimodal Transportation Plan and metropolitan plans and the investment direction in MnSHIP shape the projects that are ultimately delivered, and the process MnDOT uses to develop and deliver those projects.

Based on the investment guidance in MnSHIP and federal and state laws, MnDOT divides available and planned funding into programs and categories within which projects are selected. For projects selected within each of the agency's eight districts (see map below), MnDOT distributes anticipated funding using formulas, which consider the condition of pavement and bridges, size of the network, and use of the system within each district.

Map of MnDOT Funding Districts[8]



[8] This map shows the district boundaries used for funding distribution. The funding boundaries follow county lines. District boundaries for construction management and maintenance are different and follow roads to key intersections or junctions, which do not always align with county boundaries.

Role of Public and Stakeholder Involvement

The public and stakeholders can influence MnDOT construction projects through participation in the planning, programming and project development processes.

MnDOT conducts public and stakeholder involvement when developing the Statewide Multimodal Transportation Plan, MnSHIP and other plans, which set the framework for project selection and how projects are developed. Participation in other MnDOT, metropolitan, regional and local plans and studies also shape individual projects and project prioritization.

MnDOT engages partners, stakeholders and the public in the project development process. Involvement at this stage influences the details of what is included and not included in a project, as well as the timing, delivery mechanism, and traffic mitigation of a project among other details.

While involvement in the planning process and project development offer the greatest opportunity to influence the projects MnDOT delivers, the public and stakeholders can also review and comment on MnDOT's draft project selection decisions. As part of the project selection process, MnDOT districts work with a broad range of stakeholders through Area Transportation Partnerships (ATPs).[9] These partnerships provide a collaborative decision-making process for the selection of projects that are recommended to receive federal funds. In addition, ATPs provide a local perspective on potential state-funded projects. Prior to finalizing the State Transportation Improvement Program, MnDOT posts a draft for public review and comment. Beginning with the 2020-2023 STIP, MnDOT will also post the scores for projects considered but not selected and the reasoning behind selection decisions with the drafts.

In urban areas with populations of 50,000 or more, project selection happens as part of a cooperative, continuous and comprehensive planning process between MnDOT and a Metropolitan Planning Organization.[10] All federally funded and regionally significant MnDOT highway construction projects within MPO planning boundaries must be included or consistent with the metropolitan long-range transportation plan and included in the region's four year Transportation Improvement Program (TIP). Each MPO in the state posts their draft TIP for public review and comment.

MnDOT developed the 10-Year Capital Highway Investment Plan to improve early project stakeholder coordination. Beginning with the 2020-2029 CHIP, the CHIP will include the scores for projects. MnDOT will also post the scores for projects considered but not selected and the reasoning behind selection decisions. The public and stakeholders can review and submit comments on the CHIP at any time.

A few competitive programs, such as the Corridors of Commerce Program, allow the public and stakeholders to submit project ideas as well as express support for specific candidate projects.

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[9] The ATPs are groups of traditional and non-traditional transportation partners that have the responsibility of developing a regional transportation improvement program for their area of the state. More information is available at: https://www.dot.state.mn.us/planning/program/mpordcatp.html

[10] The metropolitan planning process is a federal requirement under 23 USC 134 (j). More information about the state's eight MPOs is available at: https://www.dot.state.mn.us/planning/program/mpordcatp.html

Environmental Justice and Equity

Consistent with Title VI of the 1964 Civil Rights Act and Presidential Executive Order 12898,[11] MnDOT works to ensure the full and fair participation of potentially affected communities in the transportation decision-making process. MnDOT specifically reaches out to low-income and minority populations when developing plans and during the project development process. For projects impacting interests of Native Nations, MnDOT directly consults with the affected Tribal Nation(s).[12]

MnDOT also analyzes the potential impact of the department's plans and projects both at the system level and for each individual project.

During the project selection process, MnDOT must consider two fundamental principles of environmental justice:

- To avoid, minimize or mitigate disproportionately high adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

For most of MnDOT's project selection processes, the positive or adverse impacts of candidate projects on environmental justice populations are not well known at the time projects are selected. Determining the potential adverse impacts and/or benefits of a project requires significant analysis, which is completed during the project development process. When information is known about a candidate project's impact and benefits, MnDOT incorporates those considerations as well as the geographic distribution of high scoring candidate projects as qualitative factors in the decision to select or not select a project.

For processes that select projects where MnDOT is more confident these types of projects would benefit adjacent environmental justice populations, MnDOT includes environmental justice in the score of candidate projects. These include the selection of urban non-freeway/non-expressway pavement projects (see page 20 and Appendix D), the rehabilitation and replacement of existing non-motorized infrastructure (see page 23) and pedestrian bridges and underpasses (see page 22 and Appendix E), targeted safety improvements (see page 24), and standalone improvements for non-motorized transportation users (see page 28). The Transportation Economic Development Program (see page 47) also includes a consideration of whether environmental justice populations will benefit from the jobs created as a result of a candidate project.

[11] https://www.fhwa.dot.gov/environment/environmental_justice/

[12] For more information on Minnesota Tribal Nations Government-to-Government Relationship with MnDOT, see: http://www.dot.state.mn.us/policy/admin/ad005.html

Beyond the requirements of Title VI and the executive order, MnDOT is currently studying equity and engaging communities in conversation about how transportation affects equity.[13] The initiative will further define equity and may identify additional opportunities to include equity and environmental justice in project selection and scoring.

Tribal Coordination and Consultation

Minnesota is home to 11 federally recognized reservations or communities and 12 federally recognized sovereign governments. Each tribe is a separate sovereign nation. Unique unto itself, each tribe has an independent relationship with the United States and the State of Minnesota. The sovereignty of tribes is formally recognized by the State of Minnesota in Minnesota Statutes §10.65, Executive Order 19-24 signed by Governor Tim Walz and MnDOT's Tribal Nations Policy.

Meaningful coordination throughout the project selection process with relevant tribal officials is mandatory and applies to all projects located within a reservation's boundaries, projects identified in coordination with tribes, and projects that may impact tribal interests (i.e., environment and climate change, access to hotel/casino, employment and contracting, cultural resources and history, jurisdiction, etc.). In addition to regular coordination between MnDOT and tribes, specific project selection coordination meetings may be needed.

More information and resources are available on MnDOT's Tribes and Transportation webpage.

Project Selection Processes

MnDOT selects projects within categories based on types of projects and within specialty and competitive programs. Each category and program has a separate process to evaluate, prioritize and select projects.

The majority of MnDOT projects are selected within categories of project based on the guidance of the 20-year Minnesota State Highway Investment Plan. Broadly, these categories include:

- **Asset management:** the rehabilitation and replacement of pavement, bridges and other infrastructure
- **Targeted safety improvements:** improvements to reduce the number of crashes and people injured or killed on Minnesota state highways
- **Mobility and capacity expansion:** improvements to traffic flow, congestion relief and travel time reliability, the movement of freight or that create new connections for active transportation users

Each of those broad categories has sub-categories within which projects are evaluated and selected. For example, pavement projects are scored within three separate categories based on network designation, functional classification and context.

MnDOT manages a variety of special programs with specific objectives. The programs either are established in state or federal statutes, have a limited specialized purpose and/or use a competitive application process to select projects. Cities, counties and other groups may apply for funding or suggest specific project ideas for most of these programs.

The current list of competitive programs includes:

- **Corridors of Commerce Program:** funds additional highway capacity on segments where there are currently bottlenecks in the system or projects that improve the movement of freight and reduce barriers to commerce.
- **Highway Freight Program:** funds projects with measurable benefits for freight transportation.
- **Highway Safety Improvement Program:** funds projects that reduce fatal and serious injury crashes.

[13] http://www.dot.state.mn.us/planning/program/advancing-transportation-equity/

- **Local Partnership Program** (Formerly District Cooperative/Municipal Agreement Programs)**:** funds locally initiated improvements to state highways, particularly locations where the local transportation network intersects with the state system and an improvement would benefit both systems.
- **Railway-Highway Crossing Program:** funds the elimination of hazards at railway-highway crossings, including the closure and consolidation of crossings, replacement of antiquated equipment, and new grade crossing controls.
- **Stand Alone Noise Barriers Program:** fund construction of new noise barriers along state highways in locations where no noise abatement measures currently exist and no major construction projects are currently programmed.
- **Transportation Economic Development Program:** funds projects that support job creation and retention as well as other improvements with measurable economic benefits.

Other current specialty programs include:

- **Historic Roadside Properties Program:** funds the repair, rehabilitation and preservation of roadside properties that are either listed on, or eligible for, the National Register of Historic Places.
- **Intelligent Transportation Systems Program:** funds the installation of new or upgrade of existing electronics, communications, or information processing systems or services to improve the efficiency and safety of the state highway system.
- **Safety Rest Area Program:** funds construction, repair and rehabilitation of rest areas and waysides.
- **Weigh Stations Capital Improvement Program:** funds the installation, repair and replacement of the physical infrastructure necessary for the enforcement of state and federal weight and size commercial motor carrier laws.

Use of Scores and Transparency

Based on the requirements of the Project Selection Policy, MnDOT uses data-driven processes to prioritize candidate projects based on numeric scores.

The score assigned to candidate projects is a key factor in the project selection decision, but MnDOT considers a wide range of factors both for individual projects and as the manager of an entire highway system. Not all of those factors and considerations are included in the numeric score assigned to projects. When a high scoring project is not selected or when a lower scoring project is selected, MnDOT will provide a short explanation for the reasoning behind the decision in addition to the project score.

Interpreting Scores

Each category of project and every specialty and competitive program has a method to assign a numeric score. The score represents a relative priority within that category of project or program. Scores cannot be compared across categories or programs.

Projects Selected In Multiple Categories

In the STIP and CHIP, MnDOT will show one score for each project selected under this policy. Projects sometimes are originally selected in one category, but then grow or change and are selected in another category. For example, a pavement project might be modified to include a new MnPASS lane.

When a project is listed as a candidate in multiple categories or programs, the score listed will follow a general order:

1. Competitive program funded projects (e.g. Corridors of Commerce, Transportation Economic Development)
2. Major capacity expansion / mobility projects
3. Pavement and bridge rehabilitation and replacement projects
4. Specialty program funded projects
5. Standalone roadside infrastructure, safety, operational improvements, or active transportation projects

Rescoring

Projects can change and evolve through the project development process as MnDOT gets more detailed information, works with local partners and regulatory agencies, and seeks public and stakeholder input. Significant time and resources (both MnDOT's and that of local and regional agencies, the public and others) go into developing projects.

The majority of project level changes and decisions will not affect the score assigned to the project when it was selected. Projects may also move years within the CHIP or STIP without triggering a review of the score. Projects will require a new score if the project area no longer includes the area identified when the project was selected or the nature of the project changes to meet another category of project (i.e. a pavement rehabilitation project now includes a new interchange).

For accuracy, MnDOT will review and update the score to reflect current data at least every five years for projects originally selected in years 5 through 10 of the CHIP that have not yet been included in the STIP.

Non-MnDOT Selection of State Highway Construction Projects

Construction projects initiated by cities, counties or other road authorities on the state highway system that receive competitive funding through the Metropolitan Council's Regional Solicitation,[14] federal competitive programs like INFRA,[15] TIGER or BUILD,[16] or another competitive funding program do not need be to be scored to receive MnDOT match funds. They are considered selected through that competitive process.

Programs/Projects Not Scored

Based on the Project Selection Policy, MnDOT does not use scores to prioritize and select certain types of activities and projects, including:

- Chip seals, patching and crack sealing of pavements
- Epoxy chip seal wearing courses and crack sealing on bridges
- Painting of bridge steel superstructures
- Bridge expansion joint replacement
- Scour countermeasures
- Culvert lining
- Tunnel repairs
- Sign, signal, lighting, sensor and guardrail replacement
- Striping
- Legal liabilities requiring capital investment
- Emergency repairs
- Seasonal response (example: fixing winter damage)
- Slope stabilization
- Landscaping and revegetation following major construction projects
- Installation or replacement of fiber optic cables or other transmission lines in state owned right of way
- Installation of solar panels or other energy infrastructure in state owned right of way
- Temporary or research demonstration installations

[14] https://metrocouncil.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation-NEW.aspx

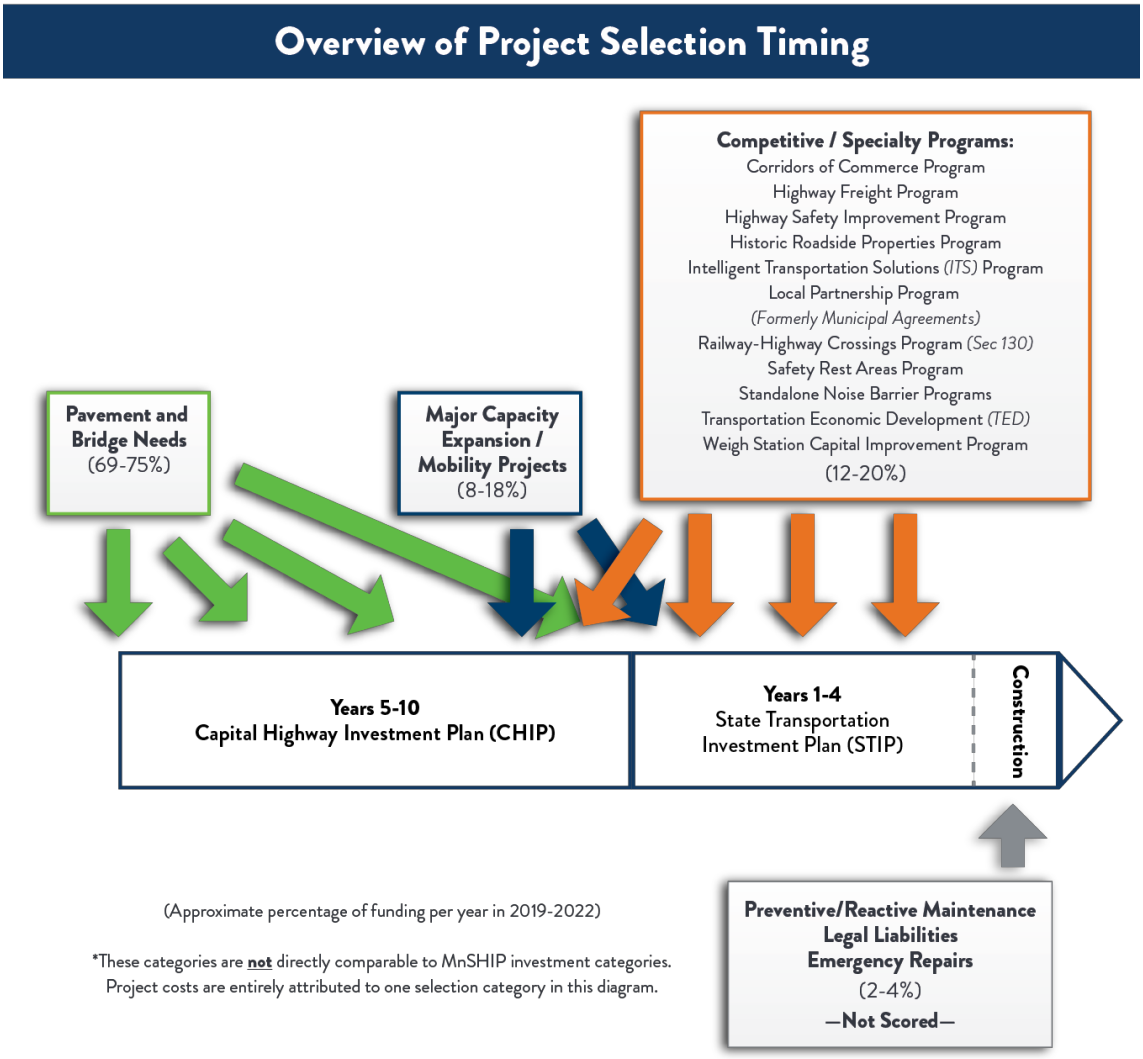
[15] https://www.transportation.gov/buildamerica/infragrants

[16] https://ops.fhwa.dot.gov/Freight/infrastructure/tiger/

Timing of MnDOT Project Selection

MnDOT scores and selects stretches of pavement and specific bridges that need work typically five to ten years before construction. For other types of projects, such as targeted safety and mobility improvements or major capacity expansions of the system, MnDOT usually selects projects three to six years before construction. For the specialty and competitive programs, MnDOT typically scores and selects projects two to five years before construction. Finally, MnDOT holds a small amount of funding to fund preventive maintenance, fix damage caused by each winter season or make emergency repairs. The department typically selects these projects the same year they are constructed.

The chart on the next page provides an overview of the timing of MnDOT's project selection categories and programs.



Future Updates and New Programs

MnDOT will annually review and revise the criteria and methodology for each project selection process to incorporate new research and guidance, changes in state or federal law, updates to state plans or policies, stakeholder feedback, and lessons learned from implementing the new project selection policy.

When changes are made, MnDOT will revise this document and note how the changes will affect already selected projects. Appendix A shows the revision history of this document.

Asset Management Projects

Broadly, projects selected under the asset management category include the rehabilitation and replacement of pavement, bridges and other infrastructure.

The majority of MnDOT highway construction projects are pavement and bridge projects. MnDOT scores these projects based on pavement and bridge needs. Projects are selected to address a primary pavement or bridge need and added to the 10-year Capital Highway Investment Plan.

The selection of pavement and bridge projects are informed by district staff, experts from MnDOT's bridge and materials offices and two asset management software programs: the Highway Pavement Management Application (HPMA) and the Bridge Replacement and Improvement Management System (BRIM). MnDOT's approach to managing pavement and bridge conditions is based on:

- Investment direction, performance measures and planned outcomes in MnSHIP
- National goals and performance targets for interstates and the National Highway System (NHS)
- Guidance and strategies in the Transportation Asset Management Plan[17]

Pavement and bridges on the NHS are scored and selected separately from pavement and bridges off the system. A map of the state highway system showing which roads are part of the NHS is included in Appendix C.

Once selected, MnDOT then identifies and evaluates alternatives and other needs, legal requirements, issues and opportunities in coordination with local partners, and considers public input. In the process, pavement work may be added to a bridge project or vice versa. The department follows a context-sensitive complete streets approach, which considers the needs of all users.[18] The final project may address a substantial number of needs beyond the pavement or bridge need that precipitated the project. Projects may move years based on local coordination, project delivery, timing of other nearby construction projects, and funding shifts.

The need score remains unchanged unless the project no longer addresses the precipitating need, or if the project changes to meet one of the thresholds for major capacity expansion and mobility projects (see page 25).

[17] http://www.dot.state.mn.us/assetmanagement/tamp.html

[18] More information about the complete streets approach is available at: http://www.dot.state.mn.us/planning/completestreets/

Pavement

Pavement projects are scored and selected within each MnDOT district. More detailed information and scoring rubrics are included in Appendix D.

NHS Pavement Needs

Criteria	Points Available	Data Source / Basis
Timing of the Improvement	60	Forecasted Ride Quality Index[19]
Network Designation	5	Interstate, Non-Interstate Freeway and other NHS
Traffic Volume	10	Annual Average Daily Traffic (AADT)
Truck Volume	10	Heavy Commercial Average Annual Daily Traffic (HCADT)
Length/Miles Covered	5	Roadway miles
Other Infrastructure Needs	10	Condition of pipes under the road

Non-NHS Pavement Needs

Criteria	Points Available	Data Source / Basis
Timing of the Improvement	60	Forecasted Ride Quality Index
Traffic Volume	10	AADT
Truck Volume	10	HCADT
Length/Miles Covered	5	Roadway miles
Other Infrastructure Needs	10	Condition of pipes under the road
Turnback Candidate[20]	5	Jurisdictional Realignment Study and assessment by district staff

[19] The Ride Quality Index is a measure of the smoothness of driving on a road.

[20] The term “turnback” refers to transferring jurisdiction of a road from one unit of government to another. In this context, from MnDOT to either a city or a county.

Urban Non-Freeway/Non-Expressway Pavement Needs

To meet the requirements of the Project Selection Policy, MnDOT scores and prioritizes urban non-freeway/non-expressway[21] pavement projects separately from the normal pavement scoring process, because of their complexity, utilities and other infrastructure and level of required local coordination and public involvement. In many instances, these roads function both as state highways and as city streets.

For the purposes of this scoring approach, MnDOT uses a flexible, context-based definition of urban. This includes areas with medium-to-high density adjacent development with small to medium setbacks, and in some instances no setback. This includes both residential, industrial and commercial areas. In some instances, the urban context may cover less than a quarter mile.

These pavement projects can be either NHS or non-NHS.

Criteria	Points Available	Data Source / Basis
Timing of the Improvement	25	Forecasted Ride Quality Index
Cracking, Patching and Rutting	25	Forecasted Surface Rating
Other MnDOT Infrastructure Condition	10	Age and condition of storm drains, catch basins, cables and other infrastructure owned by MnDOT
Local Utility Condition	5	Documented condition issues or community plans
Americans with Disabilities Act (ADA) Compliance	10	ADA Compliance of sidewalks, ramps and signals
Traffic Volume	10	AADT
Active Transportation & Transit	10	Safety risk factors for people walking, rolling and biking, corridor designation and planning, and share of community bisected by the highway
Benefits Environmental Justice Population	5	Census data

More detailed information and scoring rubrics for pavement needs are included in Appendix D.

[21] Freeways have full access control (no driveways, signals or at-grade intersections). Expressways have partial access control (limited or no driveways, few and widely spaced intersections, and may include some grade separated crossings). Both are high speed roads designed to facilitate longer trips.

Bridge

NHS bridges and culverts (greater than 10 feet) are scored and prioritized statewide with input from MnDOT district staff. Non-NHS bridges and culverts are scored statewide, but prioritized within each MnDOT district. More detailed information and scoring rubrics are included in Appendix E.

Highway Bridge Needs

Criteria	Points Available	Data Source / Basis
Condition	50	National Bridge Inventory (NBI) deck, superstructure, and substructure ratings as well as fracture critical
Risk of Service Interruption	20	Bridge Planning Index[22]
Remaining Service Life	20	Deck RSL
Bridge Size	10	Deck area

Culvert Needs

MnDOT replaces or rehabilitates most culverts (greater than 10 feet) in conjunction with other projects. However, MnDOT will occasionally select a culvert for a standalone project.

Criteria	Points Available	Data Source / Basis
Structural Condition	50	NBI culvert rating
Load Rating	20	Condition, material and design
Channel and Waterway Condition	15	NBI channel condition and waterway adequacy ratings
Traffic Volume	15	AADT

[22] Minnesota Statutes 165.14 Subd. 7 requires MnDOT to include a consideration of the risk of service interruption when prioritizing bridge repairs and replacements. MnDOT developed the Bridge Planning Index to comply with the requirement for a risk-based prioritization system. BPI weighs the risks associated with the condition and fatigue of the bridge structure, potential damage from flooding and trucks, and impacts of detours.

Bridges Carrying Railroads Over State Highways

MnDOT scores and prioritizes bridges carrying railroads over state highways statewide.

Criteria	Points Available	Data Source / Basis
Condition	70	NBI deck, superstructure, and substructure condition ratings
Vertical Clearance	15	Minimum 16 feet 4 inch clearance (16 feet 6 inches on oversize/overweight super load corridors)
Traffic Volume	15	AADT of highway under the bridge

Pedestrian Bridge and Underpass Rehab/Replacement

MnDOT replaces or rehabilitates most pedestrian bridges and underpasses as part of other pavement and bridge projects. However, MnDOT will use the following to score and prioritize standalone projects. These standalone projects are scored and prioritized statewide.

Criteria	Points Available	Data Source / Basis
Condition	65	NBI deck, superstructure, substructure and/or culvert ratings
Proximity to Key Destinations	15	School, parks, senior residential facility, grocery store and/or other non-motorized traffic generator within one mile Or part of a designated state or regional bikeway or trail
ADA Compliance	10	ADA compliance of approaches and deck
Benefits Environmental Justice Population	5	Census data
Vertical Clearance	5	Minimum 17 feet vertical clearance

More detailed information and scoring rubrics for bridges are included in Appendix E.

Other Asset Management Needs

MnDOT manages several specialty programs to repair or replace specific types of infrastructure, including:

- Historic Roadside Properties Program (see page 37)
- Safety Rest Area Program (see page 42)
- Weigh Station Capital Improvement Program (see page 49)

Many other standalone infrastructure repair and replacement projects are exempted from the scoring requirements of the MnDOT Project Selection Policy (see page 15).

Non-Motorized Infrastructure Rehabilitation/Replacement

MnDOT replaces or rehabilitates most sidewalks, shared use paths and other infrastructure for people walking, rolling or bicycling as part of other projects. In many instances, the responsibility of replacing or repairing the infrastructure is the responsibility of a local unit of government. However, MnDOT uses the following to score and prioritize standalone projects to repair or replace existing non-motorized infrastructure.

Criteria	Points Available	Data Source / Basis
Condition	65	Sidewalk, path or other infrastructure rating
ADA Compliance	15	ADA compliance
Proximity to Key Destinations	15	School, parks, senior residential facility, grocery store and/or other non-motorized traffic generator within one mile Or part of a designated state or regional bikeway or trail
Benefits Environmental Justice Population	5	Census data

Targeted Safety Improvements

MnDOT evaluates options to improve safety as part of every project. Not every safety concern can always be addressed on every project, but MnDOT makes a concerted effort to address the safety of all users during the project development process.

MnDOT also manages the Highway Safety Improvement Program (see page 34), which specifically targets improvements that reduce the number of fatal and serious injury crashes. In addition, the Railway-Highway Crossings Program (see page 41), Intelligent Transportation Systems Program (see page 39) and Safety Rest Area Program (see page 42) each fund projects that increase and support safe travel on state highways. Other competitive programs such as the Corridors of Commerce Program (see page 30), Minnesota Highway Freight Program (see page 32), Local Partnership Program (see page 40), and Transportation Economic Development Program (see page 47) include safety factors in the scoring process.

Other Standalone Safety Improvement Projects

After funding safety improvements on projects already included in the CHIP and STIP, each MnDOT district evaluates additional safety needs for targeted improvements. If districts have additional safety funds based on the guidance in MnSHIP, districts may also select potential standalone projects that aren't selected by or eligible for the dedicated safety programs mentioned above.

Potential projects are identified though plans and studies, safety audits, and intersection control evaluations or through locally initiated efforts. These standalone targeted safety projects are scored using the following criteria:

Criteria	Points Available	Data Source / Basis
Crash History	35	3 year and 10 year crash counts
Expected Impact	50	Benefit-cost ratio
Traffic Volume	10	AADT
Benefits Environmental Justice Population	5	Census data

Mobility and Capacity Expansion

MnDOT evaluates options to improve the safety, efficiency and functionality of the transportation system as part of every project. When developing pavement and bridge projects, MnDOT looks for opportunities to make targeted improvements that address traffic flow and travel time reliability, the movement of freight, or connections for people walking, rolling or biking.

Most significant capacity expansion and mobility projects (for example, converting a signalized intersection into an interchange or adding lanes to a freeway) are now selected through competitive programs like the Corridors of Commerce Program (see page 30), Minnesota Highway Freight Program (see page 32) or the Transportation Economic Development Program (see page 47). However, MnSHIP does allocate some funding to address congestion relief and improve mobility, primarily in the Twin Cities metropolitan area.

The following types of projects are scored and selected through a separate process from the main pavement and bridge project selection process:

- The addition of one lane mile or more (MnPASS, general purpose or auxiliary)
- New or significantly modified interchanges
- Any project requiring an Environmental Assessment or full Environmental Impact Statement
- Any project that includes a capacity expansion element costing $10 million or more[23]

Smaller improvements (costing less than $10 million) identified through the Congestion Management Safety Plans, Metropolitan Planning Organization Long Range Transportation Plans, or the Greater Minnesota Mobility Study do not need to a separate score if delivered as part of a pavement or bridge project.

Projects initiated by cities and counties on the state highway system meeting one of the criteria above that receive competitive funding through the Metropolitan Council's Regional Solicitation[24] or federal competitive programs like INFRA,[25] TIGER or BUILD[26] do not need be to be scored to receive MnDOT match funds. They are considered selected through that competitive process.

[23] The cost of the capacity is $10 million, not the total project cost.

[24] https://metrocouncil.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation-NEW.aspx

[25] https://www.transportation.gov/buildamerica/infragrants

[26] https://ops.fhwa.dot.gov/Freight/infrastructure/tiger/

Major Capacity Expansion / Mobility Projects in the Twin Cities

Capacity expansion and other major investments to reduce congestion and improve mobility in the Minneapolis-St. Paul Metropolitan Area[27] are identified and prioritized through the regional planning process. Specific policy direction for mobility investments comes from the region's Transportation Policy Plan (TPP) and MnDOT's statewide transportation plans.

The Metropolitan Council (the region's Metropolitan Planning Organization) and MnDOT, along with other partner agencies and stakeholders, evaluate and prioritize various issues and needs related to congestion and mobility as part of region-wide system studies. Examples include MnPASS System Study 3, the Principal Arterial Intersection Conversion Study and the Freeway System Interchange Study.

With each update to the Transportation Policy Plan, the Metropolitan Council decides which priority needs and project areas identified in the system studies to include in the 20-year timeframe of the plan. The needs and project areas listed in either the current or increased revenue scenario of the TPP are the list of eligible candidate projects to be included in the TIP/STIP or CHIP.

Scoring Criteria

In cooperation with the Metropolitan Council, MnDOT uses the following criteria to score candidate projects. Major capacity expansion project selection decisions in the metro must be approved by the Metropolitan Council for inclusion in the TPP, as required by federal law.

Measure	Points Available	Data Source / Bases
Priority in regional plans and studies	50	Priority given in relevant regional planning studies.
Asset Management	25	Pavement Ride Quality Index and/or bridge substructure, superstructure and/or deck NBI rating
Return on Investment	25	Benefit-Cost Ratio. Standard benefits in the calculation include: travel time, number of crashes, vehicle operating costs and vehicle emissions.[28]

More detailed information and scoring rubrics for metro capacity expansion and mobility projects are included in Appendix F.

[27] For the purposes of prioritizes and selecting major capacity expansion and mobility projects, the metro area is defined by the Metropolitan Council transportation planning boundary.

[28] More information about MnDOT's benefit-cost analysis of transportation projects is available at: https://www.dot.state.mn.us/planning/program/benefitcost.html
For MnPASS projects, MnDOT also considers travel time reliability based on the following research project: http://dot.state.mn.us/research/reports/2017/201737.pdf

Mobility Investments in Greater Minnesota

Potential projects to reduce travel time and improve travel time reliability on the state highway system in Greater Minnesota are first identified through MPO metropolitan long-range transportation plans and the Greater Minnesota Mobility Study.

Mobility improvements prioritized through those planning processes do not need a separate score if delivered as part of a pavement or bridge project. If districts have additional mobility funds based on the guidance in MnSHIP, districts may also select standalone projects using the following scoring criteria:

Measure	Points Available	Data Source / Bases
Travel Time Reliability	60	Federal travel time reliability performance measure, speed index and AADT
Safety	30	Critical crash index and fatal and serious injury crash index
System Role and Route Characteristics	10	HCADT, average trip length, rail and tourism

Mobility project selection decisions in metropolitan areas are made through the federally required metropolitan planning process and must be approved by the MPO and included in the metropolitan long-range transportation plan and TIP.

Standalone Bicycle and Pedestrian Projects

The majority of improvements for people walking, rolling and bicycling on the state highway system are constructed as part of larger projects. Other projects on the state highway system or within state highway right of way are locally initiated by cities, counties, tribal governments or other groups and funded locally and/or through competitive programs like MnDOT's Local Partnership Program (see page 40) or the Metropolitan Council's regional solicitation or the Transportation Alternatives Program through the Area Transportation Partnerships.[29]

If after funding bicycle and pedestrian improvements on projects already included in the CHIP and STIP, a MnDOT district has additional bicycle or pedestrian funds based on the guidance in MnSHIP, they may also select potential standalone projects using the criteria below.

Districts first consider opportunities presented by city, county, tribal or DNR projects that intersect the state highway network. After considering those opportunities, districts then evaluate the high priority locations identified through a safety risk analysis.

Measure	Points Available	Data Source / Bases
Safety Risk Factors	50	Number of safety risk factors for people walking, rolling or bicycling
Gap/Barrier	30	District bicycle plan, Safe Routes to School Plan or other active transportation planning effort
Corridor Priority	15	District bicycle plan
Benefits Environmental Justice Population	5	Census data

[29] The ATPs are groups traditional and non-traditional transportation partners including representatives from MnDOT, MPOs, 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. More information is available at: https://www.dot.state.mn.us/planning/program/mpordcatp.html

Specialty and Competitive Programs

MnDOT manages a variety of special programs with specific objectives. The following programs are covered by the project selection policy:

- Clean Transportation Pilot Program
- Corridors of Commerce Program
- Minnesota Highway Freight Program
- Highway Safety Improvement Program
- Historic Roadside Properties Program
- Intelligent Transportation Systems Program
- Local Partnership Program
- Railway-Highway Crossings Program
- Safety Rest Area Program
- Standalone Noise Barrier Program
- Transportation Economic Development Program (TED)
- Weigh Station Capital Improvement Program

Brief summaries of each program are included. In addition, the information in this guide, detailed information and scoring rubrics are included in the application materials for each program.

Clean Transportation Pilot Program

Purpose

MnDOT's Clean Transportation Pilot Funding Program provides up to $2 million annually in grants ranging from $25,000 to $500,000 to pilot, test, and increase adoption of clean transportation technologies, especially where cost is a barrier to implementation.

The overall program goal is to demonstrate the potential of innovative clean transportation technologies to reduce greenhouse gas (GHG) emissions from the transportation sector in Minnesota and help the state meet our statutory GHG reduction goals in the Next Generation Energy Act. Successful programs will incorporate resilient design features; be responsive to economic disruptions; expand access to clean transportation technologies, especially in smaller and/or rural communities; and bring equity in project siting and user benefits, especially for communities of color and low-income residents.

The establishment of this program was a recommendation from MnDOT's Pathways to Decarbonizing Transportation in Minnesota report of 2019. This program was developed in collaboration with MnDOT's Sustainable Transportation Advisory Council and is administered by MnDOT's Office of Sustainability and Public Health.

For more information, please see the Clean Transportation Pilot Guide.

Quick facts

Topic	Detail
Frequency of project selection	Annual
Approximate annual funding	Up to $2 million
Funding Source	State
How many years before construction are projects selected	1 to 2 years

Qualifying Activities/Project eligibility

- Projects that will implement vehicle propulsion and/or fuels technologies that reduce GHG emissions compared to traditional gasoline and diesel internal combustion engines.
- Projects that advance infrastructure or implement systems that avoid or reduce transportation GHG emissions. Examples include, but are not limited to, shifting single-occupancy vehicle trips to other modes, reducing peak trip demand, advancing complete streets programs, increasing the availability of electric vehicles (EVs) and charging facilities, promote low carbon/advance biofuels, and other similar efforts.
- Projects that demonstrate innovative uses and/or adoption of commercially available clean transportation technologies in new or underserved communities or help to overcome barriers to new technology adoption in Minnesota, such as operability during winter months.
- Project that demonstrate how clean transportation technologies can be scaled up to serve a larger markets or larger numbers of users.
- Projects that expand knowledge and understanding of clean transportation technologies in communities that may have less access to this information.

Criteria Used in Project Selection

Factors	Points	
FACTOR 1: Cost-effectiveness of GHG reductions Points are awarded by dividing estimated GHG emissions reduction by grant application request, as well as the description of proof of concept viability.	35	• Top 20% of proposals received in respective geographic area (Greater MN and Twin Cities Metro): 35 pts • Next 20%: 25 pts Next 20%: 15 pts • Next 20%: 5 pts • Bottom 20%: 0 pts
FACTOR 2: Scalability & Replicability Points are awarded for describing clearly how the pilot program will (or can) be scaled up and/or be replicated in other communities in Minnesota after completion.	25	**Scalability:** A well-considered plan is provided with enough detail to adequately describe how the pilot project will be implemented and/or the project deliverables will be completed in the near-term and can be expanded (scaled up) in the future: up to 10 pts **Replicability:** • A "proof of concept" outcome is described that serves as a ready model for adoption by other organizations or agencies: up to 5 pts • A workable plan is described to collect, analyze, utilize, and publicly share project data and communicate results others who may choose to implement project in their own organizations: up to 10 pts
FACTOR 3: Equity Points awarded to projects sited in areas of environmental justice concern, as defined and identified by the Minnesota Pollution Control Agency.	15	• Sited in areas of environmental justice concerns: 15 points • Not sited areas of environmental justice concerns: 0 points
FACTOR 4: Co-Benefits Projects that anticipate one or more co-benefits* (such as those listed in Appendix 2 of the Clean Transportation Pilot Guide).	10	• 3+ co-benefits: 10 pts • 2 co-benefits: 8 pts • 1 co-benefit: 5 pts • No co-benefits: 0 pts
FACTOR 5: Source and Amount of Local Match • 1 point is awarded for every 5% above 20%. • Tribal government applicants receive 5 points.	5	
FACTOR 6: Financial Contingency Preparedness (5 points)	5	Points awarded based on the adequacy of risk identification and mitigation strategies described.
FACTOR 7: Research Advancement Points awarded based on the adequacy of the description of anticipated research advancement and knowledge sharing.	5	
Total	100	

*co-benefits are listed as but not limited to

- improved safety
- improved stormwater quality or reduced runoff
- expanded mobility and multimodal options
- add new charging stations that may encourage more people to purchase electric vehicles.
- Increased safety for one or more user groups
- Improved water quality or reduced impact on water quality
- Reduction in noise pollution
- Increased access and affordability
- Local economic benefits

Additional information can be found at http://www.dot.state.mn.us/sustainability/clean-transportation.html

Corridors of Commerce Program

Purpose

The Corridors of Commerce program funds the construction, reconstruction and improvement of state highways in support of the following goals:

- Provide additional highway capacity on segments where there are currently bottlenecks in the system
- Improve the movement of freight and reduce barriers to commerce

Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes 161.088
Frequency of project selection	Whenever funding is allocated by the MN Legislature
Approximate annual funding	$25-$200 million
Funding Source	State Funds
How many years before construction are projects selected	1 to 5 years

Where do potential project ideas come from?

Project recommendations are submitted by public sector partners, stakeholders and interested citizens statewide. MnDOT itself does not submit project recommendations for scoring consideration.

Project Eligibility:

- Projects must either develop additional system capacity or demonstrate improvement for freight movement (reduce bottlenecks).
- Projects must be consistent with the Statewide Multimodal Transportation Plan.
- Projects must be able to begin within four years of award of funding. (Construction start may be delayed beyond four years in order to avoid significant traveling public impacts from having parallel routes in the same region under construction at the same time.)
- Projects must be on the Interregional Corridor Network, including the supplemental freight routes, in Greater Minnesota or any state highway in the eight-county MnDOT Metro District.
- The amount of Corridors of Commerce funding needed to construct the project (including construction cost, right-of-way, & engineering) cannot exceed the amount of funding available.
- An identical project cannot already be listed in the STIP, but may be listed in the CHIP.

Criteria Used in Project Selection

MnDOT scores projects on seven of the eight legislatively mandated criteria. The eighth criteria, Regional Balance, is applied as a funding split after all projects are scored and ranked.

Criteria	Points Available	Data Source / Basis
Return on Investment	100	Travel time savings and reduction in crashes
Economic Impact	100	Number of jobs per million dollars of project cost
Freight Efficiency	100	Travel time reliability and HCADT
Safety Improvements	100	Number of fatal and serious injury crashes and total number of crashes
Regional Connections	100	Network designation and project type
Policy Objectives	100	Studies, planning and environmental documentation as well as alignment with the System Stewardship and Healthy Communities policy objectives in the Statewide Multimodal Transportation Plan
Community Consensus	100	Support from surrounding communities, metropolitan planning organizations, regional development commissions and chambers of commerce

Other Information

https://www.dot.state.mn.us/corridorsofcommerce

Minnesota Highway Freight Program

Purpose

The Minnesota Highway Freight Program provides funding to construction projects on public roads that provide measurable freight transportation benefits.

Quick Facts

Topic	Detail
Statutory reference(s)	23 U.S. Code Section 167
Frequency of project selection	*To be determined*
Approximate annual funding	$20 million
Funding Source	Federal
How many years before construction are projects selected	2 to 5 years

Where do potential project ideas come from?

Project proposals are solicited from cities, counties, MnDOT districts and other road authorities for three categories of projects: safety, congestion/efficiency improvements, and first/last mile connections.

Criteria Used in Project Selection

Criteria	Points Available for Safety Projects	Points Available for Freight Congestion/ Efficiency Projects	Points Available for First/Last Mile Projects	Data Source / Basis
Truck Volume	250	250	250	HCADT
Safety	350	100	100	Crash rate, sustained crash location and truck parking utilization
Travel Time Reliability	100	350	150	Truck travel time reliability, 10-ton standards
Facility Access	+50 bonus points	+50 bonus points	200	Daily truck load equivalents entering/exiting freight facility
Cost-Effectiveness	150	150	150	Total points from first four criteria divided by cost
Project Readiness	150	150	150	Status of project development

Other Information

Current MHFP funded projects were selected through a solicitation. Future project selection may be based on a solicitation or another method. Projects must be listed in the Minnesota Statewide Freight System and Investment Plan.

http://www.dot.state.mn.us/ofrw/mhfp/index.html

Highway Safety Improvement Program

Purpose

The Highway Safety Improvement Program (HSIP) funds cost effective construction projects that reduce fatalities and serious injuries on all public roads.

In Greater Minnesota, MnDOT administers two HSIP programs: one focused on safety improvements to local roads and a second focused on safety improvements to state highways.

In the Twin Cities Metropolitan Area, MnDOT administers HSIP, but the process and selection decisions are approved by the Metropolitan Council and its Transportation Advisory Board.

The majority (60 percent) of HSIP funding goes to local roads. This summary only applies to the state highway program.

Quick Facts

Topic	Detail
Statutory reference(s)	23 U.S. Code Section 148
Frequency of project selection	Annual in Greater MN and Biennial in Metro
Approximate annual funding	$8-12 million for state highway projects
Funding Source	Federal
How many years before construction are projects selected	2 to 4 years

Where do potential project ideas come from?

Project proposals are solicited from MnDOT districts in two categories: proactive/systemic projects that address known risk factors and reactive projects that address a sustained crash location.

Most projects are originally identified in a district or county safety plan or an analysis of fatal and serious injury crashes on the state highway network.

Criteria Used in Project Selection in Greater Minnesota

MnDOT is revising the criteria that will be used in future HSIP solicitations. The following are the current draft criteria for Greater MN project selection.

Criteria	Points Available	Data Source / Basis
Location Screening	20	Proactive: risk factors for fatal and serious injury crashes Reactive: fatal and serious injury crash rate
Coverage	20	Number of miles/sites treated
Expected Impact	20	Benefit-cost ratio
Planning	20	Identification in a planning document or study
Alignment with Program Goals	20	Assessment of the selection committee

Criteria Used in Project Selection in the Twin Cities Metropolitan Area

MnDOT is revising the criteria that will be used in future HSIP solicitations. The following are the current draft criteria for Metro project selection.

Proactive Project Scoring

Criteria	Points Available	Data Source / Basis
Connection to Statewide Strategies	100	Alignment with the current Minnesota Strategic Highway Safety Plan
Cost Effectiveness	200	Cost per mile or cost per intersection
Coverage	200	Number of miles/sites treated
Traffic Volume	50	AADT
Crash History	50	Number of Fatal and Serious Injury Crashes
Expected Impact	250	Crash reduction factor
Planning	150	Identification in a planning document or study

Reactive Project Scoring

Criteria	Points Available	Data Source / Basis
Expected Impact	750	Benefit-cost analysis
Alignment with Program Goals	250	Assessment of the selection committee

Other Information

Greater MN: http://www.dot.state.mn.us/trafficeng/safety/hsip.html

Metro: http://www.dot.state.mn.us/metro/trafficeng/prog_support.html

Historic Roadside Properties Program

Purpose

The Historic Roadside Properties Program funds the repair, rehabilitation and preservation of roadside properties that are either listed on, or eligible for, the National Register of Historic Places.

Quick Facts

Topic	Detail
Federal Law	National Preservation Act of 1966 (amended as 16 USC 470 et seq.), Section 106, Section 110; National Environmental Policy Act of 1969, as amended (42 USC 4321, and 4331-4335); Archaeological and Historic Preservation Act of 1974, as amended (16 USC 469-469c-2)
Statutory reference(s)	Minnesota Statutes 138-
Frequency of project selection	Annual
Approximate annual funding	$2-5 million
Funding Source	State
How many years before construction are projects selected	2 years

Where do potential project ideas come from?

Projects were identified by a series of cultural resources studies of historic roadside development properties conducted in 1996-1998 by Gemini Research for MnDOT. A supplement released in updated on 2005 with amendments in 2006 and 2009. Newer properties up to 1975 construction was completed in 2016 by Stark/Deco. A new study which combines all previous reports and update selected sites is underway in 2019.

The studies identified 243 MnDOT properties, of which 56 are either listed on, or eligible for, the National Register of Historic Places.

Criteria Used in Project Selection

Criteria	Points Available	Data Source / Basis
Statewide Ranking or Age	30	Statewide ranking includes national register designation and historical significance (If sites are not ranked, use the number of years since last renovation)
Urgency	30	Urgent repairs due to an accident, weather related damage, or sites which are deteriorating more quickly than usual
Efficiency	10	Geographic grouping of 2-3 projects.
Community Support	10	Local community support or funding contribution
Tribal connection	10	Projects located within reservation boundaries
Under-represented Districts	10	Properties located within MnDOT Districts 2, 7 and 8, which have fewer properties than the average of all districts
Total points available	100	

www.dot.state.mn.us/roadsides/historic/index.html

Intelligent Transportation Systems Program

Purpose

The Intelligent Transportation Systems (ITS) program funds the installation of new or upgrade of existing electronics, communications, or information processing systems or services to improve the efficiency and safety of the state highway system.

Quick Facts

Topic	Detail
Frequency of project selection	Annual
Approximate annual funding	$1.9 million
Funding Source	Federal and State
How many years before construction are projects selected	3 to 4 years

Where do potential project ideas come from?

MnDOT districts provide project requests to the MnDOT Office of Traffic, Safety and Technology.

Criteria Used in Project Selection

Criteria	Points Available	Data Source / Basis
Need	3	Addresses a documented need
Warrants	3	Meets warrants for ITS
Plan Consistency	3	Consistent with or advances MnDOT ITS plan and program
Technology Risk	3	Uses proven technology
Maintenance and Operations	3	Maintenance and operations plan developed
Deliverability	3	Status of project development planning

Other Information

http://www.dot.state.mn.us/its/

Local Partnership Program

Purpose

The Local Partnership Program (formerly known as Municipal Agreements or Cooperative Agreements) funds locally identified improvements to state highways, particularly locations where the local transportation network intersects with the state system.

Quick Facts

Topic	Detail
Frequency of project selection	Annual
Approximate annual funding	$6-12 million
Funding Source	State
How many years before construction are projects selected	1 to 2 years

Where do potential project ideas come from?

Within each district, cities and counties apply for funding.

Criteria Used in Project Selection

A revised project selection process is currently being developed. Draft scoring criteria (subject to change) include:

District	Status	Current	Available Points
1	Developing	Safety	35
		Local and regional Priorities	35
		Project readiness	15
		Mobility and Access Improvements	10
		System Stewardship and Asset Management	5
			100
2	Developing	Project benefits Locals and MnDOT	
3	Piloting	Infrastructure Condition	30
		Safety	20
		Project Readiness	20

		Mobility and Access	15
		Local/Regional Priorities	15
			100
4	Piloting	Healthy Communities	50
		Travel Safety	25
		Critical connections	15
		System Stewardship and Asset Management	10
			100
M	Piloting	Local and Regional Priorities	50
		Mobility and Access Improvements	20
		Safety	15
		Infrastructure Condition	10
		Project readiness	5
			100
6	Piloting	Preservation	10
		General Project considerations	8
		Safety	7
		Infrastructure Condition	5
		Project Readiness	5
			35
7	Developing	Local and regional Priorities	40
		Safety	25
		Mobility and Access Improvements	20
		Project Readiness	20
		Infrastructure Condition	5
			100
8	Piloting	Regional and Community Priorities	40
		Mobility and Critical connections	20
		Project Readiness	20
		System Stewardship and Asset Management	10
		Safety	10
			100

Other Information

More information about the revised program will be available in 2020.

Railway-Highway Crossings Program

Purpose

The Railway-Highway Crossings (Section 130) Program funds the elimination of hazards at railway-highway crossings, including the closure and consolidation of crossings, replacement of antiquated equipment, and new grade crossing controls.

Quick Facts

Topic	Detail
Statutory reference(s)	23 U.S. Code Section 130
Frequency of project selection	Annual, potentially every other year
Approximate annual funding	$6 million
Funding Source	Federal and State
How many years before construction are projects selected	2 to 4 years

Where do potential project ideas come from?

Projects are solicited annually from local road authorities, railroads and MnDOT districts in three project categories: closures/consolidations, antiquated equipment and grade crossing control.

Criteria Used in Project Selection for Closures/Consolidations

- Number of crossings closed
- Risk Factors
- Deficient Geometry

Criteria Used in Project Selection for Antiquated Equipment Criteria

- Railroad Priority
- Exposure
- Cost participation over required minimum 10%

Criteria Used in Project Selection for Grade Crossing Control

- Local road authority funding priority
- Magnitude of clearing sight distance restriction
- Exposure
- Crossing density less than 5 per mile
- Cost participation over required minimum 10%

Rail Grade Separations

The Section 130-funded railway-highway crossing program does not fund grade separations of highway-railway crossings. Most grade separation projects are funded through non-MnDOT competitive programs or state bonding. A current list of candidate projects was scored and prioritized in a 2014 study of rail lines carrying crude oil[30] using the following criteria:

Criteria	Points Available	Data Source / Basis
Risk	19	Risk to the general population, vulnerable populations and emergency services
Safety	15	Safety index
Condition	10	Condition and level of appropriate controls

Other Information

The Railway-Highway Crossings (Section 130) Program has been correlated with a significant decrease in fatalities at railway-highway grade crossings. Since the Program's inception in 1987 through 2014, for which most recent data is available, fatalities at these crossings have decreased by 57 percent. The overall reductions in fatalities come despite an increase in the vehicle miles traveled on roadways and an increase in the passenger and freight traffic on the railways.

http://www.dot.state.mn.us/ofrw/railroad/safety.html

[30] http://www.dot.state.mn.us/govrel/reports-2014.html

Safety Rest Area Program

Purpose

MnDOT's Safety Rest Area Program funds construction, repair and rehabilitation of rest areas and waysides. Rest areas support commercial freight movements, serve as a countermeasure to drowsy driving, and promote state and regional tourism as well as providing convenient time-saving services for travelers.

Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes 86A.04, 86A.05, 86A.07, 160.272, 160.2721, 160.2725, 160.2735, 160.274, 160.2745, 160.276, 160.28, and 160.282
Frequency of project selection	Every other year
Approximate annual funding	$2-6 million
Funding Source	Federal
How many years before construction are projects selected	4 to 8 years

MnDOT focuses investment in rest area projects that:

- Eliminate an unsafe highway shoulder stop
- Occur at a critical location for commercial trucks
- Occur at a strategic location for promoting the state and state tourism
- Provide another safety function
- Are situated at the desired 50-60 mile spacing on the Rest Area Service Network as a countermeasure to drowsy driving and for other highway safety purposes

Where do potential project ideas come from?

MnDOT Rest Area Program identifies capital investment candidate projects based on the physical condition of rest area buildings and pavements, accessibility and building code compliance, partnership potential and availability of alternative funding sources.

MnDOT Districts also identify rest area capital investment projects. These typically focus on the physical condition of rest area vehicular pavements and ramps. These projects typically use one-time funding.

Criteria Used in Project Selection

Criteria	Points Available	Data Source / Basis
Condition	35	Condition of the buildings and pavement
Long-Range Objectives	25	Advances the program objectives of consolidation and completing the system
ADA Compliance	15	Compliance with ADA requirements
Usage	10	Estimated number of average daily visitors
Coordination/Synergy	10	Local partnership opportunity or coordination with another project
Network Designation	5	Interstate designation

Other Information

www.dot.state.mn.us/restareas

Standalone Noise Barrier Program

Purpose

The Standalone Noise Barrier Program provides funding for construction of noise barriers along state highways in areas where no noise abatement measures currently exist and no major construction projects are currently programmed.

Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes 161.125
Frequency of project selection	Annual
Approximate annual funding	$2 million (Metro) $1 million (Greater Minnesota)
Funding Source	State Funds
How many years before construction are projects selected?	4 to 5 years

Where do potential project ideas come from?

Metro District

MnDOT maintains a list of areas within the Metro District where residential noise standards are exceeded. These areas are ranked based on existing noise levels, the number of homes adjacent to the highway, and the cost effectiveness of a potential noise barriers. The list is updated every five years.

Starting in 2018, MnDOT uses a solicitation to select standalone noise barrier projects from the ranking list. Interested cities must fill out an application form and provide information about the area where a noise barrier is being requested. MnDOT then conducts a noise study and ranks the applications.

Greater Minnesota

For standalone noise barriers in Greater Minnesota, MnDOT uses a solicitation to select standalone noise barrier projects. Interested cities apply for funding and provide information about the area where a noise barrier is being requested. MnDOT then conducts noise analyses and ranks the applications.

Criteria Used in Project Selection

Criteria	Points Available	Data Source / Basis
Intensity Adjusted Cost Effectiveness	100	Cost of the noise barrier, number of residential units that receive at least 5 decibels of noise reduction, and existing noise level compared to federal threshold

Other Information

Any noise barriers constructed under this program must meet the criteria for feasibility, reasonableness, and cost effectiveness identified the MnDOT's 2017 Noise Requirements: http://www.dot.state.mn.us/environment/noise/policy/index.html

Both Metro and Greater Minnesota standalone noise barrier projects require a 10 percent cost share from the city where the noise wall is being proposed.

The majority of the residential units that would benefit from a noise barrier must have been constructed prior to 1997.

MnDOT Metro Standalone Noise Barrier Study:
http://www.dot.state.mn.us/environment/noise/pdf/2016-hwy-noise-abatement-study.pdf

MnDOT Greater Minnesota Standalone Noise Barrier information and application:
http://www.dot.state.mn.us/environment/noise/greater-mn-program.html

Transportation Economic Development Program

Purpose

The Transportation Economic Development Program (TED) provides competitive grants to construction projects on state highways that provide measurable economic benefits. The economic benefits may be local, regional or statewide in geographic scale. The program specifically focuses on highway improvements that support job creation or retention.

Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes 174.12
Frequency of project selection	Every other year
Approximate annual funding	$8-12 million
Funding Source	State Funds
How many years before construction are projects selected	2 to 3 years

Where do potential project ideas come from?

MnDOT solicits applications for funding from cities, counties, tribes and other government entities.

Criteria Used in Project Selection

Criteria	Points Available	Data Source / Basis
Economic Benefits	40	Job creation/retention per $1million of project cost, income creation/retention after 5 years, and benefits to targeted industry clusters and labor, including environmental justice populations
Transportation Benefits	40	Benefit-cost analysis; consistency and priority in state, metropolitan and local plans; improvements for safety, freight and/or multimodal transportation
Project Readiness Risk Assessment	20	Status of project development and funding

Bonus points for project applications that include contributions from non-public sources or that advance the geographic distribution objectives in Minnesota State Statute 174.12 Subd. 7(b).

Other Information

The TED program can only fund up to 70 percent of the total transportation infrastructure cost of the project.

The Minnesota Department of Employment and Economic Development administers a parallel Transportation Economic Development Infrastructure (TEDI) program that funds projects on local roads and for other types of transportation.

http://www.dot.state.mn.us/funding/ted/

Weigh Station Capital Improvement Program

Purpose

The Weigh Station Capital Improvement Program funds the installation, repair and replacement of the physical infrastructure necessary for the enforcement of state and federal weight and size commercial motor carrier laws. The Minnesota Department of Transportation is responsible for the physical infrastructure used to perform enforcement. The Minnesota State Patrol, a division of the Minnesota Department of Public Safety, is responsible for operations and carrying out of enforcement of the laws. The two units of government coordinate closely to identify operational and capital improvements.

Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes 169.771, 169.80
Frequency of project selection	Annual
Approximate annual funding	$2 million
Funding Source	Federal and State Funds
How many years before construction are projects selected	3 to 4 years

Where do potential project ideas come from?

Projects are solicited through MnDOT District offices and through input from the Weight Enforcement Unit of the State Patrol. MnDOT and the State Patrol developed a 10 year Weight Enforcement Investment Plan that identified and prioritized needs throughout the state. The plan is the basis for project identification and selection.

Criteria Used in Project Selection

Criteria	Points Available	Data Source / Basis
Roadway Characteristics	20	Functional classification and truck crash rate
Freight	20	HCADT and truck vehicle miles travelled
Geographic Coverage	15	Spacing and points of entry
Enforcement / Safety	25	System security and field experience/enforcement data
Condition	20	Condition of the physical infrastructure

Other Information

http://www.dot.state.mn.us/cvo/weighstations.html

List of Appendices

Appendix A: Revision History

The table below will document changes made to this document and the date the changes were made.

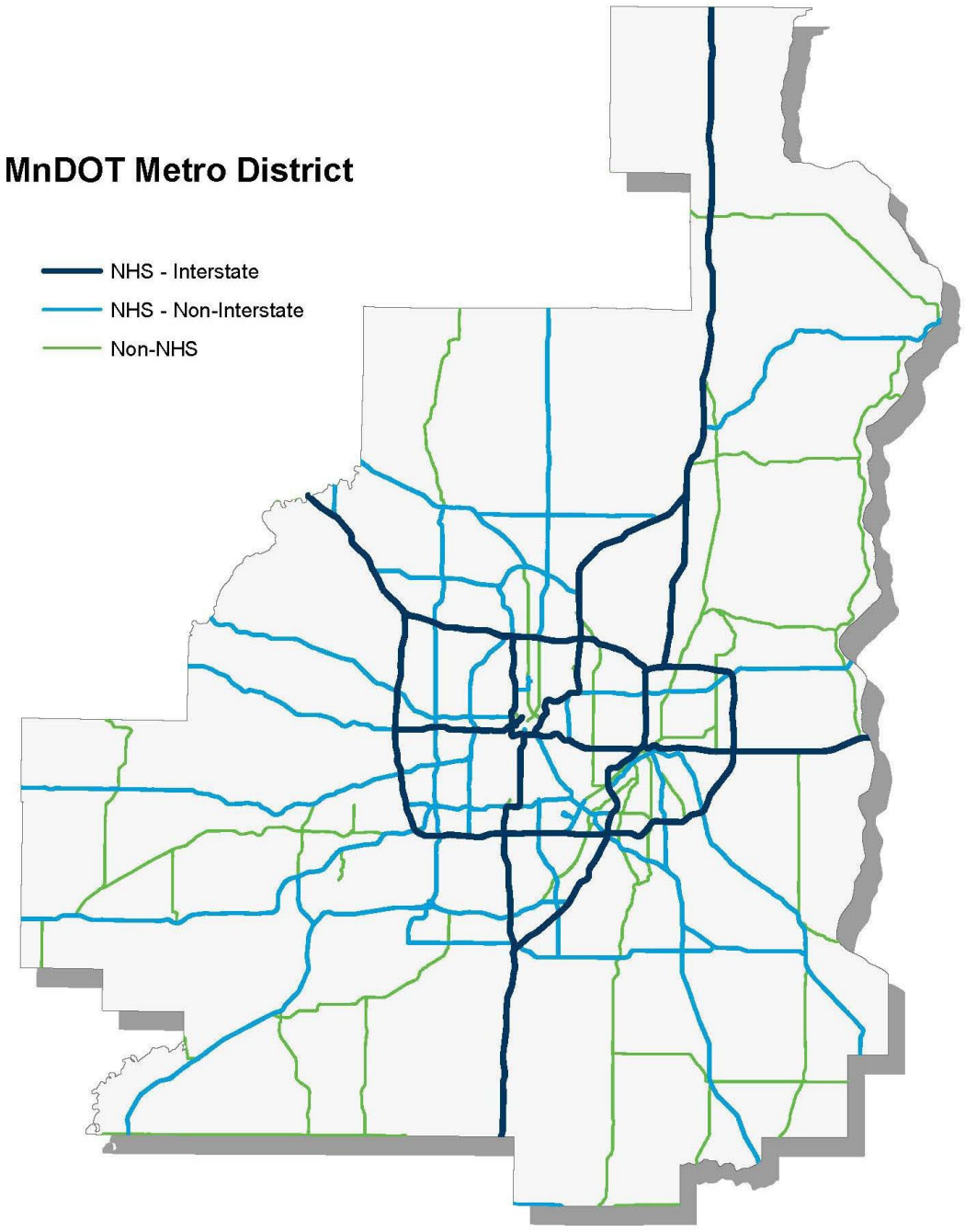
Date Revised	Description of Updates
November 2018	First publication
October 2019	Historic properties, ITS and LPP criteria and scoring updated
June 2020	ITS criteria and scoring updated
May 2021	Sustainability pilot program added and Railroads over MnDOT facilities selection criteria was updated
July 2022	Project selection guide name updated. Added “Highway” to name to reflect recent legislation.
September 2022	Added Tribal coordination language

Appendix B: List of Acronyms

Acronym	Meaning
AADT	Annual Average Daily Traffic
ADA	Americans with Disability Act
ATP	Area Transportation Partnership
BPI	Bridge Planning Index
BRIM	Bridge Replacement and Improvement Management System
BUILD	Better Utilizing Investments to Leverage Development Program
CHIP	Capital Highway Investment Plan (10 year plan)
CPR	Concrete Pavement Rehabilitation
EJ	Environmental Justice
FAST	Fixing America's Surface Transportation Act
HCADT	Heavy Commercial Average Daily Traffic
HPMA	Highway Pavement Management Application
HSIP	Highway Safety Improvement Program
INFRA	Infrastructure for Rebuilding America Program
ITS	Intelligent Transportation Systems
MnDOT	Minnesota Department of Transportation
MnSHIP	Minnesota State Highway Investment Plan (20 year plan)
MPO	Metropolitan Planning Organization
NBI	National Bridge Inventory
NHS	National Highway System
PROWAG	Public Rights-of-Way Accessibility Guidelines
RBTN	Regional Bicycle Transportation Network
RQI	Ride Quality Index
RSL	Remaining Service Life
SR	Surface Rating
STIP	State Transportation Improvement Program
TED	Transportation Economic Development Program
TIGER	Transportation Investment Generating Economic Recovery Program
TIP	Transportation Improvement Program
TPP	Transportation Policy Plan

Appendix C: National Highway System Map

Map of the State Highway Network Indicating National Highway System (NHS) Designation



More information about the National Highway System is available at:
http://www.dot.state.mn.us/roadway/data/nhs.html

Appendix D: Pavement Scoring

Scoring Pavement Needs / Selecting Pavement Projects

MnDOT scores stretches of highway based on a pavement need when selecting projects to include in the 10-year Capital Highway Investment Plan. The selection of pavement projects is informed by district staff, experts from MnDOT's materials office and the Highway Pavement Management Application (HPMA). MnDOT's approach to managing pavements follows the guidance and targets in the Transportation Asset Management Plan[31] and the planned outcomes in MnSHIP.

Pavement needs on the National Highway System (NHS) are scored and selected separately from pavement needs off the system. The allocation of funding between NHS and Non-NHS pavement needs is based on MnSHIP.

Given their complexity, utilities and other infrastructure and level of required local coordination and public involvement, MnDOT scores and prioritizes urban non-freeway/non-expressway pavement needs separately from the normal pavement scoring process.

Once selected, MnDOT then identifies and evaluates alternatives and other needs, legal requirements, issues and opportunities in coordination with local partners, and considers public input. In the process, non-pavement work may be added to a pavement project or a pavement project may be combined with a nearby bridge project. The department follows a context-sensitive complete streets approach, which considers the needs of all users. The final project may address a substantial number of needs beyond the pavement need that precipitated the project. Projects may move years based on local coordination, project delivery, timing of other nearby construction projects, and funding shifts.

Project Identification

Potential pavement projects are identified by the Highway Pavement Management Application (HPMA) and by MnDOT district staff.[32]

Projects Requiring Scoring

Potential projects may be developed for any stretch of road, but at a minimum, potential projects will be developed and scored for all roads with a Ride Quality Index (RQI)[33] forecasted to be 2.5 or lower (Remain Service Life=0)[34] in year 10 of the CHIP being developed.

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[31] http://www.dot.state.mn.us/assetmanagement/tamp.html

[32] More information about how MnDOT manages pavements is available at: http://www.dot.state.mn.us/materials/pvmtmgmt.html

[33] MnDOT's statewide performance measures for pavements are based on RQI, which uses a zero to five rating scale to measure the smoothness of driving on a road. Roads with an RQI greater than 3.0 are considered in good condition, between 2.1 and 3.0 in fair condition, and 2.0 or less in poor condition.

[34] When a road has reached the end of its design life it does not mean the road cannot be driven on, but most people would feel it is uncomfortable to drive on and a major rehabilitation is likely needed.

Preventive Maintenance

Chip seals, patching and crack sealing are not scored.

Scoring Criteria and Weights

Pavement projects are scored and selected within each district.

NHS Pavement Scoring

Criteria	Points Available	Scoring Rubric
Timing of the Improvement	60	See table below for detailed scoring information
Network Designation	5	Interstate – 5 points Non-Interstate Freeway – 2 points Other NHS – 0 points
Traffic Volume	10	Projects with AADTs equal to or greater than 25,000 in Greater MN and 120,000 in Metro receive full points. Below those values, points are assigned as a percent of those values rounded down to the nearest point. Example AADT of 14,000 in Greater MN: 14,000/25,000 X 10 points = 5.6 points rounded down to 5 points.
Truck Volume	10	Projects with HCADTs equal to or greater than 1,000 in Greater MN and 5,000 in Metro receive full points. Below those values, points are assigned as percent of those values rounded down to the nearest point.
Length/Miles Covered	5	$\leq$ 10 roadway miles - miles/2 = points (i.e. 4 mile project gets 2 points) – round to the nearest half point > 10 roadway miles - 5 points
Other Infrastructure Needs	10	Number of condition 3 & 4 pipes: $\geq$5 – 10 points 1-4 – 5 points 0 – 0 points

Scoring Project Timing

For the purposes of scoring, MnDOT uses the forecasted length-weighted average RQI for the year anticipated for programming the project. Default is year 10 of the CHIP being developed.

Type of Fix Assumed for Programming Purposes	RQI 0.1-0.5	RQI 0.6-1.0	RQI 1.1-1.5	RQI 1.6-2.0	RQI 2.1-2.5	RQI 2.6-3.0	RQI 3.1-3.3	RQI >3.3
Thin Overlay, Diamond Grinding, Minor Concrete Pavement Rehabilitation (CPR)	0 points	0 points	0 points	0 points	25 points	55 points	55 points	25 points
Rehab, Medium Mill and Overlay, Major CPR, Thick Overlay	20 points	25 points	50 points	60 points	60 points	50 points	20 points	0 points
Reconstruct, Reclaim, Cold In-Place Recycling, Regrade, Unbonded Overlay	60 points	60 points	60 points	60 points	45 points	25 points	0 points	0 points

Non-NHS Pavement Scoring

Criteria	Points Available	Scoring Rubric
Timing of the Improvement	60	See table above for detailed scoring information
Traffic Volume	10	Projects with AADTs equal to or greater than 5,000 in Greater MN and 25,000 in Metro receive full points. Below those values, points are assigned as a percent of those values rounded down to the nearest point.
Truck Volume	10	Projects with HCADTs equal to or greater than 500 in Greater MN and 1,000 in Metro receive full points. Below those values, points are assigned as percent of those values rounded down to the nearest point.
Length/Miles Covered	5	≤ 10 roadway miles – miles/2 = points - round to the nearest half point > 10 roadway miles - 5 points
Other Infrastructure Needs	10	Number of condition 3 & 4 pipes: ≥5 – 10 points 1-4 – 5 points 0 – 0 points
Turnback Potential	5	Turnback candidate – 5 points

Scoring Urban Pavement Needs / Selecting Pavement Projects

Given their complexity, utilities and other infrastructure and required local coordination and public involvement, urban non-freeway/non-expressway pavement projects are scored and prioritized separately from the normal pavement scoring process.

Freeways have full access control (no driveways, signals or at-grade intersections). Expressways have partial access control (limited or no driveways, few and widely spaced intersections, and may include some grade separated crossings). Both are high speed roads designed to facilitate longer trips.

These pavement projects can be either NHS or non-NHS.

Project Identification

Potential urban pavement projects are identified by the Highway Pavement Management Application (HPMA) decision tree and by district staff.

Definition of Urban

For the purposes of scoring urban pavement needs, MnDOT uses a flexible, context-based definition of urban. This includes areas with medium-to-high density adjacent development with small to medium setbacks, and in some instances no setback. This includes both residential, industrial and commercial areas. Presence or lack thereof of curb and gutter or incorporation are not included in this definition. In some instances, the urban context may be very short (less than a half a mile).

Projects Requiring Scoring

Districts can identify potential projects for any stretch of urban road, but at a minimum, potential projects will be developed and scored for all roads with RQIs forecasted to be 2.5 or lower (Remain Service Life=0) and a Surface Rating (SR) of 3.0 or less in year 10 of the CHIP being developed. RQI alone is less reliable in urban areas as the measure is based on higher speed roads (>50 miles per hour) and may overestimate the need for pavement rehabilitation or replacement.

Preventive Maintenance

Chip seals, patching and crack sealing are not scored.

Scoring Criteria and Weights

Urban pavement projects are scored and selected within each district.

Criteria	Points Available	Scoring Rubric
Timing of the Improvement	25	*See table below for details*
Cracking, Patching & Rutting	25	Forecasted Surface Rating:[35] <2.1 – 25 points 2.1-2.4 – 20 points 2.5-3.0 – 10 points >3.0 – 0 points
Other MnDOT Infrastructure	10	District assessment based on age, condition rating and inspection history of storm drains, catch basins, culverts, fiber optic and other cables, and other roadside infrastructure.
Local Utilities	5	Documented local utility need and/or cast iron or clay pipes – 5 points
ADA	10	Documented ADA non-compliant sidewalk, curbs and/or signals – 10 points Substantially, but not fully compliant and/or previous investments to address ADA, but PROWAG has changed the geometric requirements since then – 5 points
AADT	10	Projects with AADTs equal to or greater than 10,000 in Greater MN and 25,000 in Metro would receive full points. Below those values, points would be assigned as a percent of those values rounded down to the nearest point. Example AADT of 14,000 in Metro: 14,000/25,000 X 10 points = 5.6 points rounded down to 5 points.
Active Transportation and Transit	10	*See below for scoring details*
Benefits Environmental Justice Population	5	Adjacent census tracks have more than 30% EJ population in Metro and more than 20% in Greater MN

[35] Use forecasted surface rating for the year you anticipate programming the project. Default is year 10 of the CHIP being developed.

Scoring Project Timing

For the purposes of scoring, MnDOT will use the forecasted length-weighted RQI for the year anticipated for programming the project. Default is year 10 of the CHIP being developed.

Type of Fix Assumed for Programming Purposes	RQI 0.1-0.5	RQI 0.6-1.0	RQI 1.1-1.5	RQI 1.6-2.0	RQI 2.1-2.5	RQI 2.6-3.0	RQI 3.1-3.3	RQI >3.3
Thin Overlay, Diamond Grinding, Minor CPR	0 points	0 points	0 points	0 points	10 points	20 points	20 points	10 points
Rehab, Medium Mill and Overlay, Major CPR, Thick Overlay	10 points	15 points	20 points	25 points	25 points	20 points	5 points	0 points
Reconstruct, Reclaim, Cold In-Place Recycling, Regrade, Unbonded Overlay	25 points	25 points	25 points	25 points	20 points	10 points	0 points	0 points

Scoring Active Transportation and Transit

Points can be earned for active transportation and transit for a variety of factors listed below. The maximum score a potential project can earn is 10 points.

- Non-motorized safety risk factors: each intersection with 4 or more risk factors – 5 points
- Fixed route transit with stations/stops on the corridor – 5 points
    - If Bus Rapid Transit, Light Rail Transit or other rapid transit planned or operational on the corridor – 10 points
- Corridor designated or planned as a state bikeway or Regional Bicycle Transportation Network (RBTN) (in Metro) and/or specific improvements identified on the corridor in a Safe Routes to School Plan, Scenic Byway Corridor Management Plan or other Active Transportation Plan – 5 points
- A trail, regional bikeway or RBTN crosses the corridor at grade – 3 points
- Approximate percentage of the community destinations and neighborhoods divided by the state highway:
    - 0% – 0 points
    - 1-10% - 1 Point
    - 11-20% - 2 Points
    - 21-30% - 3 points
    - 31-40% - 4 points
    - 41-50% - 5 Points

Factors Not Included in Scoring

MnDOT considers a wide range of factors when selecting projects. These include considerations specific to individual projects as well as system level performance targets and guidance. Not all are included in the score.

Examples of Reasons Why a High Scoring Project Wouldn't Be Picked

- Waiting to coordinate with another project
- Cost is greater than total available budget for year
- Waiting to avoid simultaneous or multiple years of detours in the same area
- Local partner not ready to participate at this time
- Project not identified or prioritized in the metropolitan transportation plan or studies (for projects within MPO planning areas)
- Significant environmental process needs to be completed or more work needed to identify and resolve environmental constraints
- Corridor study in process
- Not a district priority will continue to monitor pavement performance
- Project is being developed to be ready if additional funding becomes available (flex or shelf project)
- District does not expect pavement segment(s) to deteriorate as fast as model predicts.

Examples of Reasons Why a Lower Scoring Project Would Be Picked

- RQI forecast doesn't reflect on the ground conditions or expectations
- Ongoing maintenance concerns
- City, county or tribal government has funding for a specific year
- Turnback agreement in place
- To coordinate with the timing of another MnDOT or local project

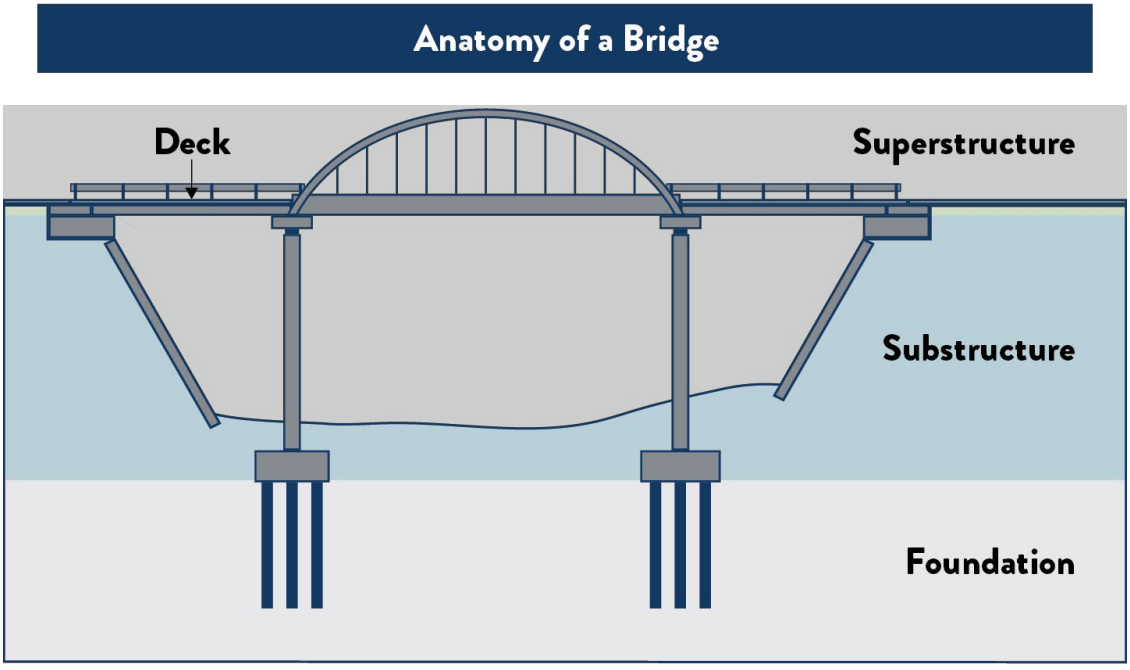
Appendix E: Bridge Scoring

Scoring Bridge Needs / Selecting Bridge Projects

MnDOT scores bridge condition needs when selecting projects to include in the 10-year Capital Highway Investment Plan. The selection of bridge projects is informed by district staff, experts from MnDOT's bridge office and the Bridge Replacement and Improvement Management System (BRIM). [36] MnDOT's approach to managing bridges follows the guidance and targets in the Transportation Asset Management Plan[37] and the planned outcomes in MnSHIP.

Bridge that carry roads on the National Highway System (NHS) are scored and selected separately from bridge needs off the system. The allocation of funding between NHS and Non-NHS bridge needs is based on MnSHIP.

Once selected, MnDOT then identifies and evaluates alternatives and other needs, legal requirements, issues and opportunities in coordination with local partners, and considers public input. In the process, non-bridge work may be added to a bridge project or a bridge project may be combined with a nearby pavement project. The department follows a context-sensitive complete streets approach, which considers the needs of all users. The final project may address a substantial number of needs beyond the bridge need that precipitated the project. Projects may move years based on local coordination, project delivery, timing of other nearby construction projects, and funding shifts.



[36] More information about how MnDOT manages bridges is available at: http://www.dot.state.mn.us/bridge/

[37] http://www.dot.state.mn.us/assetmanagement/tamp.html

Project Identification

Potential projects will be developed and scored for all bridges: A) identified by BRIM and expert review for an action within the time period covered by the CHIP under development, and B) with deck, substructure or superstructure National Bridge Inventory (NBI) ratings[38] based on the following table.

Recommended Action from BRIM and Expert Review	Deck NBI Rating	Superstructure or Substructure NBI Rating
Overlay Deck	≤7	N/A
Replace Deck	≤6	≤5
Rehabilitation[39] or Replacement	≤6	≤5

Bridge Preventive and Reactive Maintenance

Epoxy chip seal wearing courses, painting of steel superstructures, expansion joint replacement, scour countermeasures, etc. will not be scored, but will be considered for the CHIP based on the condition of the element receiving the action.

Scoring Criteria and Weights

NHS bridges are scored and prioritized statewide with input from district staff. Non-NHS bridges are scored statewide, but prioritized within each district.

Scoring Multiple Bridge Structures

Projects involving significant work on twin bridge structures or other situations with more than one bridge, the score of the primary bridge driving the project will be the score for the overall project.

[38] NBI condition ratings measure the general condition of a bridge on a 1 to 9 scale. Ratings of 7 or higher are considered good condition, 5 and 6 are considered fair and satisfactory, and 4 or less considered poor.

[39] Rehabilitation includes superstructure replacement or widening and other activities as identified in Chapter 6 of the Bridge Preservation and Improvement Guidelines: http://www.dot.state.mn.us/bridge/construction.html.

Bridge Scoring

Criteria	Points Available	Scoring Rubric for Re-decks, Rehabilitations and Replacements	Scoring Rubric for Overlays
Condition	50	NBI Deck, Superstructure, or Substructure Rating: ≤4 – 50 points =5 and/or fracture critical – 35 points	NBI Deck Rating: ≤6 – 50 points =7 – 30 points
Risk of Service Interruption	20	Bridge Planning Index (BPI):[40] ≤60 – 20 points 61-80 – 10 points >80 – 0 points	BPI: ≤60 – 20 points 61-80 – 10 points >80 – 0 points
Remaining Service Life	20	Deck RSL: ≤10 years – 20 points 11-15 years – 10 points >15 years – 0 points	Deck RSL: ≤20 years – 20 points 21-30 years – 10 points >30 years – 0 points
Bridge Size	10	Deck Area: ≥100,000 ft^2 = 10 points 90,000-99,999 ft^2 = 9 points 80,000-89,999 ft^2 = 8 points 70,000-79,999 ft^2 = 7 points 60,000-69,999 ft^2 = 6 points 50,000-59,999 ft^2 = 5 points <50,000 ft^2 = 0	Deck Area: ≥100,000 ft^2 and/or span length ≥ 250 feet = 10 points 90,000-99,999 ft^2 = 9 points 80,000-89,999 ft^2 = 8 points 70,000-79,999 ft^2 = 7 points 60,000-69,999 ft^2 = 6 points 50,000-59,999 ft^2 = 5 points <50,000 ft^2 = 0

[40] Minnesota Statutes 165.14 Subd. 7 requires MnDOT to include a consideration of the risk of service interruption when prioritizing bridge repairs and replacements. MnDOT developed the Bridge Planning Index to comply with the requirement for a risk-based prioritization system. BPI weighs the risks associated with the condition and fatigue of the bridge structure, potential damage from flooding and trucks, and impacts of detours.

Scoring Other Types of Bridge Projects

Culvert Needs

MnDOT replaces or rehabilitates most culverts (greater than 10 feet) in conjunction with other projects. However, MnDOT will occasionally select a culvert for a standalone project.

Criteria	Points Available	Data Source / Basis
Structural Condition	50	NBI culvert rating: ≤4 – 50 points 5 – 35 points
Load Rating	20	Concrete Culvert: W Type in condition state 4 – 20 points W Type or condition state 4 – 10 points Corrugate Metal Culvert: Condition State 4 – 20 points Condition State 3 – 10 points
Channel and Waterway Condition	15	NBI channel condition and waterway adequacy ratings: ≤ 4 (channel) and/or ≤3 (waterway) – 15 points
Traffic Volume	15	Projects with AADTs equal to or greater than 10,000 in Greater MN and 25,000 in Metro receive full points. Below those values, points are assigned as a percent of those values rounded down to the nearest point. Example AADT of 14,000 in Metro: 14,000/25,000 X 15 points = 8.4 points rounded down to 8 points.

Bridges Carrying Railroads Over State Highways

Criteria	Points Available	Data Source / Basis
Condition	70	NBI deck, superstructure, and substructure condition ratings Any NBI rating under 5 =70 points NBI 6 =35 points 7 and above =0 points
Vertical Clearance	15	<16 feet 4 inch clearance – 15 points (16 feet 6 inches on oversize/overweight super load corridors)
Traffic Volume	15	Based on AADT of road bridged. AADTs equal to or greater than 10,000 in Greater MN and 25,000 in Metro receive full points. Below those values, points are assigned as a percent of those values rounded down to the nearest point. Example AADT of 14,000 in Metro: 14,000/25,000 X 15 points = 8.4 points rounded down to 8 points.

Pedestrian Bridge and Underpass Rehab/Replacement

MnDOT replaces or rehabilitates most pedestrian bridges and underpasses as part of other pavement and bridge projects. However, MnDOT will use the following to score and prioritize standalone projects.

Criteria	Points Available	Scoring Rubric
Condition	65	NBI deck, substructure, superstructure or culvert rating: ≤4 – 65 points 5 – 30 of points
Proximity to key destinations	15	School, parks, senior residential facility, grocery store and/or other non-motorized traffic generator: w/in ¼ mile – 15 points w/in ½ mile – 10 points w/in 1 mile – 5 points Or part of a designated state or regional bikeway or trail – 15 points
ADA Compliance	10	Approaches and/or deck not ADA compliant – 10 points
Benefits Environmental Justice Population	5	More than 30% of the population in Metro and more than 20% of the population in Greater MN adjacent census tracts are covered by the Environmental Justice Executive Order
Low vertical clearance	5	< 17 feet – 5 points

Factors Not Included in Scoring

MnDOT considers a wide range of factors when selecting projects. These include considerations specific to individual projects as well as system level performance targets and guidance. Not all are included in the score.

Examples of Reasons Why a High Scoring Project Wouldn't Be Picked

- Waiting to coordinate with another project
- Cost is greater than total available budget for year
- Waiting to avoid simultaneous or multiple years of detours in the same area
- Project not identified or prioritized in the metropolitan transportation plan or studies (for projects within MPO planning areas)
- Not a district performance will continue to monitor bridge performance
- Cost sharing with locals/neighboring state
- Project is being developed to be ready if additional funding becomes available (flex/shelf project)
- Local partner not willing to participate at this time

Examples of Reasons Why a Lower Scoring Project Would Be Picked

- Bridge is currently load posted
- To prepare for a future pavement or capacity expansion
- Ongoing maintenance concerns
- To coordinate with the timing of another MnDOT or local project
- Limited funding for bigger fix which scores higher

Appendix F: Major Capacity Expansion and Mobility Projects

Scoring and Selecting Major Capacity Expansion Projects in the Twin Cities Metropolitan Area

Most significant capacity expansion and mobility projects (for example, converting a signalized intersection into an interchange or adding lanes to a freeway) are now selected through competitive programs like Corridors or Commerce (see page 30) or the Transportation Economic Development Program (see page 47). However, MnSHIP does allocate some funding to address congestion relief and improve mobility.

When developing pavement and bridge projects, MnDOT looks for opportunities to make targeted improvements to address safety and improve traffic flow. In some instances, larger investments are necessary. The following types of projects are scored and selected through a separate process from the main pavement and bridge project selection process:

- The addition of one lane mile or more (MnPASS, general purpose or auxiliary)
- New or significantly modified interchanges
- Any project requiring an Environmental Assessment or full Environmental Impact Statement
- Any project that includes a capacity expansion element costing $10 million or more (the cost of the capacity is $10 million, not the total project cost)

Projects initiated by cities and counties on the state highway system meeting one of the criteria above that receive funding through the Metropolitan Council's Regional Solicitation or federal competitive programs like INFRA, TIGER or BUILD do not need be to be scored to receive MnDOT match funds. They are considered selected through that competitive process.

Project Identification

Capacity expansion and other major investments to reduce congestion and improve mobility in the Twin Cities Metropolitan Area are identified and prioritized through the regional planning process.[41] Specific policy direction for mobility investments comes from the region's Transportation Policy Plan (TPP) and MnDOT's statewide transportation plans.

The Metropolitan Council (the region's Metropolitan Planning Organization) and MnDOT, along with other partner agencies and stakeholders, evaluate and prioritize various issues and needs related to congestion and mobility as part of region-wide system studies. Examples include MnPASS System Study 3, the Principal Arterial Intersection Conversion Study and the Freeway System Interchange Study.

[41] https://metrocouncil.org/Transportation/Planning-2/Transportation-Planning-Process.aspx

With each update to the Transportation Policy Plan, the Metropolitan Council decides which priority needs and project areas identified in the system studies to include in the 20-year timeframe of the plan. The needs and project areas listed in either the current or increased revenue scenario of the TPP are the list of eligible candidate projects to be included in the TIP/STIP or CHIP.

Scoring Criteria

In cooperation with the Metropolitan Council, MnDOT uses the following criteria to score candidate projects. Major capacity expansion project selection decisions in the metro must be approved by the Metropolitan Council for inclusion in the TPP, as required by federal law.

Measure	Points Available	Scoring Rubric
Priority in regional plans and studies	50	Priority given in relevant regional planning studies. Examples: MnPASS System Study: Tier 1 or 2 – 50 points Tier 3 – 30 points* Principal Arterial Intersection Conversion Study: High Priority – 30 points* Medium Priority – 20 points* Freeway System Interchange Study (ongoing study): Tier 1 – 50 points Tier 2 – 30 points* *+20 points if Non-MnDOT funding >1/3 of the total project cost
Asset Management	25	Forecasted pavement Ride Quality Index: <2.0 – 25 points 2.1-2.5 – 15 points 2.6-3.0 – 5 points >3.0 – 0 points AND/OR bridge substructure, superstructure and/or deck NBI Rating: ≤4 – 25 points 5 – 15 points 6 – 5 points >6 – 0 points
Return on Investment	25	Benefit-Cost Ratio: <1 – 0 points 1.0-1.49 – 5 points 1.5-1.99 – 10 points 2.0-2.49 – 15 points 2.5-2.99 – 20 points ≥3.0 – 25 points

Factors Not Included in the Score

MnDOT and the Metropolitan Council consider a wide range of factors when selecting projects. These include considerations specific to individual projects as well as system level performance targets and guidance. Not all are included in the score. Examples of other factors include:

- Geographic balance of projects
- Timing of adjacent projects to avoid construction on parallel corridors
- Available budget in any given year

Project Changes That Require Rescoring

Most scoping decisions for capacity projects would not require rescoring, but the following thresholds would require an updated score:

- Cost of capacity expansion element(s) increases by more than 20 percent
- The scope changes would likely meaningfully change the benefit-cost ratio (i.e. change in travel time savings or safety benefits great enough to affect the benefit-cost ratio rounded to the nearest whole number).
- The nature of the project changes (i.e. switching from a MnPASS lane to a general purpose lane)

More information about MnDOT project selection is available at:
www.mndot.gov/projectselection