

Minnesota Statewide Freight System Plan

Task 2.4 - Existing Institutional Structure

draft report

prepared for

Minnesota Department of Transportation

prepared by

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date

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1.0 Existing Institutional Structure

1.1 MINNESOTA DEPARTMENT OF TRANSPORTATION ORGANIZATION

The Minnesota Department of Transportation (MnDOT) was created in 1976 by the Legislature to assume the activities of the former Departments of Aeronautics and of Highways and the transportation-related sections of the State Planning Agency and of the Public Service Department. Today MnDOT develops and implements policies, plans, and programs for aeronautics, highways, motor carriers, ports, public transit, and railroads. MnDOT's mission is to:

“Plan, build, operate and maintain a safe, accessible, efficient and reliable multimodal transportation system that connects people to destinations and markets throughout the state, regionally and around the world.”

An organizational chart for MnDOT's various departments is shown in Figure 1.1. MnDOT's Office of Freight and Commercial Vehicle Operations (OFCVO) is a department within the Modal Planning & Program Management Division.

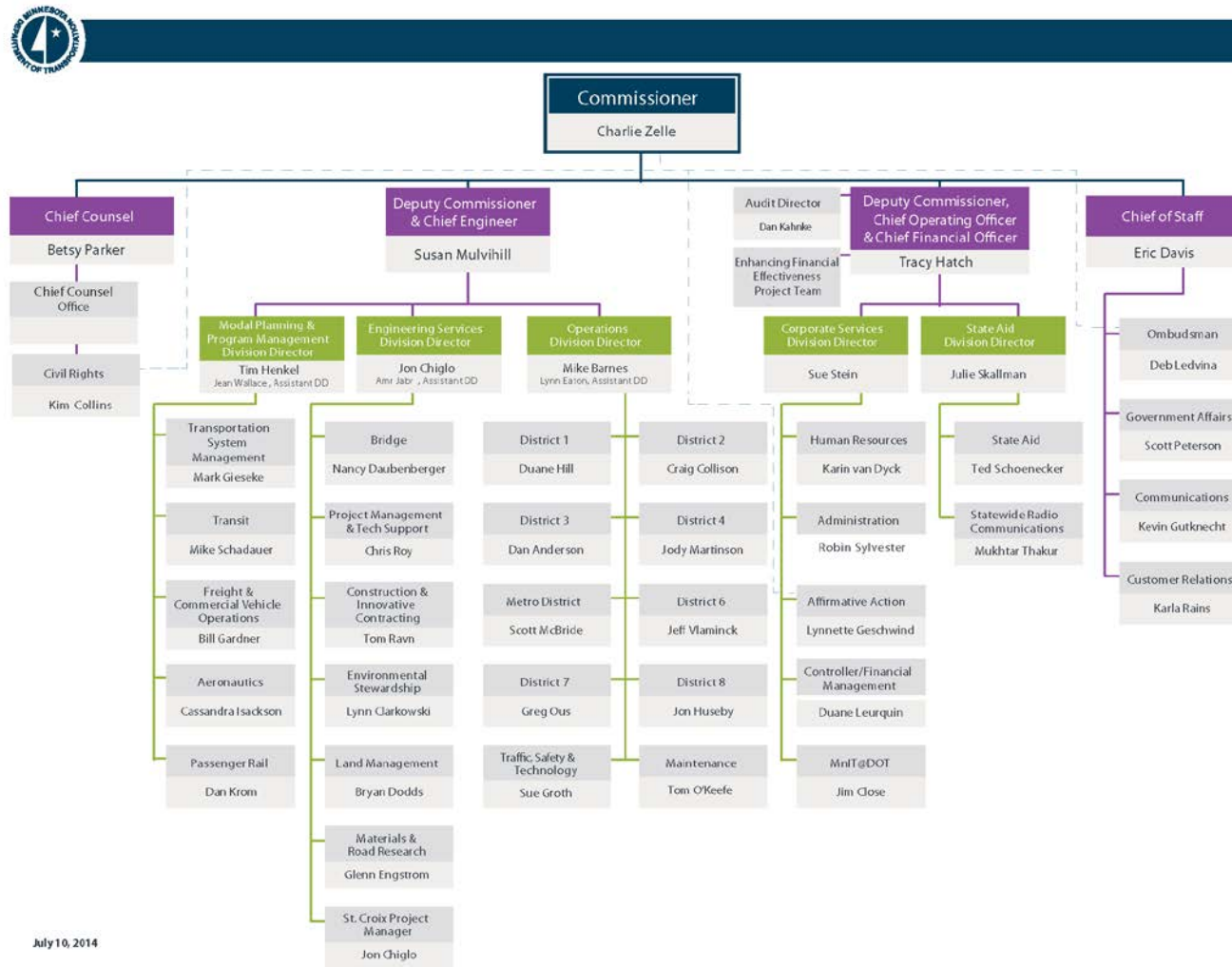
Office of Freight and Commercial Vehicle Operations

MnDOT's Office of Freight and Commercial Vehicle Operations (OFCVO) role is to develop new and innovative approaches to advance freight planning and project development in Minnesota, while providing for the safe and efficient movement of goods via Minnesota's highways, railways and waterways.

MnDOT also works with commercial transportation providers to improve the safety of their operations by implementing, administering, and enforcing Minnesota laws and federal regulations that govern property and passenger carriers.

An organization chart for the staff in the OFCVO is shown in Figure 1.2.

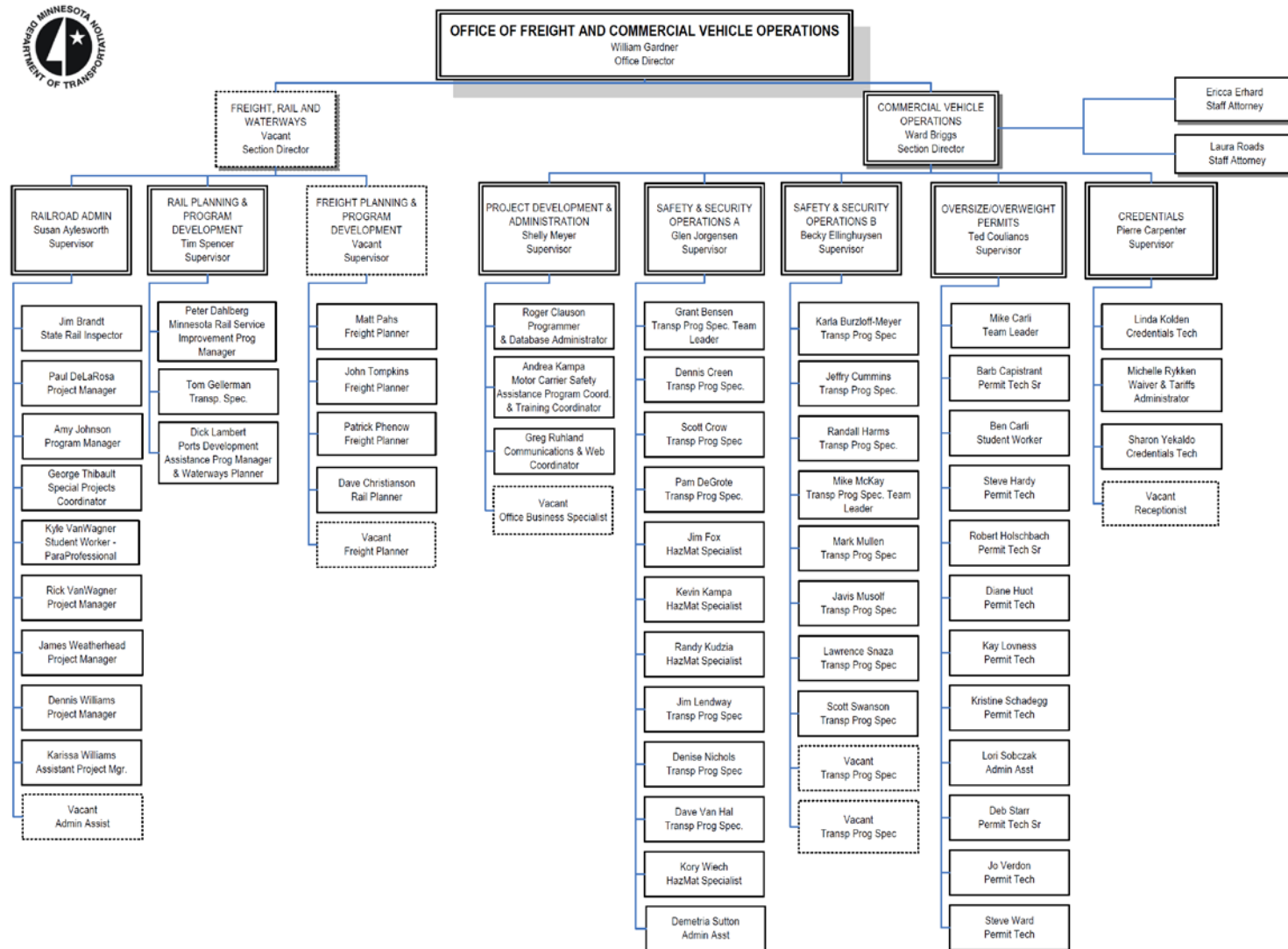
Figure 1.1 MnDOT Organizational Chart



Source: Minnesota DOT

Figure 1.2

MnDOT Office of Freight and Commercial Vehicle Operations Organizational Chart



Source: Minnesota DOT, October 2013

Public Sector Relationships

The OFCVO often works closely with other public agencies including the Department of Employment and Economic Development (DEED), and Metropolitan Planning Organizations (MPOs) throughout the region, particularly the Metropolitan Council in the Minneapolis-Saint Paul area, to collaborate on freight issues of regional importance, and to develop solutions together. The OFCVO also coordinates closely with many cities and counties to understand the freight needs specific to their local communities.

Private Sector Relationships

The Minnesota Freight Advisory Committee (MFAC) is coordinated by the OFCVO and the Center for Transportation Studies (CTS) at the University of Minnesota. The MFAC is a partnership between government and business that meets quarterly to exchange ideas and recommend policy and actions. The MFAC represents the needs and requirements of freight-generating and freight-dependent industries to the State, elected officials, and other public agencies and organizations.

The goal of the MFAC is to develop and promote safe, productive, and sustainable freight transportation in Minnesota and to recommend program and research areas for MnDOT to pursue. The committee provides input and direction to MnDOT's freight investment committee on freight transportation policies, needs and issues and ensures that freight transportation needs are incorporated in the planning, investment, and operation of Minnesota's transportation system.

MnDOT is also a member of the Great Northern Corridor Coalition. The Great Northern Corridor spans the northern tier of the western U.S. from Chicago through Wisconsin, Minnesota, North Dakota, Montana, Idaho, Washington, and Oregon. The purpose of the Coalition is to improve the corridor into a globally competitive, seamless, and multi-state freight corridor consisting of rail and road networks.

Federal Oversight Role and Requirements

The 2012 Federal Surface Transportation Act, Moving Ahead for Progress (MAP-21) was signed into law on July 6, 2012, and took effect on October 1, 2012. It introduced several substantial changes to how transportation is planned and funded in the U.S. The bill broadened the definition of the National Highway System (NHS) to include all principal arterials. In addition, MAP-21 introduced standards and programs that place emphasis on the performance of this expanded NHS system. Freight planning and programming efforts are affected by these changes. MAP-21 also established a national freight policy to improve the condition and performance of the National Freight Network.

As part of MAP-21, the Secretary of Transportation encourages states to develop a comprehensive State Freight Plan and establish a State Freight Advisory Committee. Fortunately, Minnesota is well positioned in regard to both of these provisions. MnDOT has previously developed a Statewide Freight Plan in 2005 and has an active Freight Advisory Committee (MFAC) that meets on a quarterly basis to discuss freight issues that affect Minnesota.

Prior to the development of this 2015 Statewide Freight System Plan, MnDOT's existing policies and planning documents were reviewed for consistency with the MAP-21 Freight provisions in the *Integrating Freight in Statewide Planning and Programming* report. Current MnDOT policy is well aligned with MAP-21's policy requirements and guidance, including MAP-21's National Strategic Freight Goals.

1.2 FREIGHT FUNDING PROGRAMS

This section describes currently available funding programs for the multimodal freight system in the State of Minnesota, organized by Federal and State funding programs.

Federal Agencies

There are numerous Federal departments, agencies, and boards involved in freight-related matters. The U.S. Department of Transportation (U.S. DOT) has the most extensive involvement, both directly with carriers and indirectly in conjunction with State DOTs and regional jurisdictions. The following is information on key Federal agencies with a role in freight program administration. While traditional State DOTs focus on a relationship with the Federal Highway Administration, the multimodal freight system requires coordination with each of the modal agencies freight "touches."

Federal Highway Administration (FHWA). A modal agency within U.S. DOT, the FHWA supports State and local governments in the planning, design, construction, and maintenance of the Nation's highway system and various federally and tribal owned lands. The Office of Freight Management and Operations resides within FHWA and is tasked with promoting efficient, seamless, and secure freight flows on the U.S. transportation system and across its borders. This includes conducting research, developing analytical tools and data, providing funding guidance and resources for projects such as those of National and Regional significance, and other activities that build a greater understanding of freight transportation issues and trends, foster public/private partnerships, and improve freight system operations.

Federal Motor Carrier Safety Administration (FMCSA). A modal agency within U.S. DOT, the FMCSA's primary mission is to prevent commercial motor vehicle-related fatalities and injuries. Activities of the FMCSA contribute to ensuring safety in motor carrier operations through strong enforcement of safety

regulations; targeting high-risk carriers and commercial motor vehicle drivers; improving safety information systems and commercial motor vehicle technologies; strengthening commercial motor vehicle equipment and operating standards; and increasing safety awareness.

Federal Railroad Administration (FRA). As one of the modal agencies within U.S. DOT, the FRA's primary responsibility is to develop and enforce railroad safety rules. The agency also has a role in providing funding for freight rail projects, providing oversight of Amtrak, and managing a small research program. Within FRA, the Office of Railroad Safety promotes and regulates safety throughout the nation's railroad industry. It employs more than 400 Federal safety inspectors, who operate out of eight regional offices nationally.

Maritime Administration (MARAD). MARAD is the agency within the U.S. DOT dealing with waterborne transportation. Its programs promote the use of waterborne transportation and its integration with other segments of the transportation system, as well as the viability of the U.S. merchant marine. MARAD works in many areas involving ships and shipping, shipbuilding, port operations, vessel operations, national security, environment, and safety.

National Transportation Safety Board (NTSB). The NTSB is an independent agency responsible for investigating the cause of transportation accidents (all modes) and promoting transportation safety. While the NTSB can make recommendations aimed at preventing future accidents, it has no funding or regulatory enforcement authority.

Pipeline and Hazardous Material Safety Administration (PHMSA). The PHMSA under the U.S. DOT regulates the transport of hazard materials in both tank cars on roads and rails, as well as via pipelines. The agency identifies and evaluates safety risks; develops and enforces standards for transporting hazardous materials; educates shippers, carriers, state partners and the public; investigates hazmat incidents and failures, conducts research, and provides grants to improve emergency response to incidents.

Surface Transportation Board (STB). Established in 1996 as the successor to the Interstate Commerce Commission (ICC), the STB adjudicates disputes over rates and services between shippers and carriers, and has administrative authority over rail restructuring transactions, including oversight of mergers and acquisitions, new line construction, rail line abandonment, and use of rail lines as recreational trails; railroad rate regulation; and rate and service disputes involving shippers and railroads. In 2008, the PRIIA expanded its role to mediate conflicts between passenger rail operators with freight rail owners. The STB functions as an independent agency, but is administratively affiliated with the U.S. DOT.

Federal Freight Funding Programs

U.S. DOT provides several funding programs; however given the modal diversity of the freight system and the numerous agencies involved, each

program is administered by FHWA and is primarily intended for the highway system. The following text provides an overview of the potential funding sources that can be put towards infrastructure projects.

Federal-Aid Highway Program

The Federal-Aid Highway Program supports State highway systems by providing financial assistance for the construction, maintenance and operations of the Nation's 3.9 million-mile highway network, including the Interstate Highway System, primary highways and secondary local roads. FHWA is charged with implementing the Federal-aid Highway Program in cooperation with the States and local government.

In Minnesota, there are four main permanent revenue sources for the State Trunk Highway Fund (the primary source of transportation funding in the State) including the Federal-Aid Highway Program, Motor Fuels Excise Tax, Motor Vehicle Registration Tax, and the Motor Vehicle Sales Tax. In 2010, the Federal-Aid Highway Program contributed 33 percent (\$473 million) to the State Trunk Highway Fund. This program apportionment to Minnesota, for use on both eligible state and local facilities, are governed by a formula that takes into account the size and usage of each state's highway network, among other factors.

The subsequent program-level allocation of federal funds within Minnesota follows the MAP-21 guidance. A fraction of federal revenue is directed to the Statewide Bridge and Corridor Program, created to assist in the funding of larger bridge and other improvement projects that a single MnDOT District or Area Transportation Partnership (ATP) would have difficulty funding with its standard targeted share of federal funds.

The remaining—and greatest—share of federal support is distributed among the eight ATPs through a target formula. This target formula takes into account each ATP's share of statewide infrastructure preservation (60 percent), mobility (30 percent), and safety (10 percent) needs. Each ATP consists of a MnDOT District and various local transportation partners, including Metropolitan Planning Organizations (MPOs), Regional Development Commissions (RDCs), and transit, other modal, county, city, and tribal government representatives. The ATPs integrate state and local priorities for federal funding within their regions and decide the division of federal funding between MnDOT and local governments. While an average of approximately two-thirds of federal funding is programmed for state highways, this share varies across ATPs and over time.¹

While not offering additional funding, MAP-21 also encourages identification of projects that improve freight movement, and authorizes a maximum Federal share of 95% for an Interstate System project (or of 90% for a non-Interstate

¹ Minnesota 20-Year State Highway Investment Plan, APPENDIX E. REVENUE FORECAST

System project) if the project makes a demonstrable improvement in the efficiency of freight movement and is identified in a State Freight Plan.

Projects of National Significance

In 2005, Section 1301 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established funding for projects that have “national and regional benefits, including improving economic productivity by facilitating international trade, relieving congestion, and improving transportation safety by facilitating passenger and freight movement.” Although Congress authorized a competitive grant process for allocating these funds, Congress also directly earmarked all the funding to 26 projects. National projects included rail yard relocation, multi-state rail corridor improvements, and urban rail congestion relief projects in California and Illinois. MAP-21 authorized \$500 million in 2013 for these projects, but did not directly earmark the projects.

Transportation Investment Generating Economic Recovery

The Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program, administered by the U.S. DOT, solicits applications for road, rail, transit and port projects that promise to achieve critical national objectives such as repairing existing infrastructure, connecting people to jobs, and contributing to economic growth. Since 2009, Congress has dedicated more than \$4.1 billion for six rounds to fund projects that have a significant impact on the Nation, a region or a metropolitan area.

The TIGER program enables DOT to examine a broad array of projects on their merits, to help ensure that taxpayers are getting the highest value for every dollar invested. Applicants must detail the benefits their project would deliver for five long-term outcomes: safety, economic competitiveness, state of good repair, livability and environmental sustainability.

State Freight Funding Programs

The following section includes an overview of state programs available for funding capital improvement and maintenance projects on the freight system.

The movement of freight often involves the use of multiple modes (e.g., highway, rail, air, water). Local roads and “last-mile connections” are increasingly becoming a more important element of freight movement as the demand grows for home delivery of goods. However, it is important to note that MnDOT does not manage or control all of these systems. Additionally, much of the freight network is owned and maintained by the private sector, particularly in the case of rail, waterways, and air.

The Minnesota State Legislature has historically played a significant role in the development of transportation funding opportunities. The Legislature understands the importance of transportation infrastructure and the need for the

safe and efficient transportation of people and goods. To this end, the Legislature has created a number of special funding programs to address specific transportation needs.

Corridors of Commerce

In 2013, the State Legislature authorized \$300 million in trunk highway bonds for the Corridors of Commerce program. The bonding was not new money and it is being repaid through current revenue sources. This program directed funds for roadway expansion, state highway improvements in smaller communities (main streets), and other related projects primarily on the Interregional Corridor (IRC) system.

The 2014/2015 Corridors of Commerce program will include \$31.5 million of funding. The focus of the program will be statewide freight preservation, statewide freight bottlenecks, and main street enhancements.

Transportation and Economic Development Grants

The Transportation and Economic Development (TED) funding program began in 2010 as a joint effort between MnDOT and DEED. TED invested \$56 million in 24 projects in the 2010 and 2012 funding cycles and awarded an additional \$15.7 million to five projects in 2013. The program's purpose is to fund construction, reconstruction, and improvement of state and local transportation infrastructure in order to:

1. Create and preserve jobs,
2. Improve the state's economic competitiveness,
3. Increase the tax base,
4. Accelerate transportation improvements to enhance safety and mobility, and
5. Promote partnerships with the private sector.

TED provides state funding to close financing gaps for transportation infrastructure improvement construction costs. The funding includes money from the Highway Trust Fund, and is available for highway improvements, only. These highway improvements enhance the statewide transportation network while promoting economic growth through the preservation or expansion of an existing business, or development of a new business.

TED targets transportation investments that improve specific industries (many of which will rely heavily on freight movements) including manufacturing, industrial parks, warehousing/distribution, and agricultural processing. In reviewing the 54 TED projects that were awarded in 2010 and 2012, every one of them directly benefited freight movement. Examples of projects that have been funded since 2010 and have a direct impact on freight movements include:

1. New or improved interchanges,

2. Improved access roads to industrial parks,
3. Road strengthening in order to allow trucks to carry heavier loads,
4. Construction of multi-modal facilities,
5. Additional turn lanes, bypass lanes, truck acceleration lanes, intersection improvements, road widening, and other upgrades near freight generators, and
6. Access management projects.

Projects are awarded more points in the TED solicitation if they have the following freight characteristics:

1. Improve economic competitiveness (projects will likely benefit freight movements based on the list of targeted industries),
2. High Heavy Commercial Average Daily Traffic (HCADT),
3. Improve access to existing eligible business facilities (relates to last-mile connections), and
4. Support modal integration, now or in the future.

Railroad-Highway Grade Crossing Safety Improvement Program

Federal funds (i.e., FHWA Section 130) have been apportioned to the State of Minnesota each year since 1974 to fund the Railroad-Highway Grade Crossing Safety Improvement Program. Minnesota receives about \$5.5 million annually from this program, which is managed by the OFCVO.

MnDOT's OFCVO and Rail Administration Section has worked in cooperation with the state's counties, cities, townships, and railroads to improve the railroad-highway transportation infrastructure in order to support economic growth and to connect Minnesota to global opportunities. Active warning devices have been installed at over 1,500 of the approximately 4,200 public railroad-highway grade crossings in the state. Most of these projects have been constructed using federal funds with matching state, local or railroad funds.

MnDOT's efforts to improve safety at railroad-highway grade crossings, to date, have been successful. Grade crossing crashes in Minnesota have been reduced from an average of 400 vehicle/train collisions and 50 deaths annually in 1972 to 26 vehicle/train collisions and 4 vehicle related deaths in 2012.

The following types of projects are eligible for funding under this program:

1. Various types of signals and signal upgrades,
2. Crossing closures and consolidations,
3. Improving sight conditions by removal of visual obstructions, and
4. Improving roadway geometrics and/or grades.

Grade crossing surface improvements are not eligible for funding under this program.

In an effort to improve safety at the most hazardous railroad crossings, the Rail Administration Section has focused most of its attention on programing upgrades to warning devices at high hazard crossing locations. However, some locally requested projects and signal replacements will be programed as well. Crossings to be reviewed are selected by high hazard, local request and signal age.

Minnesota Rail Service Improvement Program

The Minnesota Rail Service Improvement Program (MRSI), established in 1976 and managed by the OFCVO, is designed to rehabilitate deteriorating rail lines, improve rail-shipping opportunities, and preserve and maintain abandoned rail corridors for future transportation uses. Funds are available for capital improvement projects that increase rail usage (e.g., expanding industrial spurs, adding storage and transfer capacity, loading efficiency improvements).

MnDOT provides loans with up to a ten-year repayment schedule to qualified applicants. The maximum loan amount under this program is \$200,000. Capital improvements must be directly related to rail transportation. Project eligibility is determined on a priority basis based on the following criteria, ordered from highest to lowest priority:

1. Projects on lines rehabilitated under the MRSI Program where the applicant has made a financial investment in the rehabilitation,
2. Projects on lines rehabilitated under MRSI Program; no applicant financial investment,
3. Projects on non-MRSI lines owned by Class II or III (short line or regional) railroads,
4. Projects on Class I railroads carrying less than 5,000,000 gross tons per mile per year, and
5. All other projects.

Corridor Investment Management Strategy Initiative

The Corridor Investment Management Strategy Initiative (CIMS) was a one-time program started in 2013 that awarded \$30 million to fund 10 trunk highway projects that improve quality of life, environmental health, or economic competitiveness. Given these objectives, a wide range of projects were eligible for CIMS funding, including those that benefitted freight.

At this time, program funding has been fully allocated and is no longer available for future projects. However, it represents a good example of a successful transportation funding program.

A benefit-cost analysis (BCA) accounted for 60 percent of the scoring, and freight played a role in this calculation. As part of the BCA, truck travel time and travel time reliability were monetized for the proposed projects using Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) data. In addition, the operating costs for trucks (e.g., tires, diesel fuel, maintenance expenses), as well as the potential reduction in noise and truck emissions resulting from the project were considered in the BCA.

Beyond the benefit-cost analysis, projects that benefit freight movements could also score points if they:

1. Closed or addressed a gap in the oversize/overweight network of other identified system,
2. Created system redundancy that would improve the overall transportation system's reliability,
3. Improved access to an airport or intermodal facility,
4. Positively impacted rail (e.g., removal of an at-grade rail crossing), or
5. Improved economic competitiveness.

Local and Other Sources of Funding

These additional sources of funding are resources that are available for improvements to the freight network, but not at the statewide level. These include funding programs specific to particular regions or local projects. The projects

Port Development Assistance Program

The Minnesota Port Development Assistance Program (PDAP) provides the state's public port authorities with capital investment funding assistance through grants. Program assistance is used to upgrade facilities and infrastructure, as well as to rehabilitate and expand port capacity. A cornerstone of the (PDAP) is improved access to waterways transportation that benefits Minnesota industries and the public. The program is managed by the OFCVO.

For each port improvement project, the PDAP involves a maximum state match of 80 percent funding and a local match of at least 20 percent. Examples of the potential benefits and impacts through this program include:

- New or expansion dredging to maximize ship draft at dock areas,
- Dock wall construction,
- Building, rehabilitating or retrofitting of new technologies for port structures and facilities,
- Improving road and rail access to port areas, and
- Upgrading plumbing and electrical to meet safety codes.

Regional Solicitation

The Regional Solicitation is a competitive process for allocating federal transportation funds in the seven-county Twin Cities metropolitan area. Since 1993, and approximately every two years thereafter, the Transportation Advisory Board (TAB), with the assistance of its Technical Advisory Committee (TAC) and the Metropolitan Council, solicits, evaluates, ranks, and recommends projects for inclusion in the region's Transportation Improvement Program (TIP).

Approximately \$150 million in federal funds is distributed every two years in three major federal programs:

- Surface Transportation Program (STP) - Urban Guarantee
- Congestion Mitigation and Air Quality (CMAQ)
- Transportation Alternatives Program (TAP).

The improvements fund a wide range of projects (e.g., roadway, intersections/interchanges, bridges, shoulders, and ITS improvements), many of which enhance freight movements.

Some Regional Solicitation funds that are awarded to counties and cities as part of this process also benefit freight such as improvements to non-MnDOT owned "A" Minor Arterials or non-freeway Principal Arterials that facilitate the movement of freight from freight generators to the Principal Arterial system. In addition, many trail grade separation projects are completed that reduce conflicts with bicyclists/pedestrians with busy arterial roadways used by freight.

All roadway projects awarded federal funds in the Regional Solicitation must be built to 10-ton standards. Recent changes to the Regional Solicitation increased the emphasis on freight movements, so that nine percent of the project's score is directly tied to freight. Points are awarded to projects that have a connection to freight include the following:

- Have higher HCADTs (HCADT counts are required as part of the application), and
- Improve roadways that connect to manufacturing and warehousing locations identified in *Thrive MSP 2040*.

Private Sector Contributions

Private sector contributions help fund needed transportation improvements such as new turn lanes, traffic signals, and new highway access. Businesses request these improvements either during the construction period or as the business grows, thus requiring improved transportation infrastructure to support the growth.

An example of a successful private sector contribution is contributing funds toward an additional travel lane on Highway 169 that is important to the Shakopee Mdewakanton Sioux Community. The project will add a third lane to a

roughly one-mile stretch in Shakopee, Minnesota. The project will improve traffic flow through the area, thereby improving access to the Mystic Lake Casino Hotel, owned and operated by the Shakopee Mdewakanton Sioux Community.

Another example of private sector funding contribution is the Willmar Wye project, which is a proposal to construct a new rail alignment and industrial park access on the west side of the City of Willmar. The proposed project would also include the construction of two new highway bridges on Highway 12 and Highway 40, over the proposed new rail line, along with other associated local road modifications. The project is being funded through a public private partnership that includes the City of Willmar, Kandiyohi County, Kandiyohi/Willmar Economic Development Commission, MnDOT, and BNSF Railway.

1.3 STATE OF MINNESOTA FREIGHT DECISION- MAKING

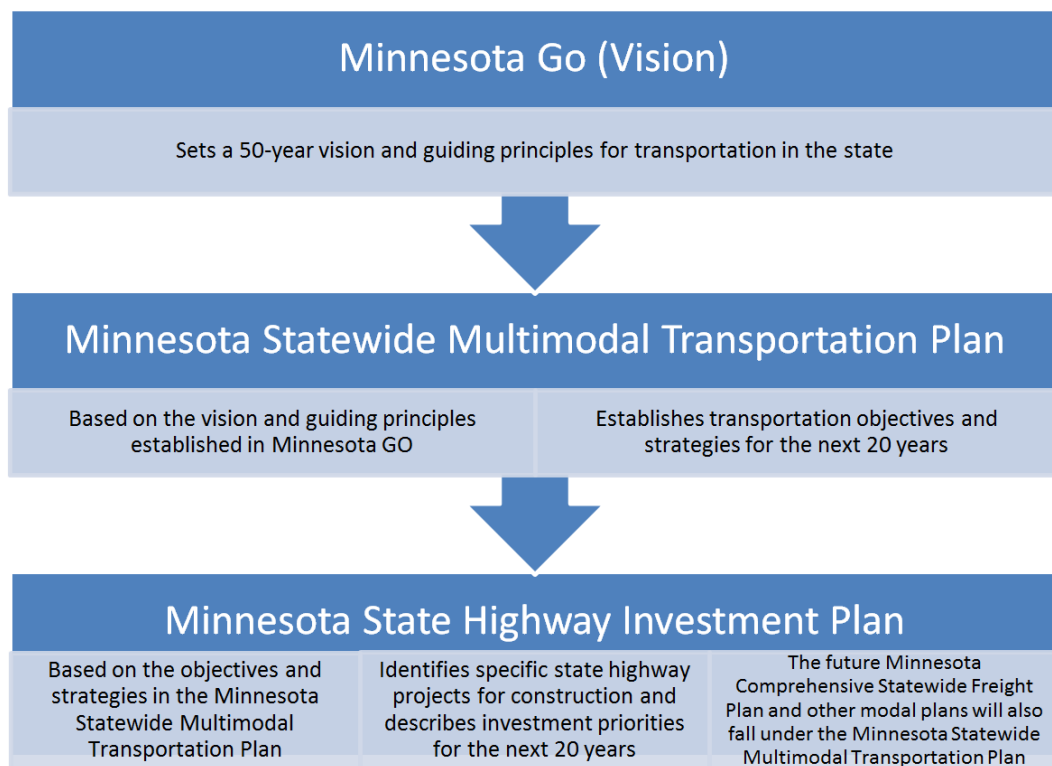
Statewide Planning Documents

Over the past several years, MnDOT has developed three primary statewide planning documents that have helped shape policies as they relate to the movement of freight in Minnesota:

- The Minnesota GO 50-Year Transportation Vision
- The Minnesota Statewide Multimodal Transportation Plan
- The Minnesota State Highway Investment Plan

Figure 1.3 depicts how the three plans relate to one another.

Figure 1.3 Relationship between Minnesota’s Statewide Planning Documents



Minnesota GO sets the overarching transportation vision and guiding principles, the Minnesota Statewide Multimodal Transportation Plan takes the vision and establishes policy direction and guidance for the integration of all modes, and the Minnesota State Highway Investment Plan implements this direction for the highway system by identifying highway funding priorities for the next 20 years.

Minnesota GO

Minnesota GO establishes a 50-year statewide vision for transportation. It is a long-term plan that describes the end goal of what is envisioned in Minnesota, but does not identify strategies for how to reach the vision (this is done in other statewide planning documents). Freight is an important component of Minnesota GO, as six of the nine vision elements and seven of the eight guiding principles have a direct or indirect connection to freight.

Some of these connections include the key freight concepts such as linking people, resources, and businesses with each other and ensuring the safety of all users. The freight-related vision elements and guiding principles listed in Minnesota GO provide overall guidance for MnDOT as they relate to freight policies and goals. More specific objectives, strategies, and measures are identified in the Minnesota Statewide Multimodal Transportation Plan.

In addition to the vision elements and guiding principles, Minnesota GO describes 10 potential long-term outcomes for carrying out the 50-year vision. Five of these 10 potential outcomes relate to freight. They align with many of the major goals for MnDOT's highway network such as multi-modalism, safety, livability, and innovation. The freight-related outcomes include the following:

1. Waterways, rail, transitways, roads, trails, airports and pipelines integrated and strategically located to enable critical connections for Minnesota's businesses and communities,
2. An integrated network of streets, roads and highways collectively support freight, mass transit, non-motorized transportation and personal vehicles,
3. Zero deaths or serious injuries in any form of transportation,
4. Transportation infrastructure and services designed to enhance, enable and encourage productive land uses, and
5. Technology and innovation improve the safety, accessibility and productivity of each mode of transportation and may be implemented as an alternative to expanding the physical layout of the system.

Minnesota Statewide Multimodal Transportation Plan

This plan is the first statewide plan to be written based on the Minnesota GO Vision. It includes all modes of travel and sets the framework for investment plans such as Minnesota State Highway Investment Plan (MnSHIP). Similar to Minnesota GO, the Minnesota Statewide Multimodal Transportation Plan emphasizes freight, directly and indirectly, in the document. Five out of the six objective areas, 11 out of the 33 strategies, and 10 of the 20 performance measures, have some form of a connection to freight. This plan includes concepts that affect freight movements, such as highway access and response times to incidents.

The area with the most direct connection to freight is Critical Connections. Many of the strategies within the Critical Connections area specifically cite freight or the movement of goods. This update to the Minnesota Statewide Freight Plan will need to align with the Minnesota Statewide Multimodal Transportation Plan and Minnesota GO, as well as meet the requirements set forth in MAP-21.

While not specifically cited, freight is impacted by many of the objectives, strategies, and performance measures that are included in the Statewide Multimodal Transportation Plan.

Minnesota State Highway Investment Plan

The MnSHIP is one of MnDOT's transportation investment plans and is responsible for directing a large portion of the agency's expenditures (i.e., highway investments). Based on MAP-21, risk management strategies, and

recent MnSHIP scenario planning exercises, some revisions to MnDOT's planning processes have been made, including the following:

- New emphasis has been placed on solutions that ensure a high return-on-investment (i.e., solutions that extend across modes and demand a broader view of MnDOT's role in supporting local and regional economic competitiveness, public health, and energy independence).
- The agency recognizes the need to continue improving its project selection process to better ensure that investments more fully align with both statewide and local priorities.
- The importance of establishing multimodal strategies - the integration of different modes and adherence to objectives and strategies that apply across modes - have been incorporated into MnSHIP and will influence how Minnesota's roads are built and managed in the future.

MnSHIP estimates that there will be \$18 billion of statewide highway investment over the next 20 years. It also recognizes that \$30 billion is needed to work toward the vision established in Minnesota GO. This leaves a \$12 billion gap between the anticipated level of funding and what is needed over the 20-year period. This imbalance is the result of a widening gap between revenues collected from primary highway funding sources and the growing costs of preserving and building upon the state highway system. Sources such as gas taxes (at the federal and state level), vehicle sales taxes, and vehicle registration taxes will have to stretch further in order to address Minnesota's needs. The effects of inflation, meanwhile, are expected to erode the state's buying power as costs of raw materials and construction grow. The deepening imbalance between highway revenues and costs has shaped how MnDOT approaches highway investment over the 20-year planning period. Most importantly, this gap severely limits MnDOT's ability to construct larger projects (e.g., grade separations, port connections, and two-lane to four-lane expansions) that could benefit the movement of freight.

There are currently 10 investment categories listed in MnSHIP. Seven of the 10 relate to freight and include Pavement Condition, Bridge Condition, Roadside Infrastructure, Traveler Safety, Twin Cities Mobility, Critical Connections (Interregional Corridor Mobility), and Regional Community Improvement Program.

Again, similar to the objectives and strategies listed in the Statewide Multimodal Transportation Plan, the investment categories included in MnSHIP do not specifically identify freight; however, many of the outcomes from investments made in these investment categories provide significant benefit to freight movements. Examples of this include smooth pavements, which provide lower operating costs, greater fuel efficiency, less damage to goods, and improved safety; or improvements to critical connections, which will decrease delays and reduce travel times. Traveler safety improvements likewise reduce the frequency

and severity of crashes, simultaneously decreasing risk and delay. All of these improvements have benefits for freight.

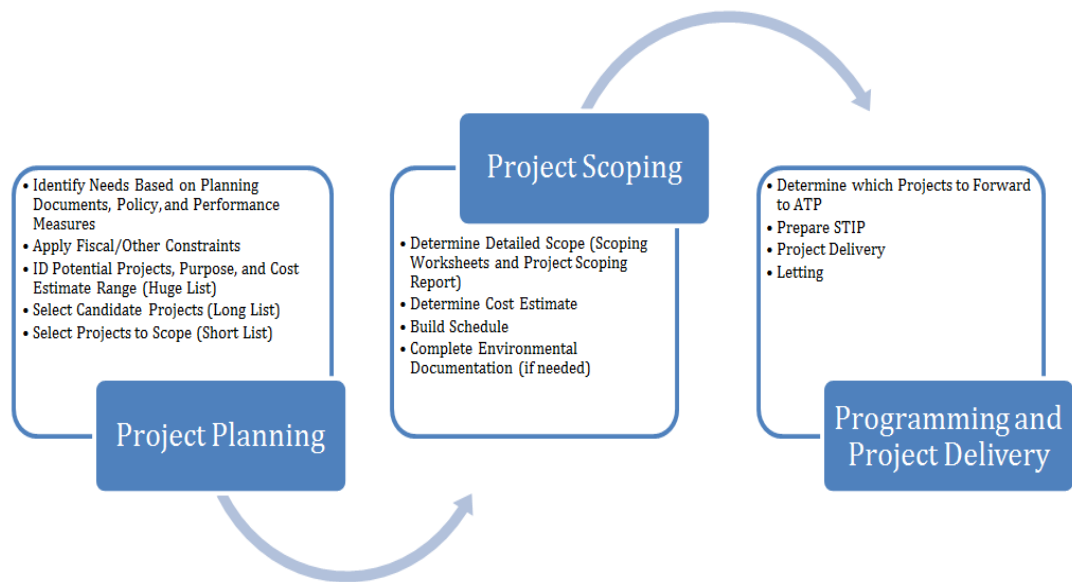
MnDOT Decision-Making Process

Outside of special funding programs, the majority of funding allocated to freight projects is done at the MnDOT District level. MnDOT's current highway project development process at the District level includes three distinct phases:

- Project Planning,
- Project Scoping, and
- Programming and Project Delivery.

Figure 1.4 depicts MnDOT's current highway project development process at the District level.

Figure 1.4 Project Planning, Scoping, and Programming Cycle



In the project planning phase, the needs of the transportation system are identified. These needs are prioritized based on a series of steps that reduces a long list of projects to a short list of projects that progress into the project scoping phase. Fiscal constraints, performance of assets such as pavements and bridges, District priorities, and other constraints aid in narrowing down the list of potential projects. A cost estimate range is also produced.

As the short list of projects moves into the project scoping phase, a project manager is assigned to each project. A more detailed cost estimate is developed, along with a project schedule. If environmental documentation is needed on a project, it is completed as part of this step. Scoping worksheets are distributed to MnDOT functional groups to further refine the project. The assigned project

manager will then prepare a Project Scoping Report, which summarizes all of the feedback received and presents the final scoped project.

Once this report is complete, the scoped projects are submitted to the Area Transportation Partnerships (ATPs) for inclusion in the Statewide Transportation Improvement Program (STIP) for possible funding. Projects then move into project delivery and are let for construction in their identified program year.

Data Currently Used in Decision-Making

There are many factors that are considered during the prioritization of projects; however, asset conditions (e.g., bridge and pavement conditions) receive greater emphasis over other elements due to federal and state performance requirements, as well as risks for not meeting these requirements. Maintaining asset conditions provides benefits to freight (such as travel time savings, safety benefits, and improved access to freight destinations). Freight-specific data is not usually a primary driver in project planning and prioritization, but it is more often incorporated in scoping a project after it has been selected.

A handful of key freight data was identified in the *Integrating Freight in Statewide Planning and Programming* report as playing a role in either the planning or project scoping phases. This data helps planning staff and decision-makers identify and anticipate the need for additional investment geared toward improving highways for freight use. Briefly, these freight-related data include the following:

1. Oversize/overweight routes,
2. Other identified freight networks,
3. Heavy Commercial Average Daily Traffic (HCADT),
4. Regional Freight Plans,
5. Freight generators list/local knowledge of freight generators,
6. Comments from the public and internal staff on trouble spots,
7. Truck-per-hour counts, where available,
8. Regional transportation modeling efforts in the Twin Cities metropolitan area, and
9. Equivalent Single Axle Load (ESAL) forecasts.

The data identified above represents a small subset of available data that could be used in developing and prioritizing future projects. However, two factors make the use of an abundance of freight data less important. First, targets and risks of not investing in key asset areas such as pavements currently guide where and how MnDOT will invest the majority of highway funds (it should be noted, however, that pavement and other asset management projects benefit freight movements). Second, given the limited amount of revenue available for programming toward freight-specific projects, District staff already have some

understanding of where the priority freight movements are located and often do not need additional data to identify these projects that help improve the movement of freight. Qualitative data and knowledge of the major freight issues in each District is often more important than the use of any quantitative data.