

Transportation Management

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Transportation Management



Prepared by: For:





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INTRODUCTION

Managing Montana's transportation network requires a diverse, skilled staff to oversee planning, design, construction, operation, and maintenance activities. Additionally, a host of support



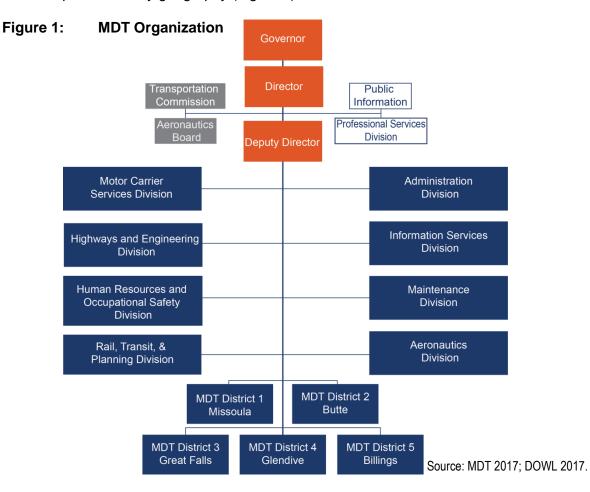
functions is needed to maintain MDT business operations and ensure continuous program delivery. Volume IV of TranPlanMT, Transportation Management, provides an overview of key MDT functions along with administration challenges facing MDT.

In particular, funding challenges loom as projected revenues fall short of anticipated needs. Sound planning and investment decisions will continue to be crucial in future years. The base year for data is 2015 unless otherwise noted.

WHAT WE KNOW

Department Organization

Under the leadership of the Governor and the MDT Director, MDT is organized both by areas of technical expertise and by geography (Figure 1).



Page 1

In the Helena headquarters, the department includes multiple divisions that oversee and administer a range of programs including planning, preconstruction, construction, maintenance, operations, motor carrier services, aeronautics, transit, and a host of support functions.

The department is also divided into five geographic districts responsible for project nomination, maintenance, and operations within each district's geographic boundaries (Figure 2).

Great Falls

Glendive

Butte

Butte

Billings

Figure 2: MDT Geographic Districts

Source: MDT 2017; DOWL 2017.

Additionally, the Transportation Commission and Aeronautics Board provide important leadership functions.

The Transportation Commission is a quasi-judicial board made up of five members appointed by the Governor, each for a four-year term. Primary functions of the Commission include selecting and prioritizing projects, awarding monthly contracts, designating roads to various highway systems, designating special speed zones and maximum speeds on bridges and overpasses, designating access control highways or facilities, resolving outdoor advertising appeals, and abandoning of highway right-of-way.

The Aeronautics Board is a quasi-judicial board consisting of nine members appointed by the Governor for four-year terms. The Board acts in an advisory capacity to the department and has statutory authority over allocation of airport development loan and grant funds and pavement preservation grant funds. The nine members represent various facets of the industry, and at least one member of the Board must be an attorney licensed to practice law in Montana.

Planning

Transportation planning enables decision makers to understand current and projected conditions, identify needs, develop policies and goals to achieve desired results, and monitor performance against defined objectives. Proposed transportation actions are evaluated through rigorous technical analysis, interagency collaboration, and public and stakeholder involvement. Timely, comprehensive planning is critical to ensure thoughtful decision-making results in appropriate investments in Montana's transportation network.

MDT works in partnership with federal, tribal, state, and local entities to conduct transportation planning at varying geographic scales.

Statewide Planning

The statewide long-range transportation plan, TranPlanMT, sets overarching statewide policy goals and priorities for the multimodal transportation system. In support of TranPlanMT, other statewide plans provide additional

detail on specific subject areas, such as safety, freight, safety rest areas, asset management,

The subject-area statewide plans outline current and desired future conditions and set specific performance targets and timeframes, where applicable.

MDT*

Moving Montana Forward. Together.

accessibility, and rail, transit, and aviation facilities.

Statewide Long Range Construction **Transportation Plan Program Delivery** Customer Input and Public Involvement /ision Routine Satisfaction Surveys System Monitoring Techincal Analysis Pavement Policy Direction Congestion On-Goina Bridge Safety On-Goina Performance erformance Goals **Funding** Distribution Plan Trade-off Analysis **Statewide Transportation** Performance Driven Improvement Program Tied to Management Project Nominations System Customer Input 1 Year Cycle Tied to Funding Plan 1 Year Cycle

MDT also conducts the Performance Programming Process (P3) at a statewide level. P3 is a method used to develop an optimal investment plan and measure progress in moving toward strategic transportation system goals. Through P3, MDT evaluates investment decisions based on their ability to support core highway system needs and achieve P3 system goals. P3 involves tradeoff analyses to develop a performance-based funding distribution plan that maximizes use of federal funding and guides the project nomination process in alignment with policy and performance goals.

Local Government Planning

MDT works closely with communities across the state to develop long-range transportation plans. Metropolitan Planning Organizations (MPOs), representing urban areas with a population of at least 50,000 including Billings, Great Falls, and Missoula, are required to develop longrange plans outlining specific strategies and projects to address identified needs within the urban boundary. Non-metropolitan communities may also elect to develop a long-range transportation plan to identify and address transportation needs based on public input and technical analysis.

Additionally, MDT provides technical and financial assistance for Montana communities to develop community transportation safety plans. Through the efforts of local safety partners, these plans assess local crash data, define safety issues, and identify strategies to reduce the number and severity of vehicular crashes within each community.

Corridor Planning

MDT develops corridor planning studies to determine cost-effective solutions addressing corridor transportation needs. MDT invites local government and stakeholder representatives to assist in identifying corridor issues and concerns, potentially affected resources, and a range of options to improve transportation safety and operations. MDT uses the *Montana Business Process to Link Planning Studies and National Environmental Policy Act (NEPA)/Montana Environmental Policy Act (MEPA) Reviews* to guide the corridor planning process. From 2005 to 2015, MDT completed 28 corridor studies across Montana.



Other Planning Efforts

MDT also conducts a number of other planning efforts including data collection and analysis, mapping and data reporting, roadway classification and designation reviews, grant funding, federal fund plan development, program administration, and database management. These functions support department programs as well as local communities in managing Montana's multimodal transportation network.

Project Development Process

After long-range planning efforts are completed, developing a new construction or rehabilitation project involves initial feasibility assessments, public involvement, survey, design, right-of-way acquisition, utility accommodations, and construction.

Figure 3 outlines standard activities MDT completes using a traditional design-bid-build delivery process. These efforts typically span four to eight years. Shorter range projects to preserve pavement or address safety issues are streamlined and can be delivered in one to three years.

Figure 3: MDT Standard Reconstruction Project Development Process

Long-range Planning: 5-20 years

Project Development: 4-8 years



Development Phase: 12 months

MDT receives project nominations from the public, local governments, management systems and MDT districts. The department analyzes and reviews the proposed projects and adds them to the Statewide Transportation Improvement Program (STIP) list for public comment. After MDT reviews the comments and evaluates them against the amount of funding available, the fundable proposed projects go before the Transportation Commission for approval and receive federal authorization to proceed.



Survey Phase: 8 to 24 months

Beyond the actual survey work, this phase also includes studies that will go into the next phase including environmental, engineering, traffic noise, and air quality studies. MDT issues news releases and holds public meetings as needed. Meanwhile, engineers establish the alignment and grade for the proposed highway and begin to prepare plans.



Design Phase: 15 to 24 months

MDT next develops detailed designs for the project taking into account road plans, electrical plans, bridge and hydraulic structures, signing, pavement markings, and erosion control. The department performs additional studies on water quality, hazardous materials, and irrigation and works to complete the design package by adding special provisions detailing the work. MDT may also hold formal public hearings.



Right-of-Way Phase: 6 to 12 months

In this phase, MDT obtains regulatory permits and negotiates agreements with property owners and railroad and utility companies. Final plans are produced, and the process to stake the centerline and relocate utilities begins.



Construction Phase: 8 to 24 months

Finally, after the plans package has been thoroughly reviewed, MDT advertises for bids. Once the department accepts a bid, it must determine if the contractor has met all requirements. If it has, the Transportation Commission awards the contracts, and gives permission for construction to begin.

Source: MDT 2017; DOWL 2017.

In some cases where appropriate, MDT may use an alternative design-build delivery process, which can expedite the design and construction of a project to benefit MDT and transportation users. Before a design-build team is selected, MDT conducts preliminary project activities such as survey, initial studies and investigations, preliminary design, and permitting and then selects the most qualified design/construction team to finish the plans and build the project. Design-build teams are encouraged to incorporate innovative, cost-saving methods and materials to optimize project value.

Operations and Maintenance

MDT monitors pavement condition and selects appropriate treatments and pavement preservation activities. Timely preventative maintenance is the most cost-effective strategy to extend the useful life of pavements.

As illustrated in Figure 4, for every dollar not spent on timely preventative maintenance, \$4 to \$8 will be needed for complete reconstruction a few years later. Maintaining existing facilities saves money over the long term and enables MDT to optimize road quality for the benefit of transportation users.

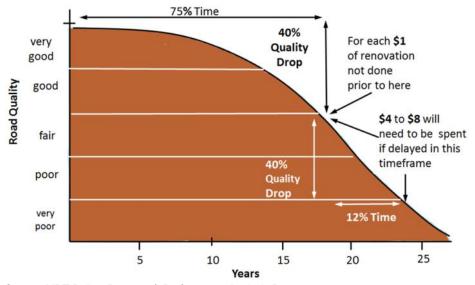


Figure 4: Cost of Roadway Deterioration

Source: MDT Policy, Program & Performance Analysis Bureau.

Similarly, preventative bridge maintenance is often the most cost-effective method to extend the life of a structure. MDT considers bridge life cycle costs when making investment decisions and targets the "right treatment at the right time" to focus on preservation activities. This approach minimizes long-term bridge life cycle costs and enhances safety of the transportation system.

Two bridge system investment strategies are illustrated in Figure 5. The preventative maintenance approach (to the left) shows the effect of small-scale preservation activities that slow deterioration and extend bridge service life. A maintenance, rehabilitation, and repair approach (to the right) results in immediate improvement to bridge condition at a higher cost compared to preservation. MDT considers long-term and short-term costs, extension of service life, and bridge condition and performance in determining the most appropriate treatment for each asset.

Preventative Maintenance

First Rehabilitation

Subsequent Rehabilitation

Target Level

Bridge Age in Years

Bridge Age in Years

Figure 5: Bridge Life Cycle Cost Considerations

Source: MDT Transportation Asset Management Plan 2015.

A substantial amount of MDT's efforts are directed toward operating and maintaining existing transportation facilities. Figure 6 illustrates maintenance activities by budget percentage. Roadway maintenance is the largest component of the program and includes both roadway pavement and bridge maintenance and repair.

Facility Winter Maintenance Maintenance 8% Roadside 24% Maintenance 7% Roadway Training/-Maintenance Approved 31% Absences Traffic Safety 15% 15%

Figure 6: Maintenance Activities by Budget Percentage

Source: MDT Maintenance Bureau 2015; DOWL 2017.

Winter maintenance is also a major component of MDT's program and is funded through the Highway State Special Revenue (HSSR) account, as are most maintenance activities. MDT strives to maintain consistent levels of service by proactively performing winter maintenance activities throughout the state. MDT maintenance crews plow approximately four million miles of road per year – the equivalent of driving around the world 160 times! MDT continues to research and apply new technologies, materials, and equipment to improve winter driving conditions in Montana.

In addition to these functions, MDT operations and maintenance programs address a broad range of transportation assets throughout the state including, rest areas, roadsides, highway drainages, signs, pavement markings, and office/maintenance buildings. MDT strives to meet customer expectations by optimizing the condition and useful life of the transportation system.

Support Services

MDT employs multiple support functions to serve as strategic business partners and assist all MDT districts and divisions. These support services are critical to the department's ability to achieve its mission and goals and serve Montana transportation users.

Administration

The Administration Division provides support services in accounting, financial management, motor fuel tax processing, purchasing, and mail services. One of the key areas of focus for the

¹ MDT Maintenance Bureau 2015.



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Administration Division is sound financial management to ensure perpetuity of the transportation system and MDT's programs. Providing continuous service to the traveling public requires careful management of MDT's financial resources. The division continuously monitors department finances, trends, and revenue data to project budgetary needs and revenue stability and health, including federal sources and the HSSR account. In all funding climates, the division scrutinizes financial decisions and expenditures to ensure appropriate use of taxpayer funds through prudent operational and investment decisions. The division's financial priorities include retaining staff, ensuring sufficient state funds to match federal aid program allocations, preserving existing transportation assets, and fulfilling obligations to customers and contractors.

Human Resources

MDT's Human Resources (HR) Division provides support in recruitment and retention, workforce planning, employee and labor relations, training, and employee safety and health. These services are critical to maintain a qualified workforce to accomplish MDT's mission and deliver transportation programs and services to the traveling public. The HR Division is focused on customer service, employee satisfaction, and safety to support MDT's mission and retain its work force investment.

MDT employs nearly 2,000 people. In 2016, the average employee age was 47 with an average of 13 years of service. As illustrated in Figure 7, older generations are more heavily represented at MDT compared to the Montana labor force overall. Recruitment of younger workers and knowledge transfer will be critical in future years to ensure smooth transitions and seamless delivery of transportation programs given upcoming staff retirements.

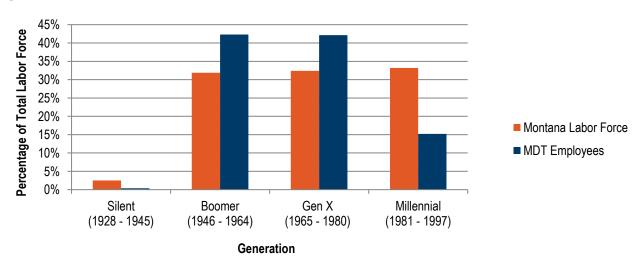


Figure 7: Montana and MDT Labor Forces

Source: 2015 State Employee Profile; DOWL 2017.

Information Services

The Information Services Division (ISD) provides products, services, and support necessary to maintain the information technology resources used statewide by MDT, as well as print shop and records management services. ISD serves as a business partner in collaboration with technical experts in planning and engineering to solve transportation problems.

The division anticipates a heightened focus on new technologies in future years ranging from mobile computing, file sharing, and collaboration tools to autonomous vehicles, three-

dimensional modeling, and mapping needs. The division intends to leverage new technologies to meet the department's needs. To do this, ISD will focus on workforce planning to continuously recruit and retain skilled employees; innovative software, hardware, and application solutions to address changes in technology and data; and efficient management to implement service and process improvements within budgetary constraints.

Professional Services

The Professional Services Division includes three support units.

Legal Services

The Legal Services Unit provides litigation and general counsel services for MDT. Primary areas of practice include real estate, contracts, outdoor advertising control, rail and transit, motor fuels tax, motor carrier services, administrative law, eminent domain, environmental review and litigation, legislation, collection of accounts receivable for damage to MDT property, and labor/employment. The unit has seen a decline in certain types of litigation due to a desire by MDT management to identify creative solutions and negotiate agreements satisfying all parties in an effort to save MDT time and taxpayer money. The unit has focused on establishing positive working relationships with tribes, local jurisdictions, landowners, contractors, service providers, and employees to enable timely and satisfactory resolution to disputes. Legal Services strives to provide sound guidance to the MDT Director and the Transportation Commission to help MDT achieve its transportation mission.

Audit Services

Audit Services provides objective evaluation and oversight services to ensure fairness in MDT's business transactions and jurisdictional areas of authority. The unit promotes compliance with laws, rules, policies, and controls to protect MDT and the citizens of Montana. Its focus on taxpayer compliance ensures taxpayers pay their fair share to the state fund. The unit also audits contractors, grantees, utilities, and other recipients of state and federal funds to ensure compliance with contract requirements and federal costs principles when performing work and billing MDT. Audits are determined through risk assessment and referrals. The unit's efforts support MDT's focus on efficient, cost-effective management and system reliability by deterring fraud, collusion, and other illegal activities. Audit Services anticipates a continuing need for independent reviews as state and federal requirements become more stringent over time.

Civil Rights

The Office of Civil Rights (OCR) administers multiple internal and external programs to ensure beneficiaries of MDT programs and services are offered an equal participation opportunity. OCR assists MDT in complying with federal and state laws and guidance and ensures MDT conducts business in an environment free of discrimination, harassment, and retaliation on the grounds of protected status in state and federal programs. Key OCR programs include the Disadvantages Business Enterprise (DBE) and Affirmative Action programs, which facilitate equal employment opportunity and ensure nondiscrimination in the award and administration of federally assisted contracts.

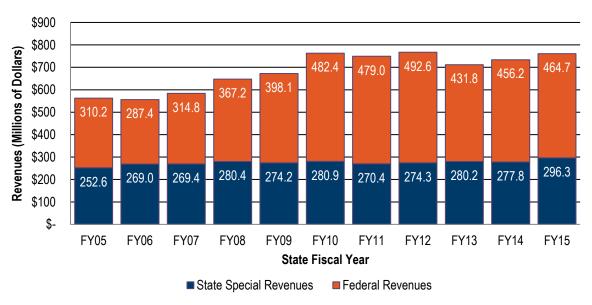
OCR plays a critical role in ensuring individuals with disabilities can access the transportation system. One of OCR's key long-term focus areas is implementing the *MDT Americans with Disabilities Act (ADA) Transition Plan* to remove accessibility barriers and ensure equitable opportunities to use the public rights-of-way system. Given the number of physical barriers across the state of Montana, the associated cost for improvements, and available funding mechanisms, full compliance is anticipated to be achieved over a period of years. OCR works in partnership with the Highways and Engineering Division to provide accessible pedestrian features.

Transportation Funding Considerations

Revenue

Montana's transportation system is mainly funded through a combination of federal and state funding sources. As shown in Figure 8, total transportation revenues administered by MDT ranged from approximately \$563 million in fiscal year 2005 to \$761 million in fiscal year 2015.

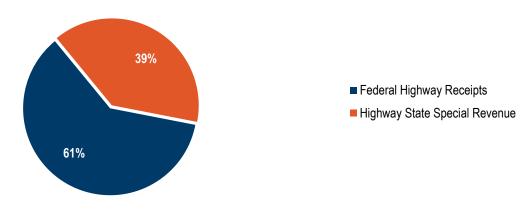
Figure 8: Historic MDT Transportation Revenues



Source: MDT Administration Division 2016; DOWL 2017. Note: Grant Anticipation Revenue Vehicle (GARVEE) bond proceeds were received in 2005 and 2008, and American Recovery and Reinvestment Act (ARRA) funds were received in 2009-2012.

Of the total transportation revenue, approximately 60 percent is generated from federal sources and 40 percent is received from state sources (Figure 9). MDT receives no funding from Montana's general revenue fund.

Figure 9: State and Federal Revenues Administered by MDT



Source: MDT Budget & Planning Bureau 2015; DOWL 2017.

Federal Sources

Federal transportation revenues are generated from gasoline and diesel fuel taxes and apportioned to states through federal highway legislation. The current federal funding authorization, Fixing America's Surface Transportation (FAST) Act, authorizes an average of approximately \$435 million to Montana per year through 2020 (Figure 10).

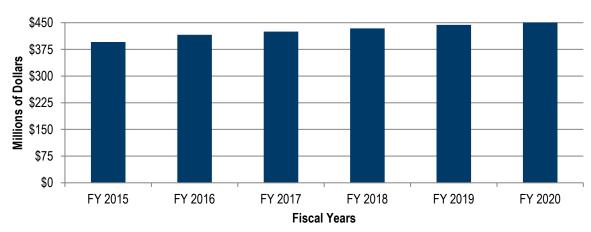


Figure 10: Montana's Actual and Estimated Federal Apportionment

Source: Comparison of Actual FY 2015 Apportionments under the Highway and Transportation Funding Act of 2014, as amended, and Estimated FY 2016-FY2020 Apportionments under the Fixing America's Surface Transportation (FAST) Act (before post-apportionment set asides, before penalties, before sequestration), Federal Highway Administration 2016; DOWL 2017.

The Fixing America's Surface Transportation (FAST) Act authorization outlines funding apportionment according to specific transportation programs, eligible fund uses, and required state participation. The level of state participation (or the match percentage) is determined according to a formula based on population and miles of federal highway within each state. Most federal transportation expenditures in Montana require approximately 13 percent state matching funds. Montana receives about \$2.27 for every \$1.00 Montana contributes to the Federal Highway Trust Fund. Montana receives about one percent of the nation's highway funds. MDT's construction program relies heavily on federal funding sources.

State Sources

State transportation revenues are generated through fuel taxes, gross vehicle weight fees, and other related fees. Effective July 1, 2017, Montana's fuel tax rate is \$0.315 per gallon for gasoline (previously \$0.27 per gallon since 1994) and \$0.2925 per gallon for special fuel (previously \$0.2775 cents per gallon since 1994). Starting in state fiscal year (SFY) 2020 these rates will increase annually through SFY 2023. In SFY 2023, fuel tax rates will be \$0.33 per gallon for gasoline and \$0.2975 cents per gallon for special fuel. Figure 11 illustrates comparable rates for neighboring states. These states also receive other revenue sources in addition to fuel tax.

Montana North Dakota Gasoline: \$0.315/gallon Gasoline: \$0.23/gallon Diesel: \$0.2925/gallon Diesel: \$0.23/gallon (increased 2017) Gasohol: \$0.23/gallon (increased 2005) South Dakota ldaho Gasoline: \$0.28/gallon Gasoline: \$0.32/gallon Diesel: \$0.28/gallon Diesel: \$0.32/gallon Wyoming Gasohol: \$0.28/gallon Gasohol: \$0.32/gallon Gasoline: \$0.24/gallon (increased 2015) (increased 2015) Diesel: \$0.24/gallon Gasohol: \$0.24/gallon (increased 2013)

Figure 11: State Fuel Tax Rates

Source: MDT Multimodal Planning Bureau 2017; DOWL 2017.

In 2015, nearly three-quarters of HSSR deposits were generated from fuel taxes (Figure 12).

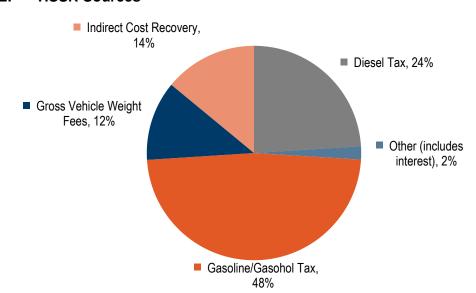


Figure 12: HSSR Sources

Source: MDT Budget & Planning Bureau 2015; DOWL 2017. Note: percentages are rounded.

Montana fuel consumption in 2016 topped 540 million gallons of gasoline and nearly 270 million gallons of diesel (Figure 13). Fuel consumption in the state has remained relatively flat.

268,038,408, 33%

Gasoline/Gasohol (Gallons)

Diesel (Gallons)

Figure 13: Montana Fuel Consumption

Source: 551 FHWA Report for FY 2016. Note: percentages are rounded.

Figure 14 illustrates base annual revenues of approximately \$300 million per year. As discussed previously, in July 2017, Montana's fuel tax rates will incrementally increase through 2023. Forecasted revenues for FY 2018, 2019, and 2020 include this additional fuel tax revenue, shown in orange. Combined forecasted revenues are anticipated to exceed \$330 million by 2020.

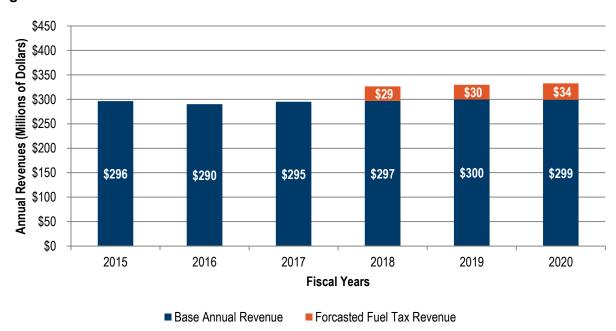


Figure 14: Total State Revenues

Source: MDT Administration Division 2017; DOWL 2017. Note: FY 2017, 2018, and 2019 represent forecasted revenues.

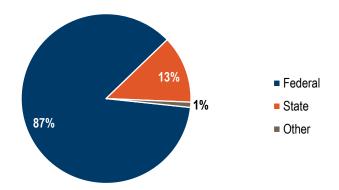
Expenditures

Federal Expenditures

MDT's construction program relies on federal and state funds to deliver projects to maintain and improve Montana's transportation system.

In 2016, approximately 87 percent of construction revenues were funded from federal sources, with approximately 13 percent matching state HSSR funds (Figure 15).

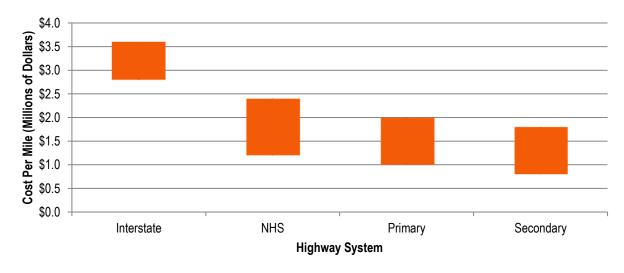
Figure 15: MDT Construction Program Expenditures



Source: MDT Budget & Planning Bureau 2016; DOWL 2017. Note: percentages do not total 100% due to rounding.

Project costs vary according to facility type. As illustrated in Figure 16, higher-order highways such as Interstates and National Highway System (NHS) roadways are more costly to construct compared to lower-order facilities typically due to greater widths, more stringent design standards, and the need for thicker surfaces to accommodate greater traffic volumes.

Figure 16: MDT Construction Costs per Mile



Source: MDT Policy, Program & Performance Analysis Bureau 2015; DOWL 2017.

Since 2006, the cost of highway and street construction increased approximately 25 percent, a higher percentage than the consumer price increase as presented in Figure 17. This means it takes increasingly more money to construct transportation infrastructure.

Price Index (2006 = 100) 200° Highway and Street Construction -Consumer Price Index

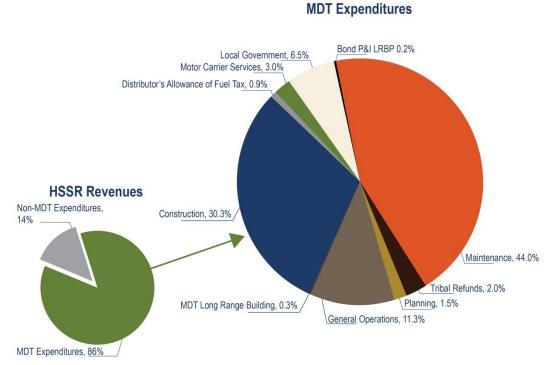
Figure 17: Historic Construction Costs and Consumer Price Index

Source: MDT Multimodal Planning Bureau 2015; DOWL 2017.

State Expenditures

Approximately 86 percent of HSSR funds (\$255M in FY16) are used by MDT to support a variety of functions, including maintenance, general operations, planning, and construction (Figure 18).

Figure 18: HSSR Expenditures



Source: MDT Budget & Planning Bureau 2016; DOWL 2017.

The remaining 14 percent of HSSR funds are used to support Montana Fish, Wildlife & Parks (\$0.2M in FY 2016), the Montana Department of Justice (\$38.4M in FY 2016), and the Montana Department of Administration (\$3.5M in FY16).

As illustrated in Figure 19, total FY16 expenditures from the HSSR exceeded revenues.

Non-MDT Expenditures MDT Expenditures Montana Fish, Wildlife, and Parks Long Range Building General Operations \$28,874,386 86% and Administration \$221,661 Construction \$77,126,270 Montana Dept. of Justice -Montana Highway Patrol 14% Maintenance \$30,161,273 \$112,212,964 Montana Dept. of Justice -Motor Carrier Services Motor Vehicle Division \$7,293,189 \$7,400,852 Transportation Planning Montana Dept. of Justice -Centralized Services Division Revenue \$3,727,276 \$889,532 Diesel Tax Tribal Refunds \$73,414,951 Montana Dept. of Justice - IT \$5,117,599 Division Gasoline Tax \$68,286 Local Government \$142,237,619 \$16,766,000 Montana Dept. of Administration - Architecture **GVW Fees** Bond and Principal Interest & Engineering Long Range \$26,947,987 \$600,500 Building \$3,532,911 Long Range Building - MDT **Indirect Cost** \$757,451 \$40,694,571 Distributors' Admin Allowance Other, Includes Interest (1% of gas/diesel tax) \$6.834.721 \$2,218,313 **Total Net Revenue** \$290,129,849 Total \$42,166,852 \$254,801,611 Total **Total Expenditures** \$296,968,463

Figure 19: HSSR Revenues and Expenditures

Source: MDT Budget & Planning Bureau 2016; DOWL 2017.

Funding Outlook

In April 2017, Montana's Legislature and the Governor passed and signed a gas tax increase to help fund transportation investments across Montana. Even so, needs are still anticipated to outpace available funding given increasing construction costs, aging infrastructure, growing travel demand, and flat funding levels.

As illustrated in Figure 20, MDT has estimated ten-year transportation system needs of nearly \$15 billion compared to available funding of approximately \$5 billion, or less than one-third of the need. A \$10 billion gap means MDT will be unable to maintain existing infrastructure in today's conditions or to make system expansion improvements to keep up with increasing demands.

\$16
\$14
\$12
\$10
\$8
\$6
\$4
\$2
\$Total Estimated Available Funding*

Total Estimated Needs

Figure 20: 10-year Budget Gap

Source: MDT Multimodal Planning Bureau 2016-2026. *Includes federal obligation limit plus state match minus IDC. Dollar amounts rounded to the nearest billion.

Permanent reductions in spending and/or increases in revenue are needed to provide a solution to the transportation funding imbalance. If anticipated budget deficits occur in future years, MDT will be faced with managing a declining transportation system.

WHAT WE HEARD

Stakeholder and public involvement are crucial elements of TranPlanMT. Communication and collaboration with members of the public and transportation partners provide important feedback to help MDT develop goals and strategies for the plan. To understand the needs and priorities of Montana's transportation system from the perspective of daily users, MDT used multiple methods of outreach including a three-month online survey tool, stakeholder workshops and interviews, a project-specific website, and an open comment period running throughout the entire planning process.

MDT Biennial Survey

Every two years, MDT contracts with a third party to conduct a public involvement survey and a stakeholder survey to examine:

- perceptions of the current condition of the transportation network;
- views about possible actions that could improve the transportation network in Montana; and
- opinions about the quality of service MDT provides to its customers.

In 2015, the survey interviewed 1,039 households and published the results on MDT's website (http://www.mdt.mt.gov/publications/docs/surveys/2015_tranplan21_public_involvement.pdf). The long-term nature of the surveys allows MDT to track progress and changes in customer expectations over time. In addition to surveying public opinion, MDT conducts a similar survey of transportation stakeholders to assess perceived transportation needs, improvements, and services in Montana.

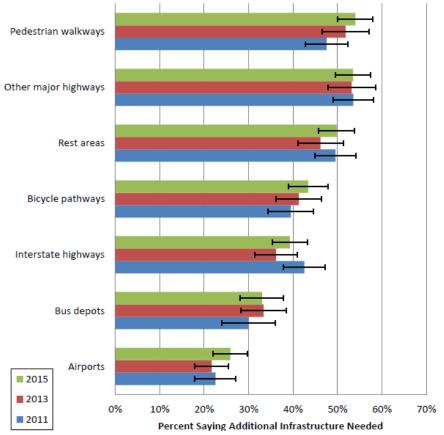
Survey respondents were generally supportive of MDT's management efforts, reporting positive interactions with staff and appreciation for MDT efforts. Requests for improvement ranged from improved communication during planning and construction phases, continued maintenance of roads during all seasons, and increases in funding for the department's efforts (specifically an increase to the state fuel tax). Figure 21 presents the perceived need for facilities, equipment, or services.

Figure 22 presents respondent recommendations for improvements to the transportation system. Top priorities include:

- maintaining road pavement condition;
- keeping the public informed;
- including wildlife crossings and barriers;
- maintaining roadside vegetation; and
- improving transportation safety.

These priority areas align with public comments received through the TranPlanMT survey.

Figure 21: Perceived Need for Facilites, Equipment, or Services



Survey Question:

Do you see a need for additional facilities, equipment, or services?

Note: Survey data are ranges. Error bars (\mapsto) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap and are denoted by *.

Source: TranPlan 21 Public Involvement Survey Volume 1 2015.

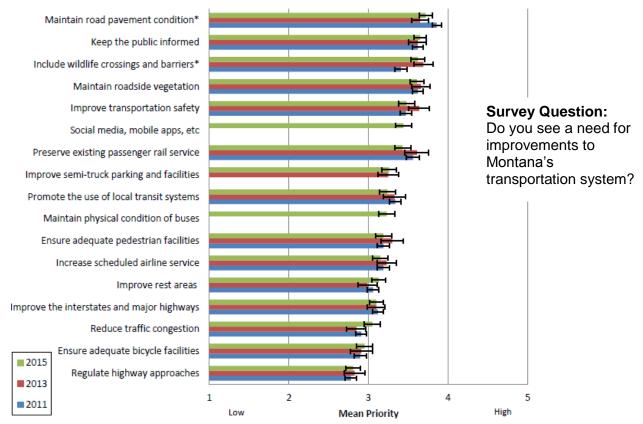


Figure 22: Possible Improvements in the Trans. System and Roadways

Note: Survey data are ranges. Error bars (\longmapsto) represent the upper and lower bounds of the estimate. Differences are significant when error bars do not overlap and are denoted by *.

Source: TranPlan 21 Public Involvement Survey Volume 1 2015.

Public Comments

MDT received 24 written comments through email and traditional mail and more than 650 individual comments through the online survey tool. Comments relating to transportation management are grouped and summarized in the following sections.

Planning

Respondents requested increased partnership opportunities with MDT, citing a desire to remain as involved as possible during the planning process. Increased collaboration with local governments and rural partners was specially identified.

Table 1: Planning Comments

| Topic Area | Comment/Suggestion |
|------------|--|
| Planning | Improve partnerships between local government and MDT representatives. Integrate all modes into planning efforts. Refocus investments to areas in need; don't simply spread resources around the state. Create a balance between rural and urban projects. Ensure transportation plans meet local needs; no "cookie-cutter" plans. Stay aware of population and visitation growth patterns. Utilize state-of-the-art technology and practices. Communicate information to locals, stakeholders, and elected officials more effectively. |

Project Development Process

Respondents were generally supportive of MDT's project development process, but made specific requests regarding the communication of project needs, priorities, and schedules. Respondents respect MDT's expertise in making decisions, but asked for improved explanations of project effects on local communities without using overly technical language. Other comments asked for a clearer, more transparent approach to construction bidding.

Table 2: Project Development Comments

| Topic Area | Comment/Suggestion |
|--------------------------------|--|
| Project Development Process | Use simpler language to communicate project decisions and impacts. Find solutions to keep traffic moving during construction. Ensure transparency in the construction bid system. Keep public involvement and input processes transparent. Make decisions based on need and not cost analyses. Balance public input/desires with available resources, knowledge, and needs. Continue to upgrade and add rest areas around the state. |

Operations and Maintenance

Overall, transportation users are pleased with MDT's current maintenance approach.

Table 3: Operation and Maintenance Comments

| Topic Area | Comment/Suggestion |
|---------------|---|
| Operation and | Continue maintenance of all roads in all seasons. |
| Maintenance | Maintain roads and walkways in current condition. |

Funding Considerations

Respondents recognize the need for creative funding solutions to sustain the transportation system. Comments noted the need for new funding sources and an increase in support and assistance in navigating existing funding sources.

Table 4: Funding Considerations

| Topic Area | Comment/Suggestion |
|-------------------------------|--------------------------|
| Funding Considerations | Increase state fuel tax. |

Stakeholder Feedback

Transportation stakeholders gathered on June 15, 2016, to discuss the long-range transportation planning process and goals and priorities for Montana. Stakeholders also participated in an interactive voting exercise to assess transportation trends in Montana and predict if these trends would increase, decrease, or remain unchanged during the next twenty years.

Trend areas included: driving age population, vehicle ownership, suburban migration, licensing regulations, congestion and time use, non-auto modes, fuel costs, labor force participation, GDP & real income growth, goods & services delivery, telecommuting/teleconferencing, social networking, shared mobility services, autonomous cars, and driverless vehicles.

Following the forecasting exercise, stakeholders were asked to participate in small group discussions in one of six policy areas: Montana's Economy, Montana's Environment, Montana Highway Safety, Preservation and Maintenance, Congestion and Delay Relief, and Transportation Options. For stakeholders unable to attend the workshop, interviews were conducted to provide opportunity for feedback on transportation priorities, goals, and other suggestions or concerns. Stakeholder comments are summarized in Table 5 according to workshop topic areas.

Table 5: **Stakeholder Comments on Management**

| Topic Area | Comment/Suggestion |
|-----------------------------------|---|
| Preservation & Maintenance | Repair potholes in a timely manner. Conduct winter maintenance of roads but assure snow does not pile up on the adjacent sidewalks. Mow ditches in rural areas more frequently. Sweep streets in the spring to keep roads clear of debris. Bicyclists often ride in the driving lanes to avoid rock/gravel in the bike lanes/shoulders. Assure construction projects are completed in a timely manner. Construction delays affect traffic and it is difficult to provide enforcement in construction zones when work is not actively taking place. Provide more clarification to local jurisdictions regarding MDT fund distributions and justification. Provide additional clarification to the public and stakeholders regarding the P3 decision-making process. Recognize funding issues faced by tribal, city, and county governments. Provide additional clarification to stakeholders and the public with regard to access of MDT/FHWA funds. Stakeholders would like more "say" in how/where the money goes. |
| Quality and Cost Effectiveness | Maintain good relationships with commercial shippers, rail, and local government partners. Assist stakeholders and partners in working with local representatives. Prepare for and communicate political and social changes affecting partners. Change language in TranPlanMT to emphasize "coordination" to encourage collaborative efforts. Engage other state agencies (e.g., Commerce) when working with local partners. Create longevity and continuity plans for MDT positions to prevent institutional knowledge loss during staff turnover. Keep highway funds paying for highway improvements and not nonmotorized efforts. Continue finding modern, electronic solutions for licensing and permitting. Find ways to increase available funding (i.e., increasing gas tax, new revenue streams, grant programs). Balance planning for urban and rural areas. Communicate schedules and project plans to local communities. |

MOVING MONTANA FORWARD

Goals and Strategies

MDT has developed a set of goals and strategies reflecting public and stakeholder feedback and analysis of available data.

- **Goals** are statements of desired results for the transportation network.
- Strategies are methods and business practices to achieve stated goals.

Goals and strategies provide broad policy guidance to inform and direct MDT decision making during the 20-year planning horizon.

- **Safety** is an overarching goal and is applied in nearly every MDT decision making process for all projects and programs.
- MDT makes roadway investment decisions by prioritizing (1) system preservation and maintenance, (2) mobility and economic vitality, and (3) accessibility and connectivity.
- Sensitivity to the **environment** and cost-effective **management** are underlying goals that inform decisions on a broad, department-wide basis.



Goals and strategies relevant to transportation management are listed below in order of priority. Strategy numbering reflects the complete set of goals and strategies, which can be viewed in their entirety in the *TranPlanMT Plan Summary*.



System Preservation and Maintenance (SPM): Preserve and maintain existing transportation infrastructure.

Strategy SPM5: Perform routine repairs and maintenance to provide consistent levels of service.

Conducting routine maintenance activities is a cost-effective approach to extend the useful life of transportation infrastructure. These efforts reduce long-term life cycle costs and improve safety. MDT will continue to

implement routine maintenance and repairs as needed to ensure reliable system performance.



Mobility and Economic Vitality (MEV): Facilitate the movement of people and goods recognizing the importance of economic vitality.

<u>Strategy MEV12: Perform winter maintenance activities to provide consistent levels of service and enable wintertime mobility.</u>

Montana transportation users rely on state highways during winter months. MDT recognizes the importance of providing reliable, consistent maintenance to clear snow and ice and enable travelers and goods to

safely reach their intended destinations.



Business Operations and Management (BOM): Provide efficient, cost-effective management and operation to accelerate transportation project delivery and ensure system reliability.

Strategy BOM2: Develop and implement a long-range multimodal transportation improvement program that addresses Montana's statewide transportation needs, is consistent with the statewide long-range transportation plan and management system output, and maximizes the

use of federal funds through the Performance Programming Process (P3) to ensure a cost-effective, efficient, and safe transportation system.

MDT's planning program is vital to identifying and prioritizing needed improvements to the transportation system. MDT works to maintain consistency with statewide, regional, and local plans and to optimize investment decisions through use of its P3 method.

Strategy BOM3: Recruit and retain a qualified workforce and conduct staff succession planning to sustain MDT business operations.

MDT employees are vital to the implementation of critical transportation programs. Without a qualified workforce, MDT would be unable to deliver transportation improvement projects and maintain and operate transportation assets. MDT is focused on recruiting and retaining competent staff members to fulfill key roles and ensure program delivery.

Strategy BOM4: Exercise sound financial management to ensure business continuity, enable adequate matching funds for the federal-aid program, and ensure adequate state funding for system maintenance and operations.

MDT strives to wisely manage its fiscal resources and invest in the areas of highest priority. Reserving adequate state matching funds enables MDT to invest at higher levels in Montana's transportation system using federal grants. State funds are also critical for continued operation and maintenance activities.

<u>Strategy BOM5: Invest at the appropriate level to achieve performance targets given available funding.</u>

Continued investment in the transportation system is critical to maintain adequate levels of service for transportation users. MDT uses the P3 method to analyze performance data for each asset type and identify tradeoffs between competing needs. MDT develops funding levels based on consideration of performance targets and funding availability.

Strategy BOM6: Employ proactive management strategies to ensure compliance with rules and regulations, identify risk to MDT and the transportation network, and facilitate equitable participation in MDT programs and services.

MDT programs are subject to numerous local, state, tribal, and federal regulations. MDT complies with all applicable requirements to safeguard transportation users and enable participation in MDT programs and services.

<u>Strategy BOM7: Enhance information technology products and services through modernization of legacy systems and implementation of new technologies to improve efficiency and cost-effectively meet customer and department needs.</u>

MDT strives to stay well informed about rapidly evolving technology and communication opportunities as they apply to transportation infrastructure and management. Technologies are continually improving and evolving that incorporate advanced wireless communications, automated distribution of real-time data, application and web-based interfaces, and improved data management processes. Recognizing the challenge to fund and implement new technologies, MDT focuses on development of the IT workforce and recruits skilled employees who are tasked with monitoring, researching, and developing cost-effective technologies for Montana. MDT's commitment to technology offers increased efficiencies and communications in the transportation system such as improved traffic management and safety, better communication with customers, and enhanced internal data management procedures and productivity.

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Visit the TranPlanMT website for more information: http://www.mdt.mt.gov/tranplan



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