



# **Performance Programming Process**

A Tool for Making Transportation  
Investment Decisions

November 2015

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## *How Does a Project Get Funded*

We're often asked how a project gets selected for funding within Montana's highway construction program. This booklet is intended to provide you with a brief description of the process used for the Interstate, National Highway, and Primary Highway Systems.



Very simply, for a project to be funded it has to address both a specific transportation need and contribute to overall transportation system performance goals.

All along the way – from planning – to programming – to project delivery, there are ways for you to get involved. The Montana Department of Transportation (MDT) staff listed at the back of this booklet are good points of contact for each of these activities. Or, if you'd like more information on the Performance Programming Process (P3), visit the Department's internet web site at [www.mdt.mt.gov](http://www.mdt.mt.gov).

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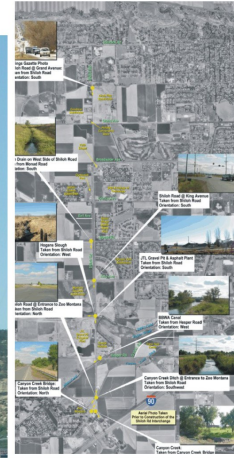
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Two Medicine River Bridge, East Glacier

## Customer-Oriented Goals



Shiloh Road, Billings

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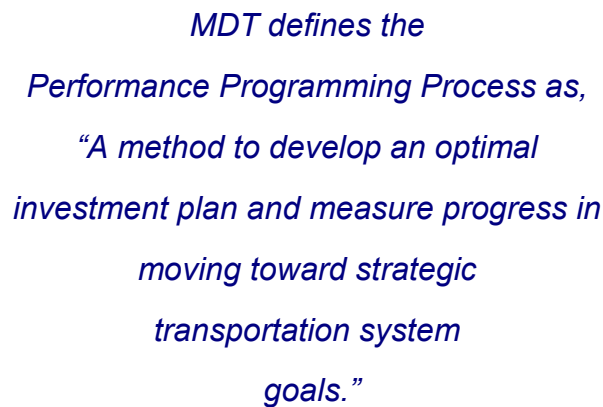
## What is Performance Programming Process?

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The Montana Transportation Commission makes investment decisions annually for more than \$400 million in state and federal funds. Transportation needs in Montana continue to exceed available resources. It is not a surprise that in a state like Montana, with vast miles of roads and few people, resources will remain scarce and tough highway investment decisions have to be made.

MDT's Performance Programming Process (P3) ensures the best system-wide investment decisions are made given:

- Overall direction from customers
- Available resources
- System performance monitored over time



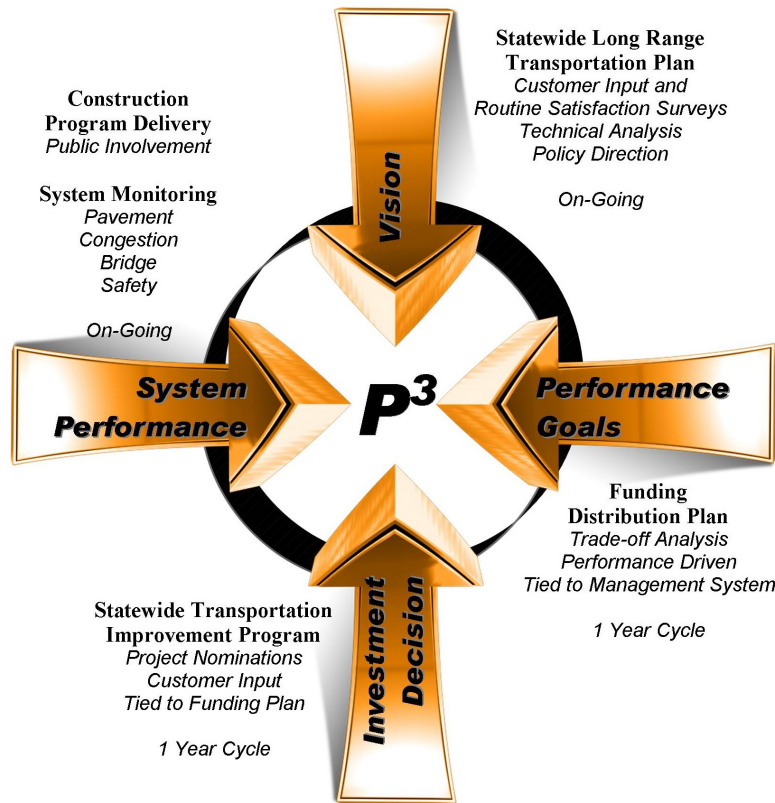
*MDT defines the  
Performance Programming Process as,  
“A method to develop an optimal  
investment plan and measure progress in  
moving toward strategic  
transportation system  
goals.”*

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## How P3 Works – A Thumbnail Sketch

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Several different annual and multiple-year activity cycles interact to plan, program, and deliver Montana’s highway improvements. P3 ensures they are all moving in the same direction.



### *Vision*

Montana’s statewide transportation plan sets a direction and a vision for how the transportation system will be managed and developed into the future. This planning document (adopted in 1994, updated in 2002, and amended in 2008) known as “TranPlan 21” was based on extensive public comment and technical analysis. It gave broad direction such as “improve pavement conditions on the Interstate and National Highway

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Systems” but, it did not specify which projects should be built or the timing of individual improvements. The 2002 updated plan established explicit priorities (1) preservation of the existing highway system, (2) capacity expansion and mobility improvement, and (3) other improvements. The most important is safety in all MDT does. The public and MDT stakeholders continue to emphasize pavement condition as a top priority through biennial customer satisfaction surveys.

### *Performance Goals*

Given the direction set in TranPlan 21, the next question is, “What can be achieved in highway system performance given currently available and anticipated revenues?” This question is answered by annually performing a series of tradeoff analyses and developing a performance-based funding distribution plan for systems, districts, and type of work. Overall, the aim of this plan is to get the best statewide highway system performance for the available funding and to commit to moving the overall program toward specific performance goals. This analysis uses the technical power of MDT’s management systems.

### *Investment Decisions*

The funding distribution plan defines funding levels by district, system, and type of work. This funding plan is based on predicted system performance given anticipated funding and specific program mix being delivered. System condition predictions will only be realized if projects are developed and delivered consistent with the plan. P3 does not “pick” projects, but does guide the project nomination process. The tentative list of proposed projects presented to the public during development of the annual Statewide Transportation Improvement Program is consistent with this plan. Based on public input, a specific project could enter or be eliminated from the program, but the overall mix of projects in the program supports performance goals.

### *System Performance*

MDT uses computer-based management systems that assist in

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summarizing the condition of the transportation system and evaluating the impacts of various investment options. These systems are used to manage highway pavement, roadway congestion, bridge conditions, and safety and are supported by an annual data collection program. For example, ride quality, rutting, delay time, traffic volume, pavement cracking, bridge deck condition, and crashes are just a few of the many technical and operational characteristics tracked annually by these systems. With P3, the management systems are used to analyze various funding alternatives. Just as important, the management systems are also used to track the actual performance of the highway system after the investments are implemented. This feedback loop increases the predictive capacity of the management systems and MDT's overall accountability.

### ***What are the categories of the Funding Plan?***

*The Funding Plan recommends levels of funding by district, system, and type of work. In all cases, the Funding Plan is tied to performance for pavement, congestion, bridge, and safety.*

#### ***District***

*Montana has five commission districts defined in MCA 2-15-2502. The districts are generally known as Missoula, Butte, Great Falls, Glendive, and Billings.*

#### ***System***

*The three rural highway systems are the Interstate, National Highway, and Primary Highway System.*

#### ***Type of Work***

*The three major categories of roadway work are reconstruction, rehabilitation, and resurfacing. Bridge and safety work are also tied to performance objectives.*



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## Why Use the Performance Programming Process?

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The primary reason to use P3 is to focus MDT investment decision-making on the users of Montana's transportation system. By establishing customer-oriented goals and basing all investment decisions on attaining these goals, MDT has put in place a process that focuses resources toward meeting the needs of the traveling public and improving MDT's accountability.

By defining the goals, P3 allows MDT to channel resources into the programs that best meet these goals. MDT can now assess the "bang-for-the-buck" of different investment choices. By using performance measures, MDT can determine whether dollars spent on one program versus another is on track to achieving transportation goals.

A second advantage of P3 is providing MDT with a high level of organizational alignment. Private companies and other agencies that have fully implemented performance-based budgeting have found it results in all employees knowing what the goals are, how movement toward these goals will be measured, and how their role in the organization fits into the overall picture.

Third, P3 gives MDT the tools to monitor progress toward achieving goals and to report results. This information gives MDT useful feedback on programs that are working well and those that need improvement. This monitoring process improves the effectiveness of the investments made in Montana's transportation system.

P3 also improves MDT's accountability in managing the transportation program. By basing investment decisions on a well-defined set of performance objectives, MDT is better positioned to communicate the impacts of investment choices and report on the results of those decisions.

Overall, P3 improves MDT's accountability for managing Montana's transportation resources.

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## MDT's Annual Investment Decision-Making Process



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## KEY P3 CONCEPTS

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### *Customer-Driven*

- ⇒ The public and stakeholders set the policy in TranPlan 21 (statewide long-range transportation plan).
- ⇒ The public and stakeholders comment annually on individual projects in the Statewide Transportation Improvement Program. They also provide input regarding customer satisfaction and perceived needs through the biennial public telephone and stakeholder surveys.
- ⇒ District offices (those closest to the customers) nominate the projects consistent with the P3 funding investment plan.

### *Incremental Development*

- ⇒ New projects consistent with the P3 funding investment plan are added annually into the program. Existing projects are not disrupted.
- ⇒ Management systems will incrementally improve predictive capabilities based on annual feedback from monitoring – no major new data system needs to be developed.

### *High Level of Accountability*

- ⇒ P3 commits to a project mix tied to predicted system performance.
- ⇒ P3 provides a method to track actual performance over time.
- ⇒ MDT is currently developing performance measures for project delivery.

### *Supports Sound Investments*

- ⇒ P3 provides a way to demonstrate tradeoffs inherent in new initiatives.
  - ⇒ P3 provides a way to demonstrate what is likely to occur at various funding level scenarios.
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## **Cross-Cutting**

- ⇒ P3 links the policy goals in the long-range plan to specific project investments in the annual construction program.
- ⇒ P3 moves all of MDT toward a common goal regardless of organizational unit.
- ⇒ P3 provides a feedback loop to monitor predicted versus actual performance and a way to fine-tune investments over time.

### **Who Uses Performance-Based Capital Budgeting?**

*Private companies have long used performance-based planning and budgeting to focus resources on strategic business goals and improve accountability to shareholders.*

*Over the last decade, approaches similar to Montana's P3 have been adopted by numerous state transportation departments, major metropolitan transportation organizations, and other public agencies. As revenues for public agencies are likely to remain "lean" well into the future, performance-based budgeting and capital programs are expected to be used ever more broadly.*

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## MDT Objectives and System Performance Measures

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MDT has established objectives, performance measures, and performance targets in four program areas: pavement, bridge, congestion, and safety. Other areas may be added in the future.

### *Pavement*

*Objective:*

Preserve highway pavement condition at existing or higher levels on the Interstate, NHS, and Primary Systems.

*Performance Measure:*

Ride Index – A measure of the quality (smoothness) of the ride as perceived by the highway user.

*Performance Target:*

Interstate – Maintain average ride in the desirable (or superior) range

NHS – Maintain average ride in the desirable (or superior) range.

Primary System – Maintain average ride in the desirable (or superior) range.

### *Bridge*

*Objective:*

Improve the condition of the bridges on the state highway system.

*Performance Measure:*

The number of structurally deficient bridges as measured by the National Bridge Inventory Condition Assessment.

*Performance Target:*

Reduce the number of structurally deficient bridges on the state highway system.

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## **Congestion**

### **Objective:**

Maintain and improve the congestion levels on the rural portion of Montana's highway system and improve major interchanges and system operation within urban areas.

### **Performance Measure:**

Congestion Index – A measure of travel delay. A higher congestion index value indicates that a driver experiences less congestion and more mobility.

### **Performance Target:**

Interstate – Congestion Index  $\geq$  70 (Level of Service B).

NHS – Congestion Index  $\geq$  55 (Level of Service C).

Primary System – Congestion Index  $\geq$  55 (Level of Service C).

## **Safety**

### **Objective:**

Improve safety of the state highway system.

### **Performance Measure:**

Number of highway fatalities and incapacitating injuries.

### **Performance Target:**

Reduce the number of fatalities and incapacitating injuries by half from 1,704 in 2007 to 852 by 2030.

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## **Safety, Maintenance, Other Asset Management Categories in addition to P3 Process**

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### *Safety: Vision Zero*

P3 places a great deal of emphasis on improving highway safety in Montana. In addition to reserving dollars for the Highway Safety Improvement Program, P3 advocates for the incorporation of safety features during the project development phase of all highway construction projects. Although every MDT project has some element of safety, many factors affecting safety are outside the control of MDT such as enforcement, emergency response, and driver behavior. Consequently, the overall vision for highway safety as outlined in Montana's Comprehensive Highway Safety Plan (CHSP) is established with many partners and stakeholders having a contributing role.

### *Maintenance*

MDT's Maintenance Division currently utilizes a Maintenance Management System (MMS) that provides information such as what, when, and where work was accomplished. MMS also provides information on what it costs MDT to perform specific maintenance activities.

The Maintenance Division is currently working to replace the existing legacy reporting system with a more robust system that meets the business needs of today and the future. One of the components included in the new system is an accountability module to manage performance goals and targets on many maintenance activities and infrastructure items.

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### *Urban Highway System Asset Management*

MDT continues to work closely with stakeholders to optimize investment strategies for assets in urban areas. In addition to funding, MDT provides technical assistance for development and implementation of pavement management systems in urban areas. Once these locally developed pavement management systems are operational, MDT utilizes outputs to direct funds in an effort to improve overall urban highway system performance. A prime example of this can be seen in MDT's Urban Pavement Preservation Program, which directs funds to specific urban routes based on recommendations from the local pavement management systems.

### *Rest Areas*

MDT has recently implemented an asset management approach to address rest area facility needs. With a clear understanding that funding is limited, and in response to substantial public demand, MDT developed a Rest Area Prioritization Plan intended to deliver cost-effective solutions for rest areas statewide. In addition to advancing a prioritized list of projects, the plan (approved by the Montana Transportation Commission) set aside an annual reserve to fund rest area improvement projects.



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### **How Does P3 Tie to Federal and State Requirements?**

*At the federal level, Title 23 U.S.C. mandates a broad-based customer-oriented planning process that ensures existing transportation resources are preserved. Also under Title 23, there must be a link between the goals of the long-range plan and the actual investment decisions made in the annual Statewide Transportation Improvement Program or 'STIP' (23 USC, Section 135). P3 fulfills all of these Federal expectations.*

*On the state level, P3 will in no way affect the funding distributions provided in state statute for the Urban and Secondary Systems (MCA 60-3-206 and 211). P3 also does not apply to issue-specific funding like the federal Congestion Mitigation and Air Quality Improvement Program. The analysis done through P3 supports, and is consistent with, Montana's statutory requirement for the distribution of Primary Highway funds (MCA 60-3-205), as well as the allocation of funds for the Interstate and the National Highway Systems. While not a state or federal "requirement," P3 enables MDT to provide Montana's Congressional Delegation and the legislature information on what MDT plans to accomplish and has accomplished with Montana's transportation resources.*

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# APPENDIX

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## Projections for System Performance

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Updated 2015

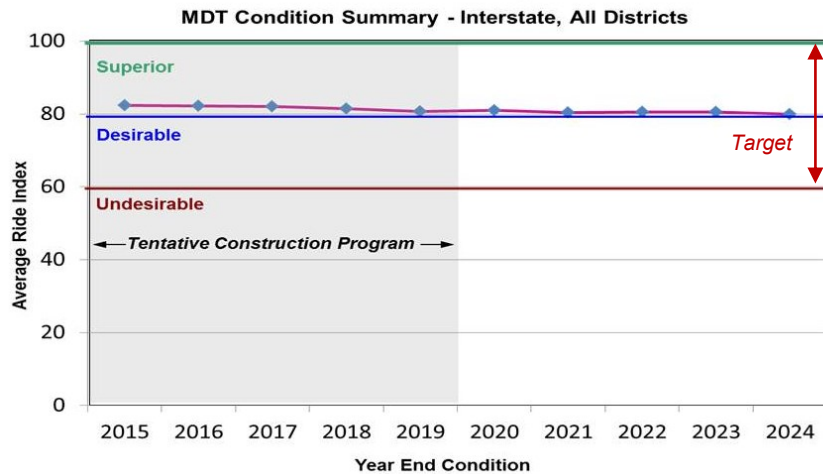
MDT has completed the most recent cycle of the P3 process. The figures in this appendix show the performance projections for Bridge, Congestion, Pavement Condition, and Safety based on anticipated funding.

At this time, MDT anticipates that federal and state funds will continue to grow at an annual rate of around three percent. Additionally, it is assumed that long-term inflationary rates for highway construction items will hold at around three percent as well. This relatively flat level of funding means system conditions will decline.

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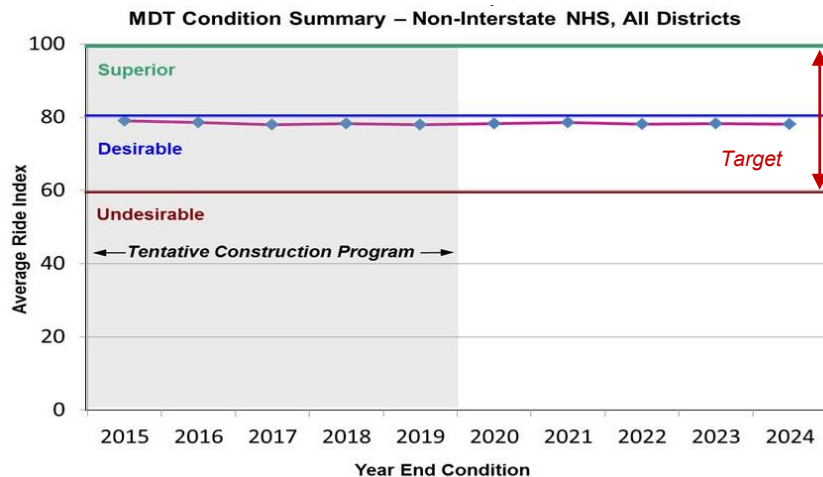
## Pavement Condition – Interstate System

As indicated in the graph below, Montana's Interstate System will remain in the very desirable range but is trending downward for the duration of the analysis period (ten years).



## Pavement Condition – NHS System

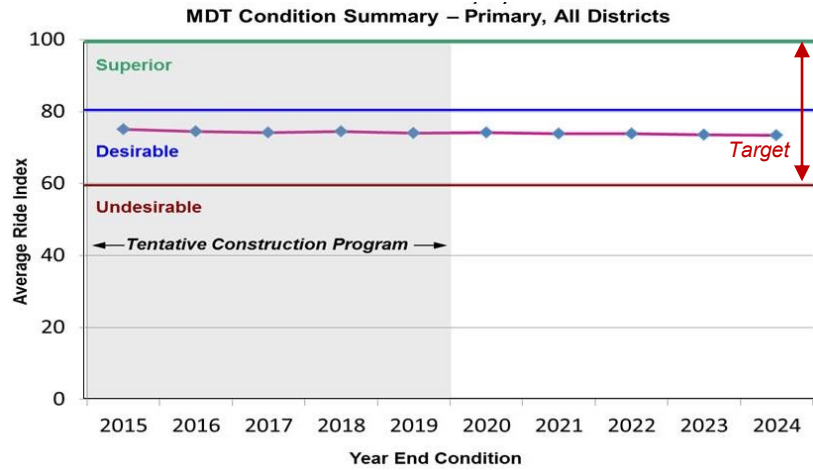
Montana's NHS System will remain in the desirable range for the duration of the analysis period (ten years).



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## Pavement Condition – Primary System

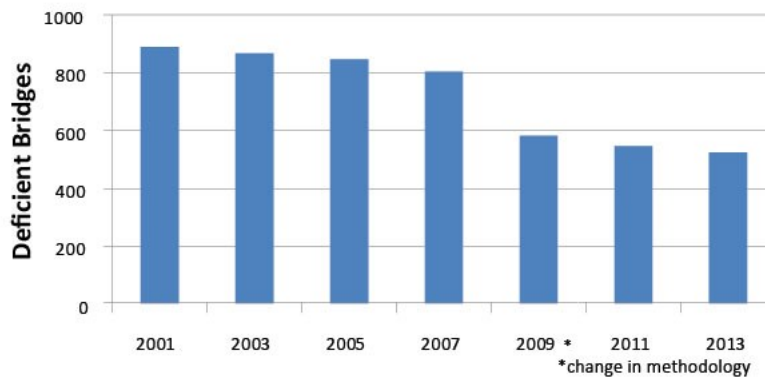
Montana’s Primary System will remain in the desirable range for the duration of the analysis period (ten years).



## Bridge Condition

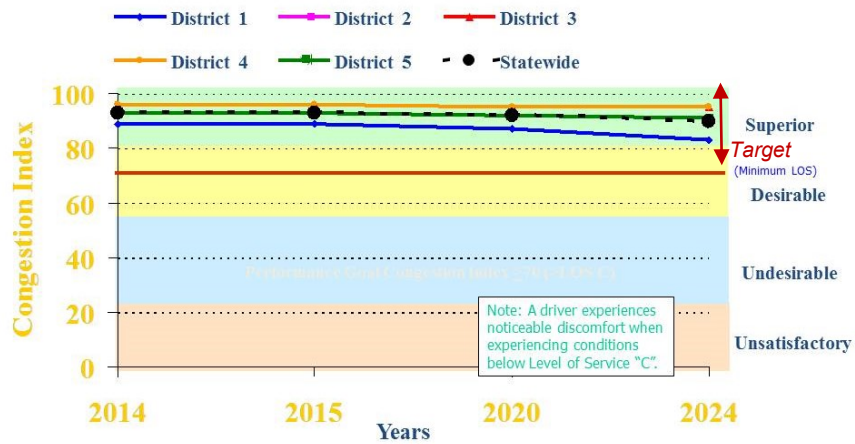
Montana will meet its performance objective for reducing the number of structurally deficient (SD) bridges.

### Deficient Bridges On and Off State Highway System



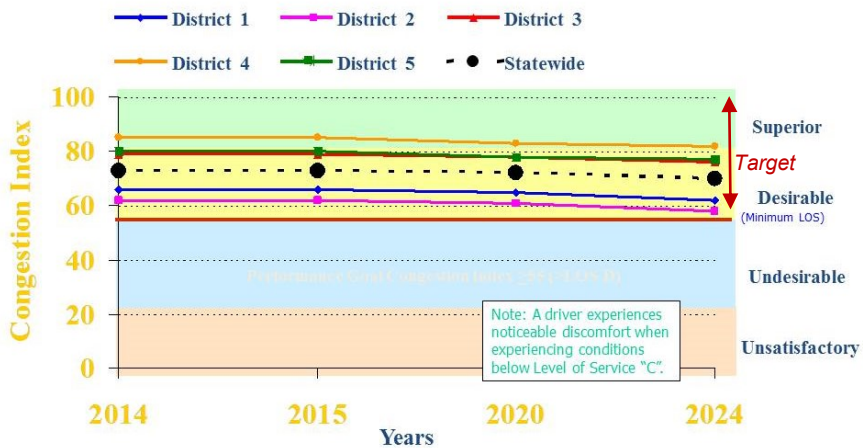
## Congestion – Interstate System

Montana will meet its performance objective for congestion on the Interstate System over the next ten years.



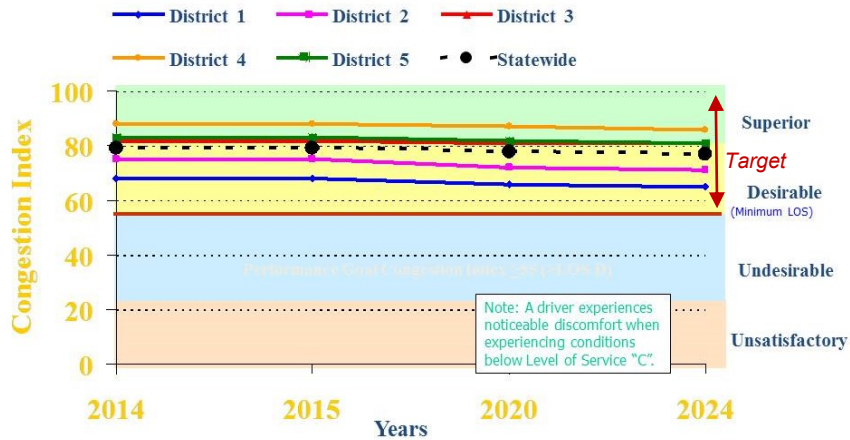
## Congestion – NHS System

Montana will meet its performance objective for congestion on the NHS System over the next ten years.



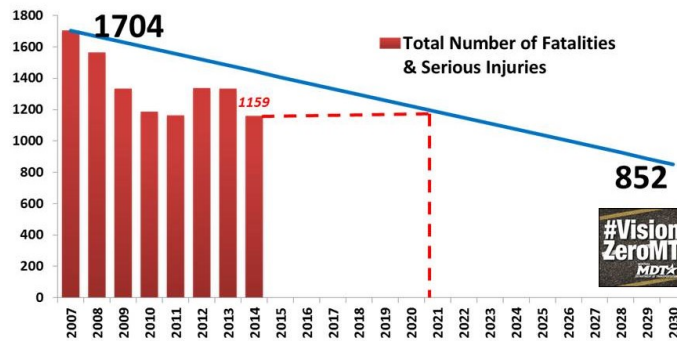
## Congestion – Primary System

Montana will meet its performance objective for congestion on the Primary System over the next ten years.



## Traffic Safety: Vision Zero

Montana's vision is zero fatalities and serious injuries on Montana highways with an interim goal of reducing the number by half in two decades. Montana is on track to meeting this interim goal.



Interim Goal: Reduce fatalities & serious injuries in Montana by half in two decades, from 1,705 in 2007 to 852 by 2030

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## **Contacts for P3 Activities**

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### *Vision – Statewide Long-Range Transportation Plan*

Lynn Zanto - Division Administrator  
Rail, Transit, and Planning  
(406) 444-3445 [lzanto@mt.gov](mailto:lzanto@mt.gov)

Chris Dorrington - Bureau Chief  
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Jim Skinner - Bureau Chief  
Policy, Program & Performance Analysis  
(406) 444-9233 [jskinner@mt.gov](mailto:jskinner@mt.gov)

### *Performance Goals and Statewide Transportation Improvement Program*

Paul Johnson - Manager  
Project Analysis  
(406) 444-7259 [paujohnson@mt.gov](mailto:paujohnson@mt.gov)

### *Project Nominations*

Billings District – (406) 252-4138  
Butte District – (406) 494-9600  
Glendive District – (406) 345-8200  
Great Falls District – (406) 454-5880  
Missoula District – (406) 523-5800

### *Additional Information*

Copies of MDT publications (such as TranPlan 21, STIP, Biennial Public and Stakeholder surveys and CHSP) can be accessed at [www.mdt.mt.gov](http://www.mdt.mt.gov).

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MDT attempts to provide accommodations for any known disability that may interfere with a person participating in any service, program or activity of the Dept. Alternative accessible formats of this information will be provided upon request. For further information call (406) 444-3423 TTY (800) 335-7592, or Montana Relay at 711 or by contacting the ADA Coordinator at (406) 444-9229.

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