



VISION ZERO

zero deaths · zero serious injuries

MONTANA DEPARTMENT
OF TRANSPORTATION

MDT's Infrastructure & Railroad Safety Safety Engineering Program

Patricia Walsh Burke, PE
Safety Engineer

Traffic & Safety Bureau – Engineering Division
Montana Department of Transportation

November 2021



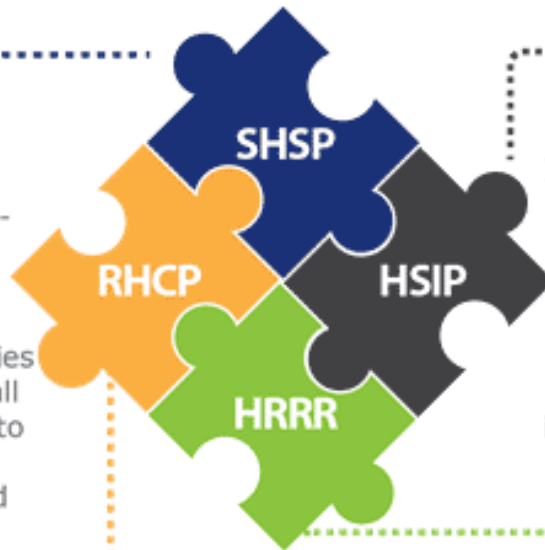
MDT's Safety Program

STRATEGIC HIGHWAY SAFETY PLAN

The SHSP is a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. [Click here to learn how to develop, implement, evaluate and promote your SHSP.](#)

RAILROAD-HIGHWAY CROSSINGS PROGRAM

The RHCP provides funds for the elimination of hazards at railway-highway crossings under 23 U.S.C. 130. [Click here for more information to support RHCP efforts.](#)



HIGHWAY SAFETY IMPROVEMENT PROGRAM

The HSIP is the projects, activities, plans, and reports carried out under 23 U.S.C. 148. [Click here for resources to support State HSIP planning, implementation, evaluation and reporting efforts.](#)

HIGH RISK RURAL ROADS

If the fatality rate on rural roads increase in a State, they are required to spend a portion of their HSIP funds on rural roads. [Click here for more information to support HRRR efforts.](#)

MDT's Highway Safety Plan

Montana Comprehensive Highway Safety Plan

MONTANA
MDT
DEPARTMENT OF TRANSPORTATION
May 2015

#VisionZeroMT
zero deaths | zero serious injuries

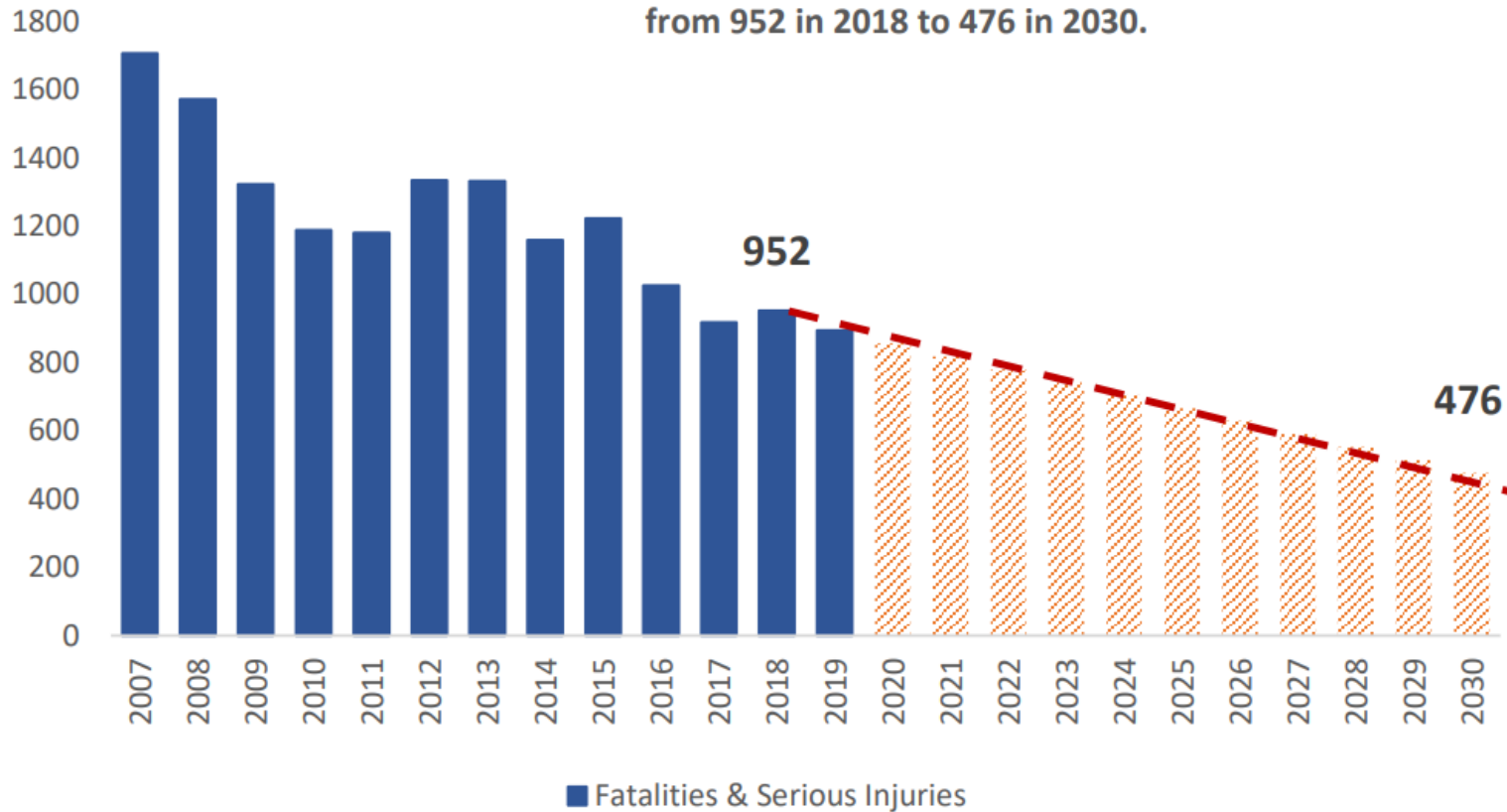
Montana Comprehensive Highway Safety Plan

2020

VISION ZERO
zero deaths - zero serious injuries
MONTANA DEPARTMENT
OF TRANSPORTATION

MT Highway Safety Goal

Reduce fatalities and serious injuries on Montana's roads by half, from 952 in 2018 to 476 in 2030.



Highway Safety Improvement Program (HSIP)

- **Federal Annual Program**
 - Delivers approximately \$30 Million per year
 - HSIP program includes a funding set-aside for Rail Crossing Safety
 - Includes two (2) sources:
 - Federal direct apportionment to HSIP Program
 - Additional funding from penalty funds (% of Core Program) – Repeat Offender Law
- **Program has defined objectives and selection process**
 - **Data - Driven & Strategic Approach** to Improving Highway Safety
 - Project selection is **competitive** – based on benefit cost
 - Those that have a higher safety benefit are moved forward first
 - **All public roads** eligible
 - Projects identified **state-wide**
- **Roadway safety needs far exceed available funding**

How are Projects Identified?

Three (3) Main Methods of Identifying Sites of Interest

- Re-active / Traditional Method
 - **Network Screening** of the crash database (3-10 years data)
- Pro-active – 2 methods
 - **Requests** from MHP, MDT District Offices or Local / Tribal Governments
 - Examples
 - City of Billings, Gallatin County – intersections - roundabouts
 - Lewis & Clark County – intersections, curves – signing, slope flattening, roundabout
 - **Systemic Applications** of FHWA Proven Safety Countermeasures or other safety improvements (ie, delineation, sign reflectivity upgrades, centerline rumble strips, flashing yellow arrows, etc).

Recent Systemic Examples



Summary of Steps

- **Office Review** – determine crash trends, potential safety improvements
 - i.e. rumble strips for roadway departure crashes
 - i.e. shoulder widening in a curve for roadway departure crashes
 - i.e. intersection improvements (signal, roundabout, reflective backplating, etc) for intersection related crash trends.
- **Field Review** – meet with District Staff and other stakeholders (local officials for local routes) to determine potential safety improvements.
- **Back in office** – compute the benefit cost and nominate projects based on benefit cost ranking and available funding.
- **Next Steps** – Transportation Commission approval and beginning design.

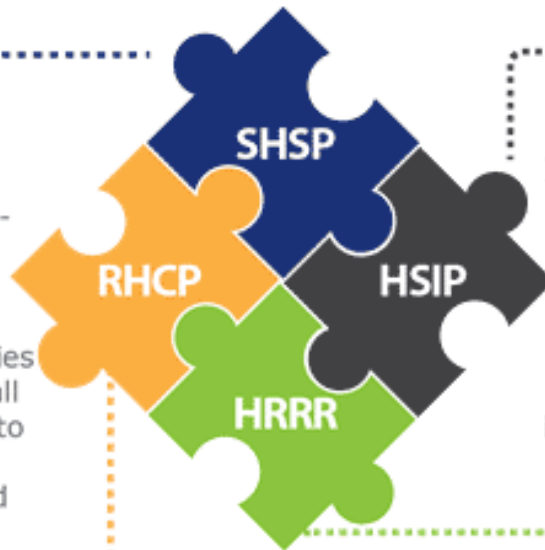
MDT's Safety Program

STRATEGIC HIGHWAY SAFETY PLAN

The SHSP is a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. [Click here to learn how to develop, implement, evaluate and promote your SHSP.](#)

RAILROAD-HIGHWAY CROSSINGS PROGRAM

The RHCP provides funds for the elimination of hazards at railway-highway crossings under 23 U.S.C. 130. [Click here for more information to support RHCP efforts.](#)



HIGHWAY SAFETY IMPROVEMENT PROGRAM

The HSIP is the projects, activities, plans, and reports carried out under 23 U.S.C. 148. [Click here for resources to support State HSIP planning, implementation, evaluation and reporting efforts.](#)

HIGH RISK RURAL ROADS

[If the fatality rate on rural roads increase in a State, they are required to spend a portion of their HSIP funds on rural roads. \[Click here for more information to support HRRR efforts.\]\(#\)](#)

MDT's Highway – Rail Grade Crossing Safety Program



MDT's Highway – Rail Grade Crossing Safety Program

General Rail Information

1350+ Public Crossings in Montana

- 495 Active Warning Devices
- 222 grade separated crossings

12 Operating Railroads in Montana

- 51 of 56 counties have railroads traversing their boundary

Highway-Rail Crossing Program

- Prevent highway-rail crossing collisions
- Other consequences that develop
 - Train derailments – secondary injuries, hazardous materials, down power lines, environmental impacts

MDT's Highway – Rail Grade Crossing Safety Program

Two Main Components

Grade Crossing Inventory

- MDT's Highway-Rail Grade Crossing Inventory
 - 3 year cycle
- Federal Railroad Administration's National Database
 - Submit data to FRA

Identifying Highway-Rail Safety Projects

- **Identify crossings** for safety improvements
- **Initiate Diagnostic Review process** to determine safety improvements
- **Allocation of federal dollars** to implement safety improvements at public grade crossing

MDT's Highway – Rail Grade Crossing Safety Program

Identifying Highway-Rail Safety Projects

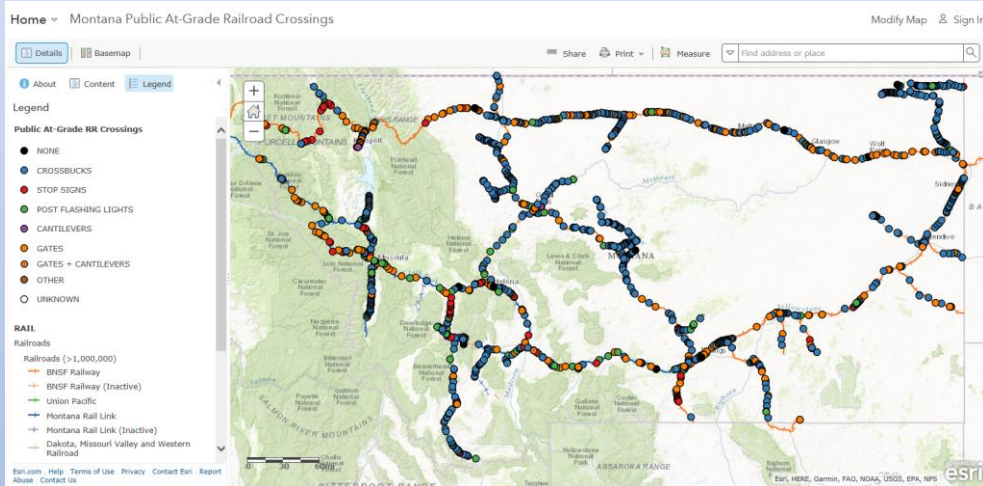
Federal programs require each State to implement a **systematic method** for identifying crossings that have the most need for safety and/or operational improvements.

The priority schedule is based on:

- **Potential reduction** in the number and/or severity of crashes
- **Cost** of the projects and the **resources** available
- **Relative safety** of public railroad-highway grade crossings based on a priority index formula
- **Safety need** as determined by a **Diagnostic Review Team**

Montana Public Rail Crossings

- <https://www.arcgis.com/apps/mapviewer/index.html?webmap=218f3b14b0ad45359d58d236f4f7a0f1>



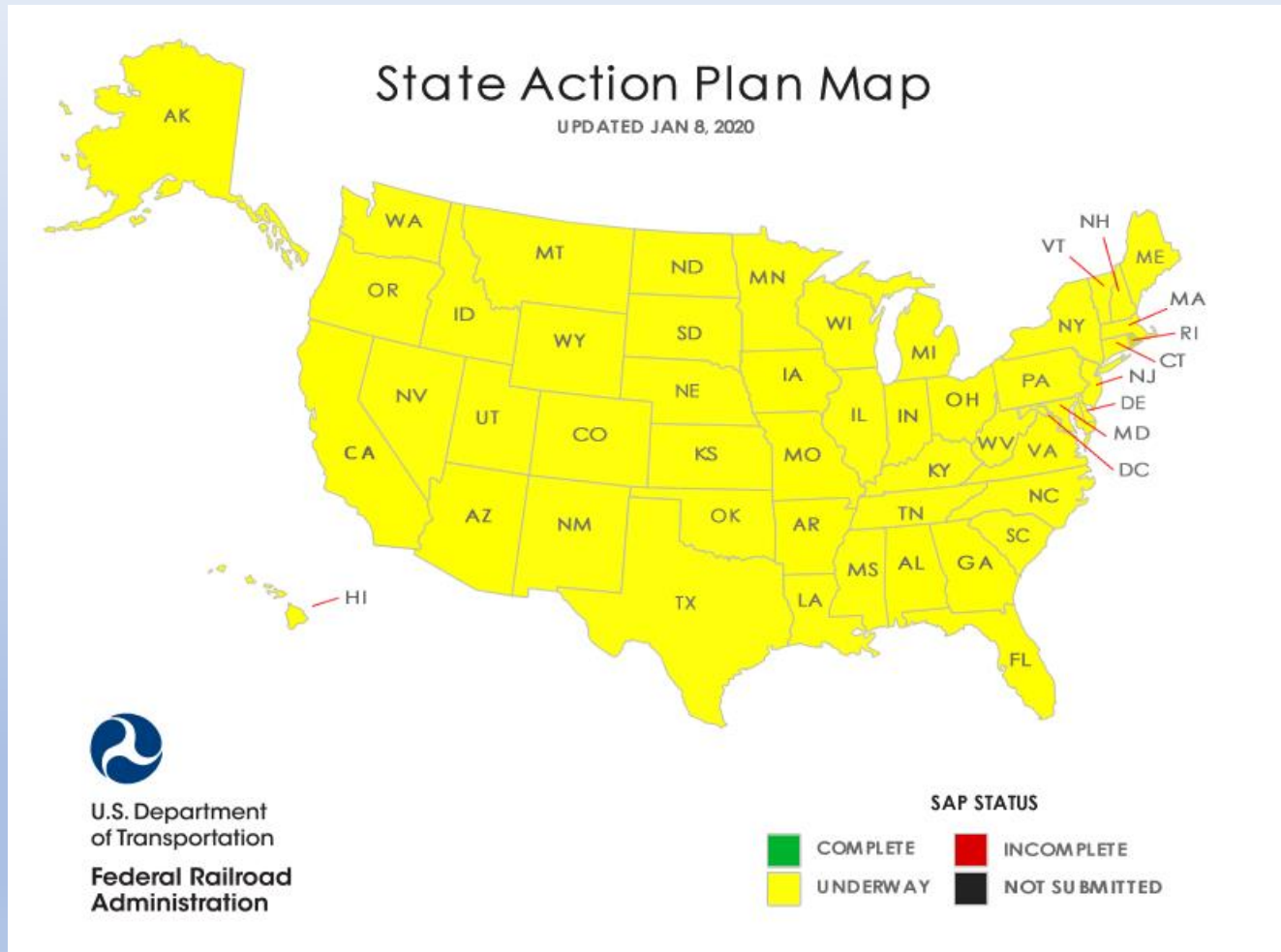
Zoom to 3 of 3

Public At-Grade RR Crossings: GT FALLS MILW

US DOT NUMBER	398767P
OPERATING RAILROAD	BNSF
RAIL LINE NAME	GT FALLS MILW
EMERGENCY NOTIFICATION SYSTEM	1-800-832-5452
LOCATION	River Dr / 57th St
RAILROAD MILEPOST	194.16
WARNING DEVICE	CANTILEVERS
COUNTY	Cascade
STATUS	ACTIVE
CORRIDOR	C005205N
CORRIDOR REFERENCE POINT	007+0.000

Crossing Images

Montana State Action Plan



Summary – HSIP B/C Process

Two Primary Key Take Away's

- HSIP Funds eligible for all **public roads** and **public rail crossings**
 - https://www.mdt.mt.gov/publications/docs/forms/hsip_application.pdf
- Programs uses **data-driven tools** to implement safety improvements

Contact Names:

- Patricia Burke – Highway Safety Program
pburke@mt.gov or 406-444-9420
- John Althof – Highway-Rail Safety Program/Section 130 Program
jalthof@mt.gov or 406-444-7247