Highway Safety Improvement Program

Data Driven Decisions

Montana
Highway Safety Improvement Program
2014 Annual Report

Prepared by: MT

Disclaimer

Protection of Data from Discovery & Admission into Evidence

23 U.S.C. 148(h)(4) states "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data."

23 U.S.C. 409 states "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data."

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Executive Summary

In the reporting period, the Montana Department of Transportation (MDT) successfully utilized our allotted Highway Safety Improvement Program (HSIP) funds on Montana's roadways. MDT also completed or has initiated Corridor Safety Audits (CSA) on two locations in the state. Recommendations from these CSA's are being utilized to supplement our historical site specific identification of safety improvements. MDT is moving forward with upgrading our safety analysis software and is developing a Roadway Departure Implementation Plan (RDIP). The RDIP included the development of Safety Performance Functions (SPFs) and diagnostic norms for all rural, on-system roads for both total crashes as well as road departure crashes. This report and the associated tools will likely be used in future years for identification of projects thru the HSIP.

MDT continues to evaluate our historical processes for identifying locations for safety improvements and is discussing how to balance our site specific program with systemic improvements. Overall crash trends for fatal and severe injury crashes in the state had a slight decrease in 2013 as compared to 2012; however, overall fatalities and serious injuries are down over 21% since the establishment of the goal in 2007. MDT continues efforts to conduct outreach to local government agencies on the availability of HSIP for completion of safety improvements on local roads.

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP MAP-21 Reporting Guidance dated February 13, 2013 and consists of four sections: program structure, progress in implementing HSIP projects, progress in achieving safety performance targets, and assessment of the effectiveness of the improvements.

Program Structure

Program Administration

How are Highway Safety Improvement Program funds allocated in a State?

☒ Central

☐ District

☐ Other

Describe how local roads are addressed as part of Highway Safety Improvement Program.

Crash data is available for local roads; however, the ability to query the data based on local road route and milepost is very limited. MDT has developed a process to generate approximate coordinates for crashes coded to off-system routes. Additionally, traffic volume and roadway characteristics data is generally not available for the local routes. MDT has made an effort to identify crash clusters on the local road system using the crash data and querying methodologies currently available.

Fatal crash data is available for the Tribal reservations; however, other crashes investigated by the Tribal enforcement agencies or Bureau of Indian Affairs are not consistently submitted. MDT solicits

participation from local and Tribal agencies, who can submit documentation of sites to be evaluated and prioritized under the Highway Safety Improvement Program. A nomination/application for HSIP projects is attached to this report (HSIPAPPLICATION 2010.pdf) and is also included on the MDT internet page at: http://www.mdt.mt.gov/publications/docs/forms/hsip_application.pdf.

During the past year, MDT presented information on the HSIP at the annual meeting of the Montana Association of County Road Supervisors, the Joint Engineers Conference, and the League of Cities and Towns annual meeting. These meetings were attended by local representatives with an interest in local road safety.

Identify which internal partners are involved with Highway Safety Improvement Program planning.

☒Design

☒Planning

☒Maintenance

☒Operations

☒Governors Highway Safety Office

☒Other: Other-District Personnel

Briefly describe coordination with internal partners.

The MDT Planning Division coordinates the safety activities and administers the Comprehensive Highway Safety Plan (CHSP). The CHSP is currently undergoing an update which will be completed in 2015.

The Highway Safety Improvement Program is administered centrally by the MDT Traffic and Safety Bureau. Crash clusters are identified by roadway system and by various criteria. Enforcement agencies identify locations and request site reviews. Local and Tribal agencies can forward safety projects or request MDT evaluate areas of interest. MDT District Offices also submit sites for investigation and participate in the engineering study to determine crash trends and countermeasure selection. Project selection is currently based on the benefit/cost ratio method. MDT has advanced some systemic improvements (curve signing as an example) based on the strategies outlined in the CHSP.

Appropriate entities within MDT are invited to participate in the CSA's. These entities include, but may not be limited to, the State Highway Traffic Safety Section, Planning Division, Motor Carrier Services, Road Design, Traffic Operations, Maintenance, and District personnel.

Identify which external partners are involved with Highway Safety Improvement Program planning.

☒Metropolitan Planning Organizations

☐Governors Highway Safety Office

☒Local Government Association

☒Other: Other-Tribes

☒Other: Other-Law Enforcement

Identify any program administration practices used to implement the HSIP that have changed since the last reporting period.

☐Multi-disciplinary HSIP steering committee

☒Other: Other-No changes in the reporting period.

Describe any other aspects of Highway Safety Improvement Program Administration on which you would like to elaborate.

Since 2006 Montana has had a Traffic Records Coordinating Committee (TRCC). The TRCC has representation from State agencies involved with safety records and Federal agencies for oversight and input. They meet regularly and attempt to coordinate and share projected record upgrades, new projects and pertinent records among participants. As the systems mature, the TRCC may include MPO

and Tribal representation.

Starting September 2008, the Montana Highway Patrol (MHP) implemented the CTS America Public Safety System dispatch-crash-record systems, including a MMUCC based crash reporting form. MHP investigates approximately 50% of all statewide crashes. This CTS America System is presently only used by the MHP via a mobile client in each patrol unit; however, a web-based crash reporting system has been developed and is being used by several local agencies. This web based system allows local enforcement agencies to input crash information via the internet, if they choose to participate. The project is starting with the eight largest local Police Departments. These eight departments report about 80% of all local crashes.

During the reporting period MDT selected a vendor for an upgrade to the safety database and analysis tools. This new software, referred to as the Safety Information Management System (SIMS), has been deployed at MDT. MDT personnel are currently in the testing and final configuration phase of the project. This new system will allow MDT to access the MMUCC compliant crash data being collected by the Montana Highway Patrol. The SIMS system also has access to many roadway data elements including many of the Fundamental Data Elements identified by FHWA. Additionally, MDT has access to the MHP crash investigator's reports, if additional detail on the particular crash is required.

The Office of Court Administration (OCA) maintains a central court repository (CCR), which contains electronic case records from all Courts of Limited Jurisdiction and District Courts. The CCR includes records on all citations, as well as corresponding disposition information. The Department of Justice (DOJ) receives any CCR information that must be applied to a driver's record. Working with the OCA and the DOJ, MDT receives the same driver information for use in traffic safety analysis. While the data is not yet available for traffic safety users, a project to increase the scope of the data received and to develop the reports and analysis needed is listed as a medium priority in the Montana Traffic Records Strategic Plan Annual Element. Additionally, in the past year MDT has worked with MHP to gain access to the MHP citation data.

The Traffic and Safety Bureau is actively involved in the implementation and update of CHSP. Traffic and Safety is taking the lead in the areas of road departure crashes and in the rural high-crash severity corridors and high crash locations. MDT is conducting a minimum of two CSA's per year.

Program Methodology

Select the programs that are administered under the HSIP.

☐ Median Barrier	☐ Intersection	☐ Safe Corridor
☐ Horizontal Curve	☐ Bicycle Safety	☐ Rural State Highways
☐ Skid Hazard	☐ Crash Data	☐ Red Light Running Prevention

☐ Roadway Departure	☐ Low-Cost Spot Improvements	☐ Sign Replacement And Improvement
☐ Local Safety	☐ Pedestrian Safety	☐ Right Angle Crash
☐ Left Turn Crash	☐ Shoulder Improvement	☐ Segments
☒ Other: Other-Hot Spot		

Program: **Other-Hot Spot**

Date of Program Methodology: **10/1/1989**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☒ Volume	☐ Horizontal curvature
☒ Fatal and serious injury crashes only	☐ Population	☐ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
☒ Other-See additional description provided in question #15	☐ Other	☐ Other

What project identification methodology was used for this program?

☐ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☒ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☒ Other-Severity Rate

☒ Other-Requests - Areas to be investigated as requested by any agency or individual

☒ Other-Any combination of fatal or severe injuries meeting minimum number of crashes

☒ Other-Rural, In Intersection or Intersection Related only, Severity – all crashes

☒ Other-Rural commercial vehicle crashes

☒ Other-Pedestrian Crashes

Are local roads (non-state owned and operated) included or addressed in this program?

☒ Yes

☐ No

If yes, are local road projects identified using the same methodology as state roads?

☒ Yes

☐ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Projects are evaluated and ranked on a benefit/cost system.

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☐ Relative Weight in Scoring

☐ Rank of Priority Consideration

☒ Ranking based on B/C	1
☐ Available funding	
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	
☒ MDT has advanced some systemic projects (curve signing as an example) based on the strategies outlined in the CHSP without calculating a benefit/cost.	1

What proportion of highway safety improvement program funds address systemic improvements?

7

Highway safety improvment program funds are used to address which of the following systemic improvments?

- ☐ Cable Median Barriers
- ☐ Rumble Strips
- ☐ Traffic Control Device Rehabilitation
- ☐ Pavement/Shoulder Widening
- ☒ Install/Improve Signing
- ☐ Install/Improve Pavement Marking and/or Delineation
- ☐ Upgrade Guard Rails
- ☐ Clear Zone Improvements
- ☐ Safety Edge
- ☐ Install/Improve Lighting
- ☐ Add/Upgrade/Modify/Remove Traffic Signal
- ☐ Other

What process is used to identify potential countermeasures?

- ☒ Engineering Study
- ☒ Road Safety Assessment
- ☒ Other: Other-Field review of location with personnel knowledgeable of the crash trend as well as personnel (MDT/Local/Tribal) familiar with the roadway.

Identify any program methodology practices used to implement the HSIP that have changed since the last reporting period.

☐ Highway Safety Manual

☐ Road Safety audits

☐ Systemic Approach

☒ Other: Other-No changes.

Describe any other aspects of the Highway Safety Improvement Program methodology on which you would like to elaborate.

The following is a summary of the criteria utilized to identify potential locations for the 2014 HSIP. All segment lengths were 0.5 miles.

Severity Index (SI) – Greater than one and a half (1.5) times the statewide average meeting the following criteria:

Interstate, NINHS routes = 10 years (2003-2012), minimum 5 crashes.

State Primary routes = 10 years (2003-2012), minimum 5 crashes.(3.34)

State Secondary routes = 10 years (2003-2012), minimum 5 crashes.

Severity Rate (SR) - minimum severity rate six (6) times the statewide average meeting the following criteria:

Interstate, NINHS, State Primary routes = 10 years (2003-2012), minimum 5 crashes.

State Secondary routes = 10 years (2003-2012), minimum 5 crashes.

Severe Injuries (SINJ) – any combination of Fatal or Severe Injuries meeting meeting the following criteria:

Interstate, NINHS, State Primary routes = 10 years (2003-2012), minimum 5 crashes

State Secondary routes = 10 years (2003-2012), minimum 5 crashes

Intersection (INTX) – Rural, In Intersection or Intersection Related only, Severity – all crashes

NINHS, State Primary, State Secondary = 10 years (2003-2012), minimum 5 crashes

Commercial Vehicles (CV) – Rural, Severity – all crashes meeting the following criteria:

NINHS, State Primary, State Secondary = 10 years (2003-2012), minimum 5 crashes

Pedestrian Crashes (PED) – Severity – all crashes

NINHS, State Primary, State Secondary = 10 years (2003-2012), minimum 3 crashes

Requests (REQ) - Areas to be investigated as requested by an agency or individual.

Once the sites are identified, a preliminary office review identifies the sites where there are near-term reconstruction projects, currently programmed safety projects, or sites that were recently field reviewed. After drafting collision diagrams, an office review establishes the sites that need on site field reviews. The sites showing no crash trend are not field reviewed. The field review team establishes crash causations and contributing factors. The team members debate potential countermeasures. Conceptual designs are developed with cost estimates.

The project prioritization process is based on a benefit-cost analysis. The costs are the annualized cost of construction over the service life of the proposed improvement plus the annual increase in operation and maintenance costs due to the improvement on the basis of the costs of the analysis year. The benefits are the anticipated annualized cost reductions due to a lower number of crashes and lower crash severity in the given analysis year. The projects with the highest benefit-cost ratios get programmed for improvements.

MDT has initiated several district wide horizontal curve signing upgrade projects. The intent of these projects is to complete a proactive improvement to upgrade all the curve warning signs to a consistent standard. This project directly addresses one of the strategies outlined in the Montana CHSP.

MDT has finalized guidelines for conducting CSA's and has completed one CSA in the last year with another anticipated for completion by the end of 2014.

MDT has also initiated development of a Roadway Departure Implementation Plan. This plan includes development of Safety Performance Functions (SPFs), Level of Service of Safety (LOSS), and diagnostic norms for rural on-system routes. MDT anticipates using this information for development of the HSIP in coming years. As part of the Plan, MDT has begun nominating centerline rumble strip projects as a proactive effort to address head-on, sideswipe opposite direction, and run off the road left crashes.

MDT is also developing SPF's and diagnostic norms for intersections. Completion of this project is anticipated in 2015.

The following definitions/notes are provided for clarification of the crash criteria utilized in development of the HSIP.

Crash Rate: Number of crashes per million vehicles miles.

Severity Index: Ratio of the sum of fatal and incapacitating injury crashes times 8 plus the number of other injury crashes times 3 plus the number of property damage crashes to the total number of crashes.

Severity Rate: Crash rate multiplied by the severity index.

Progress in Implementing Projects

Funds Programmed

Reporting period for Highway Safety Improvement Program funding.

☐ Calendar Year

☒ State Fiscal Year

☐ Federal Fiscal Year

Enter the programmed and obligated funding for each applicable funding category.

Funding Category	Programmed*		Obligated	
HSIP (Section 148)	21029512.96	29 %	21029512.96	29 %
HRRRP (SAFETEA-LU)	14656.04	0 %	14656.04	0 %
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer – Section 164	13521308	19 %	13521308	19 %
Incentive Grants - Section 163	2744.37	0 %	2744.37	0 %
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	31072569.54	43 %	31072569.54	43 %
State and Local Funds	7247087.09	10 %	7247087.09	10 %

Totals	72887878	100%	72887878	100%

How much funding is programmed to local (non-state owned and maintained) safety projects?

3 %

How much funding is obligated to local safety projects?

3 %

How much funding is programmed to non-infrastructure safety projects?

0 %

How much funding is obligated to non-infrastructure safety projects?

0 %

How much funding was transferred in to the HSIP from other core program areas during the reporting period?

0 %

How much funding was transferred out of the HSIP to other core program areas during the reporting period?

0 %

Discuss impediments to obligating Highway Safety Improvement Program funds and plans to overcome this in the future.

None at this time.

Describe any other aspects of the general Highway Safety Improvement Program implementation progress on which you would like to elaborate.

Historically, MDT has been very successful in utilizing HSIP funds. We are evaluating our current project nomination guidelines in an effort to blend the historical focus on site specific projects with proactive/systemic/systematic projects as well as improvements recommended in CSA's. Completion of updated HSIP guidelines will be initiated once the new upgrade to the safety analysis system is complete.

MDT has a process to perform CSA's on selected corridors. The intent is to develop safety recommendations as the engineering component of this process and pursue strategies such as enforcement activities and public education, involving the disciplines of the participants in the development of the strategic highway safety plan. The CSA's recommend short, medium and long term improvements from a behavioral and engineering perspective.

MDT has also initiated development of a Roadway Departure Safety Implementation Plan. The purpose of this Plan is to provide specific details on countermeasures, actions, key steps, schedules, and investments needed to support the goals of the CHSP by mitigating roadway departure crashes. The plan will provide specific information on how additions, modifications or enhancements to the current programs can be effectively implemented to address these types of crashes. Final completion of the plan is anticipated for the fall of 2014. MDT is also developing a non-infrastructure HSIP project. The goal of the project is the development of a media campaign to educate drivers on road departure crashes.

General Listing of Projects

List each highway safety improvement project obligated during the reporting period.

Project	Improvement Category	Output	HSIP Cost	Total Cost	Funding Category	Functional Classification	AADT	Speed	Roadway Ownership	Relationship to SHSP	
										Emphasis Area	Strategy
2014 SFTY UTILITY FAST PROCESS	Miscellaneous	0	62744	62744	HSIP (Section 148)	Various	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF-139-MISC SAFETY-MAINTENANCE	Miscellaneous	0	106095	106095	HSIP (Section 148)	Various	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
THOMPSON RIVER-EAST	Roadway Roadway - other	1 Miles	750000	7894788	Other Federal-aid Funds (i.e. STP,	Rural Minor Arterial	2298	55	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements

					NHPP)						
SOUTH OF LAUREL-RR OVERPASS	Roadway Roadway - other	1.37 Miles	151000	11772768	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Principal Arterial - Other	7414	55	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
JCT 419-SOUTH	Roadway Roadway - other	3.05 Miles	900000	6552207	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Minor Arterial	762	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
LINCOLN-EAST	Roadway Roadway - other	7.97 Miles	4101308	12890354	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Principal Arterial - Other	1910	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
KALISPELL-WEST	Roadway Roadway - other	1.41 Miles	6176000	6191448	Penalty Transfer – Sectio	Rural Principal Arterial - Other	6987	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash	Strategy 8 - Roadway Engineering Improvem

					n 164					Locations	ents
2003-SIGNING/GD RAIL-RAVALLI CO	Roadside Barrier - other	4.3 Miles	148392	148392	HSIP (Section 148)	Rural Local Road or Street	0	0	County Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
2003-SAFETY IMPVT-SW OF MSLA	Roadway Roadway - other	0.4 Miles	377827	377827	HSIP (Section 148)	Rural Major Collector	0	35	County Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF089 S MANHATTAN GRDRL, STRIP	Roadside Barrier - other	0.93 Miles	155425	155425	HSIP (Section 148)	Rural Major Collector	1258	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF089 VAUGHN FRTG GRDL SLP FLT	Roadside Barrier - other	3.59 Miles	1860000	3782372	Other Federal-aid Funds (i.e.	Rural Major Collector	0	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering

					STP, NHPP)						Improvements
SF 099 JCT FILSON/QUARTER CRCL	Roadway Roadway - other	1.49 Miles	3050883	3050883	HSIP (Section 148)	Rural Principal Arterial - Other	5144	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 099 SE OF HELMVILLE	Roadside Barrier - other	0.39 Miles	87480	87480	HSIP (Section 148)	Rural Minor Arterial	640	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 099 RECONSTRUCT N OF LAUREL	Roadway Roadway - other	1.16 Miles	2152916	2152916	HSIP (Section 148)	Rural Major Collector	914	60	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 099 E OF PLAINS	Roadway Roadway - other	0.6 Miles	611089	611089	HSIP (Section 148)	Rural Minor Arterial	1192	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvem

											ents
SF099 S OF ST MARY	Roadside Roadside grading	0.3 Miles	146630	146630	HSIP (Section 148)	Rural Minor Arterial	930	60	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
NEVERSWEAT RR-BR REMOVAL	Roadway Roadway - other	0.49 Miles	176745	1953737	Other Federal-aid Funds (i.e. STP, NHPP)	Urban Principal Arterial - Interstate	16793	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF-109 SIGNG DL KALISPELL AREA	Roadway signs and traffic control Roadway signs (including post) - new or updated	9.56 Miles	94148	94148	HSIP (Section 148)	Various	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF109-MSLA HRZNTAL CRV SIGNG	Roadway signs and traffic control Curve-related warning signs and flashers	0	525800	525800	HSIP (Section 148)	Various	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering

											Improvements
SF 109-GR/CBR-S OF SOMERS	Roadside Barrier - other	0.58 Miles	259600	259600	HSIP (Section 148)	Rural Principal Arterial - Other	7500	55	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF109-WDN SHDLRS, CHRVNS-S226	Roadway Roadway - other	0.24 Miles	336500	336500	HSIP (Section 148)	Rural Major Collector	320	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF109 - US2/MT40 - INT SFTY UPGRD	Intersection geometry Auxiliary lanes - add left-turn lane	0.1 Miles	55000	55000	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF109-GR-HNGRY HRSE DAM RD	Roadside Barrier - other	3.8 Miles	884904	884904	HSIP (Section 148)	Rural Minor Collector	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering

											Improvements
SF109-FLSHR-N OF LOST TRAIL	Roadway signs and traffic control Roadway signs (including post) - new or updated	0.53 Miles	66448	66448	HSIP (Section 148)	Rural Principal Arterial - Other	846	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF109-SIGNS, GR - S-487	Roadside Barrier - other	1.3 Miles	61919	61919	HSIP (Section 148)	Rural Major Collector	1800	40	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF109-CRV SFTY IMPRVTS-CHARLO	Roadway Roadway - other	3.4 Miles	13500	13500	HSIP (Section 148)	Rural Major Collector	1520	65	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 119-SIGNING E OF MT 141	Roadway signs and traffic control Roadway signs (including post) - new or updated	1.16 Miles	36950	36950	HSIP (Section 148)	Rural Principal Arterial - Other	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering

											Improvements
SF 119-JCT US 89/S-431	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0.4 Miles	194772	194772	HSIP (Section 148)	Rural Minor Arterial	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF-119 RUMBLE STRIPS MT 37	Roadway Rumble strips - edge or shoulder	51.18 Miles	123568	123568	HSIP (Section 148)	Rural Minor Arterial	346	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 119-GR S OF HAMILTON-	Roadside Barrier - other	3.09 Miles	219590	219590	HSIP (Section 148)	Rural Principal Arterial - Other	1156	65	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 119 - S-269 TURN LANE	Intersection geometry Auxiliary lanes - add two-way left-turn lane	0.4 Miles	13100	13100	HSIP (Section 148)	Rural Major Collector	8426	45	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash	Strategy 8 - Roadway Engineering Improvem

										Locations	ents
SF119-JCT US93/SKALKAHO ROAD	Lighting Intersection lighting	0.4 Miles	107828	107828	HSIP (Section 148)	Urban Principal Arterial - Other	6944	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SIGNALS-W HOLLY ST-SIDNEY	Intersection traffic control Intersection traffic control - other	1.19 Miles	844917	844917	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF119-FLASHERS STRYKER CURVE	Roadway signs and traffic control Curve-related warning signs and flashers	0.2 Miles	11096	11096	HSIP (Section 148)	Rural Principal Arterial - Other	1778	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 119-SIGNING E OF HERON	Roadway signs and traffic control Curve-related warning signs and flashers	0.5 Miles	14193	14193	HSIP (Section 148)	Rural Minor Arterial	952	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvem

											ents
SF119-RUMBL STRIPS SANDERS CNTY	Roadway Rumble strips - edge or shoulder	52.48 Miles	58661	58661	HSIP (Section 148)	Rural Minor Arterial	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 119-SAFETY IMP SO-BIGFORK	Roadside Barrier - other	0.29 Miles	45197	45197	HSIP (Section 148)	Rural Minor Arterial	3988	50	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 119 - GR W OF DRUMMOND	Roadside Barrier - other	0.69 Miles	327158	327158	HSIP (Section 148)	Rural Principal Arterial - Interstate	8300	75	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF119-SAFETY IMP-N HAVRE	Roadway Roadway - other	1.2 Miles	2513352	2513352	HSIP (Section 148)	Rural Major Collector	629	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvem

											ents
SF 119 - RAILROAD ST GR & SIGN	Roadside Barrier - other	1 Miles	91310	91310	HSIP (Section 148)	Urban Major Collector	0	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 119 - SIGNING MULLAN RD	Roadway signs and traffic control Curve-related warning signs and flashers	3.2 Miles	11562	11562	HSIP (Section 148)	Rural Major Collector	3450	45	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 129-GTFLS SIGNAL BORDERS	Intersection traffic control Modify traffic signal - add backplates with retroreflective borders	5.5 Miles	23379	23379	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF129- HIGGINS BANCROFT LGHT	Lighting Continuous roadway lighting	0.4 Miles	19312	19312	HSIP (Section 148)	Urban Minor Arterial	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements

SF 129 - DERN SPRING CR	Advanced technology and ITS Advanced technology and ITS - other	0.316 Miles	140420	140420	HSIP (Section 148)	Urban Principal Arterial - Other	7310	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129- MISSOULA WRNG WY-PH 1	Roadway signs and traffic control Roadway signs and traffic control - other	175.4 Miles	438428	438428	HSIP (Section 148)	Rural Principal Arterial - Interstate	0	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129- BUTTE WRNG WY-PH 1	Roadway signs and traffic control Roadway signs and traffic control - other	190 Miles	569203	569203	HSIP (Section 148)	Rural Principal Arterial - Interstate	0	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129-GF WRNG WY-PH 1	Roadway signs and traffic control Roadway signs and traffic control - other	207.36 Miles	465300	465300	HSIP (Section 148)	Rural Principal Arterial - Interstate	0	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF129- BILLINGS WRNG WY-	Roadway signs and traffic control Roadway signs and traffic control -	200.5 Miles	455877	455877	HSIP (Sectio	Rural Principal Arterial -	0	75	State Highway	Reducing Crashes in High Crash	Strategy 8 - Roadway Engineerin

PH I	other				n 148)	Interstate			Agency	Corridors/ High Crash Locations	g Improvements
SF 129 - S354/S211 SAFETY IMPRV	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0.1 Miles	37012	37012	HSIP (Section 148)	Rural Major Collector	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129 - SFTY IMPRV S DILLON	Roadway delineation Delineators post-mounted or on barrier	0.81 Miles	48344	48344	HSIP (Section 148)	Rural Principal Arterial - Interstate	3354	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129-SFTY IMPRV GALEN	Roadway Rumble strips - transverse	0.1 Miles	11600	11600	HSIP (Section 148)	Rural Major Collector	328	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129-RRXING MT CITY	Railroad grade crossings Surface treatment	0.8 Miles	42379	42379	HSIP (Section 148)	Rural Major Collector	2355	55	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash	Strategy 8 - Roadway Engineering Improvem

										Locations	ents
SF 129- CURVE SIGN CHOTEAU	Roadway delineation Delineators post-mounted or on barrier	0.5 Miles	3474	3474	HSIP (Section 148)	Rural Major Collector	272	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 129 - RNDABOUT KING 56TH	Intersection traffic control Modify control - two-way stop to roundabout	0.3 Miles	705817	705817	HSIP (Section 148)	Rural Major Collector	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129 - SGNG BRDG TRTM CIRCLE	Roadside Barrier - other	0.06 Miles	193197	193197	HSIP (Section 148)	Rural Major Collector	256	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF129- GRDRAIL N LOLO	Roadside Barrier - other	1.1 Miles	14548	14548	HSIP (Section 148)	Rural Principal Arterial - Other	0	65	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvem

											ents
SF 129-SGN FLASHER SEELEY LAKE	Intersection traffic control Intersection flashers - add advance intersection warning sign-mounted	0.8 Miles	8073	8073	HSIP (Section 148)	Rural Minor Arterial	2324	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF129-GRDRAIL E DESMET INTCH	Roadside Barrier - other	1.1 Miles	24461	24461	HSIP (Section 148)	Rural Principal Arterial - Interstate	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF129-SFTY IMPR E BONNER	Roadside Roadside grading	1.5 Miles	318381	318381	HSIP (Section 148)	Rural Major Collector	1644	55	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 129-KALISPELL SIGNAL BRDRS	Intersection traffic control Modify traffic signal - add backplates with retroreflective borders	5 Miles	36903	36903	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash	Strategy 8 - Roadway Engineering Improvem

										Locations	ents
SF 129 - SGN FLASHER MONTCLAIR	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0.2 Miles	43701	43701	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129-ADV FLASHER CEMETERY RD	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0.19 Miles	109588	109588	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 129-GRDRAIL N POLSON	Roadside Barrier - other	0.62 Miles	254100	254100	HSIP (Section 148)	Rural Minor Arterial	2214	50	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF139-MSLA DNTN SIGNAL UPGR	Intersection traffic control Modify traffic signal - add flashing yellow arrow	1.466 Miles	76885	76885	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements

SF 139-GTFL ADV SGNL FLASHER	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0	19221	19221	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF139-BROOKS SAFETY IMPRV	Roadway delineation Improve retroreflectivity	1.72 Miles	149825	149825	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-COTTONWOOD & STUCKY	Intersection traffic control Modify control - two-way stop to roundabout	0.6 Miles	373201	373201	HSIP (Section 148)	Rural Major Collector	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-HLN FLTS INTERSECTION	Intersection traffic control Intersection traffic control - other	0.1 Miles	77128	77128	HSIP (Section 148)	Rural Minor Arterial	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-AWF UPGRADE	Intersection traffic control Intersection flashers - add	0	41052	41052	HSIP (Sectio	Rural Principal Arterial -	0	0	State Highway	Reducing Crashes in High Crash	Strategy 8 - Roadway Engineerin

MSLA SOUTH	miscellaneous/other/unspecified				n 148)	Other			Agency	Corridors/ High Crash Locations	g Improvements
SF139-AWF UPGRADE MSLA MPO	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0	21148	21148	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-AWF UPGRADE PABLO POLSN	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0	9081	9081	HSIP (Section 148)	Rural Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-AWF UPGRADE MSLA NORTH	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	0	44784	44784	HSIP (Section 148)	Rural Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-ROUNDABOUT S OF SIDNEY	Intersection traffic control Modify control - two-way stop to roundabout	1 Miles	341269	341269	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash	Strategy 8 - Roadway Engineering Improvem

										Locations	ents
SF 139-US 212 SAFETY IMPRV	Roadway delineation Improve retroreflectivity	39.2 Miles	59663	59663	HSIP (Section 148)	Rural Principal Arterial - Other	2136	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139 - FORSYTH SKID TRTMENT	Roadway Pavement surface - high friction surface	0.6 Miles	56129	56129	HSIP (Section 148)	Rural Principal Arterial - Interstate	4269	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139 - SIDNEY SAFETY IMPRV	Roadway signs and traffic control Roadway signs and traffic control - other	1.4 Miles	20128	20128	HSIP (Section 148)	Various	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF139-SHANE CR RD SFTY	Roadway delineation Delineators post-mounted or on barrier	4.113 Miles	13842	13842	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements

SF 139-SIGNAL 13TH & PARKHILL	Intersection traffic control Intersection traffic control - other	0	65780	65780	HSIP (Section 148)	Urban Major Collector	0	0	City of Municipal Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-CENTRAL & 56TH RNDABOUT	Intersection traffic control Modify control - two-way stop to roundabout	0	349219	349219	HSIP (Section 148)	Rural Minor Collector	0	0	County Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139 - TOSTON SKID TRTMENT	Roadway Pavement surface - high friction surface	0.7 Miles	14350	14350	HSIP (Section 148)	Rural Principal Arterial - Other	3505	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF139-RACETRACK BRDG REMOVAL	Roadway Roadway - other	0.6 Miles	85971	303819	HSIP (Section 148)	Rural Principal Arterial - Interstate	7924	75	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139 - GREGSON BRDG	Roadway Roadway - other	0.6 Miles	303820	303820	HSIP (Sectio	Rural Principal Arterial -	10428	75	State Highway	Reducing Crashes in High Crash	Strategy 8 - Roadway Engineerin

REMOVAL					n 148)	Interstate			Agency	Corridors/ High Crash Locations	g Improvements
SF139-SFTY IMPRV ELECTR	Roadway signs and traffic control Curve-related warning signs and flashers	1.517 Miles	17270	17270	HSIP (Section 148)	Rural Major Collector	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF139-DILLON SFTY IMPRV	Roadway delineation Roadway delineation - other	2.576 Miles	14350	14350	HSIP (Section 148)	Rural Minor Arterial	0	0	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF139-MACDONALD PASS SFTY IMPR	Roadway signs and traffic control Curve-related warning signs and flashers	0.6 Miles	20064	20064	HSIP (Section 148)	Rural Principal Arterial - Other	0	60	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 139-I15 SKID	Roadway Pavement surface - high friction	24.4 Miles	120258	120258	HSIP (Sectio	Rural Principal Arterial -	3960	75	State Highway	Reducing Crashes in High Crash	Strategy 8 - Roadway Engineerin

TRTMENT	surface				n 148)	Interstate			Agency	Corridors/ High Crash Locations	g Improvements
SF 139 - VMS SFTY IMPR	Advanced technology and ITS Dynamic message signs	4 Numbers	165720	165720	HSIP (Section 148)	Rural Principal Arterial - Interstate	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139- VALIER SFTY IMPR	Intersection traffic control Intersection flashers - add miscellaneous/other/unspecified	1.4 Miles	33271	33271	HSIP (Section 148)	Rural Minor Arterial	1101	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139- FLESHER PASS SFTY IMP	Roadway delineation Delineators post-mounted or on barrier	13.6 Miles	43938	43938	HSIP (Section 148)	Rural Major Collector	428	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139 - CANYON FERRY DAM SFTY	Roadway signs and traffic control Curve-related warning signs and flashers	1 Miles	10667	10667	HSIP (Section 148)	Rural Major Collector	1280	45	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash	Strategy 8 - Roadway Engineering Improvem

										Locations	ents
SF 129-DERN SPRING RECONSTRUCT	Roadway Roadway - other	0.3 Miles	605736	605736	HSIP (Section 148)	Urban Principal Arterial - Other	7310	60	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF139-COLUMBIA HEIGHTS SFTY	Intersection traffic control Modify traffic signal - add flashing yellow arrow	0.5 Miles	9778	9778	HSIP (Section 148)	Rural Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF139-KALISPELL SIGNALS SFTY	Intersection traffic control Modify traffic signal - add backplates with retroreflective borders	4.222 Miles	50798	50798	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139 - WHITEFISH SFTY IMPRV	Access management Raised island - modify existing	0.5 Miles	16889	16889	HSIP (Section 148)	Rural Principal Arterial - Other	0	65	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements

SF139-GRDRAIL E OF ST REGIS	Roadside Barrier - other	1.2 Miles	17016	17016	HSIP (Section 148)	Rural Principal Arterial - Interstate	6438	75	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 139-FLORENCE SFTY IMPRV	Access management Raised island - install new	0.7 Miles	12826	12826	HSIP (Section 148)	Rural Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF139-BOZEMAN SIGNAL SFTY	Intersection traffic control Modify traffic signal - add flashing yellow arrow	15.476 Miles	260263	260263	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements
SF 139-BOZEMAN SFTY IMPRV	Roadway delineation Delineators post-mounted or on barrier	4.6 Miles	43367	43367	HSIP (Section 148)	Rural Minor Collector	0	0	County Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements

SF 139 - ARMINGTON SLOPE FLT	Roadside Roadside grading	4.6 Miles	168133	168133	HSIP (Section 148)	Rural Principal Arterial - Other	1508	70	State Highway Agency	Roadway Departure	Strategy 11 - Roadway Engineering Improvements
SF 139-TURN LANES NW OF POLSON	Intersection geometry Auxiliary lanes - add left-turn lane	0.8 Miles	125465	125465	HSIP (Section 148)	Rural Principal Arterial - Other	4242	70	State Highway Agency	Reducing Crashes in High Crash Corridors/ High Crash Locations	Strategy 8 - Roadway Engineering Improvements

Progress in Achieving Safety Performance Targets

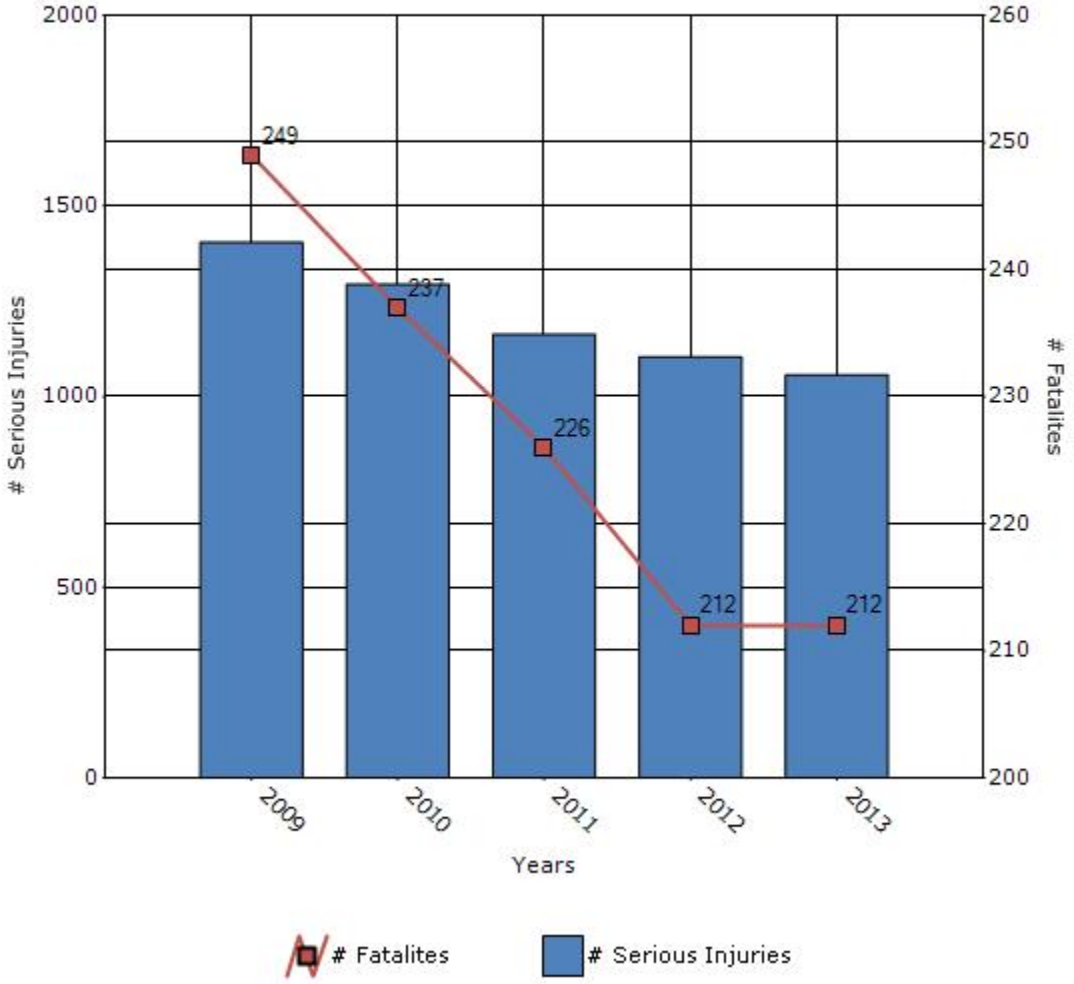
Overview of General Safety Trends

Present data showing the general highway safety trends in the state for the past five years.

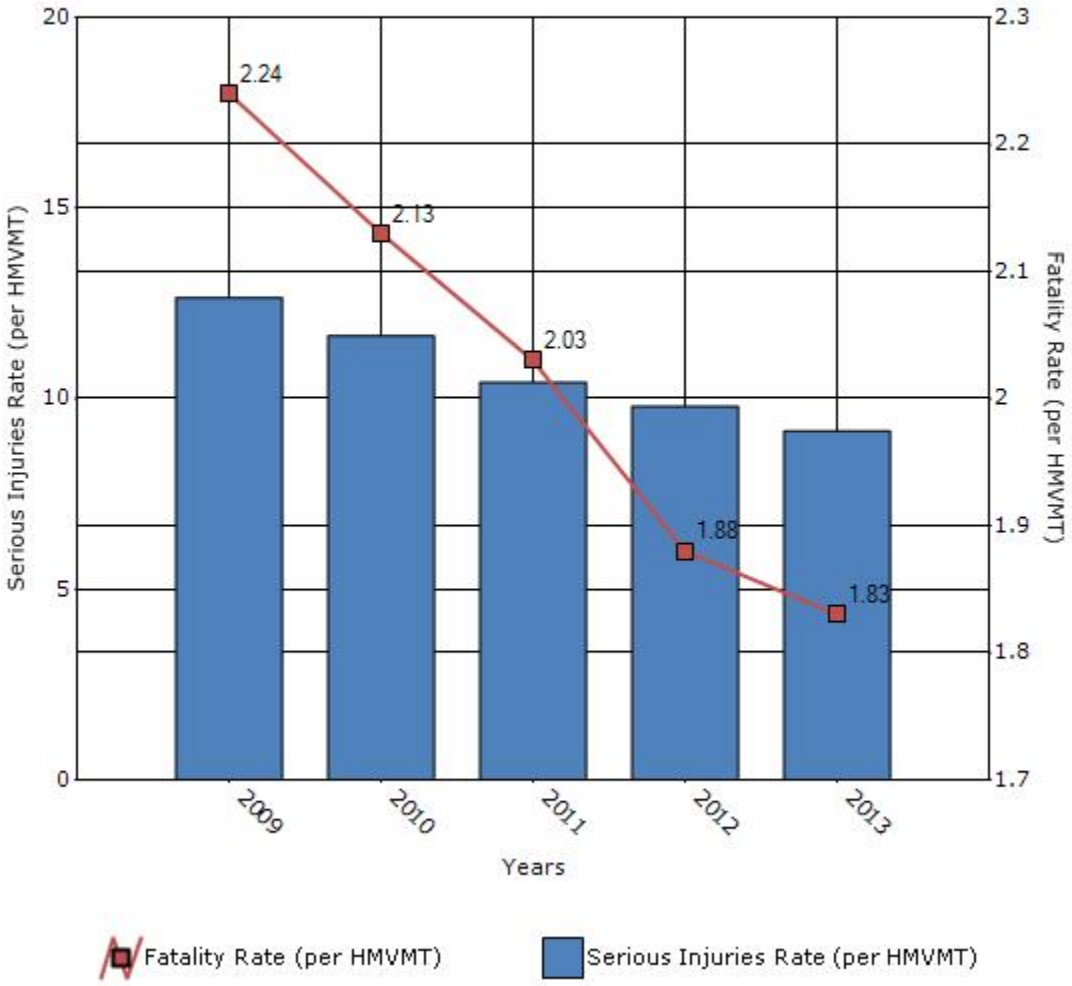
Performance Measures*	2009	2010	2011	2012	2013
Number of fatalities	249	237	226	212	212
Number of serious injuries	1405	1295	1164	1104	1057
Fatality rate (per HMVMT)	2.24	2.13	2.03	1.88	1.83
Serious injury rate (per HMVMT)	12.65	11.65	10.43	9.8	9.15

*Performance measure data is presented using a five-year rolling average.

Number of Fatalities and Serious injuries for the Last Five Years



Rate of Fatalities and Serious injuries for the Last Five Years

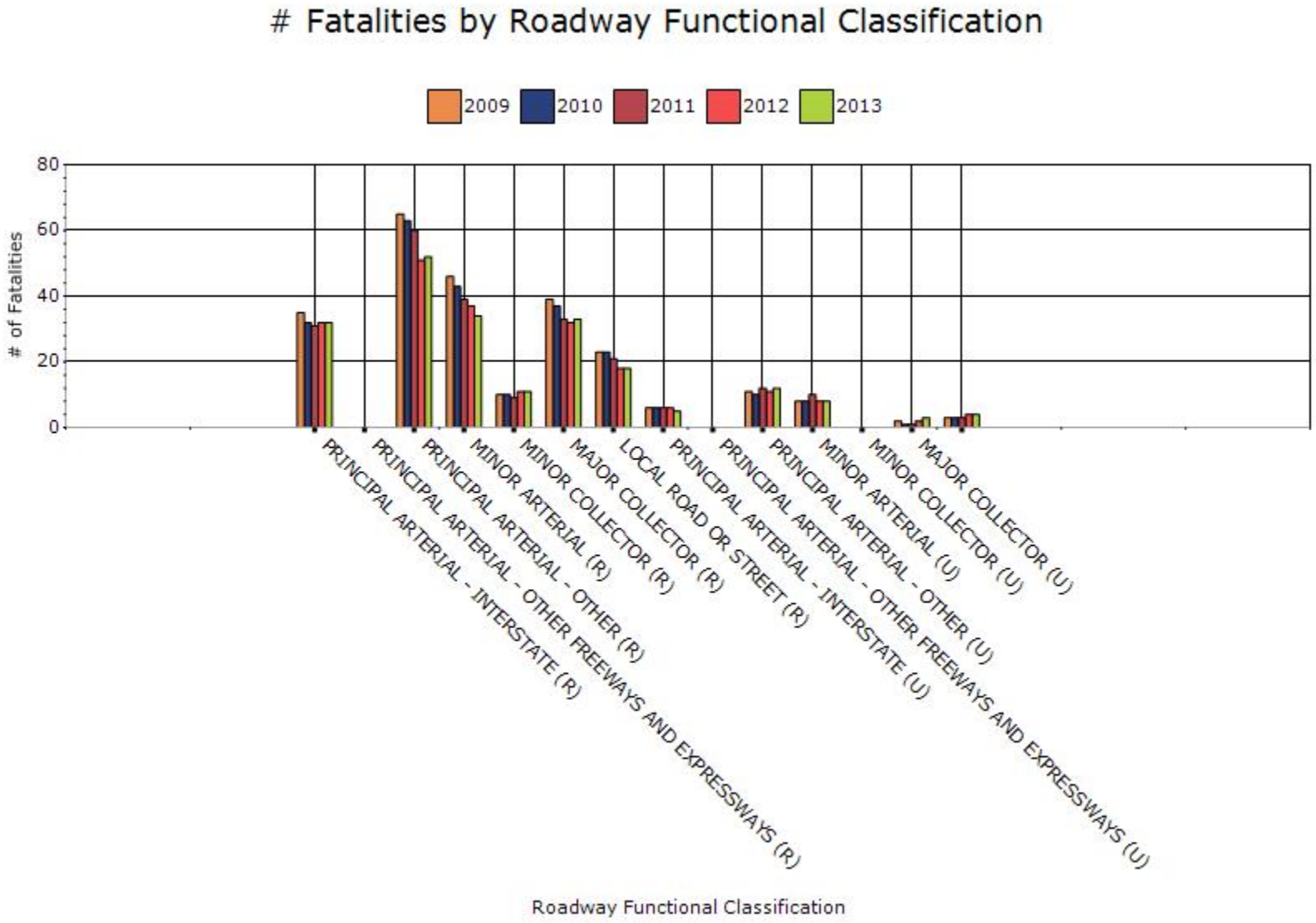


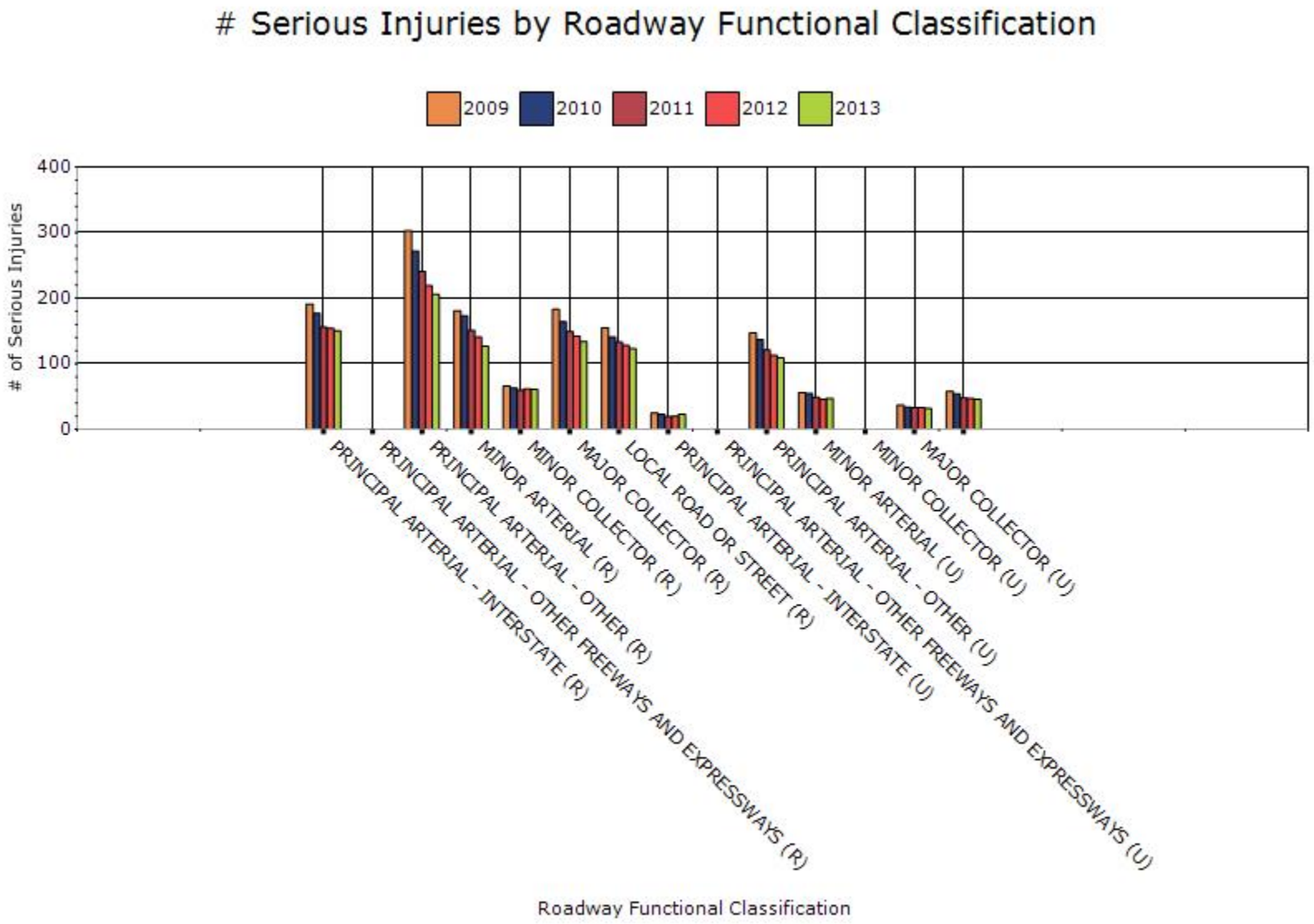
To the maximum extent possible, present performance measure* data by functional classification and ownership.

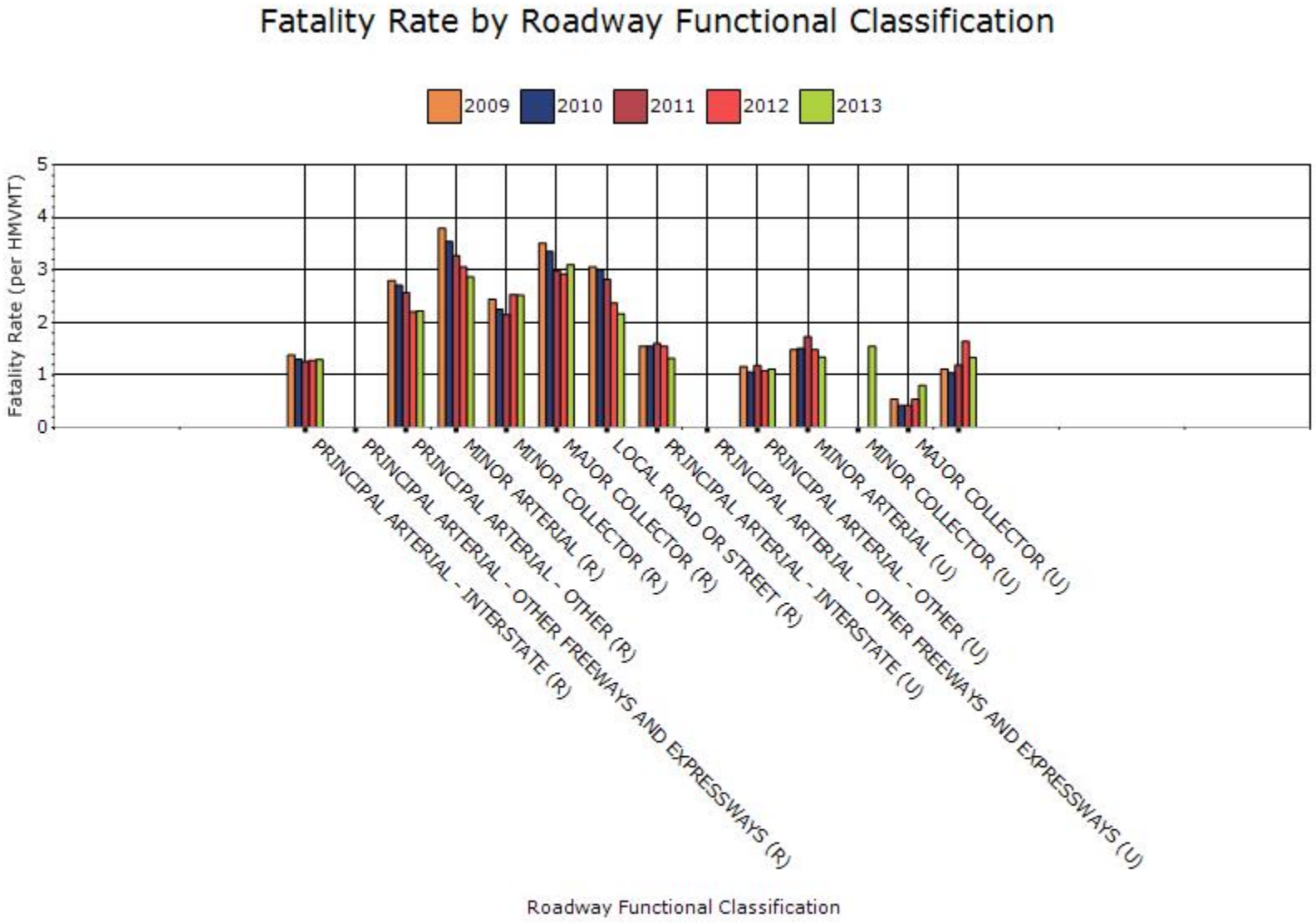
Year - 2013

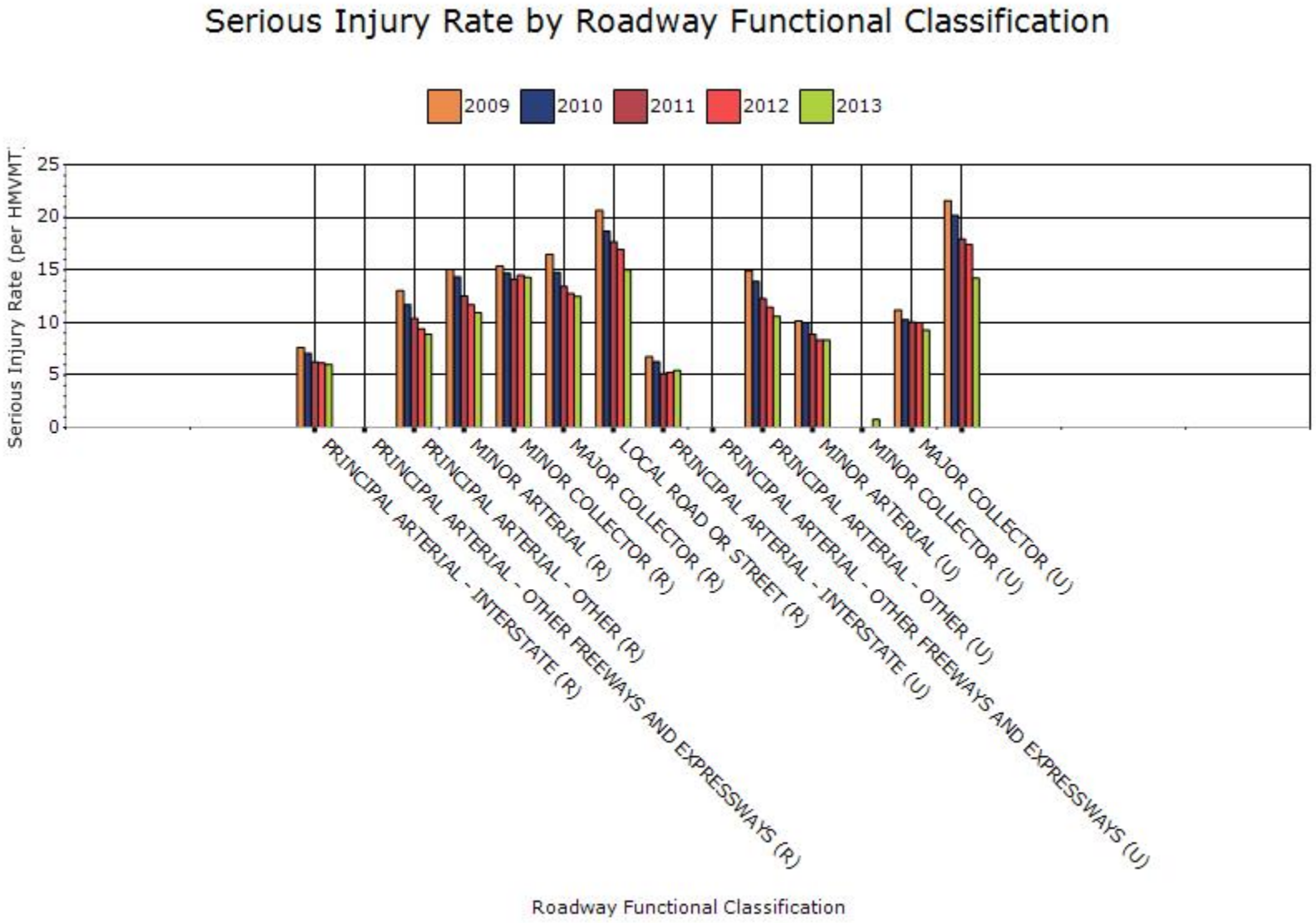
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	32	150	1.29	6
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	52	206	2.22	8.89
RURAL MINOR ARTERIAL	34	127	2.87	10.92
RURAL MINOR COLLECTOR	11	61	2.52	14.28
RURAL MAJOR COLLECTOR	33	134	3.1	12.47
RURAL LOCAL ROAD OR STREET	18	123	2.16	15.03
URBAN PRINCIPAL	5	23	1.32	5.42

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	12	109	1.11	10.59
URBAN MINOR ARTERIAL	8	47	1.34	8.32
URBAN MINOR COLLECTOR	0	0	1.55	0.77
URBAN MAJOR COLLECTOR	3	32	0.8	9.26
URBAN LOCAL ROAD OR STREET	4	46	1.33	14.22


Fatalities by Roadway Functional Classification
2009
2010
2011
2012
2013
# of Fatalities
80
60
40
20
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification


Serious Injuries by Roadway Functional Classification
2009
2010
2011
2012
2013
400
300
200
100
0
# of Serious Injuries
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

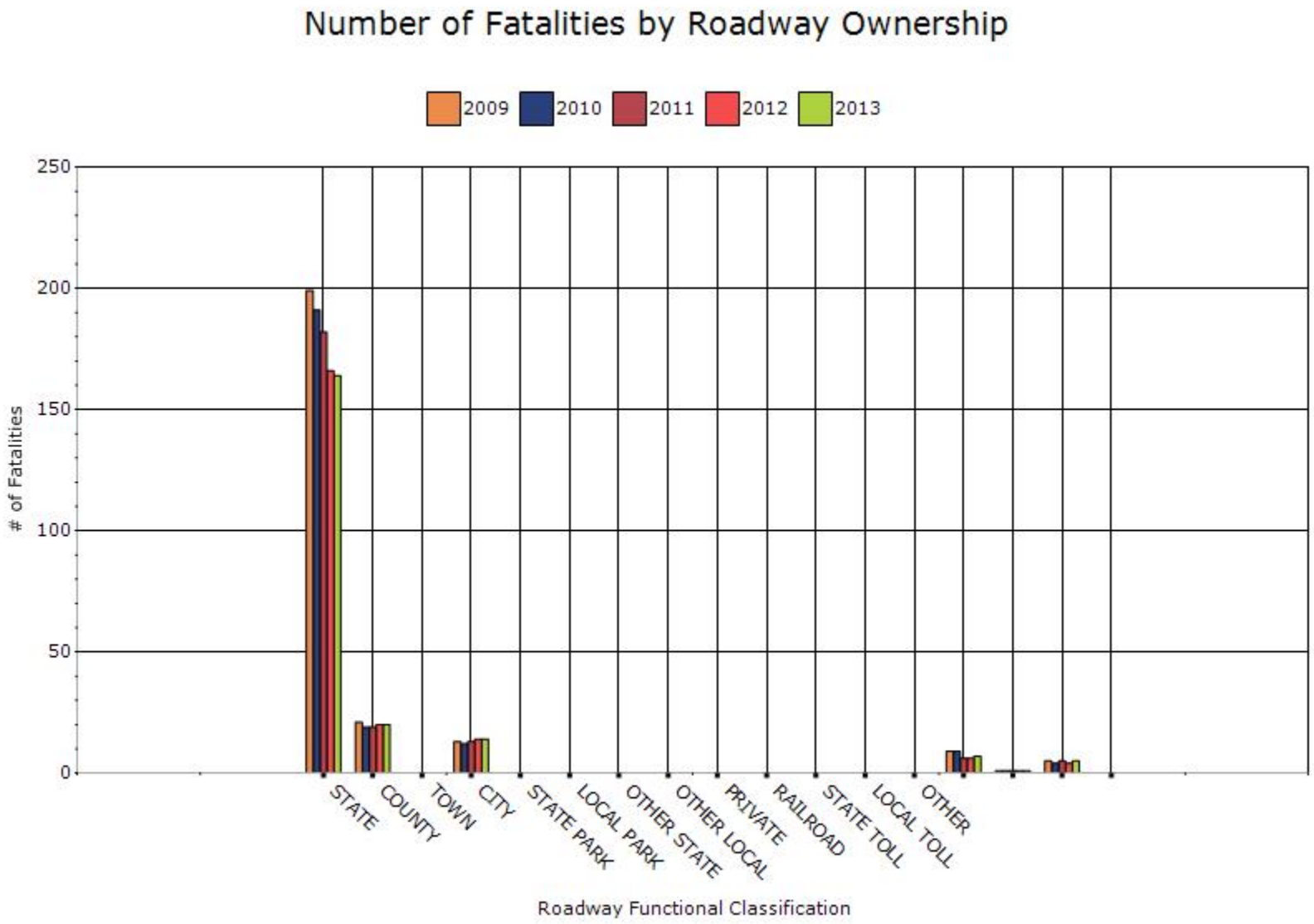

Fatality Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Fatality Rate (per HMVMT)
0
1
2
3
4
5
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

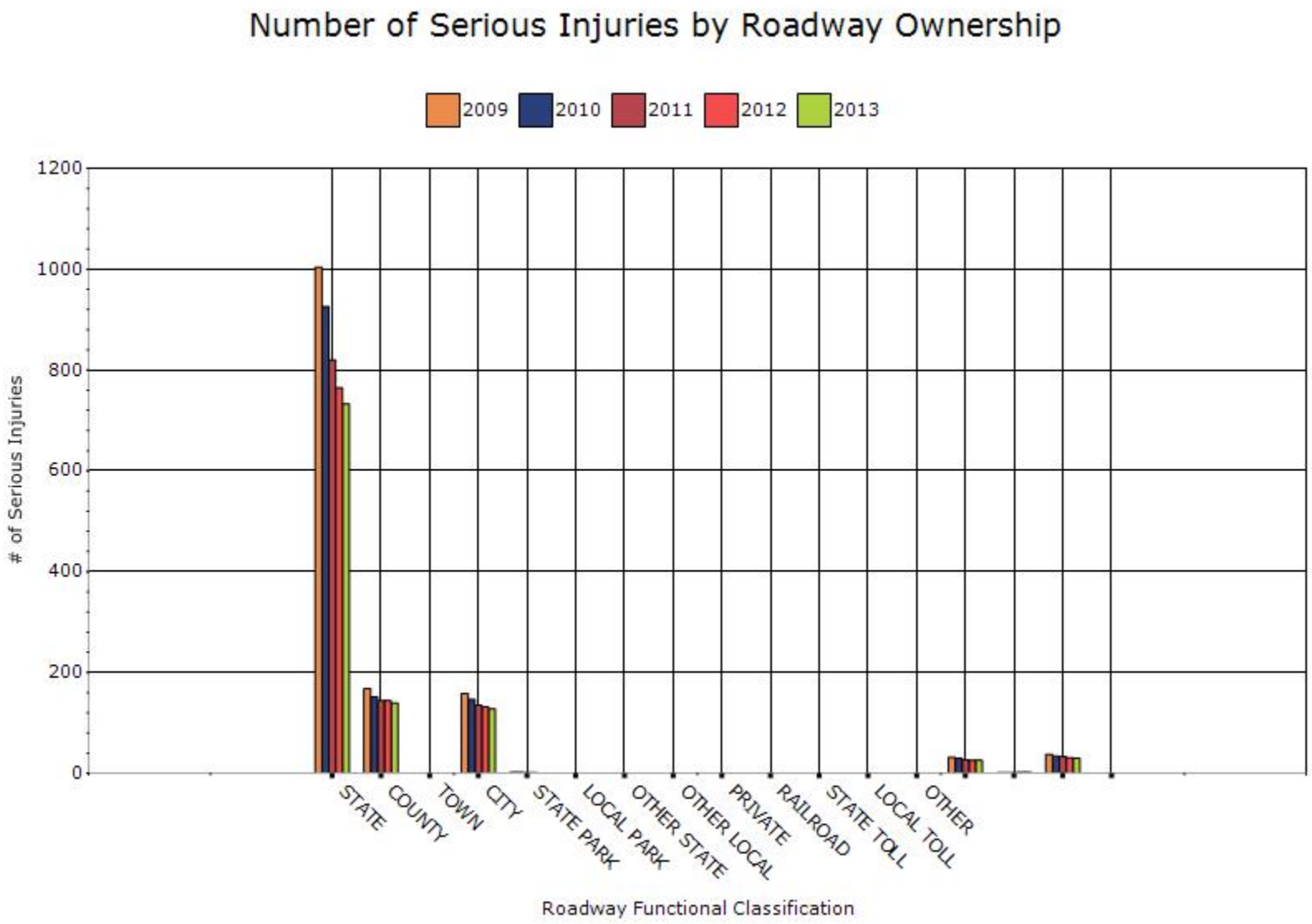

Serious Injury Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Serious Injury Rate (per HMVMT)
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

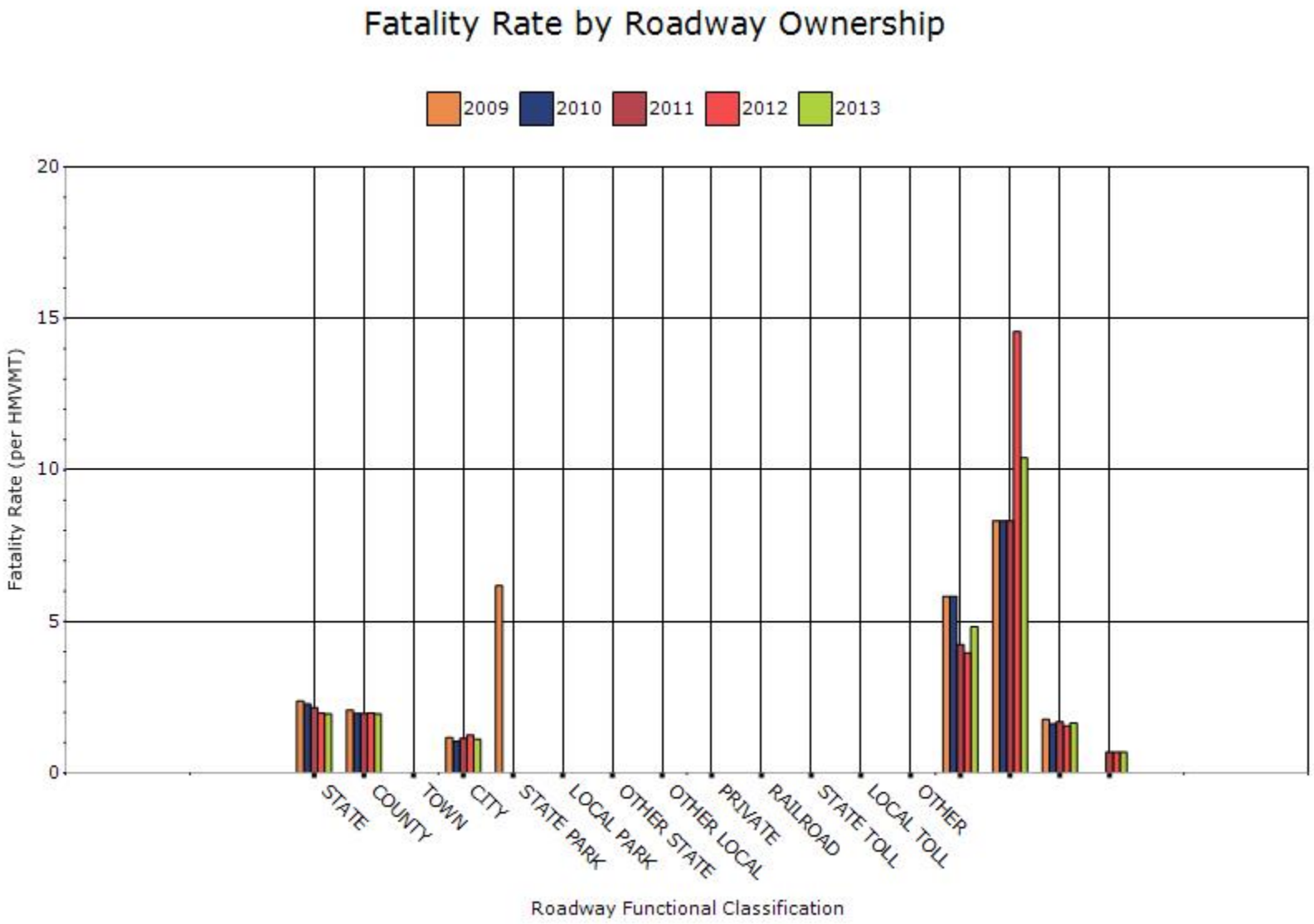
Year - 2013

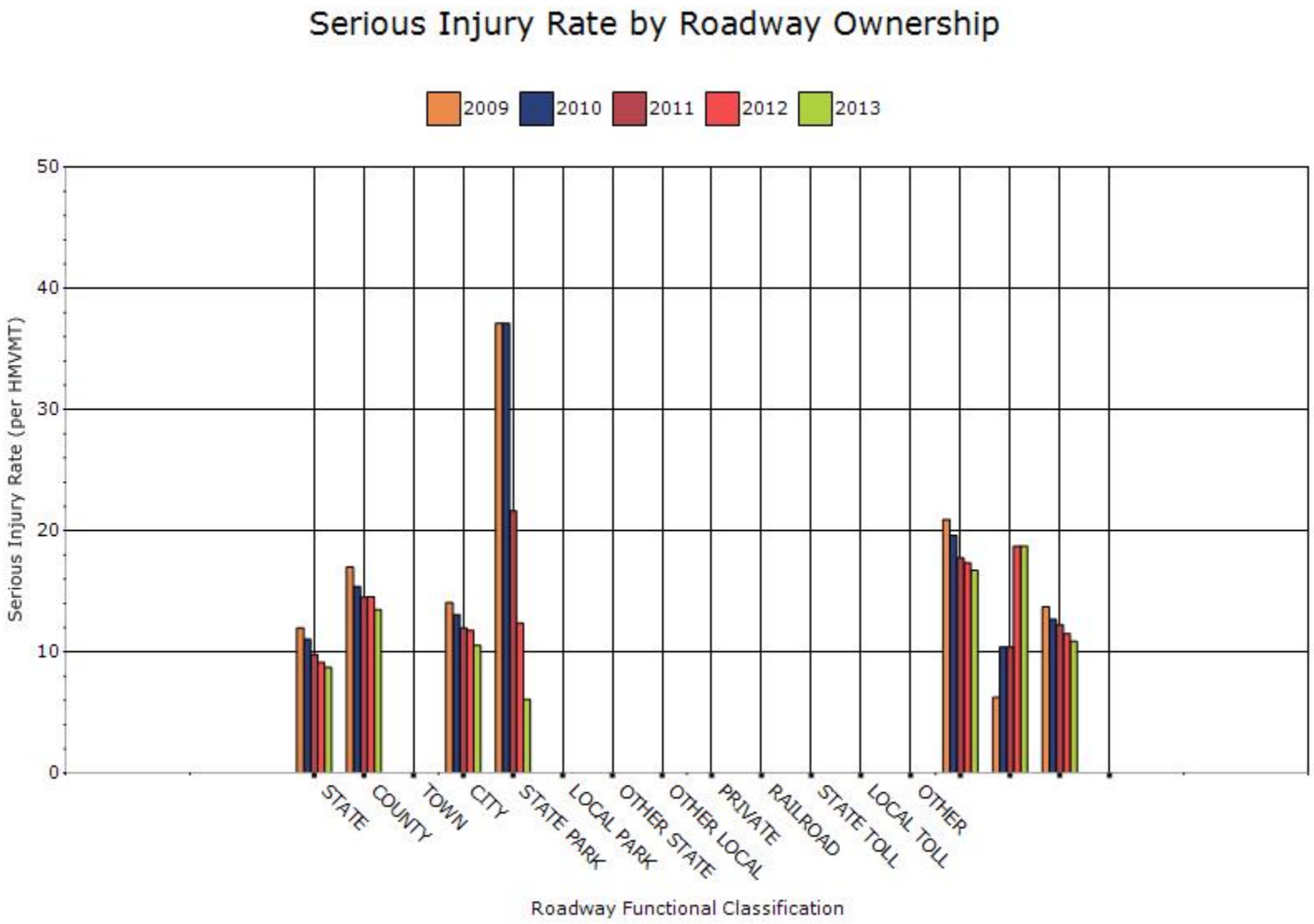
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	164	733	1.95	8.7
COUNTY HIGHWAY AGENCY	20	139	1.95	13.48
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	14	128	1.12	10.52
STATE PARK, FOREST, OR RESERVATION AGENCY	0	0	0	6.08
LOCAL PARK, FOREST OR RESERVATION AGENCY	0	0	0	0
OTHER STATE AGENCY	0	0	0	0
OTHER LOCAL AGENCY	0	0	0	0
PRIVATE (OTHER THAN RAILROAD)	0	0	0	0
RAILROAD	0	0	0	0
STATE TOLL AUTHORITY	0	0	0	0
LOCAL TOLL AUTHORITY	0	0	0	0
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)	0	0	0	0
INDIAN TRIBE NATION	7	26	4.83	16.73

BUREAU OF INDIAN AFFAIRS	1	2	10.41	18.73
US FOREST SERVICE	5	30	1.65	10.86
NATIONAL PARK SERVICE	0	0	0.69	0


Number of Fatalities by Roadway Ownership
2009
2010
2011
2012
2013
250
200
150
100
50
0
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2009
2010
2011
2012
2013
1200
1000
800
600
400
200
0
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Fatality Rate by Roadway Ownership
2009
2010
2011
2012
2013
20
15
10
5
0
Fatality Rate (per HMVMT)
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2009
2010
2011
2012
2013
Serious Injury Rate (per HMVMT)
50
40
30
20
10
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification

Describe any other aspects of the general highway safety trends on which you would like to elaborate.

The overall goal of the CHSP is to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030. The following is summary of the number of fatalities and serious injuries from 2006-2012:

Year -- Fatalities and Serious Injuries

2006 -- 1,877

2007 -- 1,704

2008 -- 1,565

2009 -- 1,322

2010 -- 1,185

2011 -- 1,162

2012 -- 1,335

2013 -- 1,331

In the spring of 2014, Montana Department of Transportation Director Mike Tooley announced "Vision Zero," a multi-pronged initiative with the ultimate goal of eliminating deaths and injuries on Montana highways. Currently, the Montana CHSP is being updated. Completion of the CHSP update is anticipated in 2015.

Application of Special Rules

Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

Older Driver Performance Measures	2009	2010	2011	2012	2013
Fatality rate (per capita)	0.27	0.27	0.26	0.24	0
Serious injury rate (per capita)	1.31	1.22	1.13	1.02	0

Fatality and serious injury rate (per capita)	1.58	1.49	1.39	1.27	0

*Performance measure data is presented using a five-year rolling average.

In order to determine the per capita fatality and serious injury rates the Montana Department of Transportation (MDT) queried the MDT crash database for crashes in which the driver or pedestrian involved is 65 years of age and older for 2005-2013 time frame.

A summary of the number of persons injured (based on severity) in the crash were tabulated.

For reporting purposes, the State of Montana only looked at the crashes that resulted in a fatal injury or serious (incapacitating) injury. The fatal injury crash data was obtained by querying the Fatality Analysis Reporting System (FARS) database.

The criteria used for querying the FARS database was as follows:

1) Select State: Montana

2) Number of Fatalities In Crash: All

3) Age: 65 years or older

4) Person Type: Driver of a Motor Vehicle In-Transport and/or Pedestrian

The population data was obtained from Attachment 2 of the Older Driver and Pedestrian Special Rule Interim Guidance (February 13, 2013) provided by the FHWA. Because 2013 population data is not provided in the interim guidance and 2013 fatality information is not available in FARS, calculation of corresponding rates for 2013 was not completed.

MDT then used a 5-year rolling average for each year of reporting (i.e. 2009, 2010, and 2011). A similar query was run for crashes involving a pedestrian(s) that were 65 years of age and older for the same time period and 5-year rolling average was calculated.

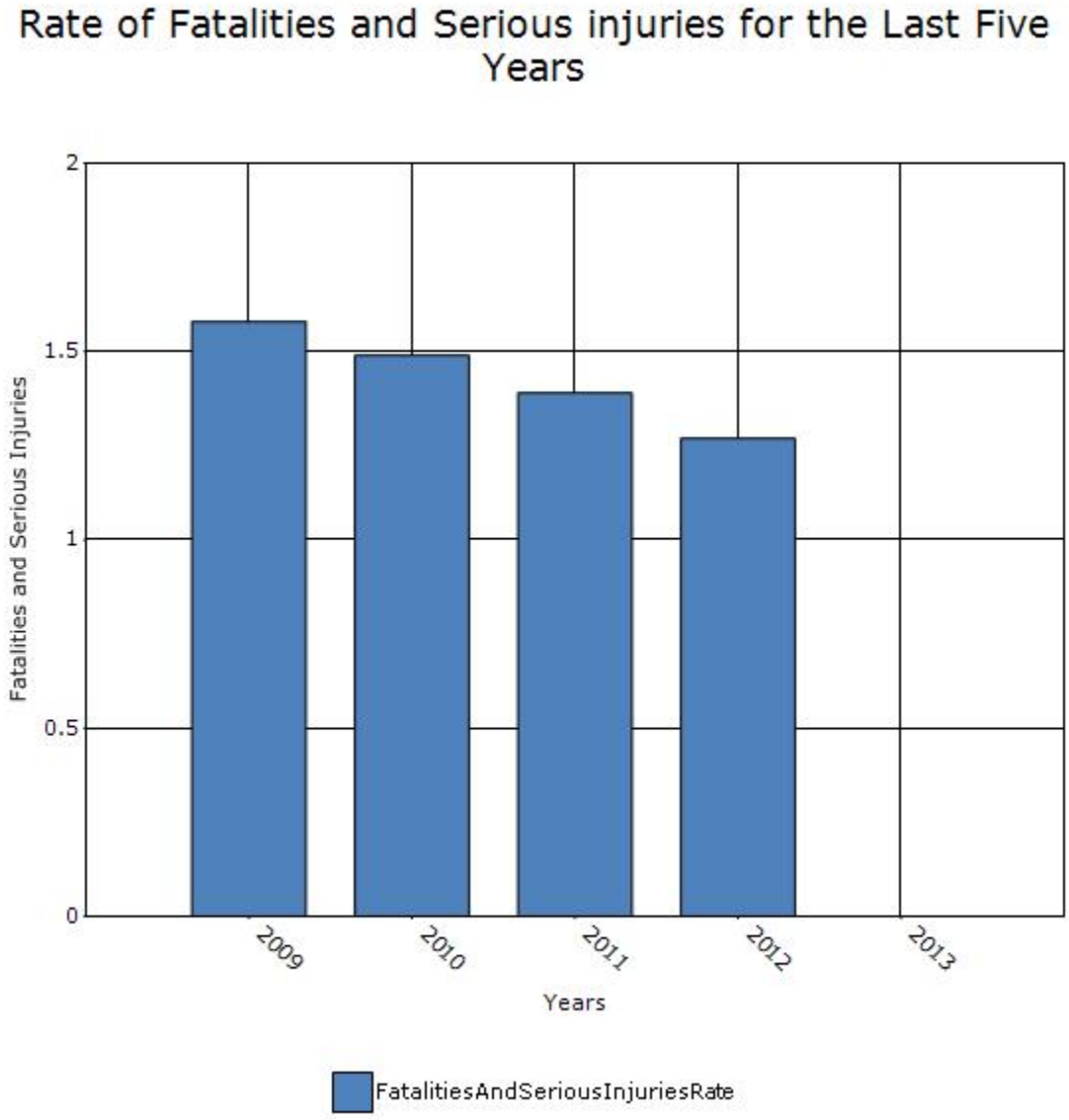
To derive the fatality rate and serious injury rate for persons 65 years of age or older per 1,000 total population that are age 65 or greater, the number of fatalities and serious injuries were added together for each year of study and divided by the proportion of Montana's population that is 65 years of age and older for the corresponding year obtained from Attachment 2. As mentioned above, once the yearly fatality rates and serious injury rates were calculated a 5-year rolling average was used for the various reporting years.

An example calculation for the combined Fatal and Serious Injury Rate per capita for Drivers and Pedestrians 65 years of age and older for 2011 (2011, 2010, 2009, 2008, and 2007) is illustrated below:

(Fatal + Serious Injury 2011 Drivers and Pedestrians 65 years of age and older/2011 Population Figure)+
(Fatal + Serious Injury 2010 Drivers and Pedestrians 65 years of age and older/2011 Population Figure)+
(Fatal + Serious Injury 2009 Drivers and Pedestrians 65 years of age and older/2011 Population Figure)+
(Fatal + Serious Injury 2008 Drivers and Pedestrians 65 years of age and older/2011 Population Figure)+
(Fatal + Serious Injury 2007 Drivers and Pedestrians 65 years of age and older/2011 Population Figure)/5

The same methodology was used for calculating the Fatality Rate and/or Serious Injury Rate by excluding either the fatal or serious injury portion of the above equation.

The Montana Department of Transportation used the calculation methodology described in the Section 142-Older Drivers and Pedestrians Special Rule Interim Guidance Report dated February 13, 2013.



Does the older driver special rule apply to your state?

No

Assessment of the Effectiveness of the Improvements (Program Evaluation)

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program?

☐ None

☒ Benefit/cost

☐ Policy change

☒ Other: Other-Overall reduction in fatalities and incapacitating injuries from 1,704 in 2007 to 1,331 in 2013. HSIP is a component of the overall CHSP goal.

2013 HSIP B/C is 3.24 based on 42 identified locations.

What significant programmatic changes have occurred since the last reporting period?

☐ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☒ None

☐ Other:

Briefly describe significant program changes that have occurred since the last reporting period.

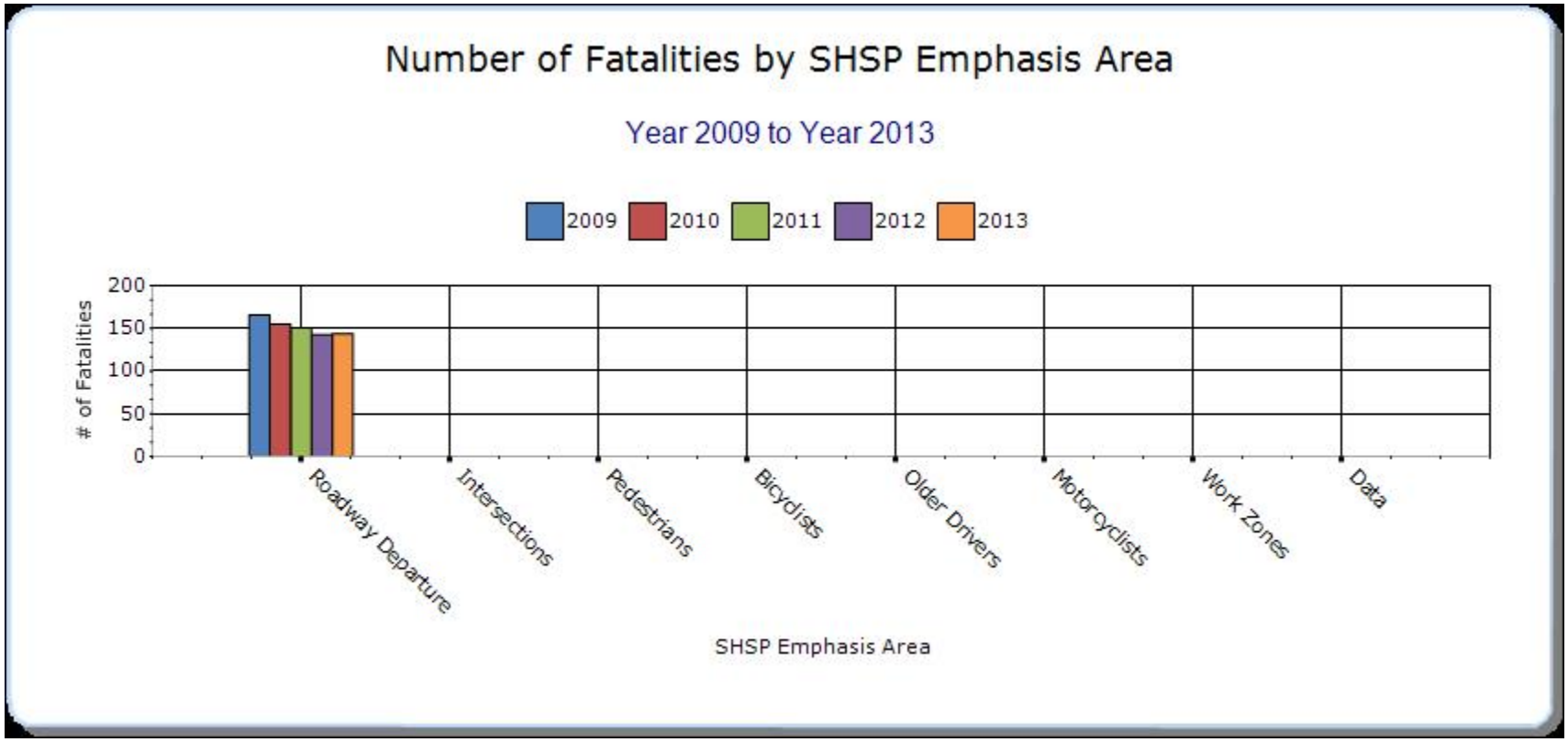
No significant program changes have occurred since the last reporting period.

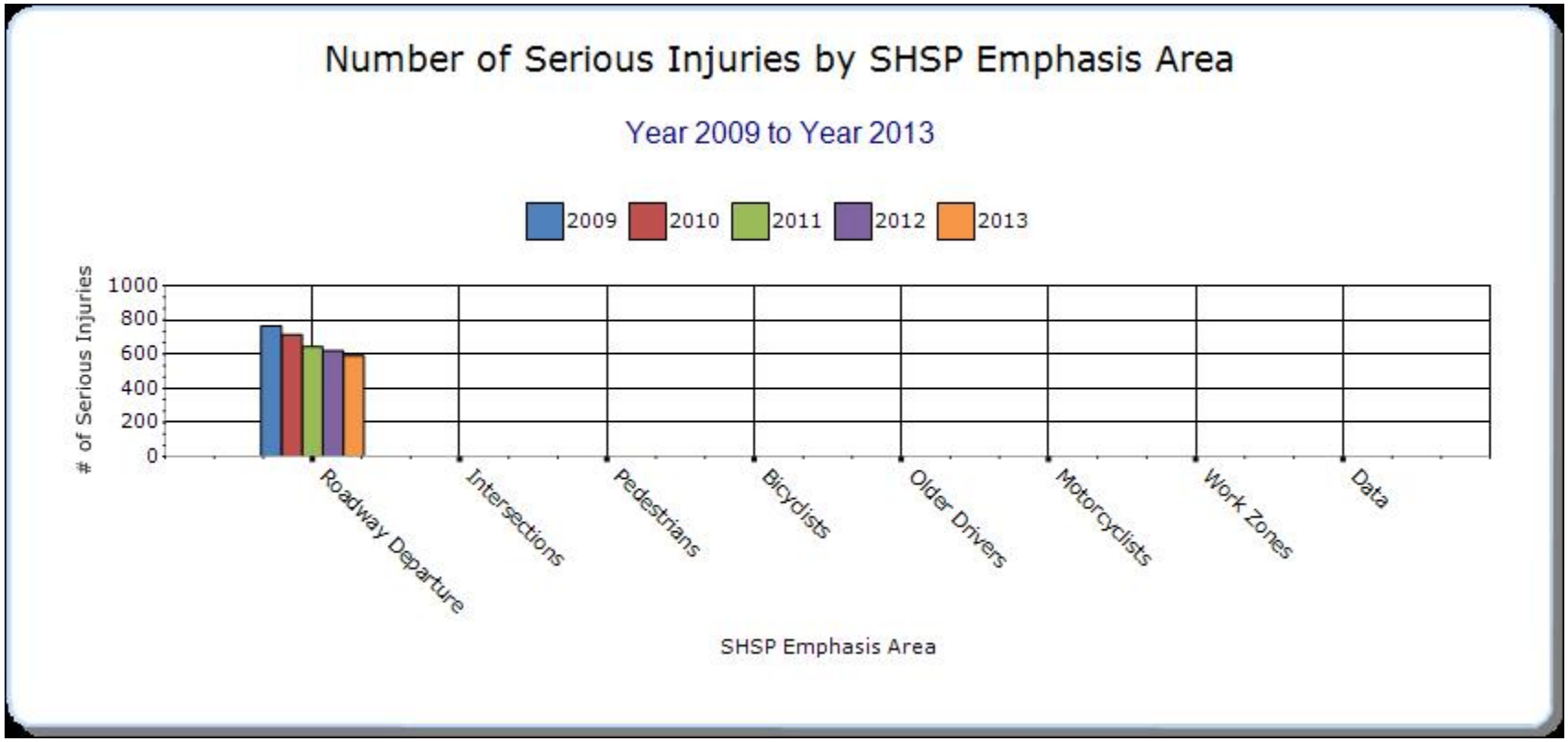
SHSP Emphasis Areas

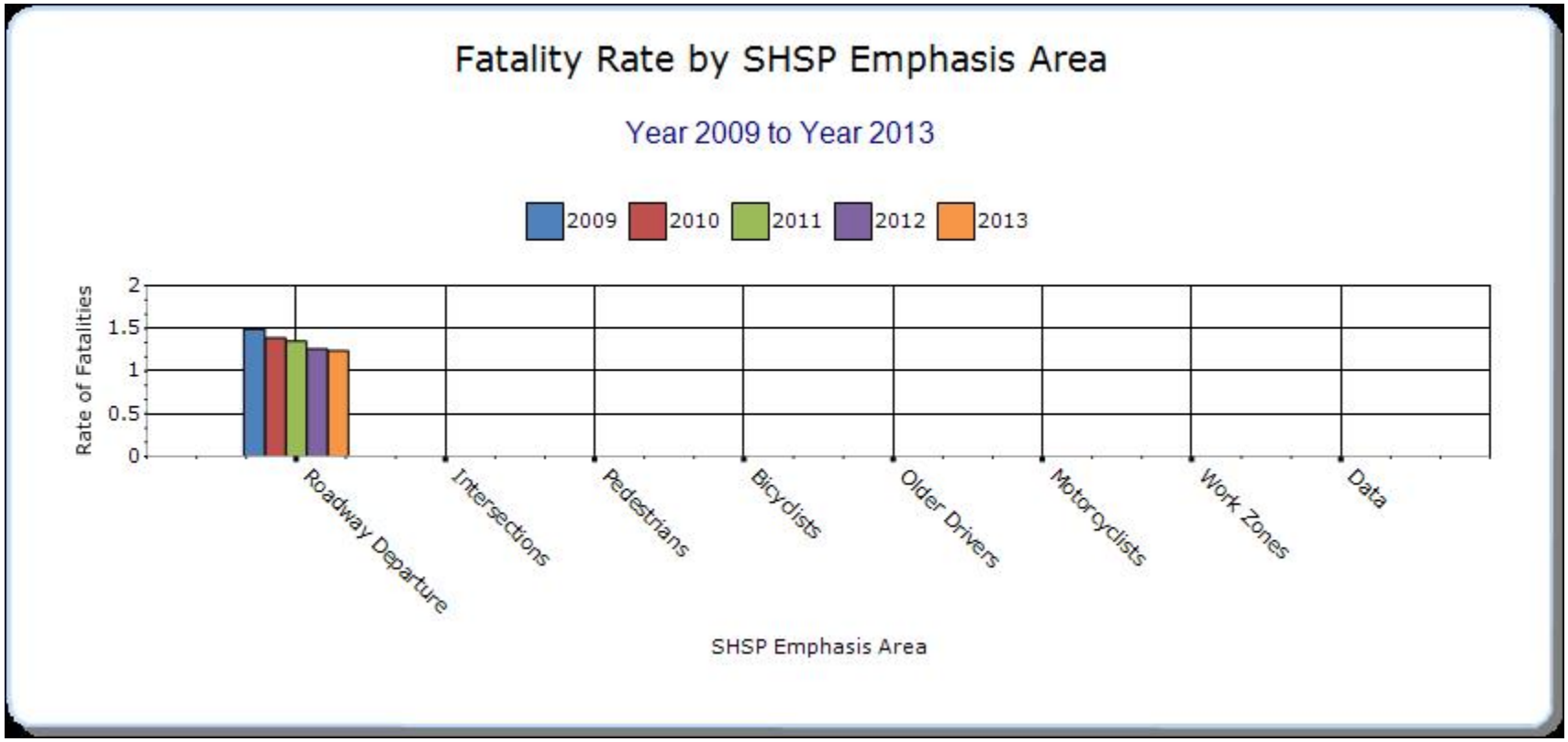
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

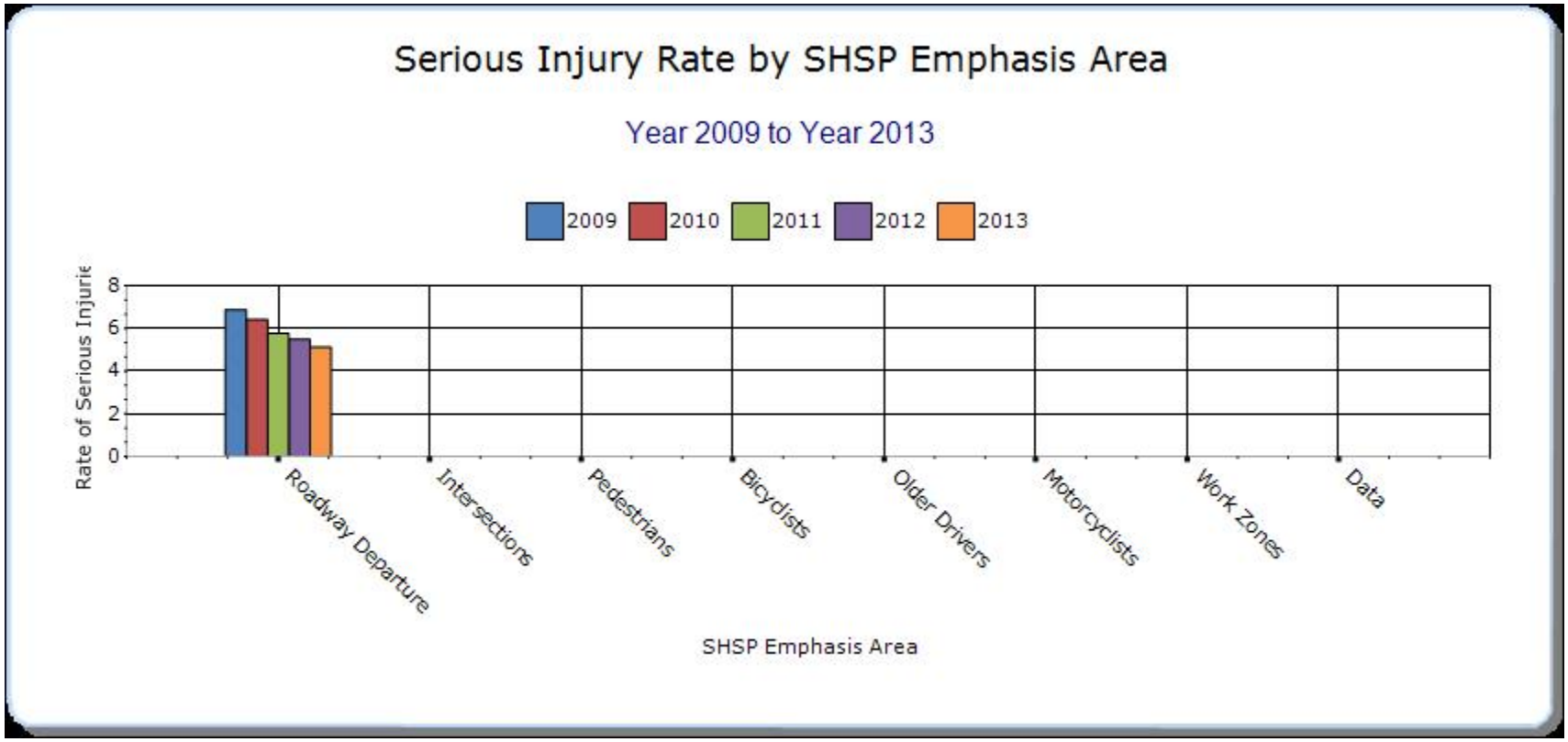
Year - 2013

HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Roadway Departure		144	591	1.24	5.12	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
200
150
100
50
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
1000
800
600
400
200
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
2
1.5
1
0.5
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area



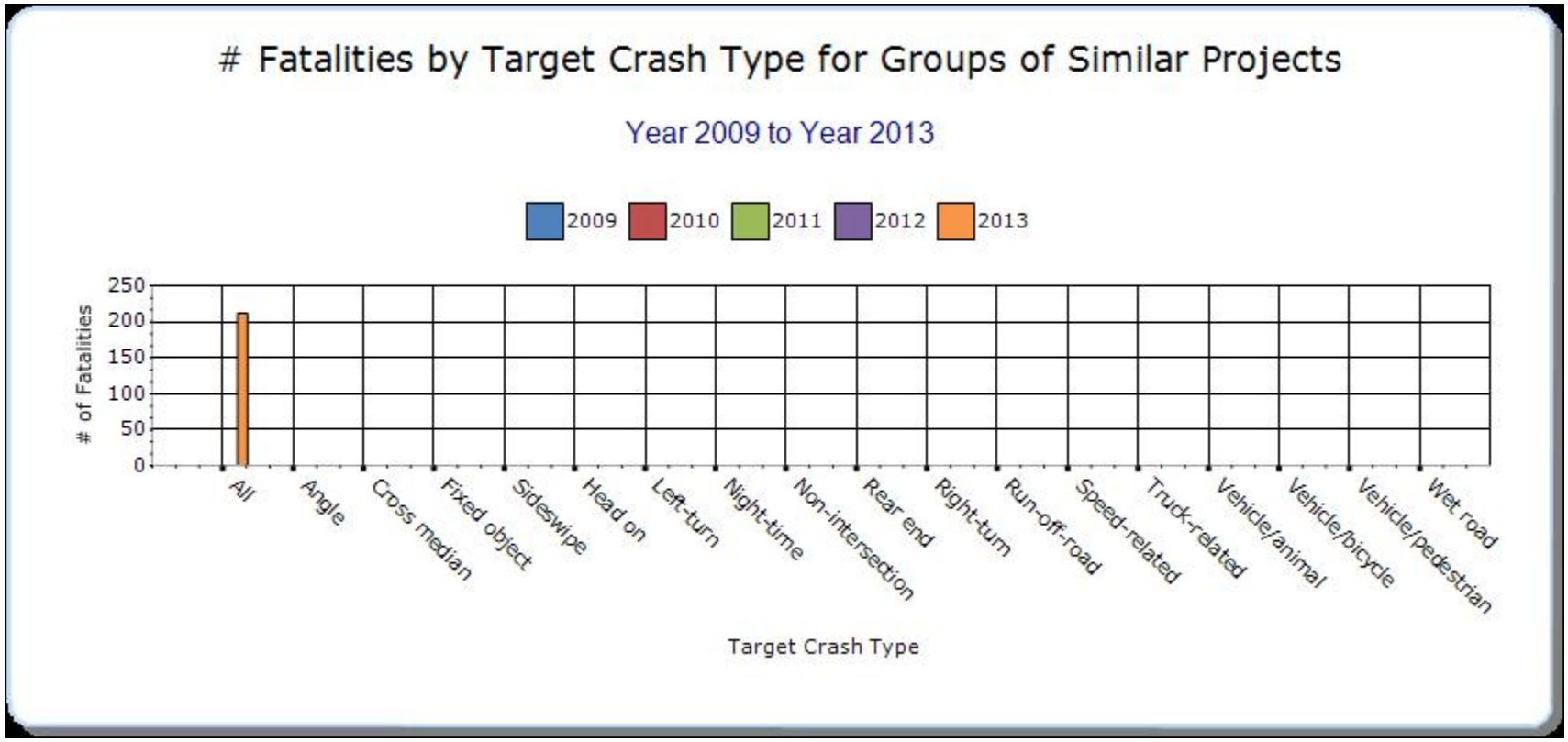
Data for number of fatalities, number of serious injuries, fatality rate and serious injury rate is provide in the Online Reporting Tool via the upload template; however, it is not being displayed correctly in the report. The upload template and relevant data is attached to this question (HSIP_Q32N_upload_Template.xlsx).

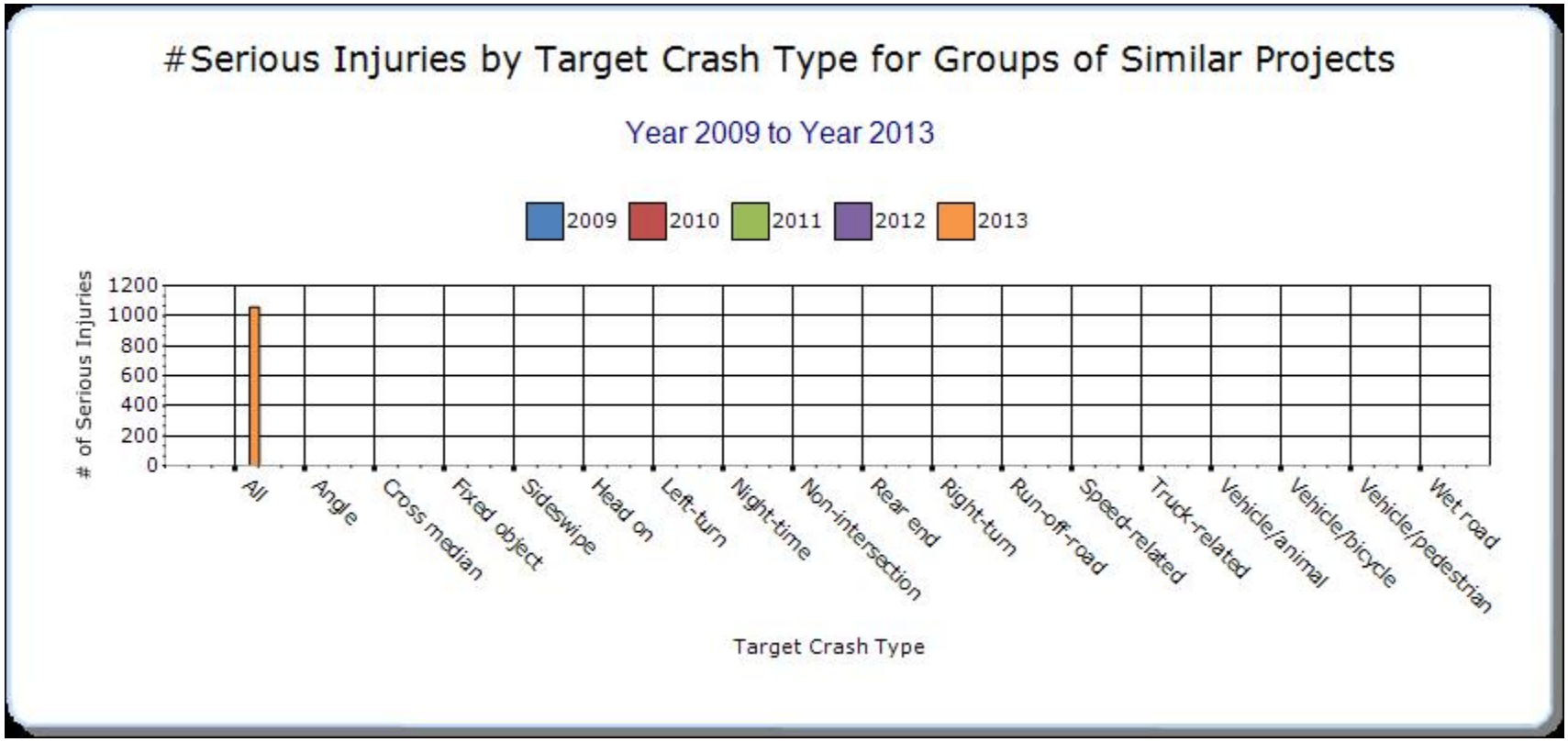
Groups of similar project types

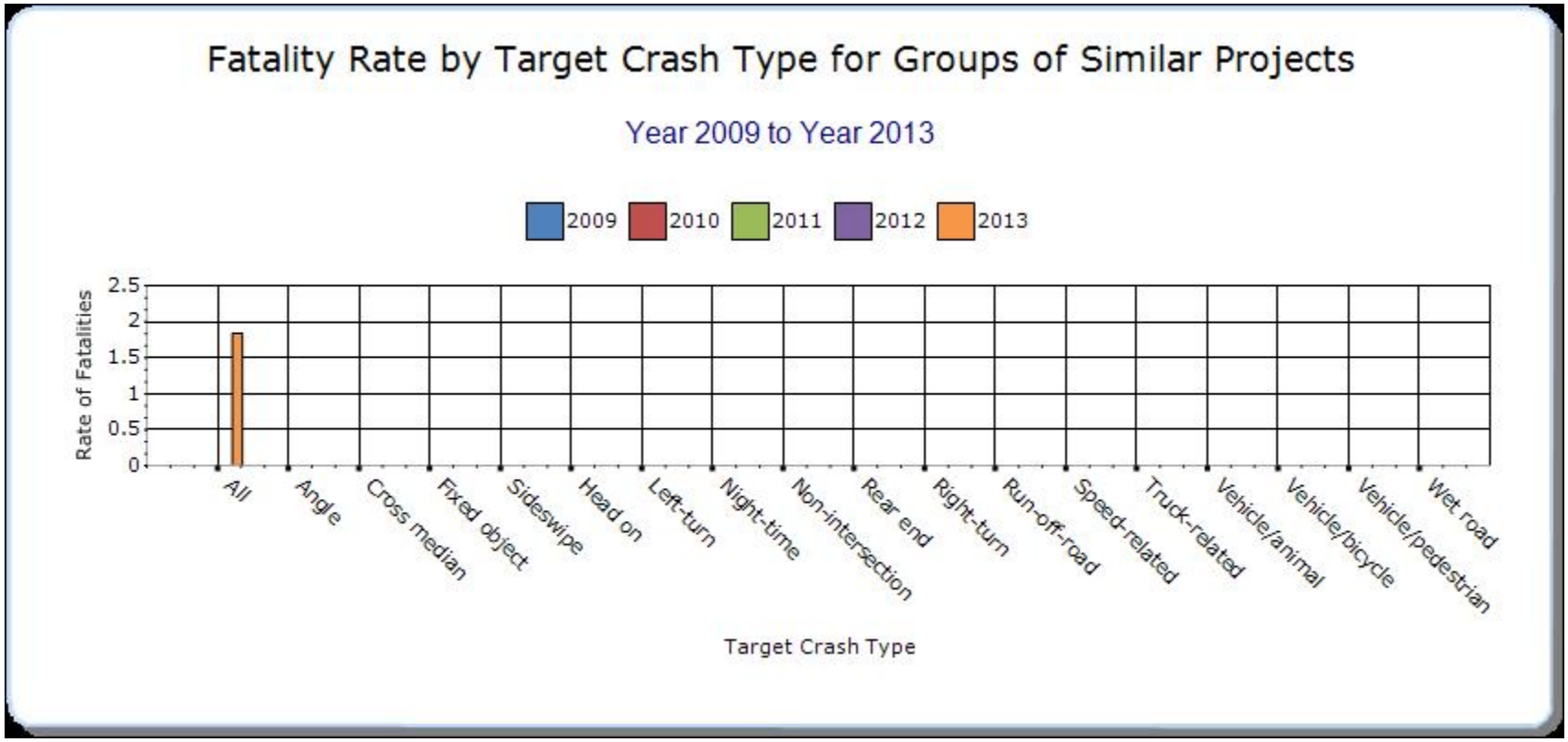
Present the overall effectiveness of groups of similar types of projects.

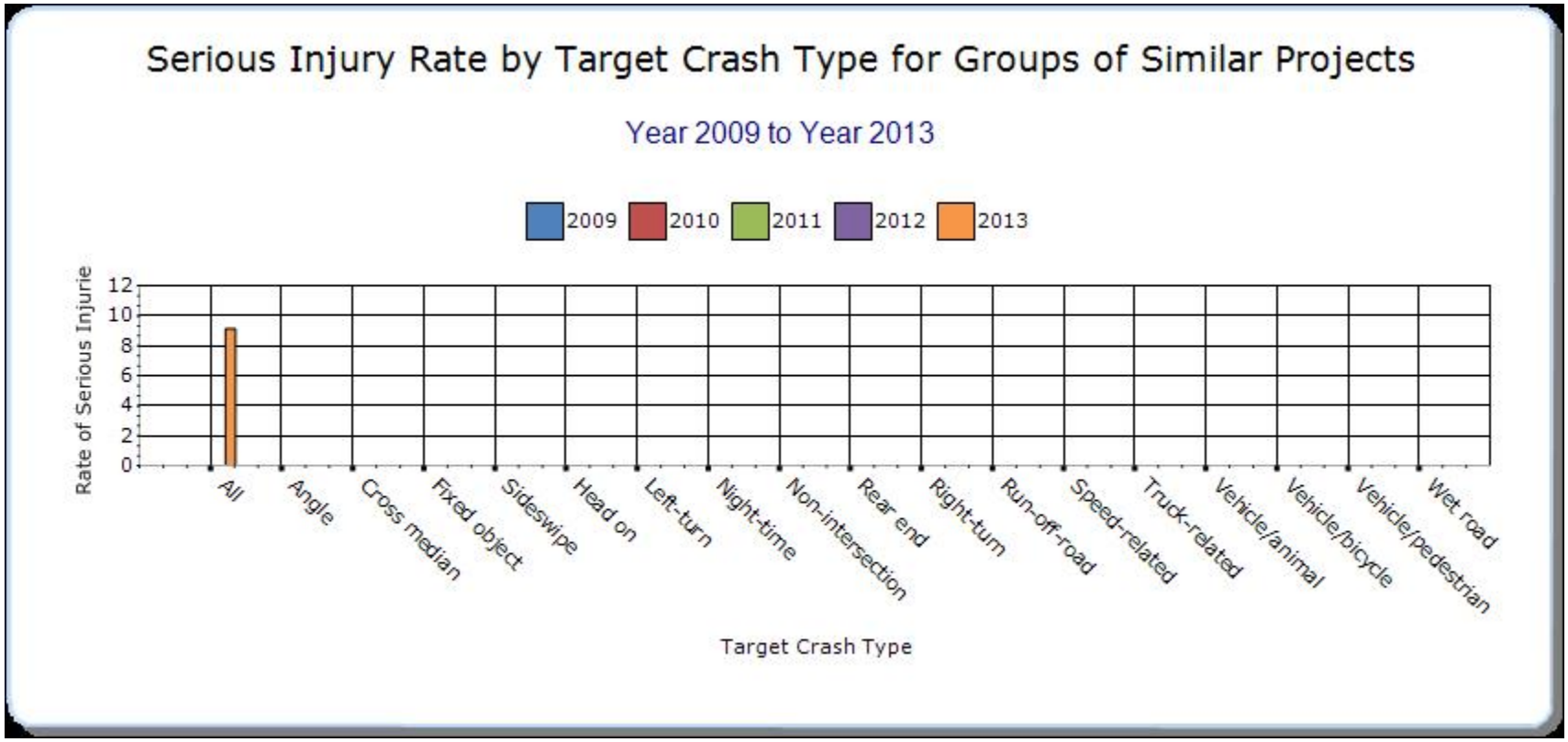
Year - 2013

HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Other-Hot Spot	All	211.8	1056.6	1.84	9.15	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
250
200
150
100
50
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
1200
1000
800
600
400
200
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Fatality Rate by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
2.5
2
1.5
1
0.5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type



Since the establishment of the current overall CHSP goal in 2009 Montana has achieved a significant reduction in fatalities and incapacitating injuries from 1,704 in 2007 to 1,331 in 2013, nearly a 22% decrease. The HSIP is a component of the overall CHSP and has contributed to this statewide reduction in severe crashes. MDT's site specific (hot-spot) program mitigates crashes at specific locations using proven engineering countermeasures. MDT has historically utilized all available HSIP funding to construct safety improvements on Montana's highways.

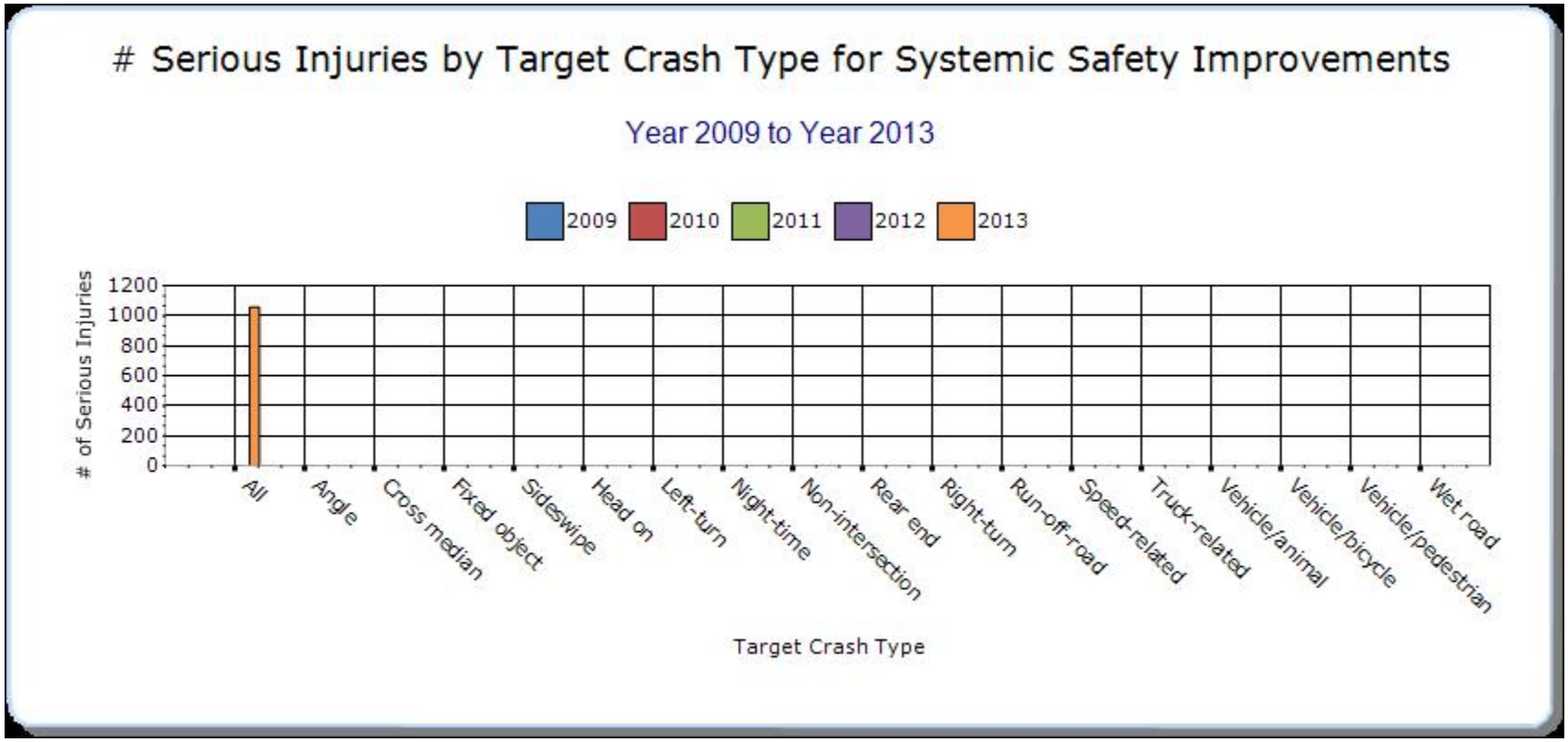
Systemic Treatments

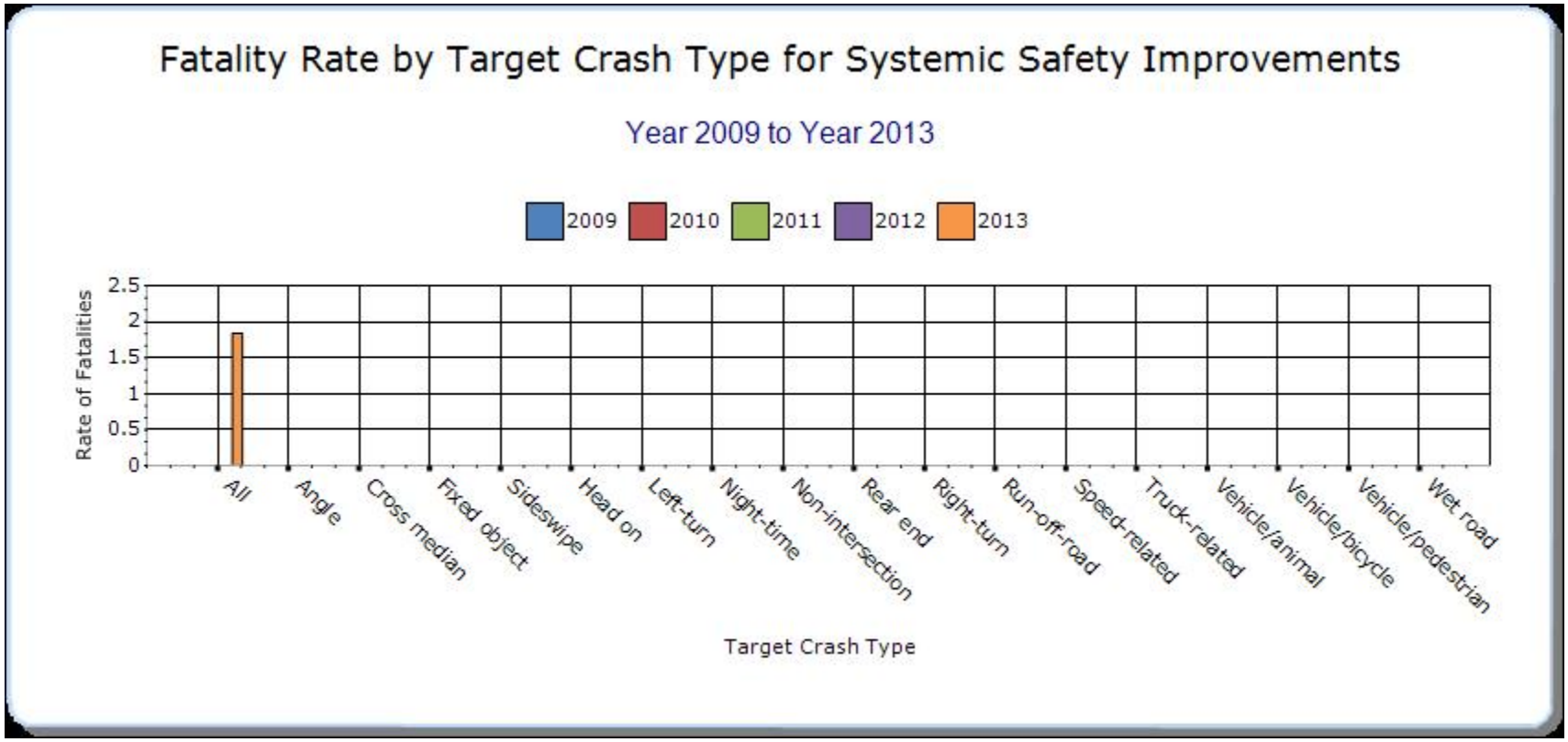
Present the overall effectiveness of systemic treatments.

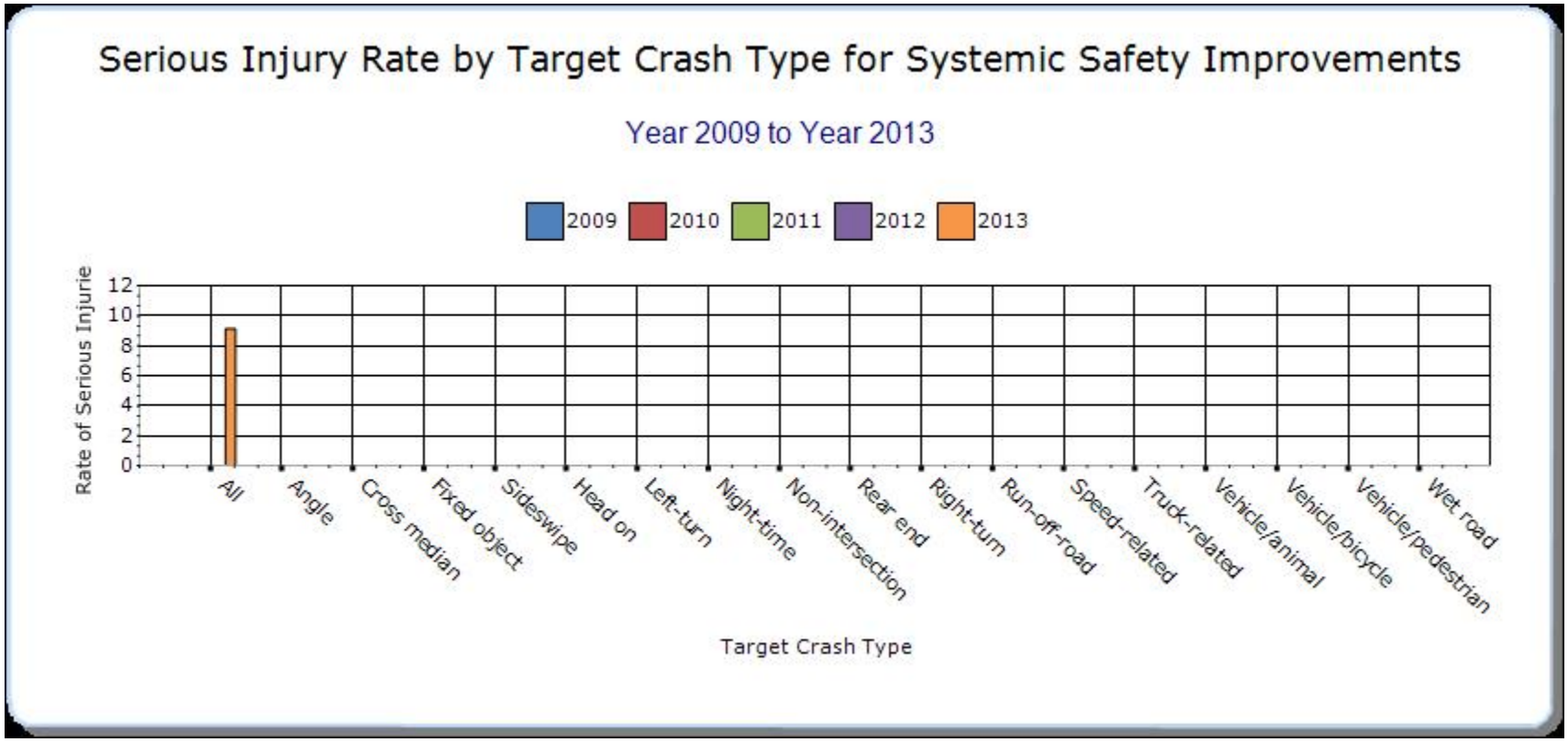
Year - 2013

Systemic improvement	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Install/Improve Signing	All	211.8	1056.6	1.84	9.15	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
250
200
150
100
50
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
1200
1000
800
600
400
200
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
2.5
2
1.5
1
0.5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type



MDT has initiated district wide horizontal curve signing upgrade projects. These projects address the High Crash Corridor (HCC) Emphasis Area, Strategy HC-3 HCC Sign Evaluation in the CHSP. In addition, these projects will address road departure crashes and high crash corridors/high crash locations, both of which are identified emphasis areas in the CHSP. Long term, the intent of these projects is to evaluate all MDT roadways; however, evaluations will likely begin on the HCC's identified in the CHSP. Data has been collected statewide. Projects are on-going in the Missoula and Butte Districts. With the adoption of the new MUTCD, MDT is required to update all horizontal curve signage by 2019. This proposed project furthers the goals of the CHSP as well as meets the deadlines established in the MUTCD. The Missoula District project was let in the summer of 2014. Evaluations of the effectiveness of the projects can be completed once the projects are constructed and sufficient after period data is available.

MDT has also initiated system wide projects on the interstate system to upgrade all of the "wrong way" signing to MUTCD standards. The projects are planned to be let for construction in federal fiscal year 2014. Several projects have been nominated to upgrade advanced warning signage/flashers in advance of traffic signals to ensure statewide consistency.

Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

The number of fatalities and incapacitating injuries shows a steady overall decline over the last fourteen years and is summarized as follows:

Year-Fatalities and Incapacitating Injuries

1997 - 2,182
1998 - 2,071
1999 - 1,959
2000 - 2,027
2001 - 1,663
2002 - 2,007
2003 - 1,896
2004 - 1,796
2005 - 1,792
2006 - 1,877
2007 - 1,704
2008 - 1,565
2009 - 1,322
2010 - 1,185
2011 - 1,162
2012 - 1,335
2013 - 1,331

The Statewide crash rate and severity rates also show a steady overall decline since 1997:

Year - Crash Rate - Severity Index - Severity Rate

1997 - 2.43 - 1.99 - 4.82
1998 - 2.33 - 1.98 - 4.61
1999 - 2.15 - 2.01 - 4.32
2000 - 2.26 - 1.99 - 4.49
2001 - 2.18 - 1.91 - 4.17
2002 - 2.24 - 1.89 - 4.23
2003 - 2.13 - 1.86 - 3.97
2004 - 1.95 - 1.88 - 3.67
2005 - 2.01 - 1.87 - 3.75
2006 - 1.97 - 1.91 - 3.76
2007 - 1.93 - 1.87 - 3.61
2008 - 2.04 - 1.84 - 3.75
2009 - 1.88 - 1.78 - 3.34
2010 - 1.80 - 1.74 - 3.14

2011 - 1.75 - 1.73 - 3.03
2012 - 1.67 - 1.82 - 3.05
2013 - 1.71 - 1.78 - 3.04

Crash Rate: Number of crashes per million vehicles miles.

Severity Index: Ratio of the sum of fatal and incapacitating injury crashes times 8 plus the number of other injury crashes times 3 plus the number of property damage crashes to the total number of crashes.

Severity Rate: Crash rate multiplied by the severity index.

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-Other Injury	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-Other Injury	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
N-24	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	2	3	2	13	20	0	0	1	5	6	58.19
N-60	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add acceleration lane	0	2	12	27	41	0	0	5	18	23	15.74
S-227	Rural Major Collector	Roadside	Roadside grading	0	0	2	2	4	0	0	0	1	1	2.43
S-226	Rural Major Collector	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	1	3	5	13	22	1	2	5	7	15	14.11
Various	Various	Roadside	Barrier - other	1	1	6	12	20	0	1	2	8	11	6.32
S-212	Rural Major Collector	Roadside	Barrier - other	1	1	1	1	4	0	0	0	1	1	37.47

P-29	Rural Minor Arterial	Roadside	Barrier - other	2	4	8	14	28	0	3	1	8	12	39.77

Optional Attachments

Sections	Files Attached
Program Structure: Program Administration	HSIPAPPLICATION 2010.pdf
Assessment of the Effectiveness of the Improvements (Program Evaluation): SHSP Emphasis Areas	HSIP_Q32N_upload_Template.xlsx

Glossary

5 year rolling average means the average of five individual, consecutive annual points of data (e.g. annual fatality rate).

Emphasis area means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.

Highway safety improvement project means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

HMVMT means hundred million vehicle miles traveled.

Non-infrastructure projects are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

Older driver special rule applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

Performance measure means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

Programmed funds mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

Roadway Functional Classification means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

Strategic Highway Safety Plan (SHSP) means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systemic safety improvement means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

Transfer means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.