Highway Safety Improvement Program

Data Driven Decisions

Montana
Highway Safety Improvement Program
2015 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 also completed an upgrade of our safety analysis software as well as a Roadway Departure Study (RDS). The RDS 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 are being used for identification of projects for the 2015 Highway Safety Improvement Program (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 as well as potentially completing behavioral projects using HSIP funds. Overall totals for fatalities and severe injuries in the state were down nearly 13% in 2014 as compared to 2013. Additionally, overall fatalities and serious injuries are down over 32% 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.

All crashes investigated by the Montana Highway Patrol, or submitted to the MHP by a local enforcement agency, are available to MDT. In the past year, MDT has implemented a new crash database system. This system allows MDT staff to query local road crash data by route and reference post as well as spatially via GIS tools. 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.

Potential HSIP projects on local and Tribal roads are currently evaluated using the same methodologies as are applied to potential projects on the state owned system.

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 has recently undergone an update. The CHSP update was completed in May 2015. The updated CHSP is available at: http://www.mdt.mt.gov/publications/docs/plans/chsp/current_chsp.pdf

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 Corridor Safety Audits (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 and is now in production at MDT. This new system allows 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 new system also allowed MDT to begin utilizing MHP citation data.

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 the CHSP. Traffic and Safety is taking the lead in the areas of road departure crashes and intersection crashes. 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

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

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

If no, describe the methodology used to identify local road projects as part of this program.

LOSS is not available for local roads. For the 2015 HSIP, local road projects were identified via request.

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?

4

Highway safety improvement program funds are used to address which of the following systemic improvements?

☐ Cable Median Barriers

☐ Traffic Control Device Rehabilitation

☒ Install/Improve Signing

☐ Upgrade Guard Rails

☐ Safety Edge

☐ Add/Upgrade/Modify/Remove Traffic Signal

☒ Rumble Strips

☐ Pavement/Shoulder Widening

☐ Install/Improve Pavement Marking and/or Delineation

☐ Clear Zone Improvements

☐ Install/Improve Lighting

☐ 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-During the reporting period, MDT implemented a new crash database that allows completion of network screening for on-system rural segments using Montana specific safety performance functions.

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

To identify potential location for development of the 2015 HSIP, MDT has elected to screen the network using the following criteria:

1) Safety performance function developed for road departure crashes resulting in a fatality or injury.

2) Sliding window using a 1 mile window length and a 0.1 mile step.

3) Crash data period is 2004-2013 for initial screening.

4) Sites with a Level of Service of Safety IV and a minimum number of crashes. The minimum number of crashes varies by system. For minor arterials and major collectors the number of crashes was greater than or equal to 4. For all other routes the minimum number of crashes was 5.

5) Sites requested for review by another agency, MDT District personnel, citizens, as well as other MDT staff, were also included in the initial list of locations.

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 the preliminary office review, further 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. The benefits are the anticipated annualized cost

reductions due to a lower number of crashes and lower crash severity. The projects with the highest benefit-cost ratios are nominated 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. MDT also completed a systemic wrong way signing upgrade to all interstate ramps. The intent of this project was to bring the signing for all off-ramps to a consistent standard.

MDT has also completed development of a Roadway Departure Study. This study included development of Safety Performance Functions (SPFs), Level of Service of Safety (LOSS), and diagnostic norms for rural on-system routes. MDT is using these tools and methodologies for development of the HSIP as well as analysis of other agency projects. As part of the Study, 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 2015/2016.

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)	10258558.97	22 %	10258558.97	22 %
HRRRP (SAFETEA-LU)	1710.23	0 %	1710.23	0 %
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer – Section 164	9067547	19 %	9067547	19 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	22254871.24	47 %	22254871.24	47 %
State and Local Funds	6019766.56	13 %	6019766.56	13 %

Totals	47602454	100%	47602454	100%

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

$360,333.00

How much funding is obligated to local safety projects?

$360,333.00

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 an updated MDT HSIP Manual is planned in the near future.

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 completed development of a Roadway Departure Study. This study included development of Safety Performance Functions (SPFs), Level of Service of Safety (LOSS), and diagnostic norms for rural on-system routes. MDT is using these tools and methodologies for development of the HSIP as well as analysis of other agency projects. As part of the Study, 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 2015/2016.

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. The project was started in the spring of 2015 with final completion anticipated for the summer/fall of 2016.

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
2015 SFTY UTILITY FAST PROCESS	Roadway Roadway - other		63610	63610	HSIP (Section 148)				State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
BELT-N & S-PHASE 2	Roadway Roadway - other	10.3 Miles	5900000	9662430	Penalty Transfer – Sectio	Rural Principal Arterial - Other	3446	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure

					n 164						crashes through data-driven problem identification and the use of best practices.
PENDROY-N & S	Roadway Roadway - other	4.5 Miles	1100000	8135148	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Minor Arterial	417	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
ROCKVALE-NORTH	Roadway Roadway - other	0.8 Miles	1720859	7996118	Other Federal-aid	Rural Principal Arterial -	5941	45	State Highway	Roadway Departur	Reduce and mitigate

					Funds (i.e. STP, NHPP)	Other			Agency	e	roadway departure crashes through data-driven problem identification and the use of best practices.
LEWISTOWN-SOUTHEAST	Roadway Roadway - other	6.8 Miles	1800000	10280947	Penalty Transfer – Section 164	Rural Major Collector	1258	45	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.

US 2 & SPRING CREEK/SUNSET	Intersection traffic control Intersection traffic control - other	0.4 Miles	815116	815116	HSIP (Section 148)	Urban Principal Arterial - Other	18942	45	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 099 N OF CHICO HOT SPRINGS	Roadside Barrier- metal	0.7 Miles	47562	47562	HSIP (Section 148)	Rural Major Collector	690	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best

											practices.
SF 099 N OF BUTTE	Advanced technology and ITS Dynamic message signs	1 Numbers	59585	59585	HSIP (Section 148)	Rural Principal Arterial - Interstate			State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 099 S OF SEELEY LAKE	Roadside Barrier- metal	0.9 Miles	55480	55480	HSIP (Section 148)	Rural Minor Arterial	1300	45	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and

											the use of best practices.
SF 099 BILLINGS GRAND 17TH SIG	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	1 Numbers	35000	35000	HSIP (Section 148)	Urban Principal Arterial - Other	18942	35	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 099 E OF PONY	Roadway Roadway - other	0.3 Miles	79878	79878	HSIP (Section 148)	Rural Minor Arterial	460	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem

											identification and the use of best practices.
SF 099 SLOPE FLAT, LIGHTING	Roadside Roadside grading	1.3 Miles	3497	3497	HSIP (Section 148)	Rural Major Collector	1105	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 109- FLASHERS ON GRANITE	Roadway signs and traffic control Roadway signs (including post) - new or updated	1 Numbers	6974	6974	HSIP (Section 148)	Urban Minor Arterial	5110	25	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-

											driven problem identification and the use of best practices.
SF109-US2/MT40-INT SFTY UPGRD	Intersection geometry Auxiliary lanes - add two-way left-turn lane	0.01 Miles	47267	47267	HSIP (Section 148)	Rural Minor Arterial	13550	65	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF109-CRV SFTY IMPRVTS-CHARLO	Shoulder treatments Widen shoulder - paved or other	6.5 Miles	1179469	1179469	HSIP (Section 148)	Rural Major Collector	1180	65	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes

											through data-driven problem identification and the use of best practices.
SF 109-CRV RECON-N OF HARRISON	Roadway Roadway - other	0.5 Miles	25000	25000	HSIP (Section 148)	Rural Major Collector	670	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF109-SIGNING S OF LEWISTOW	Roadway signs and traffic control Roadway signs (including post) - new or	1.2 Miles	3000	3000	HSIP (Section 148)	Rural Major Collector	150	35	State Highway Agency	Roadway Departure	Reduce and mitigate roadway

N	updated										departure crashes through data-driven problem identification and the use of best practices.
SF109-LT TURN BAY-MONTFORD RD	Intersection geometry Auxiliary lanes - add left-turn lane	0.5 Miles	409539	409539	HSIP (Section 148)	Rural Minor Arterial	10240	70	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 119 SPRINGTIM	Advanced technology and ITS Dynamic message	2 Numb	48527	485270	HSIP (Sectio	Rural Principal	882	75	State Highway	Roadway Departur	Reduce and

E INT-E & W	signs	ers	0		n 148)	Arterial - Interstate	4		Agency	e	mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF119-GR NW OF SUN RIVER	Roadside Barrier- metal	4 Miles	569606	569606	HSIP (Section 148)	Rural Minor Arterial	1700	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.

SF 119-SLPE FLATTEN E OF FROID	Roadside Roadside grading	0.9 Miles	111587	111587	HSIP (Section 148)	Rural Major Collector	412	45	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF-119-SAFETY IMPS OF DAYTON	Roadside Roadside grading	1 Miles	183258	183258	HSIP (Section 148)	Rural Principal Arterial - Other	3380	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best

											practices.
SF 119 - S-269 TURN LANE	Intersection geometry Auxiliary lanes - add two-way left-turn lane	0.2 Miles	31797	31797	HSIP (Section 148)	Urban Major Collector	7970	45	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 119-GR W OF CONNER	Roadside Barrier- metal	0.5 Miles	86127	86127	HSIP (Section 148)	Rural Major Collector	710	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and

											the use of best practices.
SF-119 - SIGNING GR N BOZEMAN	Roadside Barrier- metal	0.6 Miles	207796	207796	HSIP (Section 148)	Rural Minor Arterial	690	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 119-SLP FLATTEN W-KALISPELL	Roadside Roadside grading	1.7 Miles	82921	82921	HSIP (Section 148)	Rural Principal Arterial - Other Freeways and Expressways	1702	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem

											identification and the use of best practices.
SF 119-SIGN IMP-FISHTAIL	Roadway signs and traffic control Curve-related warning signs and flashers	0.5 Miles	25358	25358	HSIP (Section 148)	Rural Major Collector	1200	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF129-GTFLS SIGNAL BORDERS	Intersection traffic control Modify traffic signal - add backplates with retroreflective borders	5.3 Miles	56536	56536	HSIP (Section 148)	Urban Principal Arterial - Other	27774	35	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-

											driven problem identification and the use of best practices.
SF129-BUTTE HRZNTAL CRV SIGNG	Roadway signs and traffic control Curve-related warning signs and flashers		389371	389371	HSIP (Section 148)				State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-GLENDIVE WRNG WY-PH 1	Roadway signs and traffic control Roadway signs and traffic control - other	172 Miles	319499	319499	HSIP (Section 148)	Rural Principal Arterial - Interstate	5038	75	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes

											through data-driven problem identification and the use of best practices.
SF 129-SIGNING IMPROV P29	Roadway delineation Delineators post-mounted or on barrier	0.5 Miles	87808	87808	HSIP (Section 148)	Rural Minor Arterial	797	50	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-SB RT TURN PATTERSO	Intersection geometry Auxiliary lanes - add right-turn lane	0.6 Miles	62000	62000	HSIP (Section 148)	Urban Major Collector	4300	60	State Highway Agency	Intersections	Reduce and mitigate intersecti

N											on crashes through data-driven problem identification and the use of best practices.
SF 129-RRXING MT CITY	Railroad grade crossings Surface treatment	0.6 Miles	149223	149223	HSIP (Section 148)	Rural Major Collector	2720	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF129-ITS G-RAIL	Advanced technology and ITS Dynamic message	1 Numb	30666	306662	HSIP (Sectio	Rural Principal	460	60	State Highway	Roadway Departur	Reduce and

SIEBEN	signs	ers	2		n 148)	Arterial - Interstate	0		Agency	e	mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-G-RAIL S CHESTER	Roadside Barrier end treatments (crash cushions, terminals)	0.6 Miles	66693	66693	HSIP (Section 148)	Rural Minor Arterial	400	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.

SF 129-SFTY IMPR GIFFEN	Roadway delineation Delineators post-mounted or on barrier	0.5 Miles	27691	27691	HSIP (Section 148)	Rural Major Collector	190	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-FLTS HAVRE	Roadside Roadside grading	0.4 Miles	18000	18000	HSIP (Section 148)	Rural Major Collector	760	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best

											practices.
SF 129-FLT E CASCADE	Roadside Roadside grading	1 Miles	56306	56306	HSIP (Section 148)	Rural Major Collector	450	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-RECON INT HELENA	Roadway Roadway - other	0.3 Miles	30000	30000	HSIP (Section 148)	Rural Major Collector	685	55	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and

											the use of best practices.
SF 129-GRDRAIL RAYNESFORD EAST	Roadside Barrier- metal	0.5 Miles	175840	175840	HSIP (Section 148)	Rural Principal Arterial - Other	2060	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-GUARDRAIL BEARCREEK	Roadside Barrier- metal	1.1 Miles	45344	45344	HSIP (Section 148)	Rural Major Collector	910	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem

											identification and the use of best practices.
SF 129-RNDABOUT KING 56TH	Intersection traffic control Modify control - two-way stop to roundabout	0.3 Miles	165000	165000	HSIP (Section 148)	Rural Major Collector	4070	45	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 129-SFTY FENCING GLENDIVE	Roadside Fencing	1.2 Miles	276428	276428	HSIP (Section 148)	Rural Major Collector	300	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-

											driven problem identification and the use of best practices.
SF 129 - GRDRAIL N LOLO	Roadway delineation Delineators post-mounted or on barrier	1.1 Miles			HSIP (Section 148)	Rural Principal Arterial - Other	23010	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129 - LIGHTING HUSON INTCH	Lighting Site lighting - interchange	0.5 Miles	158738	158738	HSIP (Section 148)	Urban Principal Arterial - Interstate	8930	75	State Highway Agency	Intersections	Reduce and mitigate intersection crashes

											through data-driven problem identification and the use of best practices.
SF 129 - GRDRAIL E DESMET INTCH	Roadside Barrier- metal	0.6 Miles	109298	109298	HSIP (Section 148)	Urban Principal Arterial - Interstate	16050	75	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129-SGN FLASHER NE	Intersection traffic control Intersection flashers - add advance intersection warning	3 Numbers	68091	68091	HSIP (Section 148)	Rural Major Collector	5374	50	State Highway Agency	Intersections	Reduce and mitigate intersecti

HAMILTON	sign-mounted										on crashes through data-driven problem identification and the use of best practices.
SF 129-SFTY IMPV THOMPSON PASS	Roadway signs and traffic control Sign sheeting - upgrade or replacement	0.5 Miles	70709	70709	HSIP (Section 148)	Rural Major Collector	170	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 129 - SFTY IMPR	Intersection traffic control Modify traffic	1	93307	243921	HSIP (Sectio	Urban Minor	714	35	State Highway	Intersecti	Reduce and

BIGFORK	signal - add backplates with retroreflective borders	Miles			n 148)	Arterial	0		Agency	ons	mitigate intersecti on crashes through data-driven problem identificat ion and the use of best practices.
SF 129-ADV FLASHER N BIG FORK	Intersection traffic control Intersection flashers - modify existing	1 Numb ers	56939	56939	HSIP (Sectio n 148)	Urban Minor Arterial	714 0	35	State Highway Agency	Intersecti ons	Reduce and mitigate intersecti on crashes through data-driven problem identificat ion and the use of best practices.

SF 139-GTFL ADV SGNL FLASHER	Intersection traffic control Intersection flashers - modify existing	6 Numbers	123200	123200	HSIP (Section 148)	Urban Principal Arterial - Other		35	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 139-LAUREL GRD RAIL	Roadside Barrier end treatments (crash cushions, terminals)	0.2 Miles	10847	10847	HSIP (Section 148)	Urban Local Road or Street	3070	25	City or Municipal Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best

											practices.
SF139-SFTY IMPRV ELECTR	Advanced technology and ITS Dynamic message signs	1 Numbers	66000	66000	HSIP (Section 148)	Rural Major Collector	1120	45	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF139-DILLON SFTY IMPRV	Roadway signs and traffic control Curve-related warning signs and flashers	2 Miles	61029	61029	HSIP (Section 148)	Rural Minor Arterial	300	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and

											the use of best practices.
SF139-6TH ST/NW BYPASS SFTY	Intersection geometry Auxiliary lanes - modify left-turn lane offset	0.08 Miles	15517	15517	HSIP (Section 148)	Urban Minor Arterial	8770	30	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF139-SUN PRAIRIE TURN LANE	Intersection geometry Auxiliary lanes - add left-turn lane	3.4 Miles	52101	52101	HSIP (Section 148)	Rural Major Collector	3255	70	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem

											identification and the use of best practices.
SF 139 - COLUMBIA HEIGHTS SFTY	Intersection traffic control Modify traffic signal - add flashing yellow arrow		42590	42590	HSIP (Section 148)	Urban Principal Arterial - Other	8331	55	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 139 - SFTY IMPRV N OF LOLO	Roadway signs and traffic control Curve-related warning signs and flashers	0.6 Miles	18587	18587	HSIP (Section 148)	Rural Principal Arterial - Other	23010	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-

											driven problem identification and the use of best practices.
SF 139 - MISSOULA SIGNALS SFTY	Intersection traffic control Modify traffic signal - add backplates with retroreflective borders	5.4 Miles	37870	37870	HSIP (Section 148)	Urban Principal Arterial - Other	31479	45	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 149- BAXTER/LOVE SFTY IMPR	Intersection traffic control Modify control - all-way stop to roundabout	0.4 Miles	349486	349486	HSIP (Section 148)	Rural Minor Collector	820	45	County Highway Agency	Intersections	Reduce and mitigate intersection crashes

											through data-driven problem identification and the use of best practices.
SF149-CLRS SFTY IMPV DIST 2&3	Roadway Rumble strips - center	592 Miles	311411	311411	HSIP (Section 148)	Various			State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF-149 FORSYTH SKID	Roadway Pavement surface - high friction surface	0.1 Miles	16857	16857	HSIP (Section 148)	Rural Principal Arterial -	5640	75	State Highway Agency	Roadway Departure	Reduce and mitigate roadway

TRTMT						Interstate					departure crashes through data-driven problem identification and the use of best practices.
SF-149 FORSYTH MEDIAN BARRIER	Roadside Barrier - cable	1.6 Miles	44030	44030	HSIP (Section 148)	Rural Principal Arterial - Interstate	4826	75	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF-149 S-201 SFTY	Roadway delineation Longitudinal pavement	30	9391	9391	HSIP (Sectio	Rural Minor	705	70	State Highway	Departur	Reduce and

IMPRV	markings - new	Miles			n 148)	Arterial			Agency	e	mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF-149 ROUNDUP SFTY IMPRV	Roadway Rumble strips - edge or shoulder	0.7 Miles	2818	2818	HSIP (Section 148)	Rural Principal Arterial - Other	420	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.

SF-149 BIG TIMBER SFTY IMPRV	Roadway delineation Delineators post-mounted or on barrier	0.4 Miles	3397	3397	HSIP (Section 148)	Rural Minor Arterial	1740	55	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF-149 HILLCREST RT TURN	Intersection geometry Auxiliary lanes - add right-turn lane	1.2 Miles	30098	30098	HSIP (Section 148)	Urban Major Collector	4723	50	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best

											practices.
SF-149 BLGS SOUTH SFTY IMPRV	Roadway signs and traffic control Roadway signs (including post) - new or updated	0.3 Miles	18656	18656	HSIP (Section 148)	Rural Principal Arterial - Other	4008	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF-149 CLRS BILLINGS NORTH	Roadway Rumble strips - center	412 Miles	278508	278508	HSIP (Section 148)	Various			State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and

											the use of best practices.
SF-149 CLRS BILLINGS SOUTH	Roadway Rumble strips - center	410 Miles	278508	278508	HSIP (Section 148)	Various			State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 149 LAKE FIVE LT TURN	Intersection geometry Auxiliary lanes - add left-turn lane	0.3 Miles	15712	15712	HSIP (Section 148)	Rural Principal Arterial - Other	5597	70	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem

											identification and the use of best practices.
SF 149 RAYNESFORD SFTY IMPRV	Roadside Barrier- metal	0.6 Miles	11410	11410	HSIP (Section 148)	Rural Principal Arterial - Other	2190	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 149 SOMERS SFTY IMPRV	Pedestrians and bicyclists Pedestrian beacons	0.25 Miles	13825	13825	HSIP (Section 148)	Rural Principal Arterial - Other	7892	45	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-

											driven problem identification and the use of best practices.
SF 149 ROCKY CLIFF ITS	Advanced technology and ITS Advanced technology and ITS - other	1 Numbers	22436	22436	HSIP (Section 148)	Rural Principal Arterial - Other	14290	50	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 149 E OF SOMERS CLRS	Roadway Rumble strips - center	7 Miles	5139	5139	HSIP (Section 148)	Rural Minor Arterial	6396	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes

											through data-driven problem identification and the use of best practices.
SF 149 E OF BIGFORK SFTY IMPRV	Roadway delineation Longitudinal pavement markings - remarking	5 Miles	17474	17474	HSIP (Section 148)	Rural Major Collector	2976	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 S OF STEVENSVL L SFTY IMP	Shoulder treatments Widen shoulder - paved or other	6 Miles	595938	595938	HSIP (Section 148)	Rural Major Collector	4030	65	State Highway Agency	Roadway Departure	Reduce and mitigate roadway

											departure crashes through data-driven problem identification and the use of best practices.
SF 149 S OF HOT SPRINGS SLP FL	Roadside Roadside grading	0.7 Miles	60547	60547	HSIP (Section 148)	Rural Major Collector	420	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 149 FOYS LAKE	Roadway signs and traffic control Roadway signs	0.2	1535	1535	HSIP (Sectio	Rural Major	773	50	State Highway	Roadway Departur	Reduce and

SIGNING	(including post) - new or updated	Miles			n 148)	Collector			Agency	e	mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 BOZEMAN SFTY IMPRV	Roadway signs and traffic control Curve-related warning signs and flashers	0.5 Miles	21549	21549	HSIP (Section 148)	Rural Minor Arterial	1920	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.

SF149 LOHMAN SLP FLTN	Roadside Roadside grading	0.6 Miles	43338	43338	HSIP (Section 148)	Rural Principal Arterial - Other	2840	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 HAVRE EAST CLRS	Roadway Rumble strips - center	45 Miles	6466	6466	HSIP (Section 148)	Rural Principal Arterial - Other	2864	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best

											practices.
SF149 SFTY IMPRV N-24	Roadside Barrier- metal	0.3 Miles	45150	45150	HSIP (Section 148)	Rural Principal Arterial - Other	1220	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 SIMMS ITS SIGNING	Advanced technology and ITS Dynamic message signs	1 Numbers	10095	10095	HSIP (Section 148)	Rural Principal Arterial - Other	2390	40	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and

											the use of best practices.
SF149 FT BENTON SFTY IMPRV	Roadway Rumble strips - edge or shoulder	0.6 Miles	13725	13725	HSIP (Section 148)	Rural Minor Arterial	640	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 STOCKETT SFTY IMPRV	Roadside Roadside grading	1 Numbers	42005	42005	HSIP (Section 148)	Rural Major Collector	1390	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem

											identification and the use of best practices.
SF149 LINCOLN RD CLRS	Roadway Rumble strips - center	36.5 Miles	27160	27160	HSIP (Section 148)	Rural Major Collector	700	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 HELENA SFTY IMPRV	Intersection traffic control Intersection signing - add basic advance warning	0.1 Miles	10284	10284	HSIP (Section 148)	Rural Major Collector	2567	55	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-

											driven problem identification and the use of best practices.
SF149 DUCK LK FENCING	Roadside Fencing	7.6 Miles	99237	99237	HSIP (Section 148)	Rural Major Collector	890	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149 N-8 SHLD WDNG	Shoulder treatments Widen shoulder - paved or other	1 Miles	126712	126712	HSIP (Section 148)	Rural Principal Arterial - Other	5370	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes

											through data-driven problem identification and the use of best practices.
SF149 BUTTE SFTY IMPRV	Roadside Barrier- metal	0.2 Miles	13907	13907	HSIP (Section 148)	Rural Principal Arterial - Interstate	11470	75	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 149 CORVALLIS SFTY	Roadway delineation Longitudinal pavement markings - new	2 Miles	9372	9372	HSIP (Section 148)	Rural Major Collector	2348	45	State Highway Agency	Roadway Departure	Reduce and mitigate roadway

IMPRV											departure crashes through data-driven problem identification and the use of best practices.
SF149-YORK RD ROUNDABOUT	Intersection traffic control Modify control - two-way stop to roundabout	0.2 Miles	346449	346449	HSIP (Section 148)	Rural Major Collector	2004	60	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 149-KING INTCH	Intersection traffic control Modify traffic	0.1	4115	4115	HSIP (Sectio	Urban Principal	234	35	State Highway	Intersecti	Reduce and

SFTY IMPRV	signal - add backplates with retroreflective borders	Miles			n 148)	Arterial - Interstate	40		Agency	ons	mitigate intersection crashes through data-driven problem identification and the use of best practices.
SF 149-COLUMBUS SFTY IMPRV	Roadway delineation Longitudinal pavement markings - new	0.6 Miles	2231	2231	HSIP (Section 148)	Rural Major Collector	790	60	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.

SF 149-WOLF POINT SFTY IMPRV	Roadway signs and traffic control Roadway signs (including post) - new or updated	1.4 Miles	8445	8445	HSIP (Section 148)	Rural Minor Arterial	330	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF149-BUTTE INTERSTATE SFTY	Roadway signs and traffic control Roadway signs and traffic control - other	0.2 Miles	9201	9201	HSIP (Section 148)	Rural Principal Arterial - Interstate	3470	75	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best

											practices.
SF149-MANHATTAN SFTY IMPRV	Roadway signs and traffic control Curve-related warning signs and flashers	0.4 Miles	5382	5382	HSIP (Section 148)	Rural Major Collector	1360	70	State Highway Agency	Roadway Departure	Reduce and mitigate roadway departure crashes through data-driven problem identification and the use of best practices.
SF 149 - MSLA DIST SFTY IMPRV	Intersection traffic control Intersection flashers - add advance intersection warning sign-mounted	0.1 Miles	13864	13864	HSIP (Section 148)	Rural Principal Arterial - Other	1300	70	State Highway Agency	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and

											the use of best practices.

Progress in Achieving Safety Performance Targets

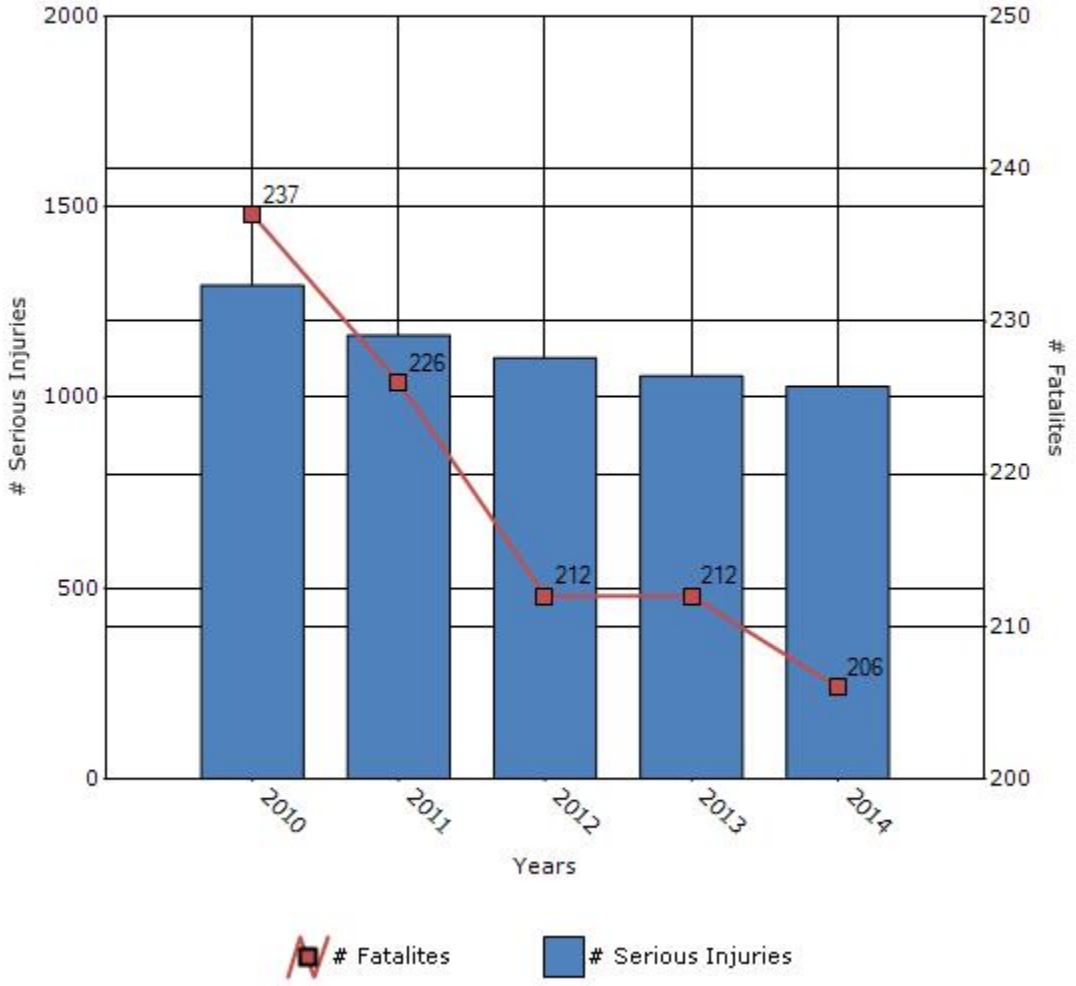
Overview of General Safety Trends

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

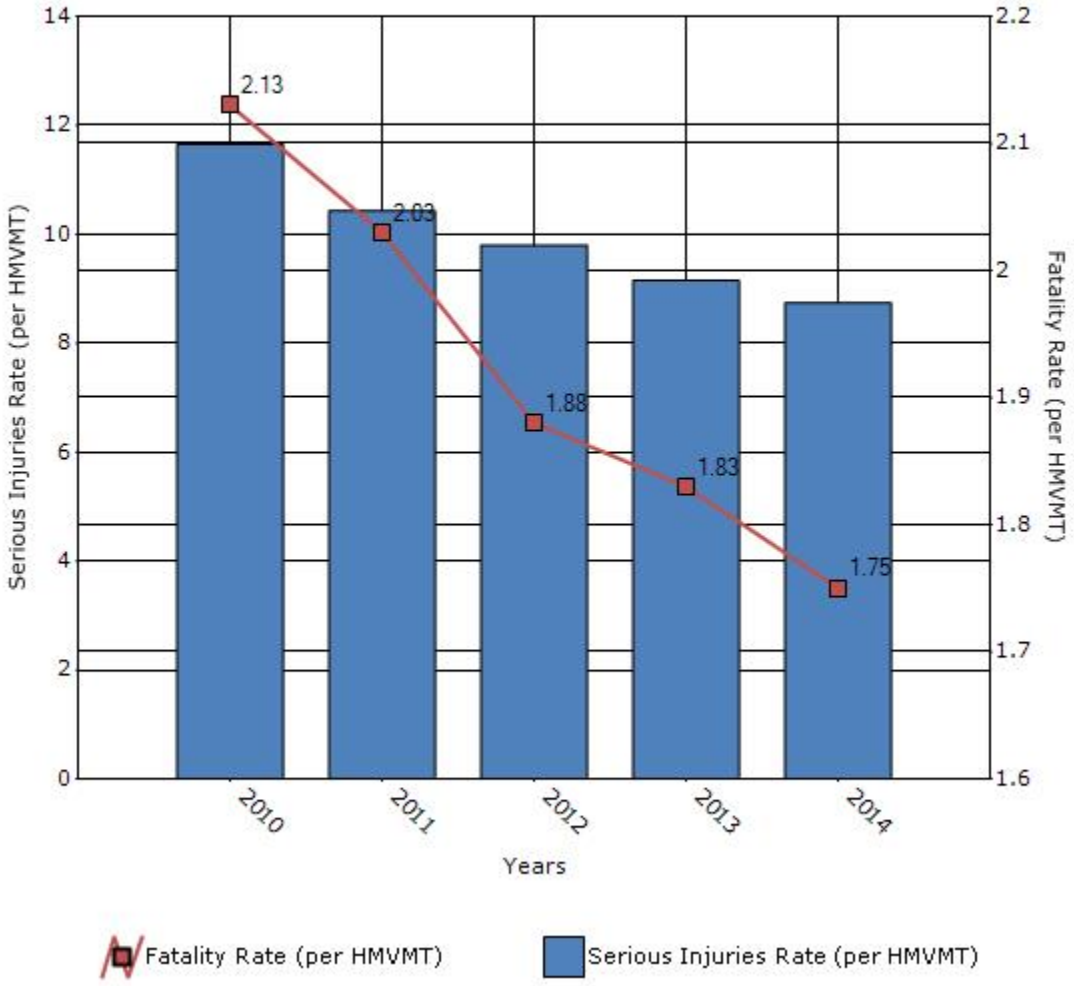
Performance Measures*	2010	2011	2012	2013	2014
Number of fatalities	237	226	212	212	206
Number of serious injuries	1295	1164	1104	1057	1030
Fatality rate (per HMVMT)	2.13	2.03	1.88	1.83	1.75
Serious injury rate (per HMVMT)	11.65	10.43	9.8	9.15	8.74

*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

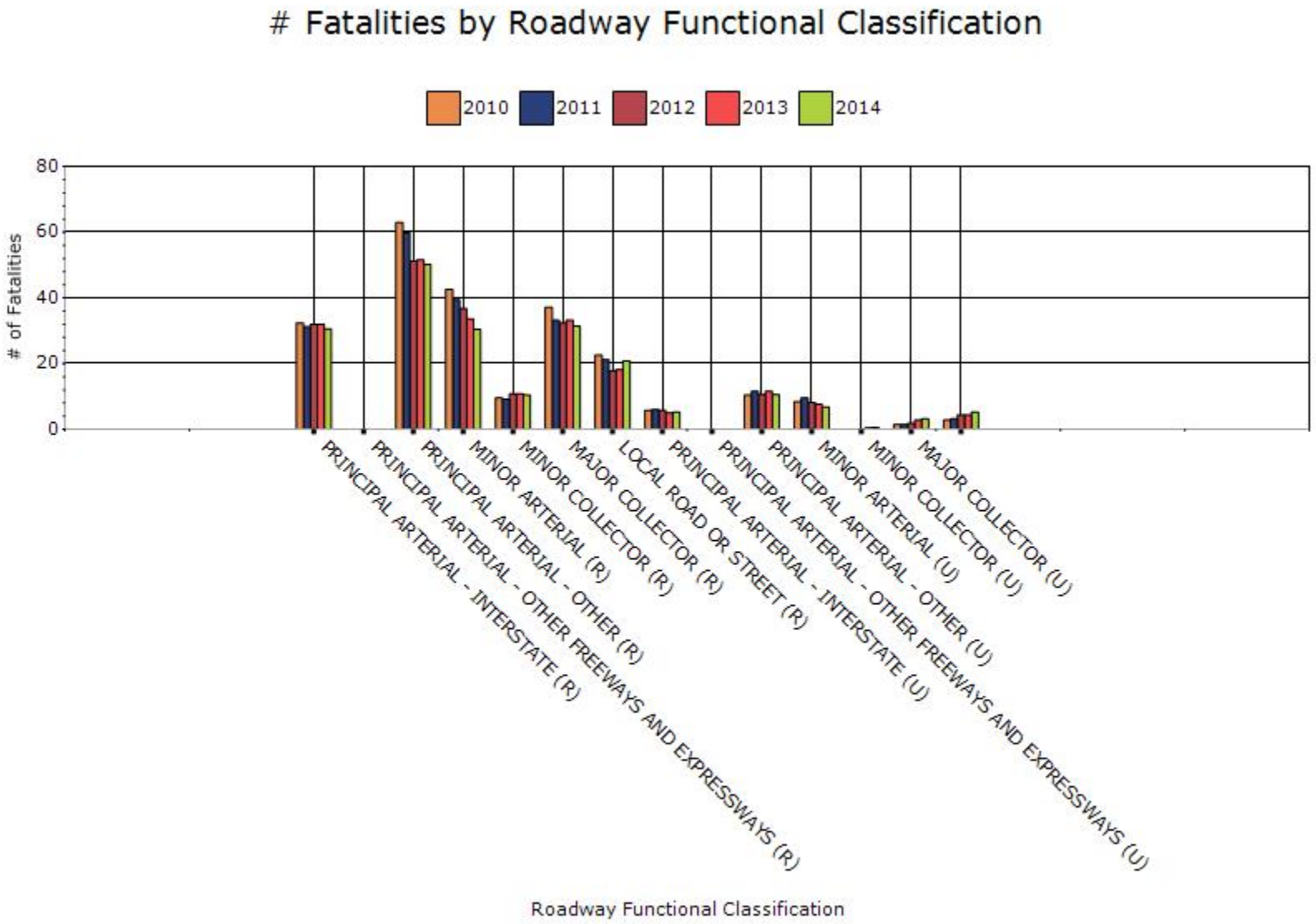


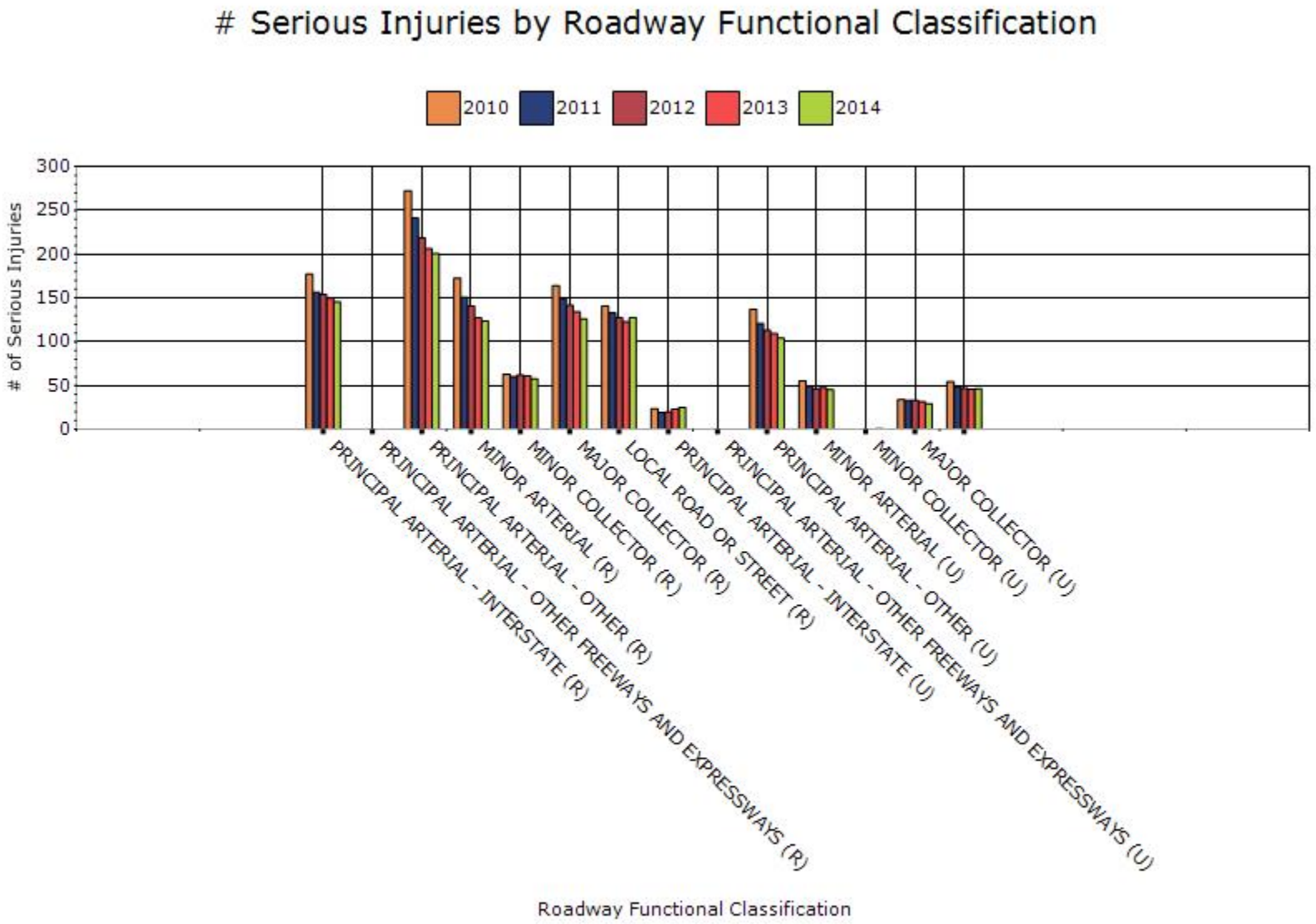
To the maximum extent possible, present performance measure* data by functional classification and ownership.

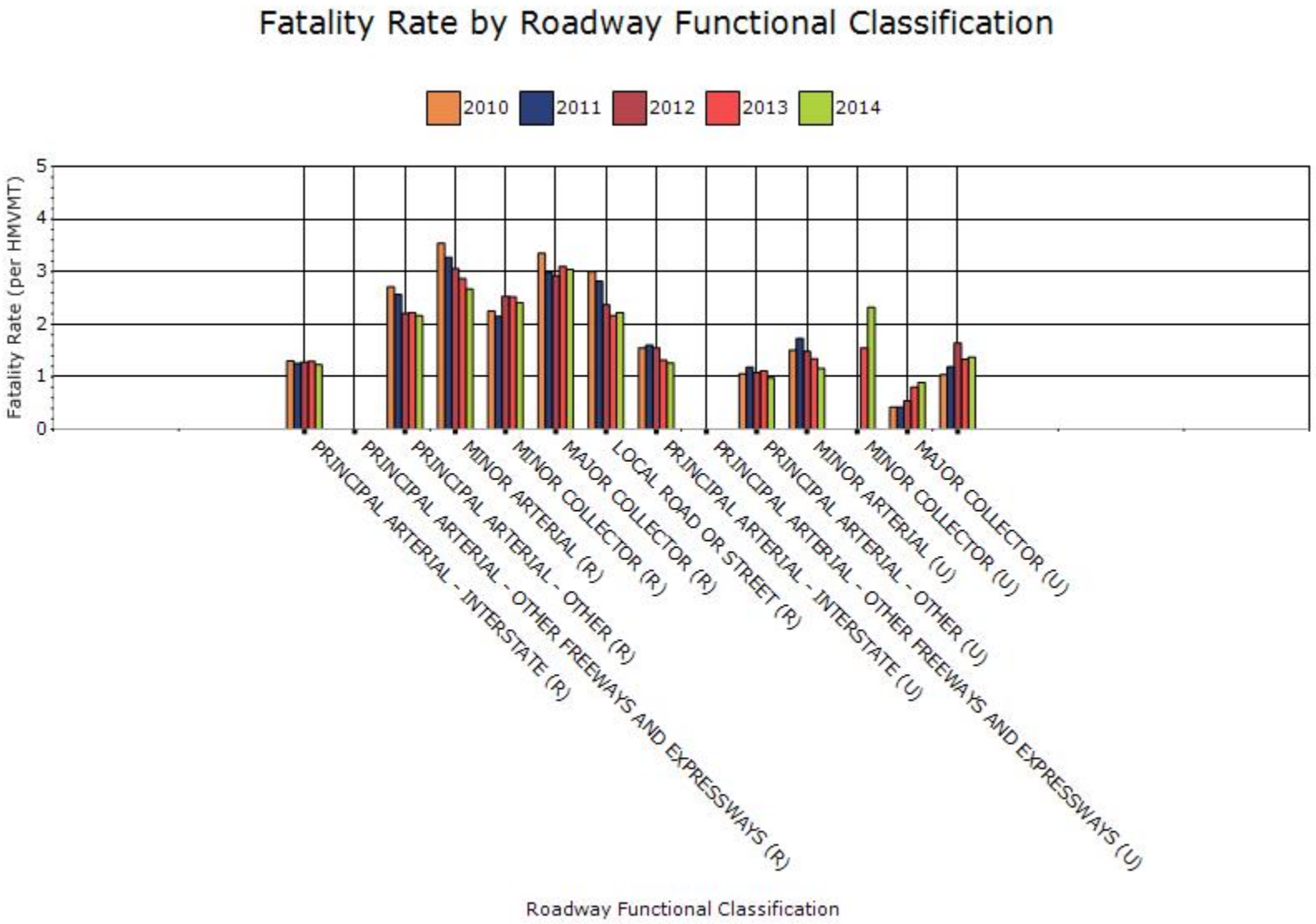
Year - 2014

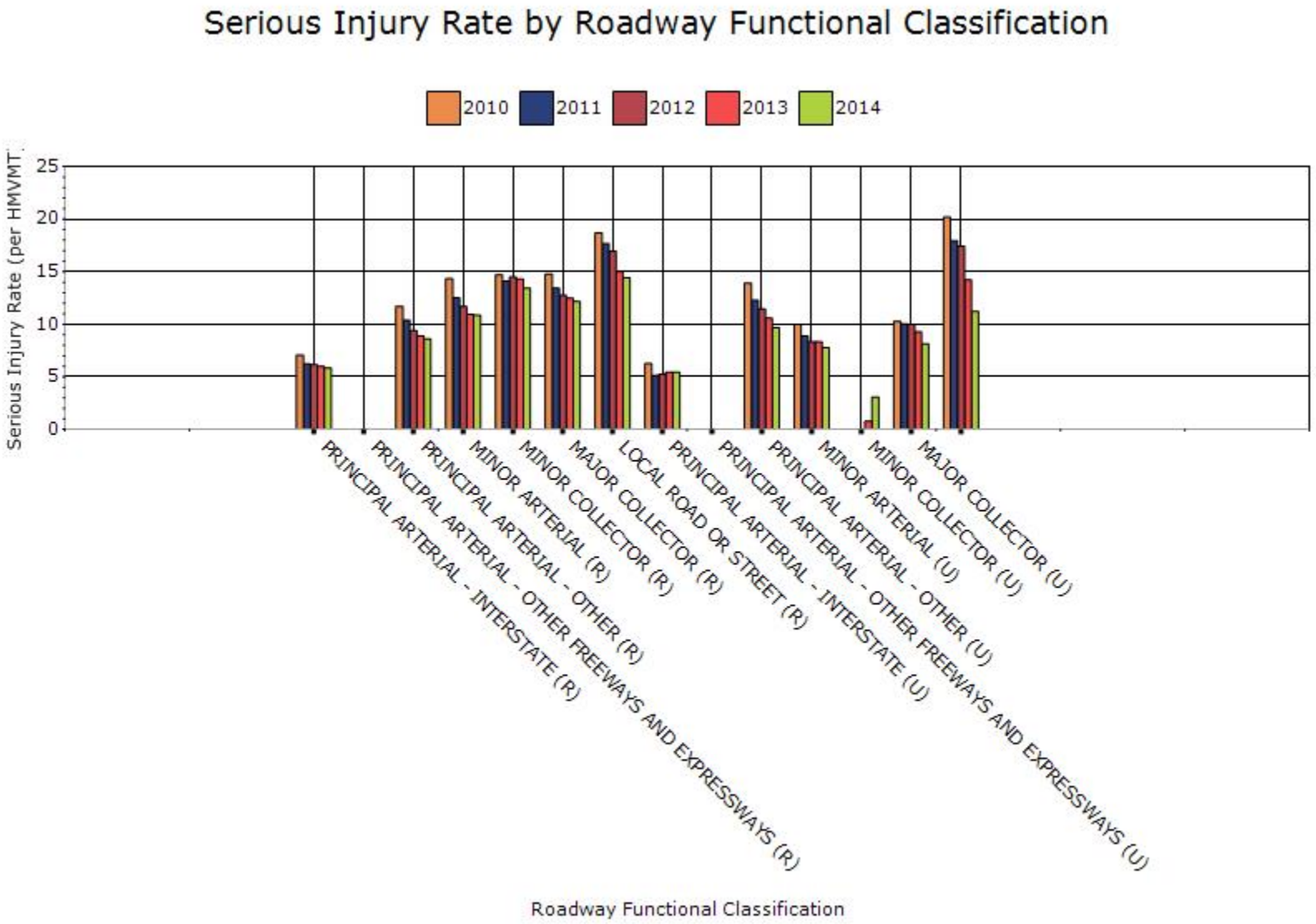
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	30.6	145.6	1.23	5.84
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	50.2	200.6	2.16	8.62
RURAL MINOR ARTERIAL	30.4	123.6	2.67	10.86
RURAL MINOR COLLECTOR	10.4	57.8	2.41	13.41
RURAL MAJOR COLLECTOR	31.4	126	3.04	12.15
RURAL LOCAL ROAD OR STREET	20.8	127.6	2.22	14.43
URBAN PRINCIPAL	5.2	25	1.26	5.43

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	10.6	104	0.98	9.66
URBAN MINOR ARTERIAL	6.8	45.4	1.16	7.76
URBAN MINOR COLLECTOR	0.6	0.8	2.32	3.07
URBAN MAJOR COLLECTOR	3.2	29.2	0.89	8.14
URBAN LOCAL ROAD OR STREET	5.2	46.4	1.37	11.23


Fatalities by Roadway Functional Classification
2010
2011
2012
2013
2014
# 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
2010
2011
2012
2013
2014
# of Serious Injuries
300
250
200
150
100
50
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

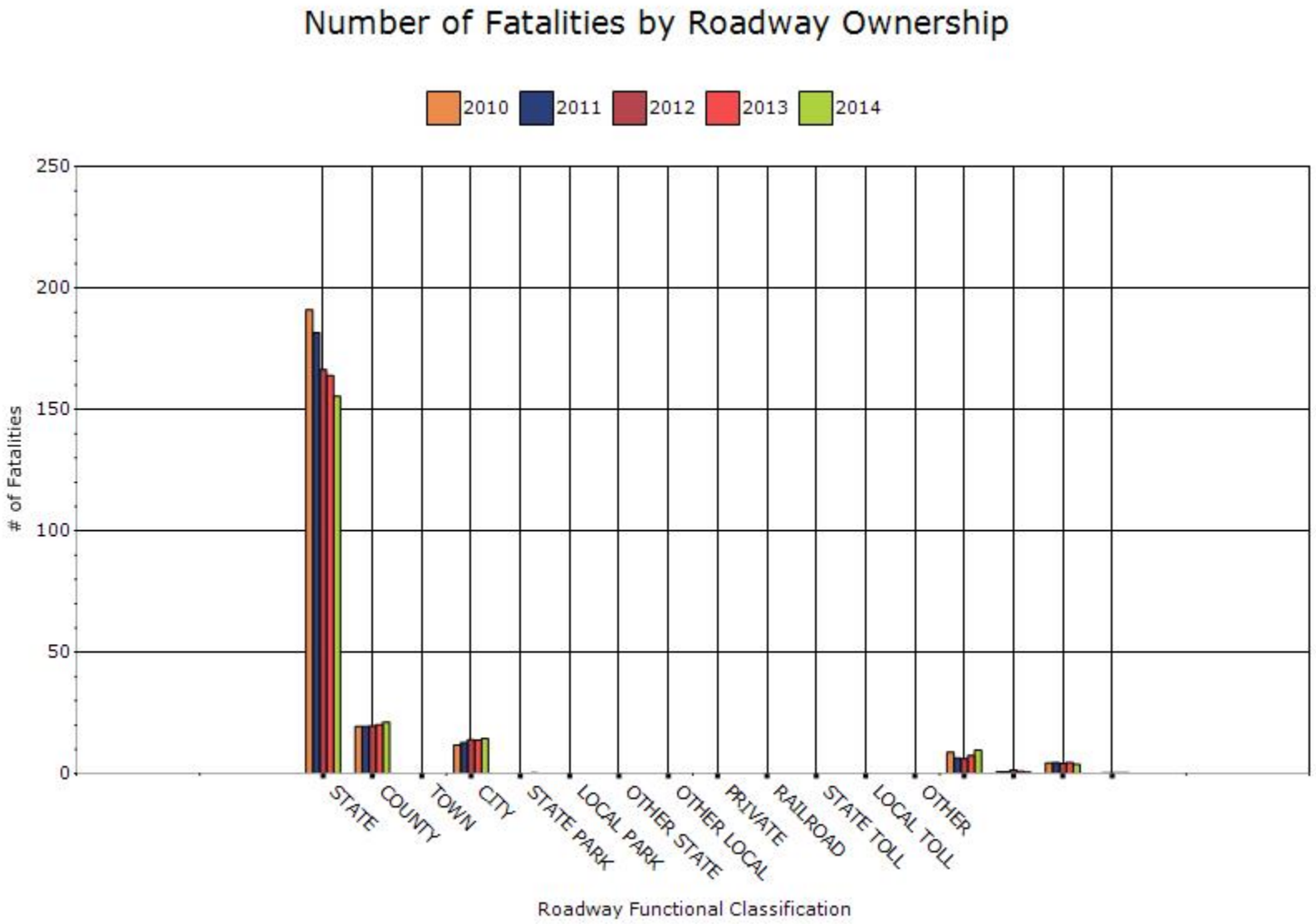

Fatality Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
0
1
2
3
4
5
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL 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

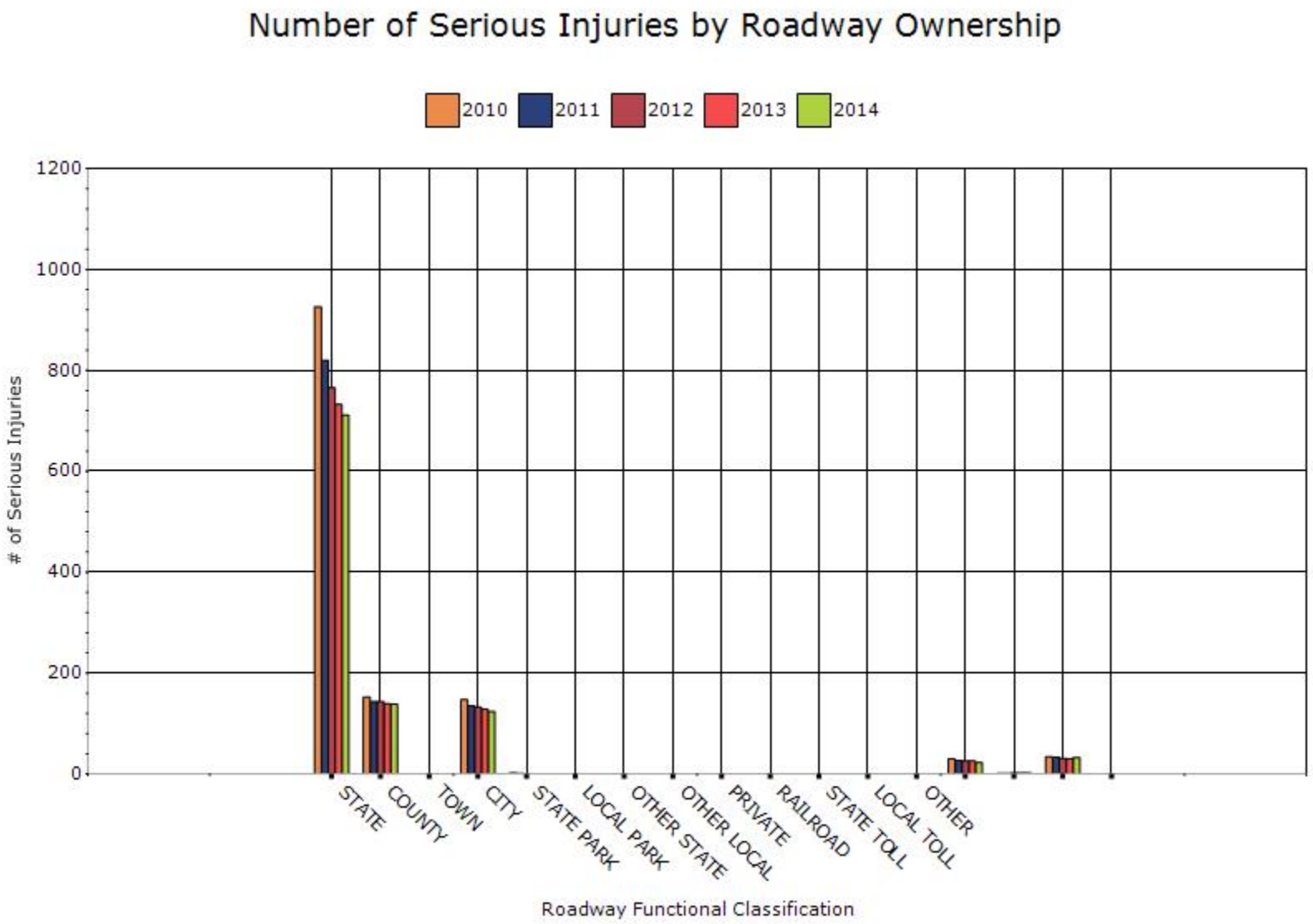

Serious Injury Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

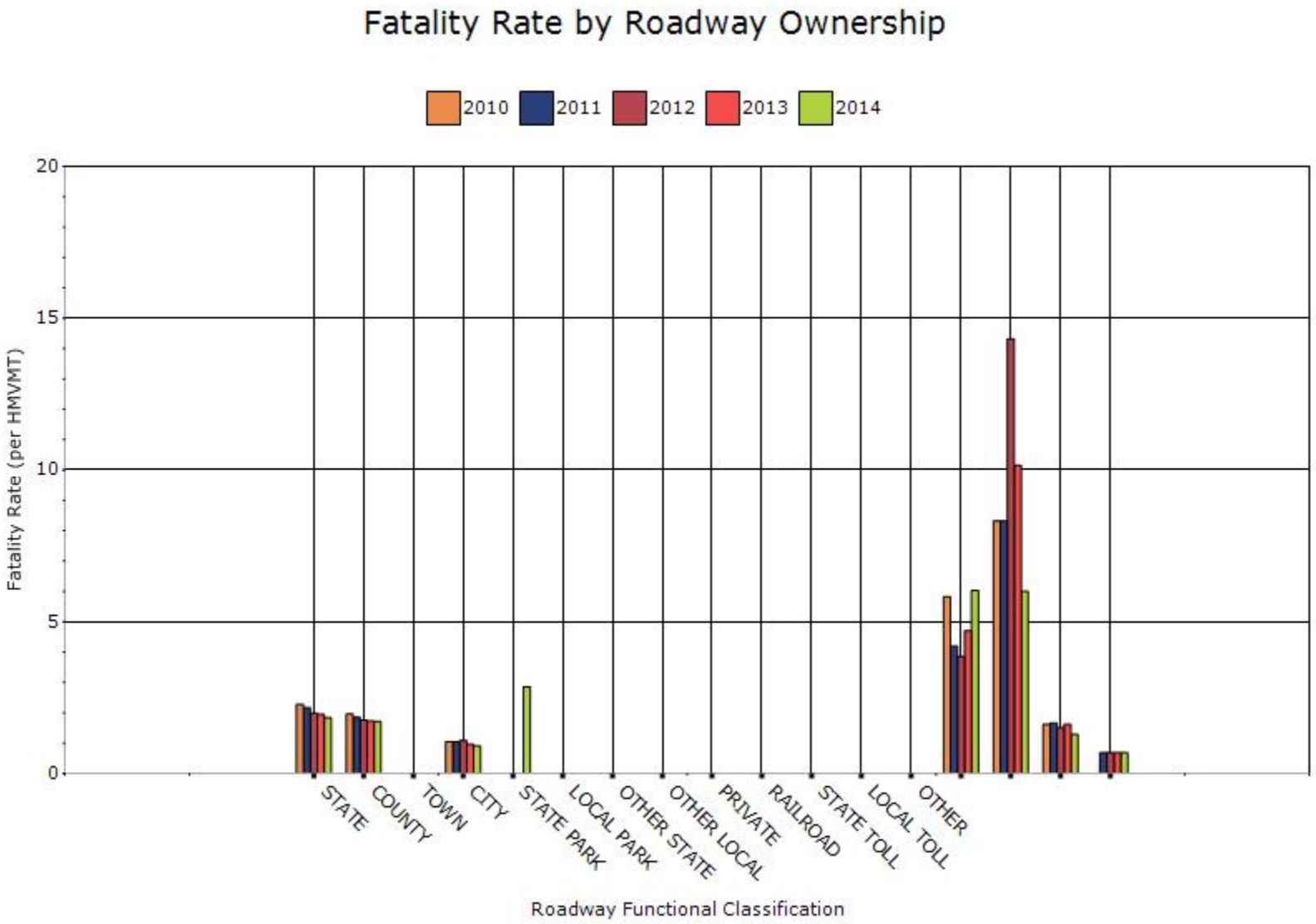
Year - 2014

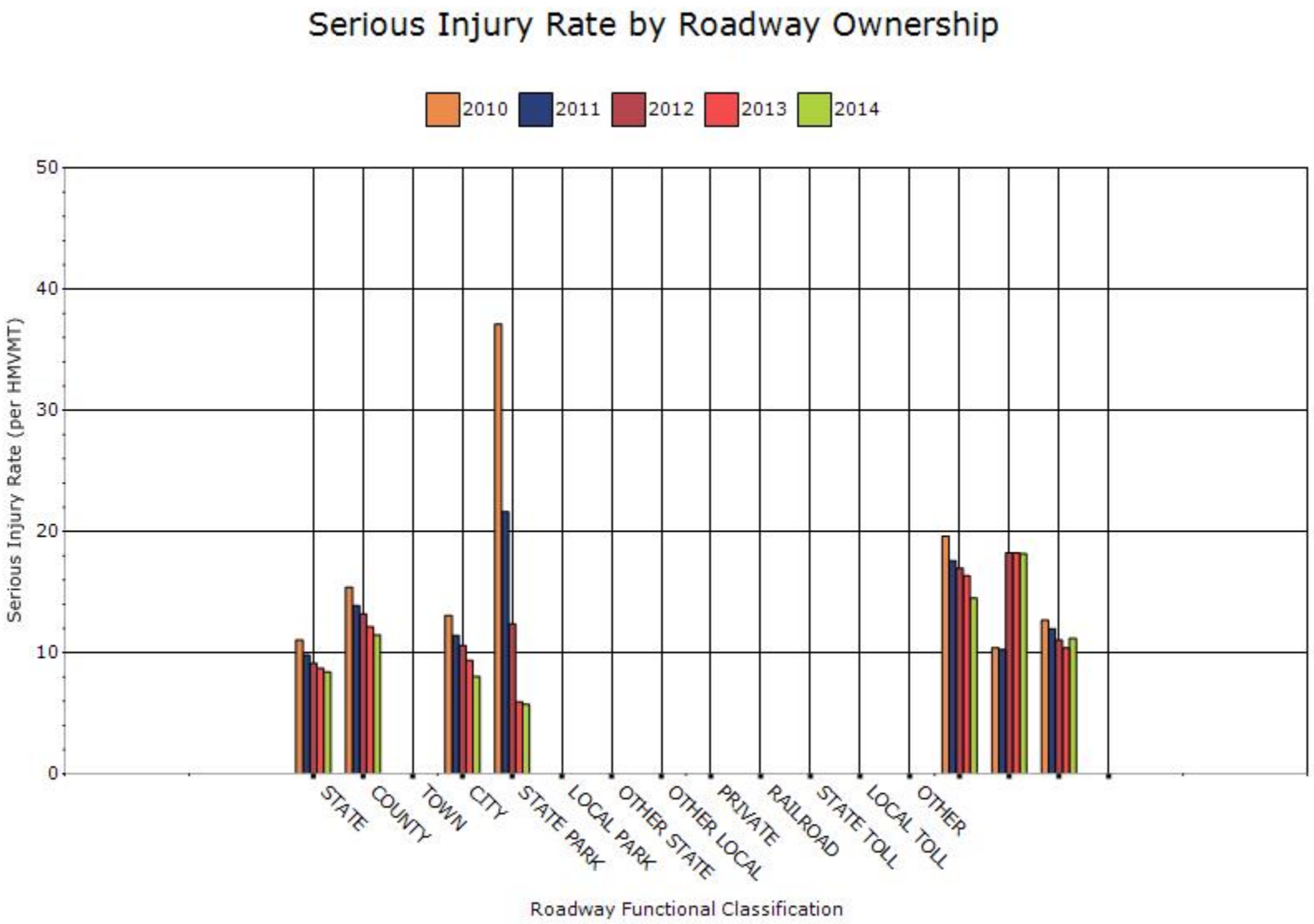
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	155.4	711.2	1.84	8.41
COUNTY HIGHWAY AGENCY	21.2	138.4	1.72	11.47
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	14.4	123.8	0.91	8.04
STATE PARK, FOREST, OR RESERVATION AGENCY	0.2	0.4	2.86	5.72
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	9.6	23	6.03	14.51

BUREAU OF INDIAN AFFAIRS	0.6	1.8	6	18.16
US FOREST SERVICE	3.8	32.8	1.3	11.18
NATIONAL PARK SERVICE	0.2	0	0.69	0


Number of Fatalities by Roadway Ownership
2010
2011
2012
2013
2014
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
2010
2011
2012
2013
2014
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
2010
2011
2012
2013
2014
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
2010
2011
2012
2013
2014
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.

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. Montana Highway Safety Stakeholders completed an update of the Montana CHSP in the spring of 2015. The updated CHSP formalizes Montana's vision of zero deaths and injuries on Montana's roads.

While the overall goal of the CHSP is zero fatalities and injuries, the CHSP update maintains an interim goal of halving fatalities and serious injuries from 1,705 in 2007 to 852 in 2030. The following is summary of the number of fatalities and serious injuries from 2006-2014:

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
2014 -- 1,158

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)	0.2	0.2	0.2	0.2	0.2
Serious injury rate (per capita)	0.6	0.6	0.5	0.5	0.5
Fatality and serious injury rate (per capita)	0.8	0.8	0.7	0.7	0.7

*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 drivers or pedestrians 65 years of age or older who were injured (based on severity) in the crash were tabulated. For reporting purposes, the State of Montana only evaluated crashes that resulted in a fatal injury or serious (incapacitating) injury to the older driver or pedestrian. Other occupants in the crash are not included in the calculation.

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) Injury Severity: Fatal Injury
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.

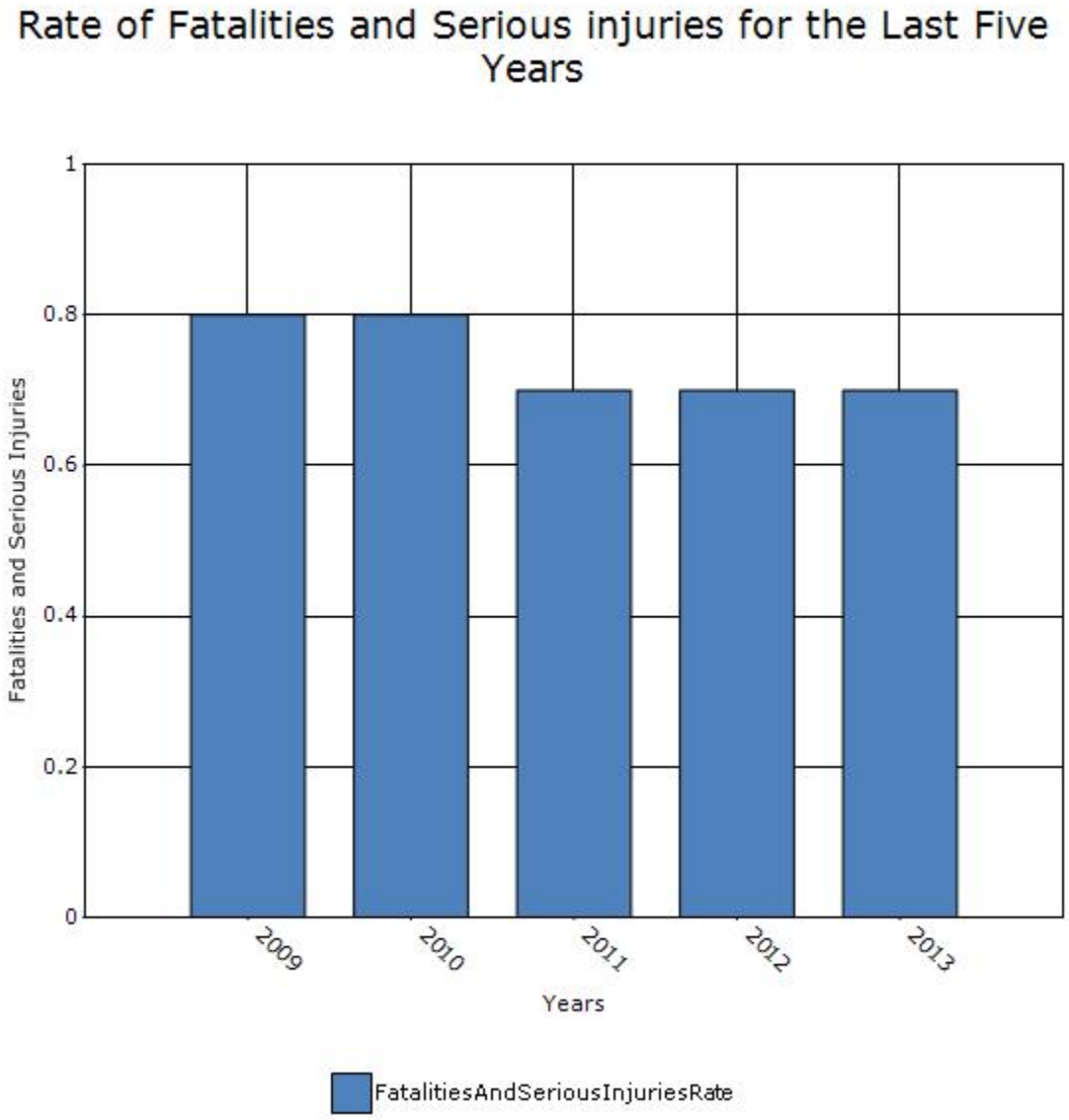
MDT then used a 5-year rolling average for each year of reporting. A similar query was run for crashes involving a pedestrian(s) that were 65 years of age and older for the same time period and 5-year rolling average was calculated.

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

All rates were rounded to the nearest tenth as described in the Section 148-Older Drivers and Pedestrians Special Rule Interim Guidance Report dated February 13, 2013. 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.



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-Other-Overall reduction in fatalities and incapacitating injuries from 1,704 in 2007 to 1,158 in 2014. HSIP is a component of the overall CHSP goal.

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.

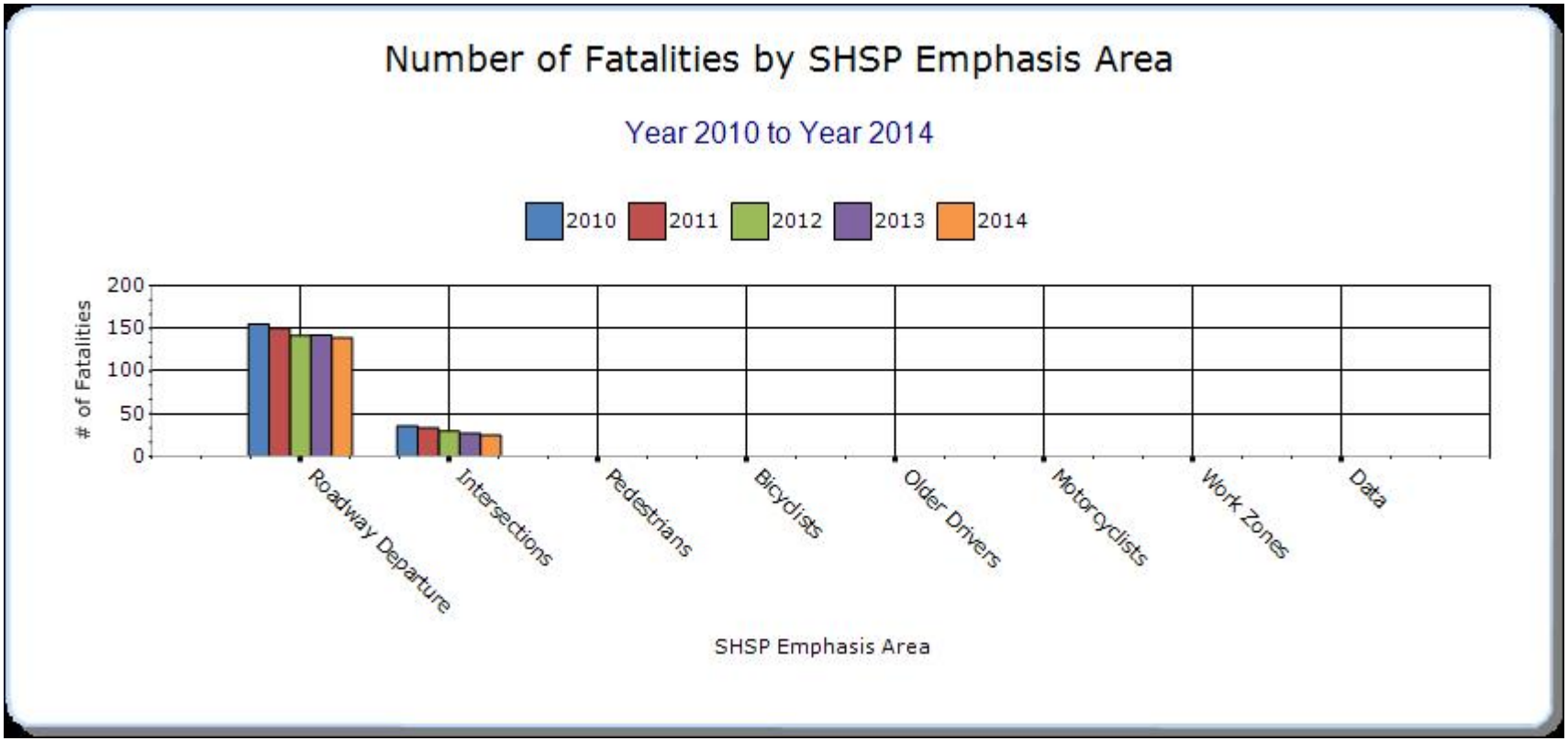
No significant program changes have occurred since the last reporting period.

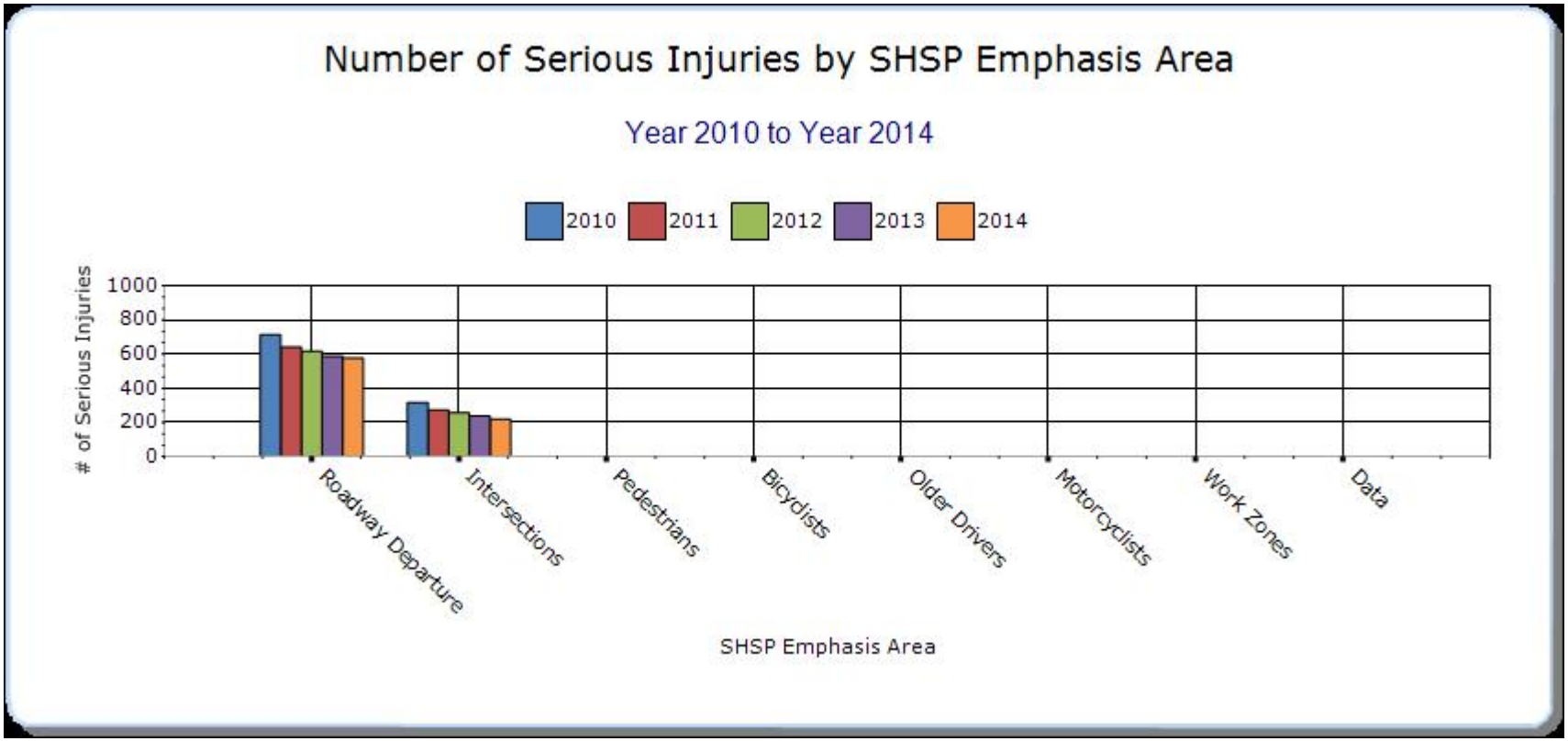
SHSP Emphasis Areas

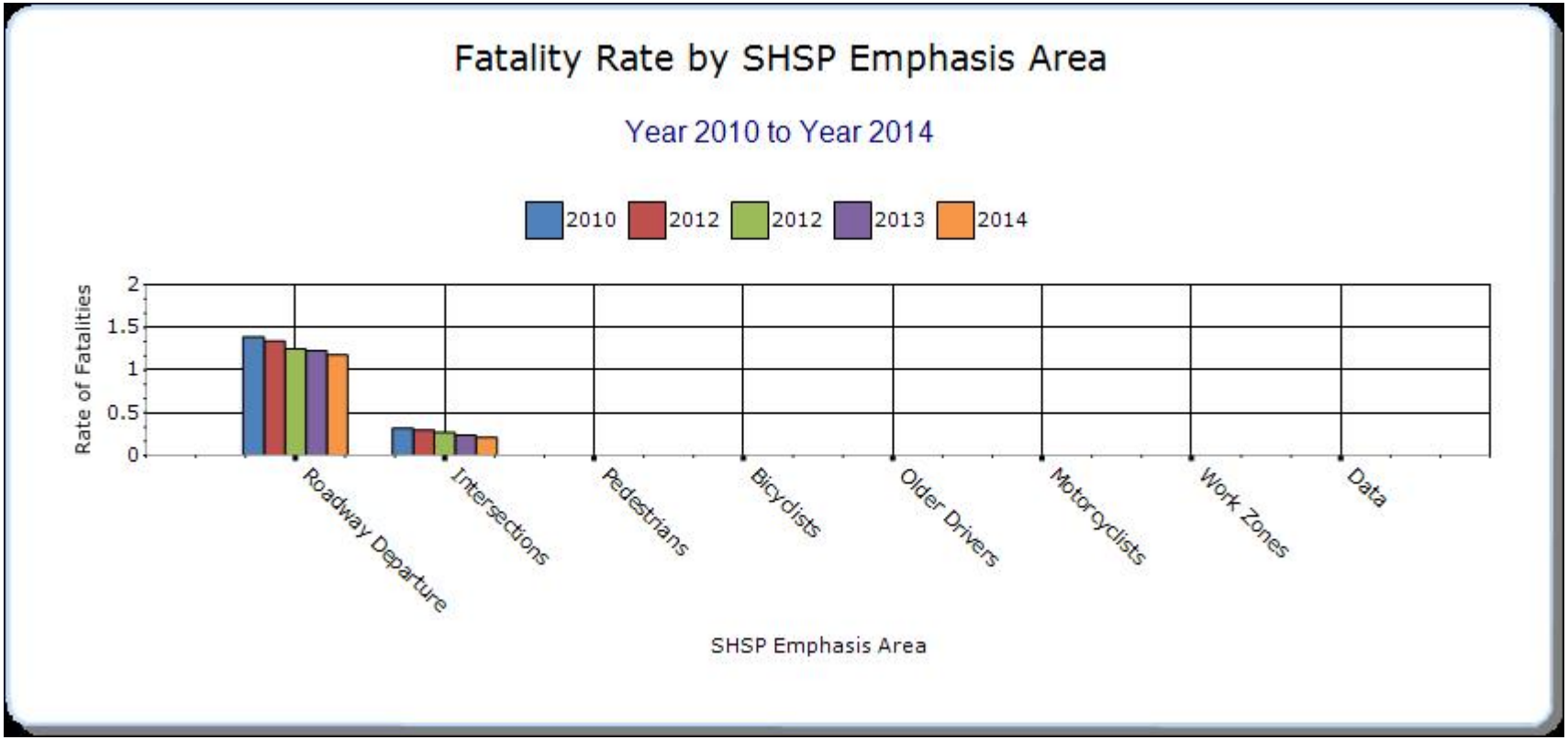
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

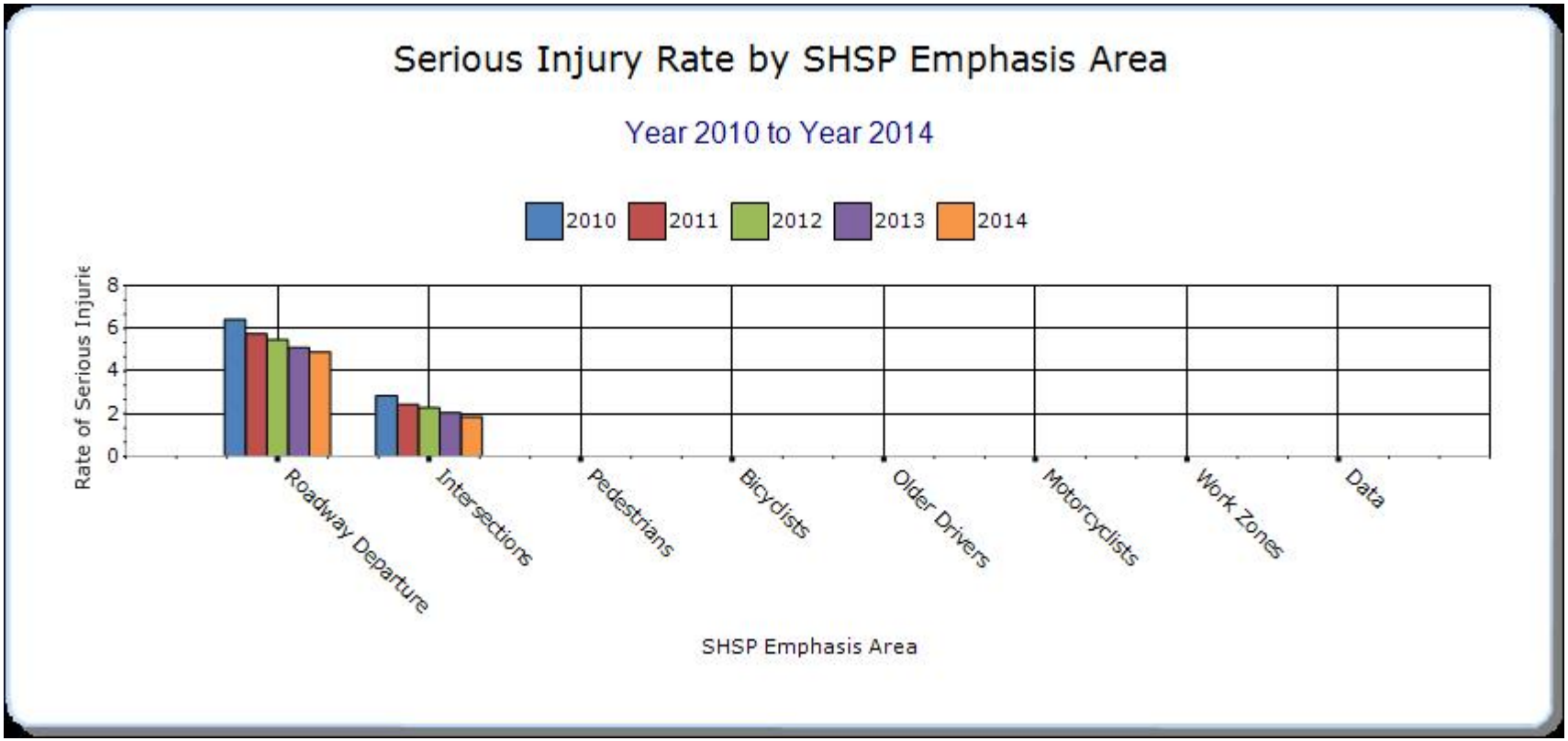
Year - 2014

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		139	576.8	1.18	4.9	0	0	0
Intersections		24.8	218.2	0.21	1.85	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# 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 2010 to Year 2014
2010
2011
2012
2013
2014
# 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 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
2
1.5
1
0.5
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

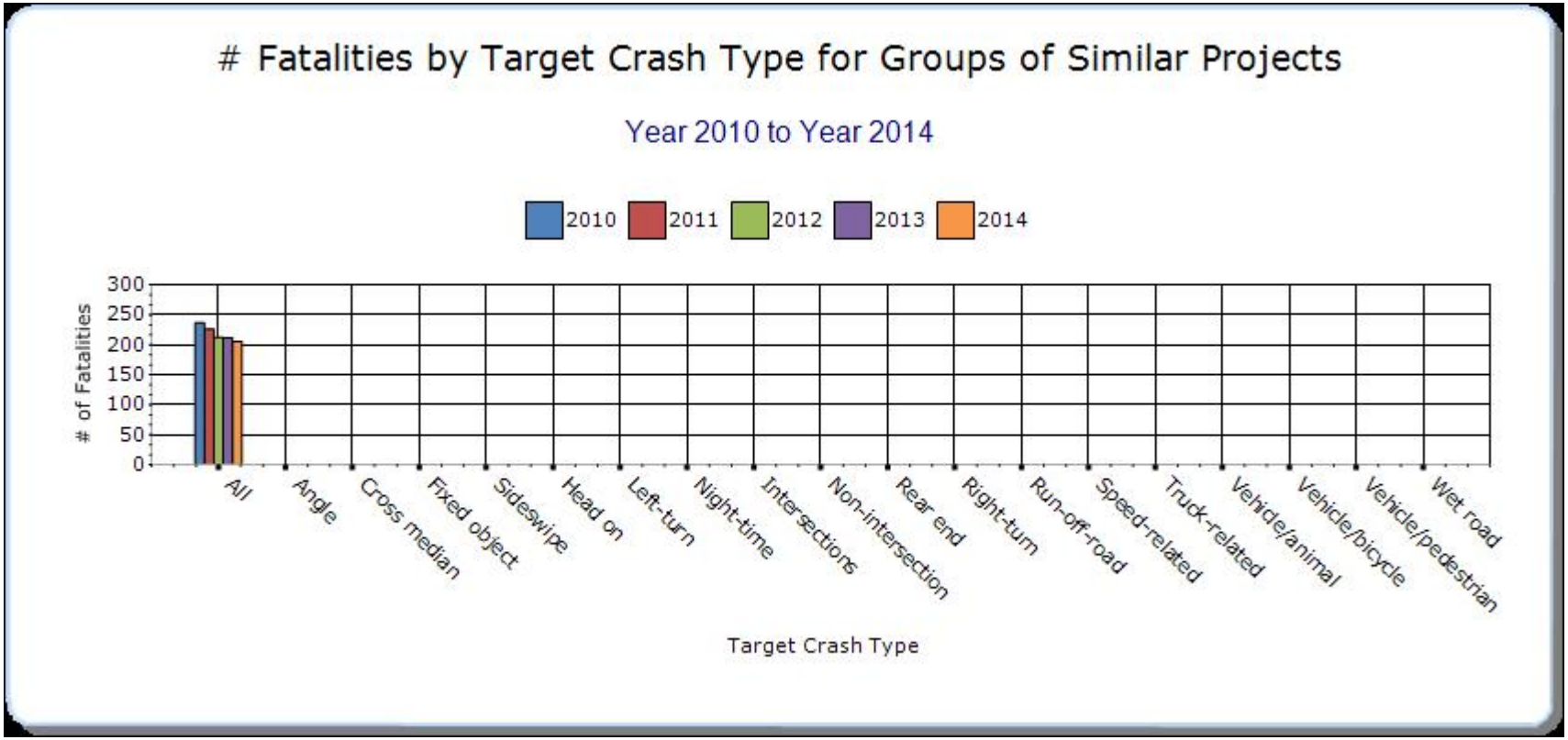

Serious Injury Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
8
6
4
2
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

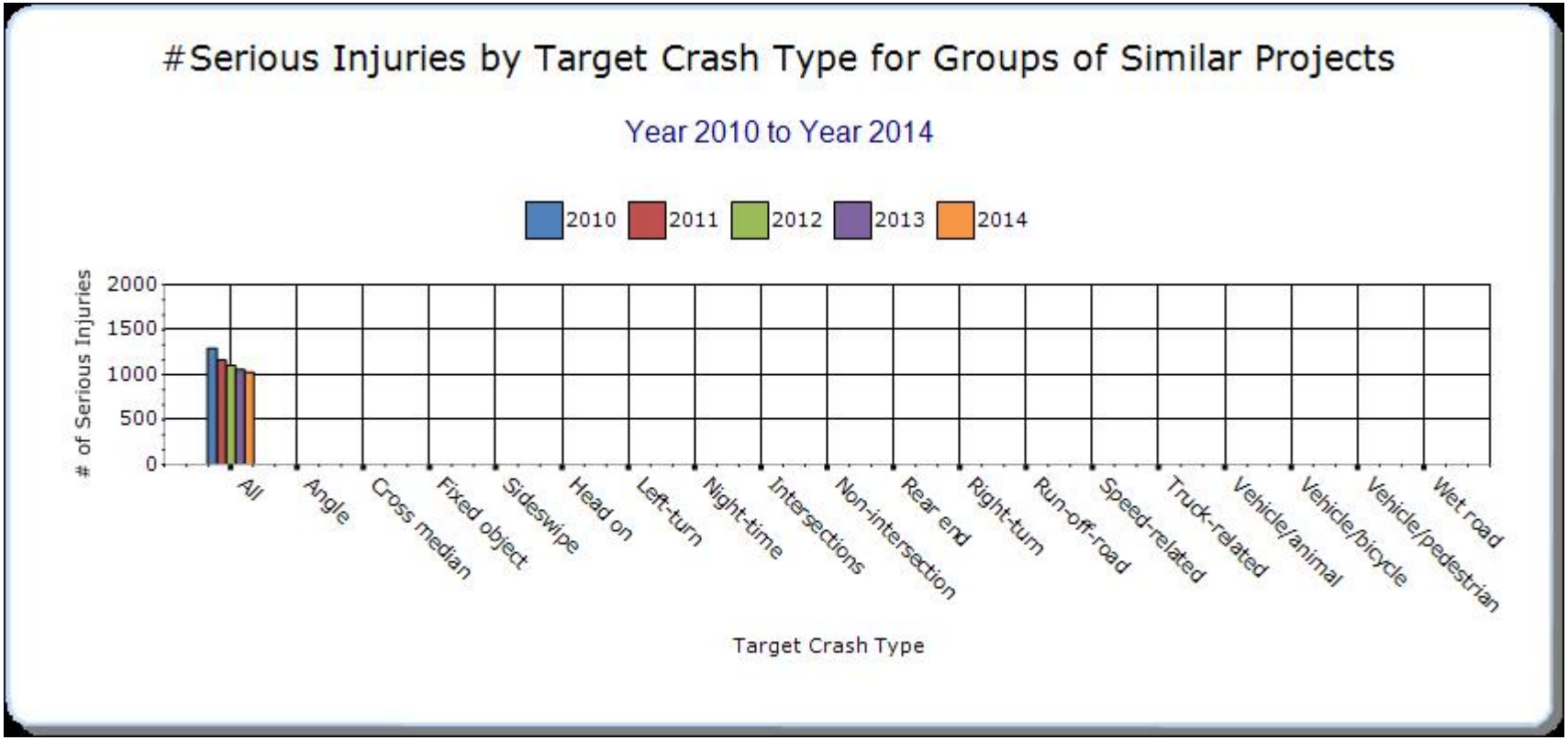
Groups of similar project types

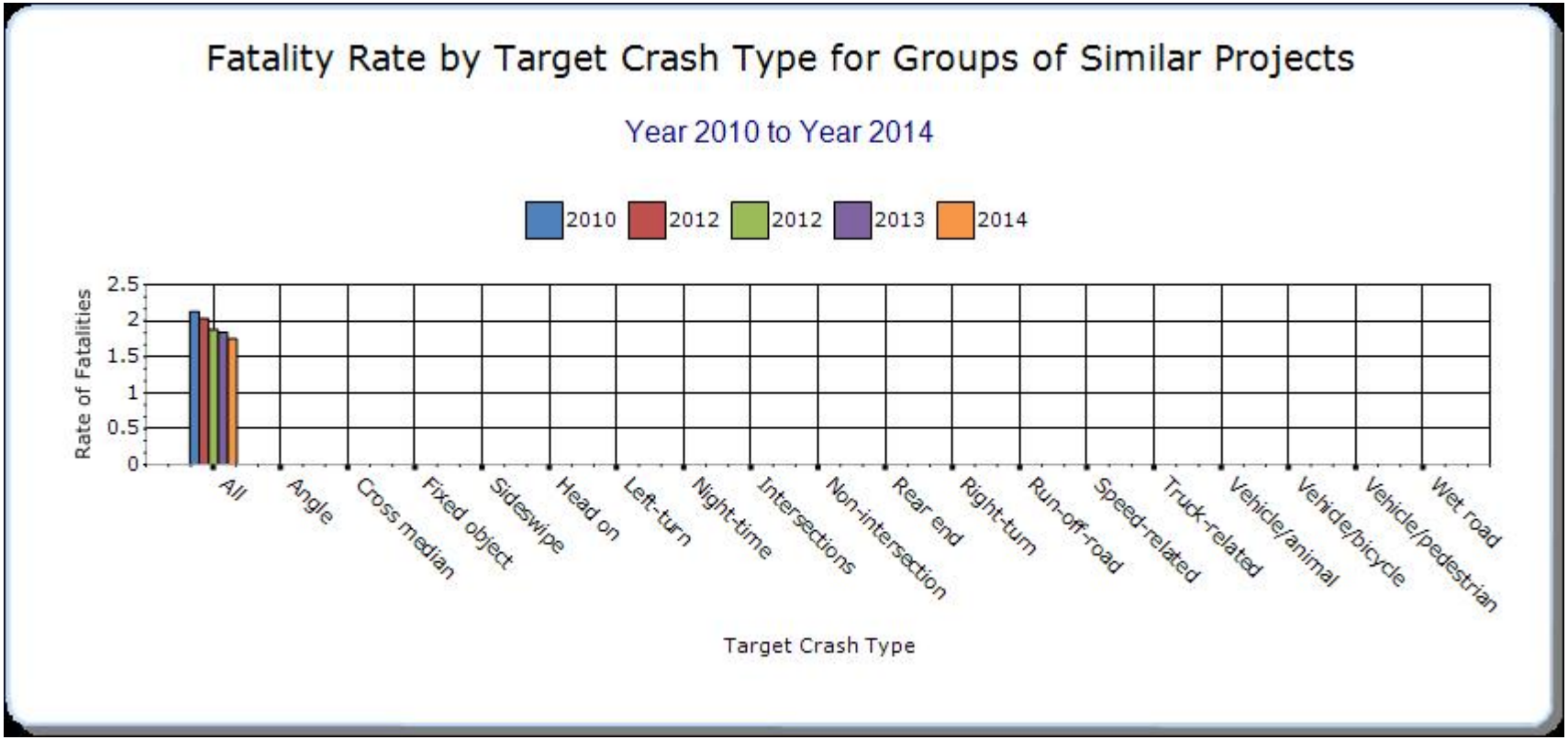
Present the overall effectiveness of groups of similar types of projects.

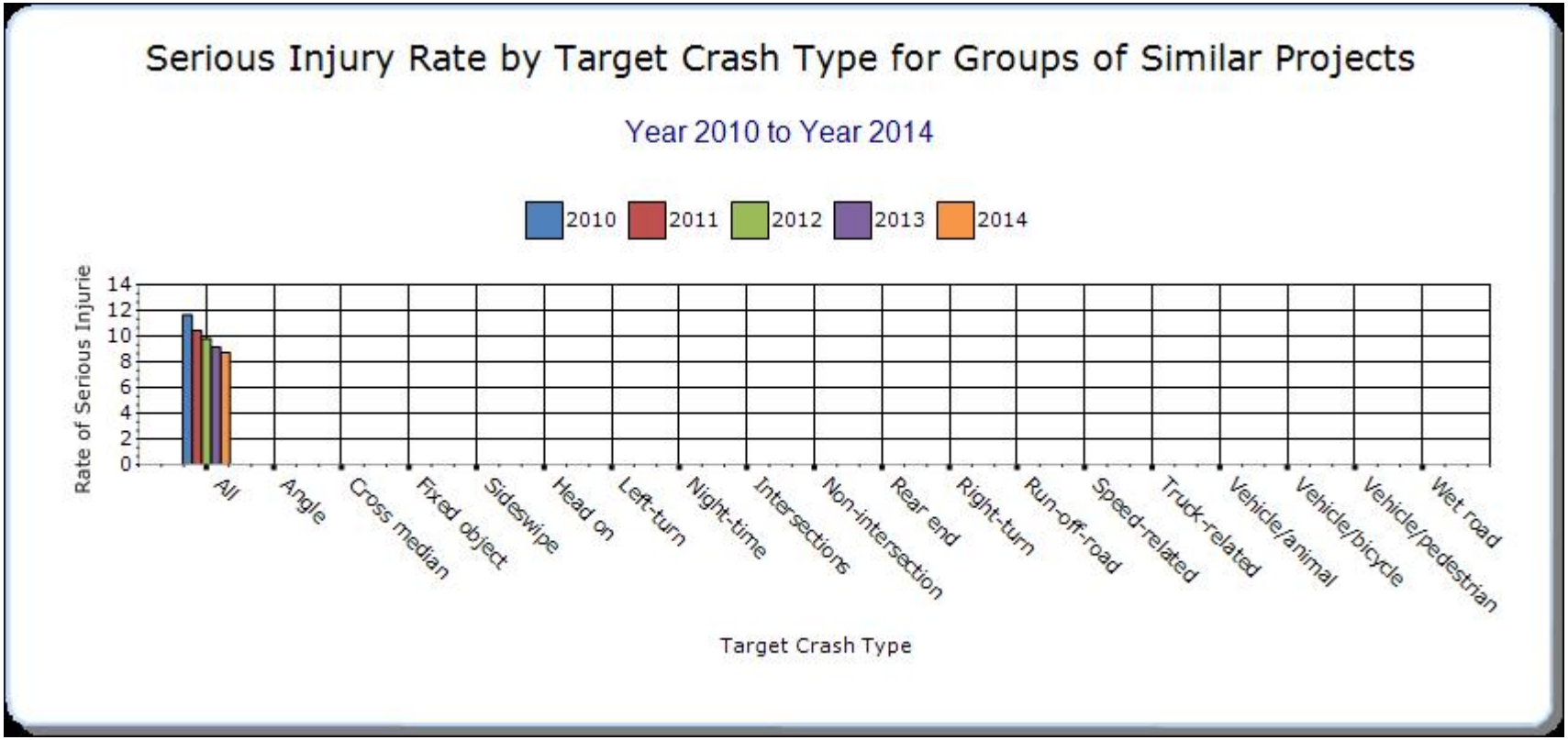
Year - 2014

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	205.8	1029.6	1.75	8.74	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
300
250
200
150
100
50
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
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 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
2000
1500
1000
500
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
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 2010 to Year 2014
2010
2012
2012
2013
2014
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
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

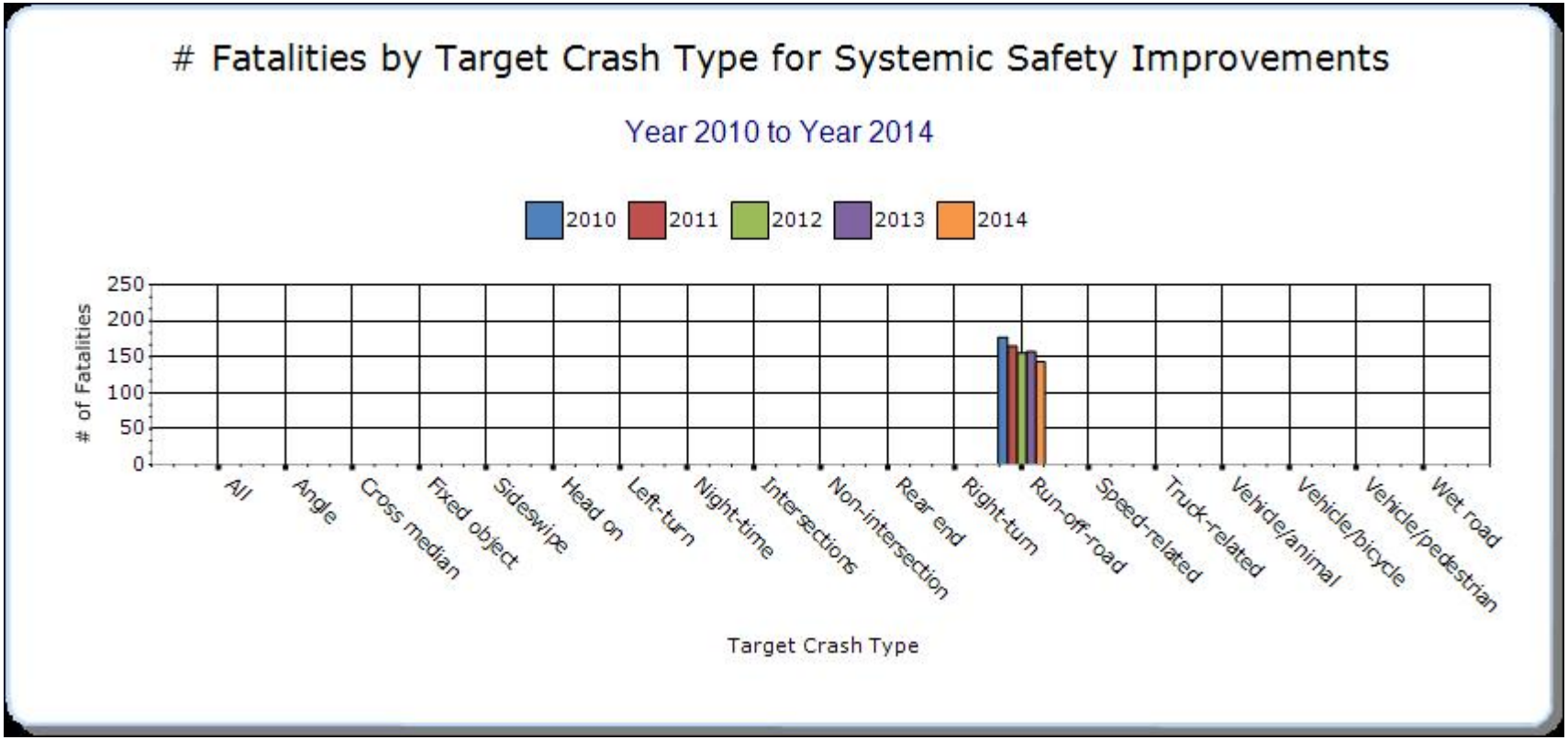

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
14
12
10
8
6
4
2
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

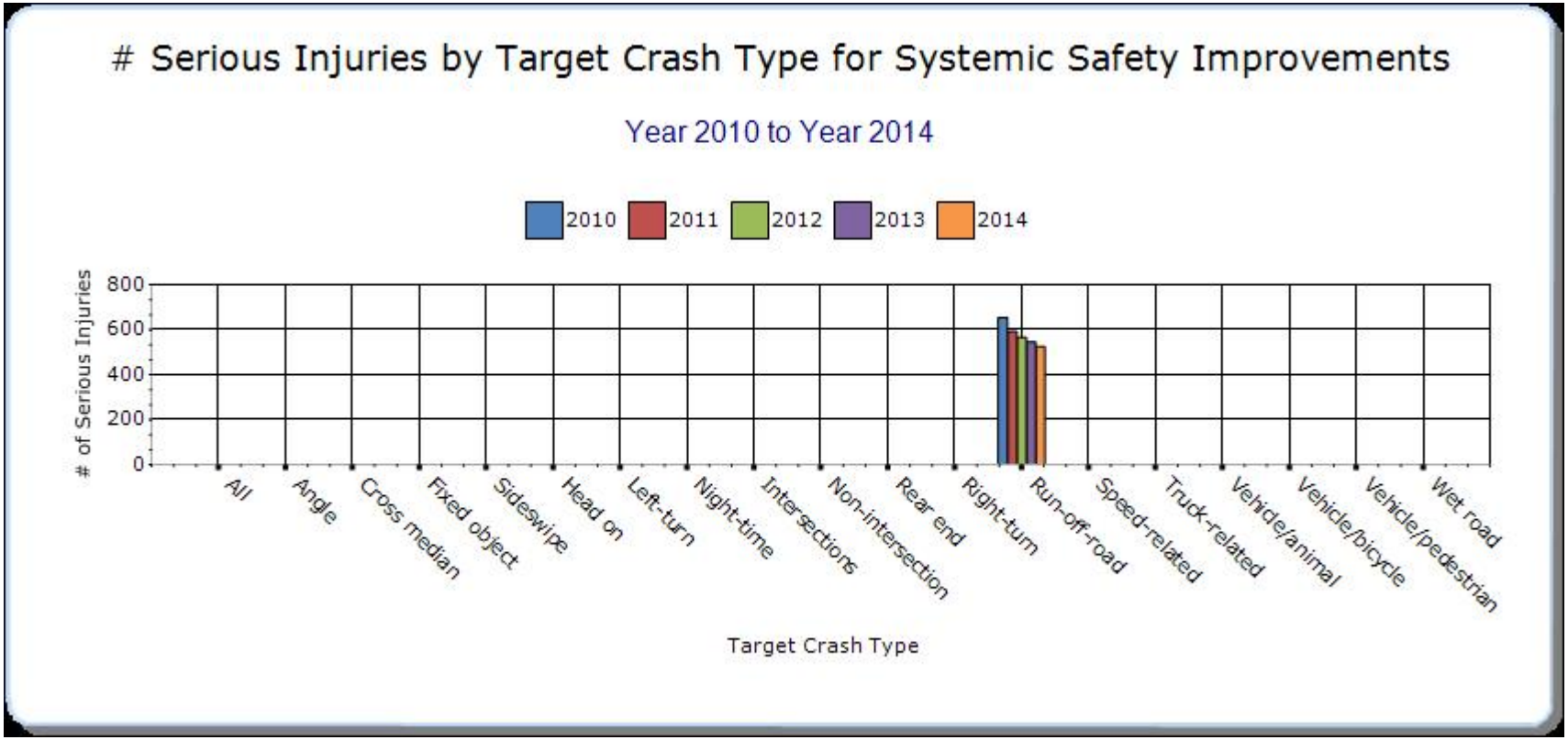
Systemic Treatments

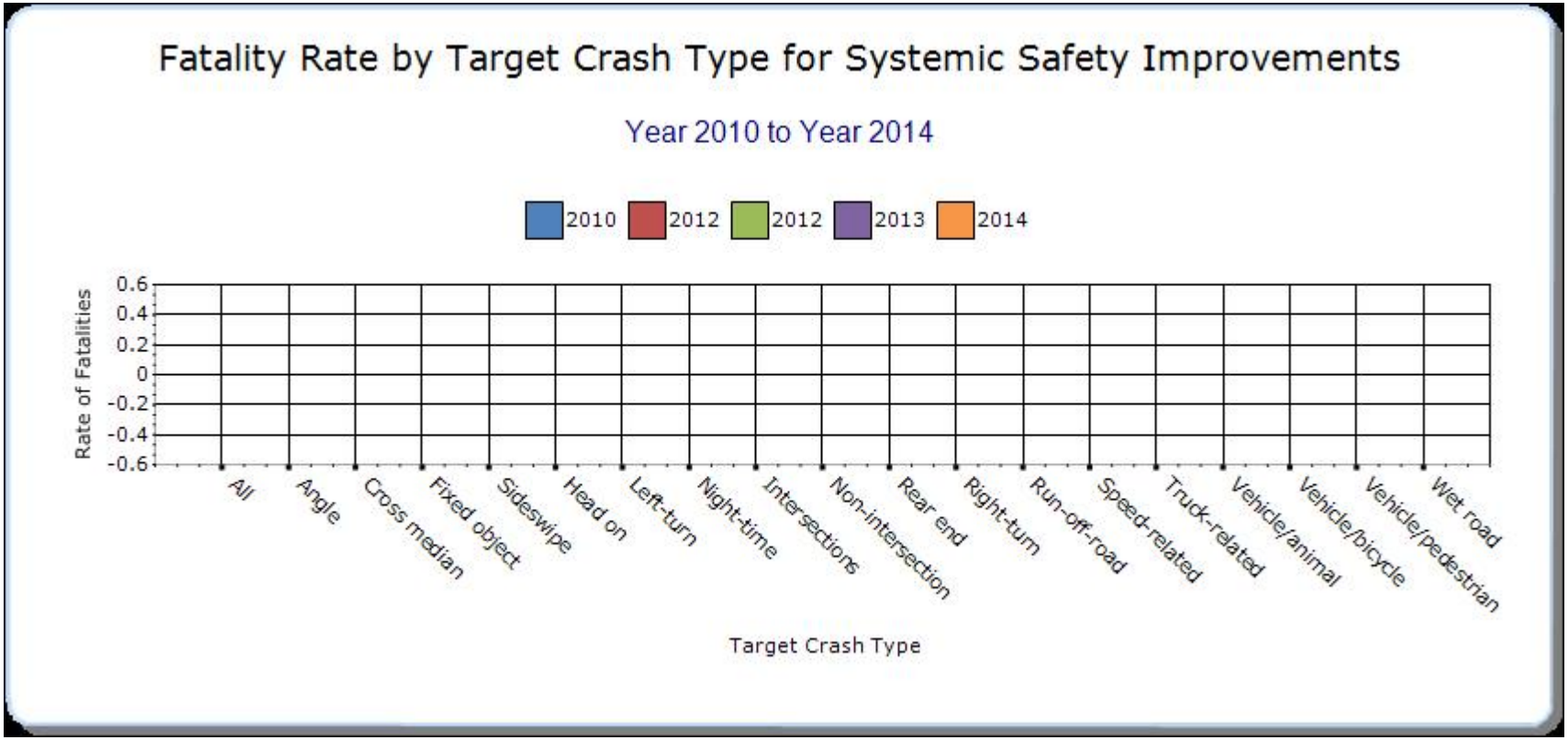
Present the overall effectiveness of systemic treatments.

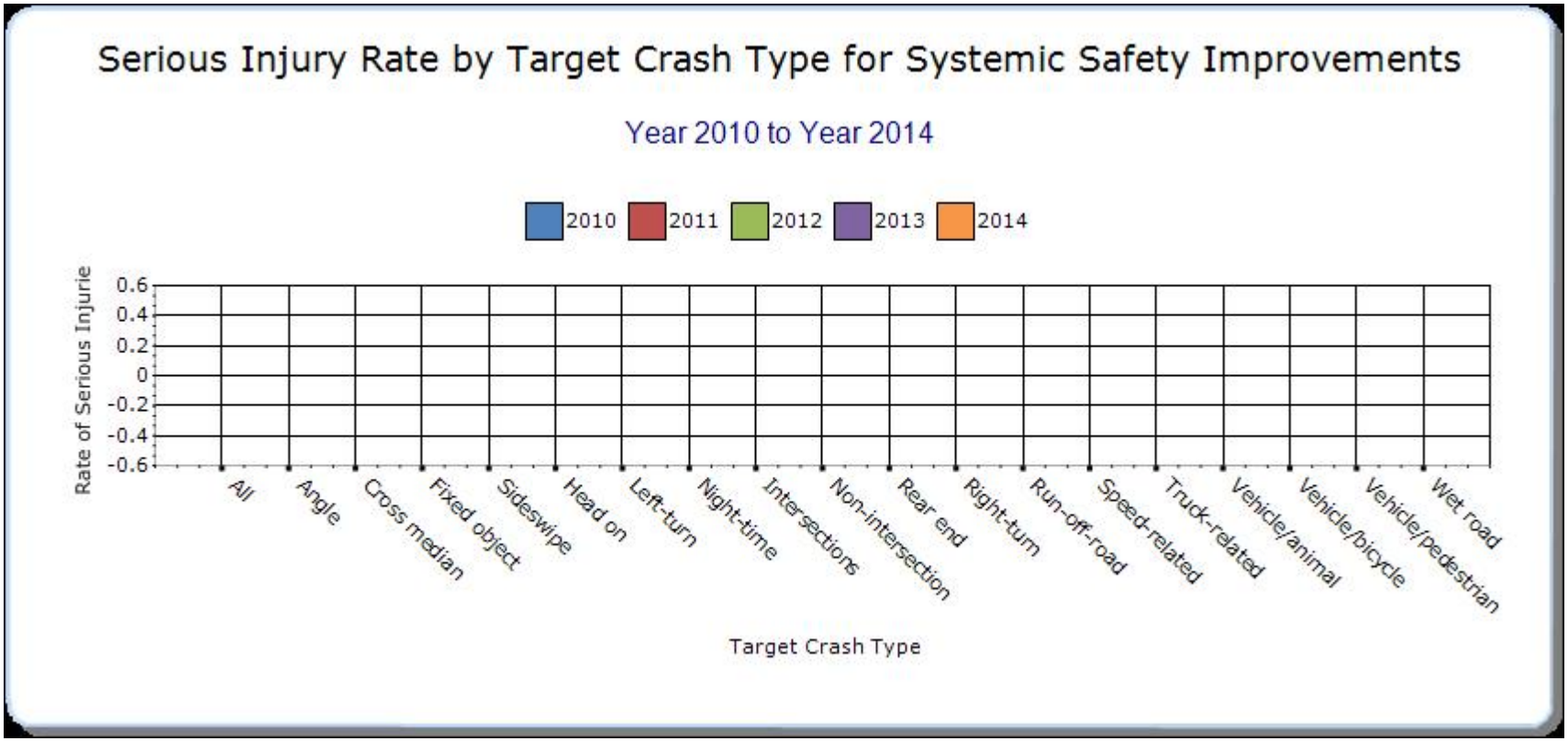
Year - 2014

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	Run-off-road	51.8	169.6	0	0	0	0	0
Rumble Strips	Run-off-road	91.2	356.4	0	0	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
250
200
150
100
50
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
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 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
800
600
400
200
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
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 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
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 Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

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 since 1997 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
2014 - 1,158

Project Evaluation

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-All Injuries	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-All Injuries	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
U-1806	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	1	0	10	17	28	0	1	1	7	9	41.6
S-232	Rural Major Collector	Alignment	Horizontal curve realignment	0	1	0	1	2	0	0	0	0	0	1.46
I-90	Rural Principal Arteria - Interstate	Roadway signs and traffic control	Curve-related warning signs and flashers	3	6	27	66	102	0	2	18	57	77	392.19
N-1	Rural Principal Arterial - Other	Roadside	Roadside grading	1	0	0	2	3	0	0	1	3	4	5.24
X-	Rural	Roadway	Roadway signs and traffic	0	3	3	15	21	0	0	7	12	19	4.73

81024	Major Collector	signs and traffic control	control - other											
P-60	Rural Minor Arterial	Roadway signs and traffic control	Roadway signs and traffic control - other	4	8	21	58	91	1	2	19	38	60	157.56
S-280	Rural Major Collector	Roadside	Roadside - other	1	1	4	7	13	0	1	2	4	7	224.21
P-52	Rural Minor Arterial	Roadside	Barrier- metal	0	1	2	5	8	0	0	0	5	5	2.72

Optional Attachments

Sections	Files Attached
Program Structure: Program Administration	HSIPAPPLICATION 2010.pdf

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.