Highway Safety Improvement Program

Data Driven Decisions

Wisconsin
Highway Safety Improvement Program
2014 Annual Report

Prepared by: WI

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

The following report outlines the details of projects obligated in SFY2014 for Wisconsin's Highway Safety Improvement Program (HSIP). Also included are program methodologies, historical crash data and safety trends, information on subprograms, and project evaluation data.

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.

HSIP applications from local governments are solicited by the Regions as part of the regular HSIP Program. All applications derived from local governments are selected and submitted voluntarily by local governments. Projects on the local system or sponsored by local governments must meet the same requirements and follow the same process as HSIP applications submitted by WisDOT Regions for improvements on the State Trunk Network. Exceptions to this equal competition requirement are local projects identified on the Local 5% Report. Local 5% Report projects follow a different set of requirements that streamline the approval process and allows the state's most severe locations to be addressed appropriately. The Local 5% Report was not continued in SFY2014 due to its elimination in

MAP-21. There are, however, projects currently programmed within the HSIP that were identified and programmed via the Local 5% Report process.

In addition, Wisconsin has continued moving forward in implementing a data-driven High Risk Rural Roads Program (HRRRP) despite its formal elimination in MAP-21. Wisconsin has developed a statewide data analysis methodology allows the focused use of safety funding to improve eligible segments on county rural roads exhibiting particular run-off-road non-intersection crash issues. A primary goal of the HRRRP is to install low-cost safety treatments on these roadways to mitigate KA crash rates as quickly as possible. It is unlikely these county trunk highways would receive federal investments outside of the HRRRP. In SFY 2014, seven projects with estimated costs totaling approximately $1M were approved for various of years of the HSIP on county highway systems throughout the state.

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

☒ Design

☒ Planning

☐ Maintenance

☒ Operations

☒ Governors Highway Safety Office

☐ Other:

Briefly describe coordination with internal partners.

The HSIP Program is managed by WisDOT's Division of Transportation Investment Management (DTIM) and the Bureau of State of Highway Programs (BSHP). DTIM/BSHP makes all final application approvals or denials and related project change or cost increase requests. However, DTIM/BSHP coordinates its efforts with several internal partners that both directly and indirectly influence the decision making process. Below is a summary of these partners and their role in the program.

- Division of Motor Vehicles (DMV): DMV receives, edits, and maintains all law enforcement crash report files.

- Traffic Safety Council (TSC): The TSC is comprised of representatives from Division of Transportation System Development (DTSD), DTIM, DMV, Division of State Patrol (DSP), and various Executive Offices. This group is charged with developing and maintaining the Wisconsin Strategic Highway Safety Plan (SHSP), which helps guide the safety efforts of the HSIP Program. The TSC's primary effort in SFY2014 was updating the Stragetic Highway Safety Plan (SHSP) for approval by the WisDOT Secretary within the 2014 calendar year. Notably, the TSC held a SHSP Peer Exchange in October of 2013 and subsequently facilitated the activities of issue area task forces. These issue area task forces developed SHSP language and statewide safety goals that reach beyond the realm of WisDOT and into the activities of local governments, court systems, law enforcement agencies, non-profits, and advocacy agencies statewide to communicate the intergovernmental, interdisciplinary, and comprehensive approaches required to increase transportation safety statwide. The most recent SHSP document was approved the Transportation Secretary in July of 2011. The revised SHSP is pending approval as of June 2014.

- Safety Engineer Executive Group (SEEG): This is a high-level group comprised of representatives from DTSD and DTIM management. Its focus is to identify safety trends and issues to develop and offer direction and initiatives to both the HSIP Program and the TSC on important safety engineering issues throughout the state. For example, the SEEG played a critical role in expanding WisDOT's Cross Median Crash (CMC) Initiative in the spring of 2014. By approving a change in the definition of CMC crashes to include single vehicle crashes and expanding crash rate warrants, SEEG enabled additional opportunities for projects to be constructed to address CMC problem areas across the state.

- Traffic Safety Engineering Workgroup (TSEWG): TSEWG is comprised of the State HSIP Coordinator, State Traffic Safety Engineer, and the Regional Traffic Safety Engineers. In some cases, the Regional HSIP Coordinators also participate. This group identifies and evaluates potential safety initiatives both within and outside of the HSIP Program, provides peer support, and reviews proposed HSIP projects. After a group evaluation, a recommendation to approve or not approve is forwarded to the State HSIP Coordinator for final review.

- State Project Oversight Engineers: The State Project Oversight Engineers are a critical component of the joint process with the TSEWG for application review and approval. The DTSD State Project Oversight Engineers, Regional Traffic Safety Engineers, the State Traffic Safety Engineer, and the State HSIP Coordinator will provide a consensus approval or disapproval of HSIP funding after a comprehensive in-person peer review. Each Region has one Project Oversight Engineer. State Project Oversight Engineers only review applications originating from the Region in which they are assigned. This consensus approval or disapproval is advisory to DTIM/BSHP.

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

☐ Metropolitan Planning Organizations

☐ Governors Highway Safety Office

☐ Local Government Association

☒ Other: Other-University of Wisconsin-Madison's Traffic Operations and Safety Laboratory (UW TOPS Lab)

☒ Other: Other-FHWA

☒ Other: Other-LTAP/Individual counties and municipalities

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-Revised Program Management Manual/HSIP Guidelines

- Revised Program Management Manual/HSIP Guidelines: Efforts were made to significantly revise the FHWA-approved HSIP Guidelines within WisDOT's Program Management Manual (PMM). The previous version evolved over a period of years without a cohesive edit, resulting in a confusing and disorganized document that failed to address, in writing, many nuances of HSIP program management. BSHP revised the document, reorganized its layout, authored completely new sections, and offered cross references to increase its usability and relevance within daily HSIP operations. The target audience of the revised document includes Region HSIP Coordinators and Central Office staff. FHWA approved these new HSIP Guidelines on 4.14.2014.

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

WisDOT makes continuous efforts to strengthen the administration and implementation of the HSIP Program. Several changes made since the last reporting period include, but are not limited to:

1. Revision of the FHWA-approved HSIP Guidelines within WisDOT's Program Management Manual
2. Simplification of the scope change application process so project sponsors can better plan and prepare for various project delivery scenarios
3. Introduction of the Locations of Interest Report (LOIR) and the implementation of B-level crash severities within the statewide safety screening process
4. Introduction of a new requirement for project sponsors to submit a Scoping Intersection Control Evaluation (ICE) on applicable projects as part of the standard HSIP application document to better align with existing statewide policies within the Facilities Development Manual (FDM).
5. Increase of the companion funding source/copay concept rule within WisDOT's HSIP Guidelines from $1.5M to $1.7M.

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-Beam Guard	☒ Other: Other-High Risk Rural Roads	

Program: **Median Barrier**

Date of Program Methodology: **1/1/2005**

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-All CMC	☒ Lane miles	☐ Roadside features
	☐ 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

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Non-competitive application process

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	
☒ Available funding	1
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	
☒ CMC crash rate threshold	2

Program: **Other-Beam Guard**

Date of Program Methodology: **8/22/2011**

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-Guardrail end inventory	☒ Lane miles	☐ Roadside features
	☐ 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-Guardrail end inventory

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Non-competitive application process

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
- ☒ Available funding 1
- ☐ Incremental B/C
- ☐ Ranking based on net benefit
- ☐ Other

Program: **Other-High Risk Rural Roads**

Date of Program Methodology: 1/1/2013

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-All ROR Crashes	☐ Lane miles	☐ Roadside features
	☐ 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

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

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
- ☒ Available funding 3
- ☐ Incremental B/C
- ☐ Ranking based on net benefit
- ☐ Other

☒Ranking by filtered KA crash rate method	1
☒Local support of process	2

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

4

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-County Traffic Safety Commission recommendations

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 change

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

Project Evaluation Factor (PEF)

The PEF is a tool for ranking the relative merits of a group of projects, and should not be compared to a benefit/cost analysis.

Accident reduction benefits are one of the elements needed to justify infrastructure projects for the HSIP program. Establishing value associated with loss of life and quality of life is obviously very challenging. When developing values related to various types of crashes, it is necessary to consider, among other things, the available data regarding crash values, the relative causes of different types of crashes and the ability of traditional treatment options to address safety issues. Following identification of crash problems, and treatment solutions, projects are compared on a relative basis so that funding decisions can be made.

The following values per crash are to be used in the Excel spreadsheet program for estimating various types of crash reductions:

Property damage crashes (Type PDO)	$10,000
Possible injury (Type C) crashes	$50,000
Non-incapacitating injury (Type B) crashes	$200,000
Incapacitating injury (Type A) crashes	$200,000
Multiple incapacitating injury (Type A) crashes	$230,000
Each incapacitating (Type A) crash in combination with one or more Fatal (Type K) crashes	$230,000
Fatal (Type K) crash	$200,000
Multiple fatal (Type K) crashes	$250,000

The "Multiple incapacitating injury (Type A) crashes," "Each incapacitating injury (Type A) crash in combination with one or more Fatal crash/es," and "Multiple fatal crashes" crash severity values are triggered if the multiple or combination scenarios occur at any point throughout the required five year analysis period.

The current values used within the PEF calculation are influenced by the Highway Safety Manual (HSM) developed by the American Association of State Highway and Transportation Officials (AASHTO). The above crash severity values are adjusted to approximate 2011 dollars using the Consumer Price Index, correlating to the most recent year of available crash data.

Although Wisconsin designs solutions to reduce all crashes, a number of targeted engineering, educational and enforcement efforts have been implemented with the defined goal of reducing crashes involving serious injuries and fatalities. Because of this focus on reducing serious injuries and fatalities, the PEF scoring mechanism assigns higher values to reoccuring Type A and Fatal crashes.

An Excel spreadsheet program is available that performs a safety project analysis and computes the PEF. It should be used for all standard HSIP projects, except for minor installations of safety hardware, such as beam guard, impact attenuators, etc. Operational costs should be included in the computations for signal projects. It is critical that appropriate crash reduction factors are used to calculate PEFs. More information on the use of reduction factors is below.

Projects require a PEF of 1.0 or greater for approval. However, the HSIP Review Committee acknowledges the PEF contains many variables and that sometimes additional expense is needed to

sufficiently address a safety issue. As such, the HSIP Review Committee can consider applications with a PEF greater than or equal to 0.9 for approval. Projects with a PEF less than 0.9 will not be approved. Projects treating LOIR locations require a PEF of 0.5 or greater for approval. LOIR locations with a PEF less than 0.5 will not be approved. After a project is approved, all project funding cap increase requests for projects over $200,000 in total costs must include a recalculated PEF spreadsheet. The recalculated PEF must be greater than or equal to 1.0 to receive cost increase approval consideration.

All data fields should be inputted to ensure accurate and consistent PEF calculations across projects. The most recent five years of available crash data is required.

Construction, such as intersections, left turn storage lanes and geometric improvements, requires justification with a PEF. Traffic signals must meet warrants in addition to having a favorable PEF.

The following additional information and guidance is provided for the Regions and local officials on how to use the crash data.

1. Rather than use typical reduction factors for various types of improvements in the spreadsheet, the following more site-specific approach should be used:

a. Gather all crash reports from the most recent 5 year period for the site under consideration. Local officials are required to submit this information. Applicants may use 6th year data as Year 1 of the required consecutive 5 year data period. The Division of State Patrol Bureau of Transportation Safety does not have an established annual deadline for finalizing crash data. For example, if the current calendar year is 2014, 2008-2012 or 2009-2013 data is acceptable for required crash histories.

b. Plot collision diagrams (include all crashes except deer hits). Locals provide for their requests.

c. Identify those crashes that likely would have been avoided if the proposed safety improvement had been constructed.

d. Estimate what percentage of those crashes, by crash type, would be reduced by constructing the proposed improvement and enter that percentage on the spreadsheet. Several resources are available to help determine the use of appropriate crash modification and reduction factors. Contact the State Traffic Safety Engineer with any immeidate questions related to CMFs and/or CRFs. The Crash Modification Factors Clearinghouse and FHWA Crash Reduction Factors Desktop Reference can be used to help determine appropriate CMFs and CRFs. In addition, historical CMFs and CRFs used in previous applications can be found in the HSIP Application Database on the DOTNET server. Please contact the Statewide HSIP Coordinator for access to the HSIP Application database.

e. The program will then compute the total crash reduction factor.

2. To aid the Regions in identifying exceptionally hazardous locations, average crash rates for sections of various types of streets and highways, and average intersection crash will be provided.

Program Approval Process

Program approval is a joint process between the Regional Safety Engineers, the Statewide Traffic Safety Engineer, applicable Regional Project Oversight Engineers, and the Statewide HSIP Coordinator. These indiviuals together comprise the HSIP Review Committee and are advisory to BSHP.

Efforts will be made to streamline the approval process by gathering all members of the HSIP Review Committee at in-person HSIP Application Review Meetings after the Standard or Mid-Cycle HSIP application deadline. These meetings will serve as a comprehensive peer review and ultimately provide a consensus approval or disapproval of application submittals.

HSIP applications occasionally a "tabling" to allow time for further review led by the application's primary Regional Safety Engineer contact. Depending on the timeline of this work, efforts to generate a HSIP Review Committee consensus approval or disapproval on the subject application will occur over email or at the next bi-montly TSEWG meeting.

BSHP will distribute the HSIP approval memos containing a regional HSIP project listing and FIIPS loading instructions to the Regions for implementation as soon as possible after approval.

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)	22674847	82 %	22662247	82 %
HRRRP (SAFETEA-LU)	2039393	7 %	2039393	7 %
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer – Section 164	100800	0 %	100800	0 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)				
State and Local Funds	2757227	10 %	2755827	10 %

Totals	27572267	100%	27558267	100%

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

18 %

How much funding is obligated to local safety projects?

18 %

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

3 %

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

3 %

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?

48 %

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

1. A significant increase in federal funds in 2005 and again in 2012 has historically made it difficult to fully obligate available funding on projects that meet Wisconsin's high safety benefits standards outlined in the state's HSIP Guidelines. Wisconsin has traditionally been hesitant to implement broad system-wide safety upgrades (e.g., blanket median barrier upgrade decisions, expansive sign inventories and replacements, etc.) with available HSIP funding due to the lack of data-supported evidence to justify such large expenses. As such, standalone projects that can feasibly demonstrate expected data-supported safety benefits have received funding priority. This makes it more difficult to quickly spend available increased funding levels. WisDOT is exploring options to better and more fairly integrate systemic-type safety treatments within the dynamics of the current process that is more focused on spot treatments. Language included within the most recent version of WisDOT's HSIP Guidelines gives WisDOT the capability to test systemic treatment approval processes via pilot efforts before formal HSIP Guidelines would be written by WisDOT and approved by FHWA.

2. A primary impediment to implementing the HSIP has been successfully incorporating natural project attrition into program planning to deliver a full HSIP that fully utilizes federal sources. Smaller projects (particularly on the local system) have traditionally experienced project delays with greater frequency than larger projects. This could be for a variety of reasons, like local governments' unfamiliarity with HSIP and federal rules and regulations, lack of priority on smaller projects, a HSIP project's interaction with larger tied projects experience delays, etc. Issues are shared between state and local projects. WisDOT undertakes outreach and education efforts with local governments in conjunction with partners like LTAP to ensure local governments are more familiar and comfortable with the HSIP and Federal-aid process at the onset of potential involvement. WisDOT has also adjusted application deadlines to better align with the realities of the chronology of project planning and development internally on WisDOT state projects. This will reduce the number of project delays and/or cancellations that ultimately affect HSIP federal obligation levels.

The delay or cancellation of larger projects imposes significant impacts on program management. Large projects can become delayed or canceled for a variety of reasons. WisDOT accommodates these large changes in approved projects through the scope change application process, but occasionally projects

still get canceled. WisDOT attempts to position the HSIP to absorb these large project shifts by identifying other approved projects to mark advanceable as candidates for expedited delivery should other projects drop out of the program.

3. Outdated parameters used to establish certain HSIP Guidelines rules and regulations can limit the potential utilization of HSIP federal funds. WisDOT has taken steps within SFY14 to address out-of-date Guidelines. For example, the project size triggering the companion funding source/copay concept was increased from $1,500,000 to $1,700,000 to reflect inflationary increases. Under certain circumstances, the HSIP Guidelines now allow the companion funding source/copay concept to be eliminated on a case-by-case basis. In addition, cross median crash definitions and crash rate warrants were changed from Caltrans parameters established in the 1960s to current Wisconsin-specific values. This will unlock additional eligibility to treat data-justified locations with appropriate safety countermeasures. The HSIP Guidelines are monitored to identify opportunities to reflect current research and practices nationwide that enable the additional use of federal HSIP funds within Wisconsin.

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

None.

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
1000-08-58	Roadside Barrier end treatments (crash cushions, terminals)	0 Miles	368465.2	409405.78	HRRRP (SAFETEA-LU)		0	0	CTH	Roadway Departure	
1000-99-41	Non-infrastructure Data/traffic records	0 Miles	145363.5	161515	HSIP (Section 148)		0	0	VAR	Data	
1000-99-55	Non-infrastructure Data/traffic records	0 Miles	341112.6	379014	HSIP (Section 148)		0	0	VAR	Data	
1001-06-73	Roadside Barrier end treatments (crash cushions, terminals)	0 Miles	908823.67	1009804.08	HSIP (Section 148)		0	0	IH	Roadway Departure	
1053-02-63	Roadside Barrier end treatments (crash cushions, terminals)	0 Miles	10350	11500	HSIP (Section 148)		0	0	STH	Roadway Departure	
1053-02-74	Roadside Barrier end treatments (crash	0.289 Miles	106798.42	118664.91	HSIP (Section		0	0	STH	Roadway Departure	

	cushions, terminals)				148)						
1053-02-75	Roadway Pavement surface - high friction surface	0.217 Miles	426600	474000	HSIP (Section 148)		0	0	STH	Lane Departure	
1090-34-00	Roadway Pavement surface - high friction surface	0.05 Miles	29664	32960	HSIP (Section 148)		0	0	IH	Lane Departure	
1111-06-71	Roadside Barrier end treatments (crash cushions, terminals)	0 Miles	747000	830000	HSIP (Section 148)		0	0	USH	Roadway Departure	
1133-03-77	Roadside Barrier end treatments (crash cushions, terminals)	1.29 Miles	507146.17	563495.75	HSIP (Section 148)		0	0	USH	Roadway Departure	
1133-09-71	Roadside Barrier end treatments (crash cushions, terminals)	2.94 Miles	551057.97	612286.63	HSIP (Section 148)		0	0	USH	Roadway Departure	
1190-05-76	Roadway Pavement surface - high friction surface	0.19 Miles	217945.73	242161.92	HSIP (Section 148)		0	0	USH	Lane Departure	
1/4/1195	Access management Change in access - miscellaneous/unspecified	0.06 Miles	22500	25000	HSIP (Section 148)		0	0	USH	Intersections	

1195-01-74	Access management Change in access - miscellaneous/unspecified	0.06 Miles	181702.74	201891.93	HSIP (Section 148)		0	0	USH	Intersections	
1195-02-00	Access management Change in access - miscellaneous/unspecified	0.2 Miles	108000	120000	HSIP (Section 148)		0	0	USH	Intersections	
1200-03-74	Roadway Pavement surface - high friction surface	0 Miles	202426.83	224918.69	HSIP (Section 148)		0	0	USH	Lane Departure	
1206-04-62	Roadside Barrier end treatments (crash cushions, terminals)	8.2 Miles	1215000	1350000	HSIP (Section 148)		0	0	USH	Roadway Departure	
1/2/1310	Intersection traffic control Intersection traffic control - other	0.13 Miles	66188	73542.22	HSIP (Section 148)		0	0	STH	Intersections	
1370-02-77	Intersection traffic control Intersection traffic control - other	0.328 Miles	990000	1100000	HSIP (Section 148)		0	0	STH	Intersections	
1490-28-71	Access management Change in access - miscellaneous/unspecified	0.871 Miles	1275300	1417000	HSIP (Section 148)		0	0	USH	Intersections	

2/1/1520	Intersection traffic control Intersection traffic control - other	0.05 Miles	55800	62000	HSIP (Section 148)		0	0	STH	Intersections	
1530-01-74	Intersection geometry Intersection geometry - other	0.05 Miles	190595.27	211772.52	HSIP (Section 148)		0	0	USH	Intersections	
1540-00-02	Intersection traffic control Intersection signing - add basic advance warning	0 Miles	30600	34000	HSIP (Section 148)		0	0	LOC	Intersections	
2/5/1570	Intersection traffic control Intersection traffic control - other	0.02 Miles	112500	125000	HSIP (Section 148)		0	0	USH	Intersections	
1590-21-01	Roadway Roadway - other	0 Miles	24936	27706.67	HRRRP (SAFETEA-LU)		0	0	CTH	Roadway Departure	
1630-00-75	Intersection geometry Intersection geometry - other	0 Miles	301018.07	334464.52	HSIP (Section 148)		0	0	USH	Intersections	
1630-06-68	Roadway Roadway - other	3.31 Miles	723600	804000	HSIP (Section 148)		0	0	USH	Roadway Departure	
1647-09-74	Intersection geometry Intersection geometry	0.461 Miles	775297.09	861441.21	HSIP (Section		0	0	USH	Intersections	

	- other				148)						
1670-02-07	Alignment Alignment - other	2.04 Miles	648900	721000	HSIP (Section 148)		0	0	USH	Roadway Departure	
2070-08-00	Intersection traffic control Intersection traffic control - other	0 Miles	101708	113008.89	HSIP (Section 148)		0	0	CTH	Intersections	
2070-09-00	Roadway Roadway - other	0 Miles	176400	196000	HSIP (Section 148)		0	0	CTH	Intersections	
2160-15-00	Roadway Roadway - other	0 Miles	100800	112000	Penalty Transfer – Section 164		0	0	CTH	Intersections	
2215-00-01	Intersection traffic control Intersection traffic control - other	0 Miles	98345.7	109273	HSIP (Section 148)		0	0	LOC	Intersections	
2216-02-00	Intersection traffic control Intersection traffic control - other	0 Miles	115875	128750	HSIP (Section 148)		0	0	CTH	Intersections	
2265-03-76	Lighting Lighting - other	3.02 Miles	912509.6	1013899.55	HSIP (Section 148)		0	0	STH	Lane Departure	

2340-09-70	Intersection traffic control Intersection traffic control - other	0.347 Miles	1530000	1700000	HSIP (Section 148)		0	0	STH	Intersections	
2375-07-00	Roadway Roadway - other	0.51 Miles	49680	55200	HSIP (Section 148)		0	0	STH	Roadway Departure	
2595-08-00	Intersection traffic control Intersection traffic control - other	0 Miles	234531	260590	HSIP (Section 148)		0	0	NON	Intersections	
2718-01-92	Pedestrians and bicyclists Pedestrian signal	0 Miles	81199.31	90221.45	HSIP (Section 148)		0	0	LOC	Pedestrians	
2718-09-70	Intersection traffic control Intersection traffic control - other	0 Miles	318563.51	353959.45	HSIP (Section 148)		0	0	NON	Intersections	
2758-01-00	Intersection traffic control Intersection traffic control - other	0 Miles	83700	93000	HSIP (Section 148)		0	0	CTH	Intersections	
2758-04-00	Alignment Alignment - other	0 Miles	64080	71200	HSIP (Section 148)		0	0	CTH	Roadway Departure	
2967-00-94	Pedestrians and bicyclists Pedestrian signal	0 Miles	574810.64	638678.49	HSIP (Section 148)		0	0	VAR	Pedestrians	

2967-00-95	Pedestrians and bicyclists Pedestrian signal	0 Miles	520425.74	578250.82	HSIP (Section 148)		0	0	VAR	Pedestrians	
4/7/2984	Intersection traffic control Intersection traffic control - other	0 Miles	188181	209090	HSIP (Section 148)		0	0	VAR	Intersections	
3042-00-73	Intersection traffic control Intersection traffic control - other	0.331 Miles	990000	1100000	HSIP (Section 148)		0	0	STH	Intersections	
3756-01-00	Roadway Roadway - other	0 Miles	18540	20600	HRRRP (SAFETEA-LU)		0	0	CTH	Roadway Departure	
4020-01-00	Roadway Roadway - other	0 Miles	19696.5	21885	HRRRP (SAFETEA-LU)		0	0	CTH	Roadway Departure	
4210-06-00	Intersection traffic control Intersection traffic control - other	0.1 Miles	108000	120000	HSIP (Section 148)		0	0	CTH	Intersections	
5271-08-72	Roadway Pavement surface - high friction surface	1.69 Miles	200000	222222.22	HSIP (Section 148)		0	0	STH	Lane Departure	
5410-02-71	Intersection traffic control Intersection traffic control - other	0 Miles	542311	602567.78	HSIP (Section 148)		0	0	USH	Intersections	

5658-00-73	Roadway Roadway - other	0.192 Miles	90000	100000	HSIP (Section 148)		0	0	CTH	Intersections	
5820-01-71	Alignment Alignment - other	0.805 Miles	915324.58	1017027.31	HSIP (Section 148)		0	0	STH	Roadway Departure	
5992-06-63	Roadway Roadway - other	0.189 Miles	94554	105060	HSIP (Section 148)		0	0	LOC	Intersections	
6207-03-71	Roadside Barrier end treatments (crash cushions, terminals)	0 Miles	490025.36	544472.62	HRRRP (SAFETEA-LU)		0	0	VAR	Roadway Departure	
6520-02-71	Advanced technology and ITS Advanced technology and ITS - other	0.789 Miles	0	0	HRRRP (SAFETEA-LU)		0	0	STH	Intersections	
6520-02-71	Advanced technology and ITS Advanced technology and ITS - other	0.789 Miles	915310.44	1017011.6	HRRRP (SAFETEA-LU)		0	0	STH	Intersections	
6990-03-73	Alignment Alignment - other	0 Miles	390384.27	433760.3	HSIP (Section 148)		0	0	STH	Roadway Departure	
6991-	Roadway Roadway -	0.01	244080	271200	HSIP		0	0	STH	Intersectio	

01-70	other	Miles			(Section 148)					ns	
6/8/6999	Roadway Roadway - other	0 Miles	27810	30900	HSIP (Section 148)		0	0	LOC	Intersections	
7016-00-72	Intersection traffic control Intersection traffic control - other	0.294 Miles	990000	1100000	HSIP (Section 148)		0	0	STH	Intersections	
7080-00-04	Intersection traffic control Intersection traffic control - other	0.02 Miles	31500	35000	HSIP (Section 148)		0	0	USH	Intersections	
1/2/7130	Intersection traffic control Intersection traffic control - other	0.62 Miles	144000	160000	HSIP (Section 148)		0	0	STH	Intersections	
7132-07-70	Roadway Roadway - other	0.17 Miles	215375.85	239306.5	HSIP (Section 148)		0	0	STH	Roadway Departure	
7255-05-72	Access management Change in access - miscellaneous/unspecified	0.18 Miles	433474.97	481638.85	HSIP (Section 148)		0	0	STH	Intersections	
7550-02-00	Intersection geometry Intersection geometry - other	0.13 Miles	13500	15000	HSIP (Section 148)		0	0	STH	Intersections	

3/3/7550	Intersection traffic control Intersection traffic control - other	0.24 Miles	46350	51500	HSIP (Section 148)		0	0	STH	Intersections	
7570-05-61	Roadway Roadway - other	0 Miles	122077.5	135641.67	HSIP (Section 148)		0	0	STH	Roadway Departure	
7640-00-71	Intersection geometry Intersection geometry - other	0.36 Miles	279000	310000	HSIP (Section 148)		0	0	LOC	Intersections	
1/4/8520	Intersection traffic control Intersection traffic control - other	0.83 Miles	45000	50000	HSIP (Section 148)		0	0	STH	Intersections	
8680-00-70	Roadway Roadway - other	0.01 Miles	57009.2	63343.56	HSIP (Section 148)		0	0	USH	Intersections	
8865-00-02	Alignment Alignment - other	0.57 Miles	72000	80000	HSIP (Section 148)		0	0	STH	Roadway Departure	
8907-00-70	Alignment Alignment - other	0.156 Miles	183879.22	204310.24	HRRRP (SAFETEA-LU)		0	0	CTH	Roadway Departure	
8997-00-23	Intersection traffic control Intersection traffic control - other	0 Miles	12600	14000	HSIP (Section 148)		0	0	LOC	Intersections	

9030-09-70	Roadway Roadway - other	0 Miles	147231.61	163590.68	HSIP (Section 148)		0	0	STH	Intersections	
9180-17-70	Roadway Roadway - other	0.26 Miles	292464	324960	HSIP (Section 148)		0	0	STH	Intersections	
9286-04-00	Roadway Roadway - other	0 Miles	18540	20600	HRRRP (SAFETEA-LU)		0	0	CTH	Roadway Departure	
0953-00-01	Miscellaneous	0 Miles	229500	255000	HSIP (Section 148)		0	0	VAR	Pedestrians	

Progress in Achieving Safety Performance Targets

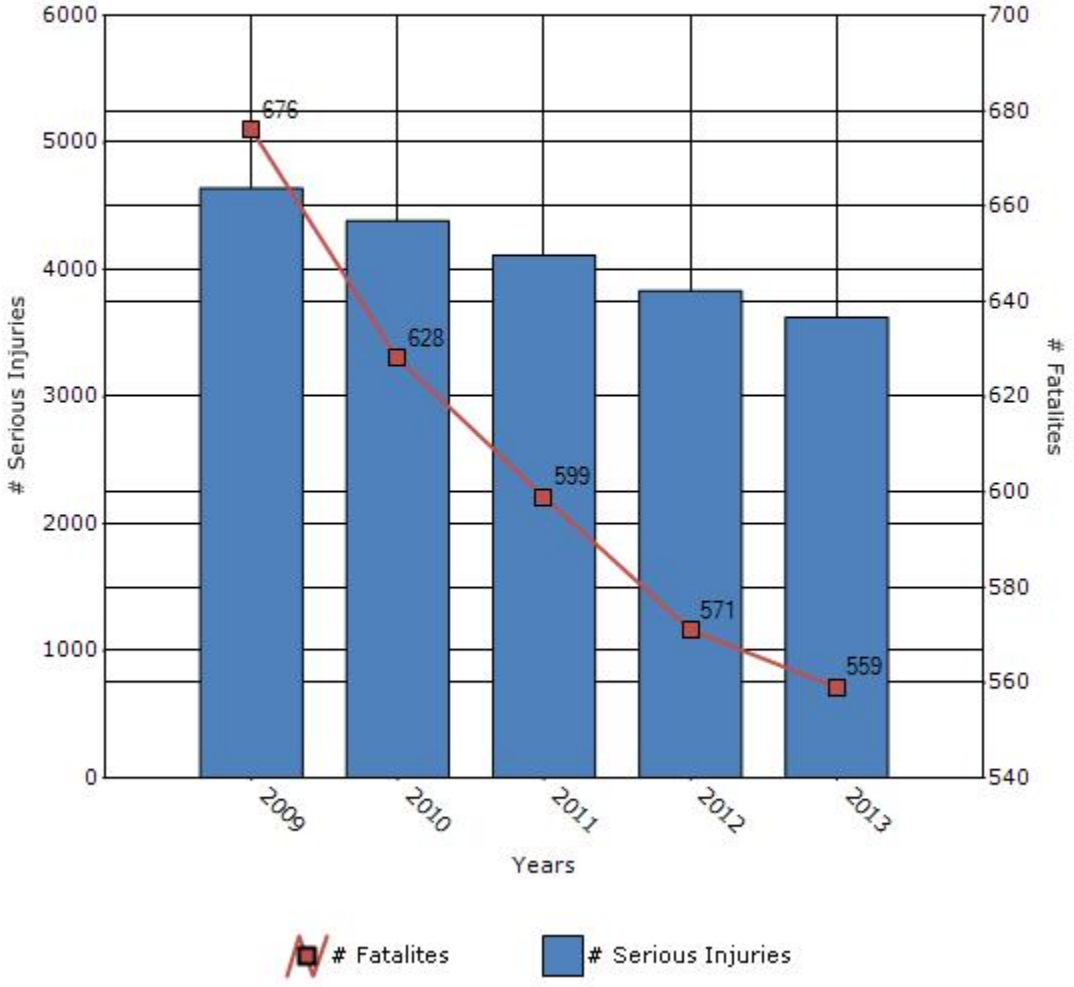
Overview of General Safety Trends

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

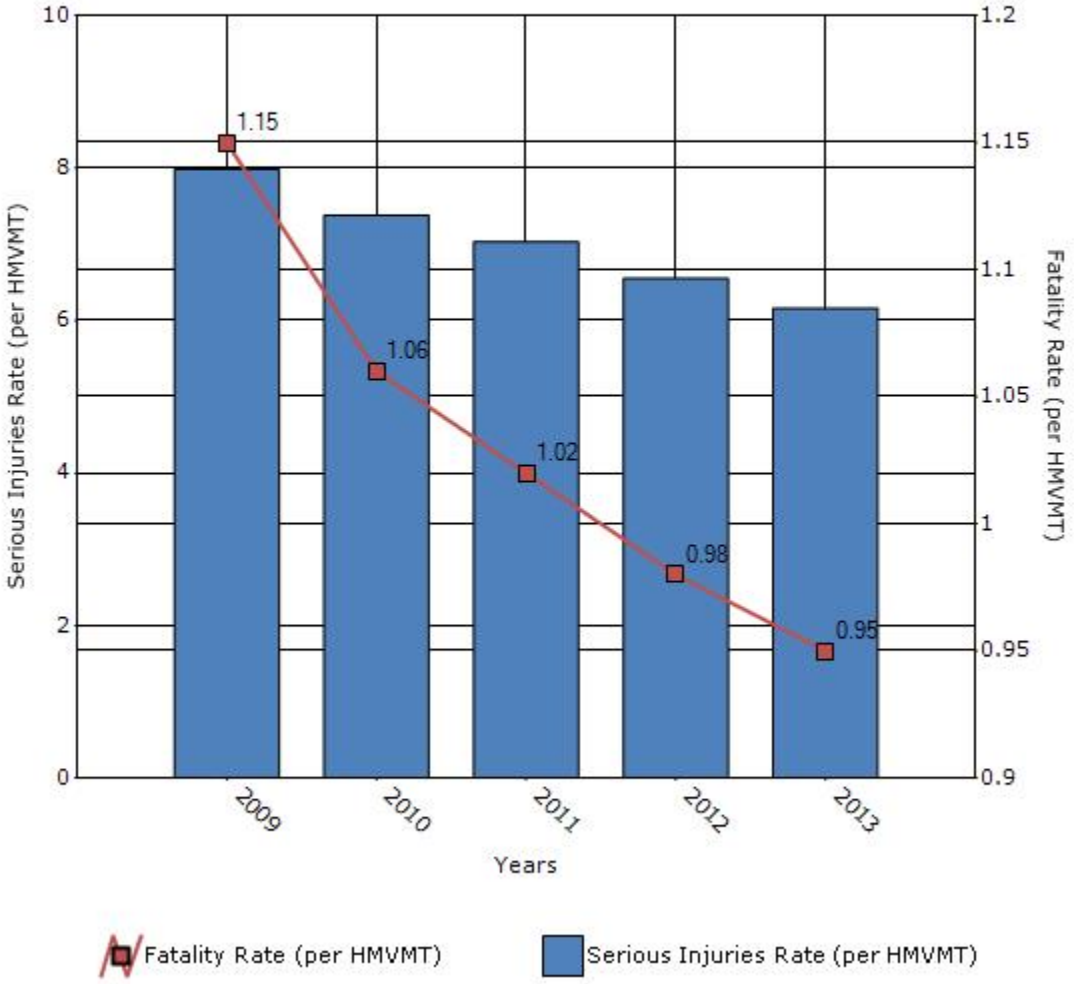
Performance Measures*	2009	2010	2011	2012	2013
Number of fatalities	676	628	599	571	559
Number of serious injuries	4639	4382	4114	3834	3625
Fatality rate (per HMVMT)	1.15	1.06	1.02	0.98	0.95
Serious injury rate (per HMVMT)	7.98	7.38	7.03	6.55	6.16

*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



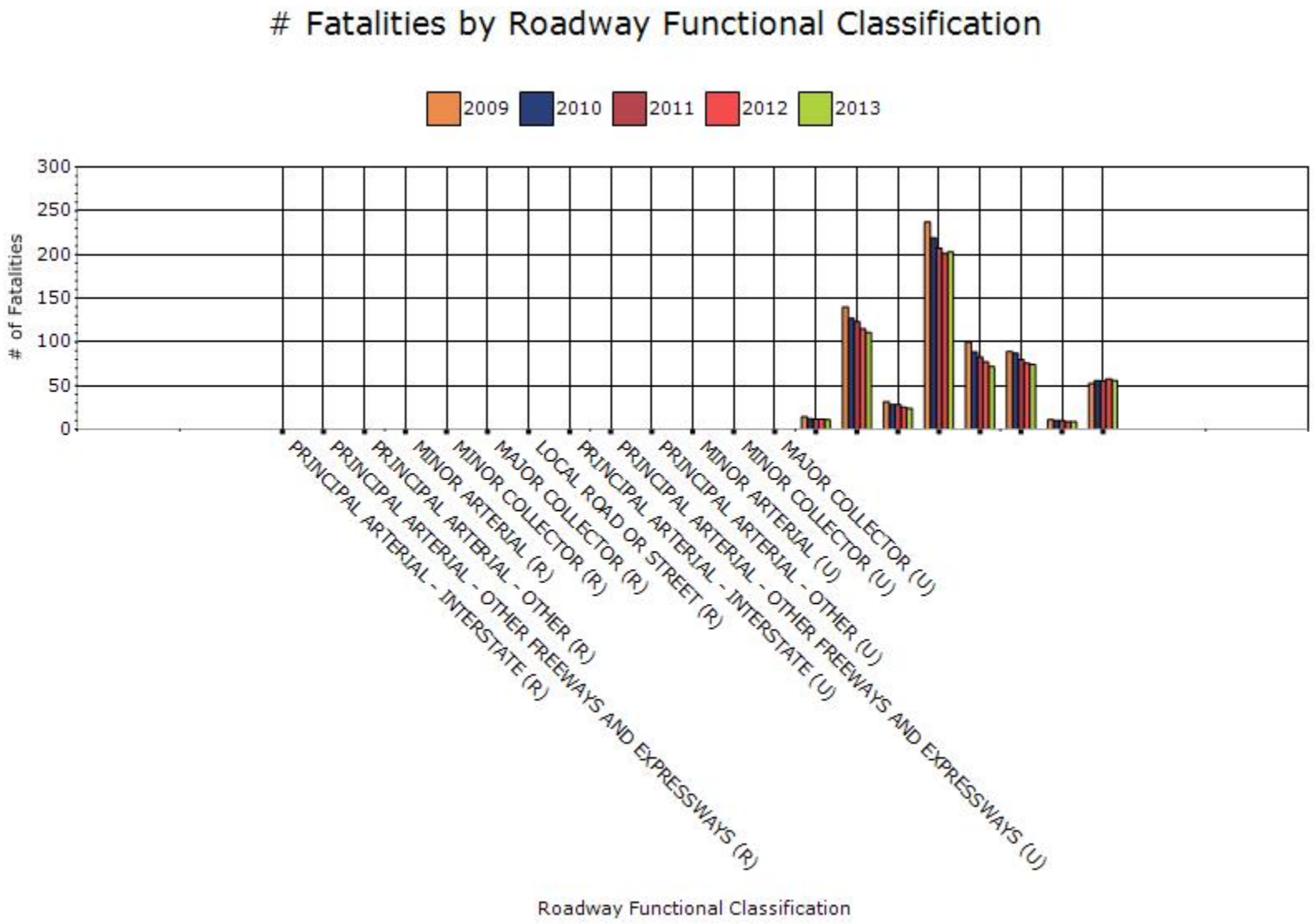
To the maximum extent possible, present performance measure* data by functional classification and ownership.

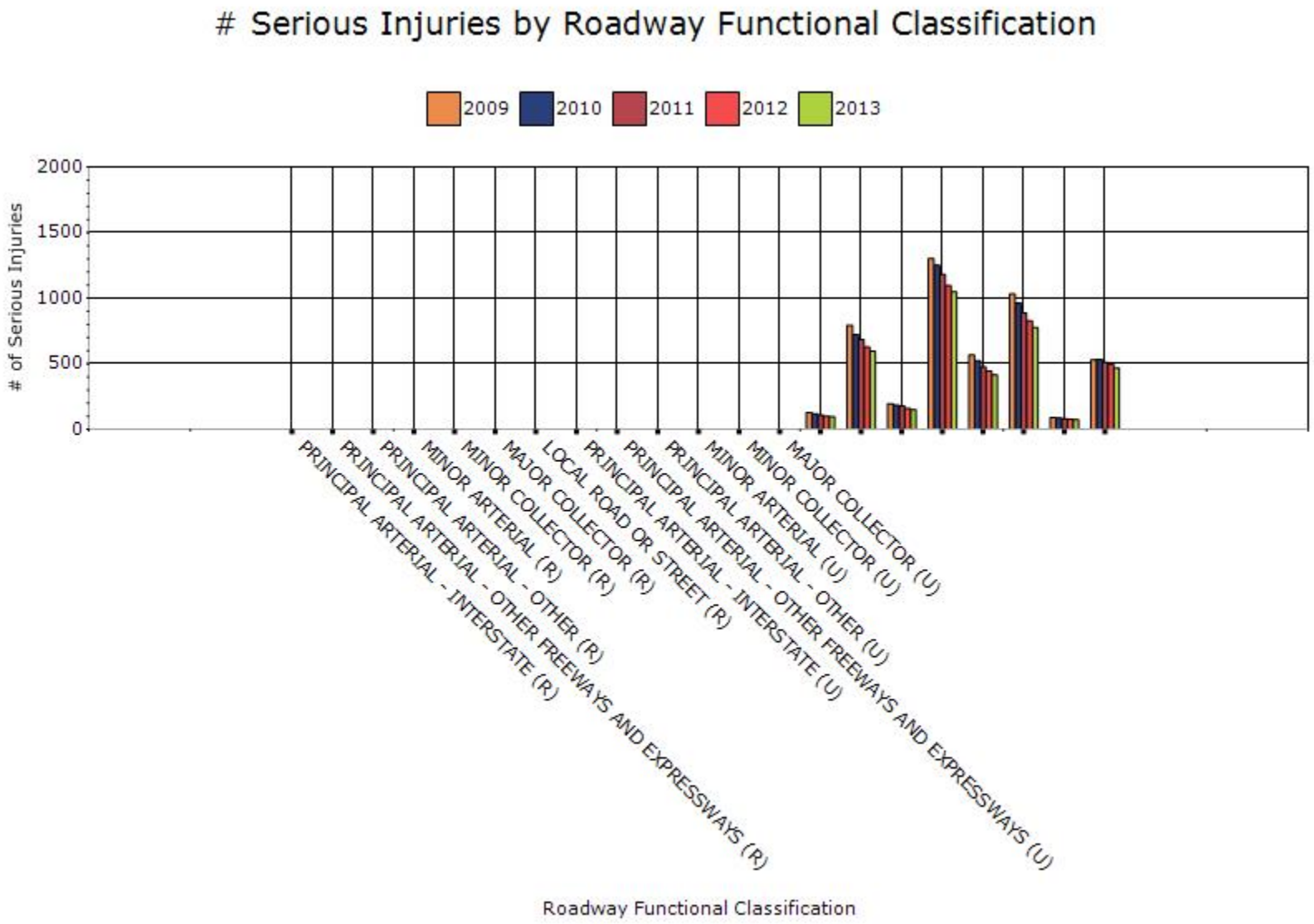
Year - 2013

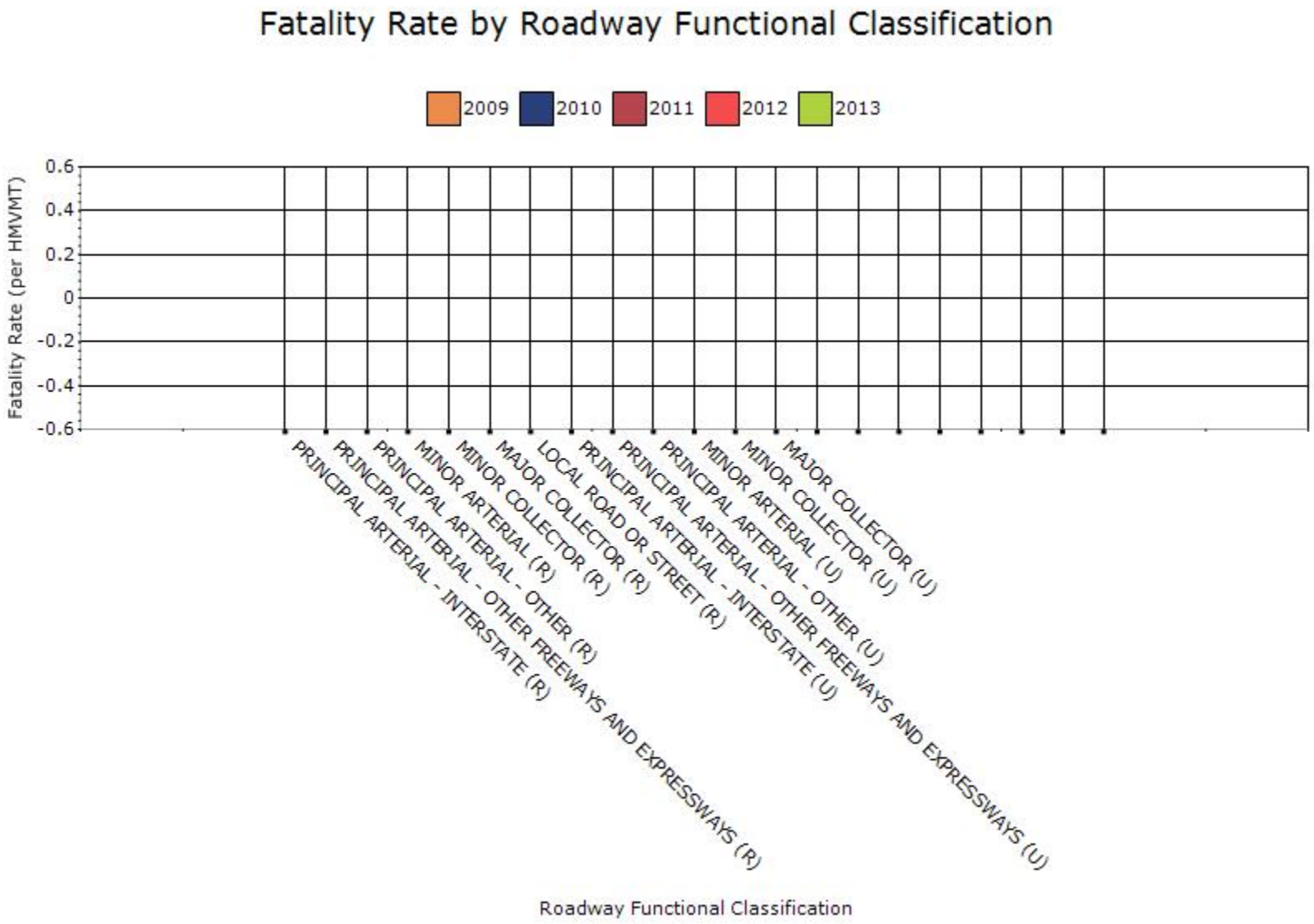
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	0	0	0	0
RURAL MINOR ARTERIAL	0	0	0	0
RURAL MINOR COLLECTOR	0	0	0	0
RURAL MAJOR COLLECTOR	0	0	0	0
RURAL LOCAL ROAD OR STREET	0	0	0	0
URBAN PRINCIPAL	0	0	0	0

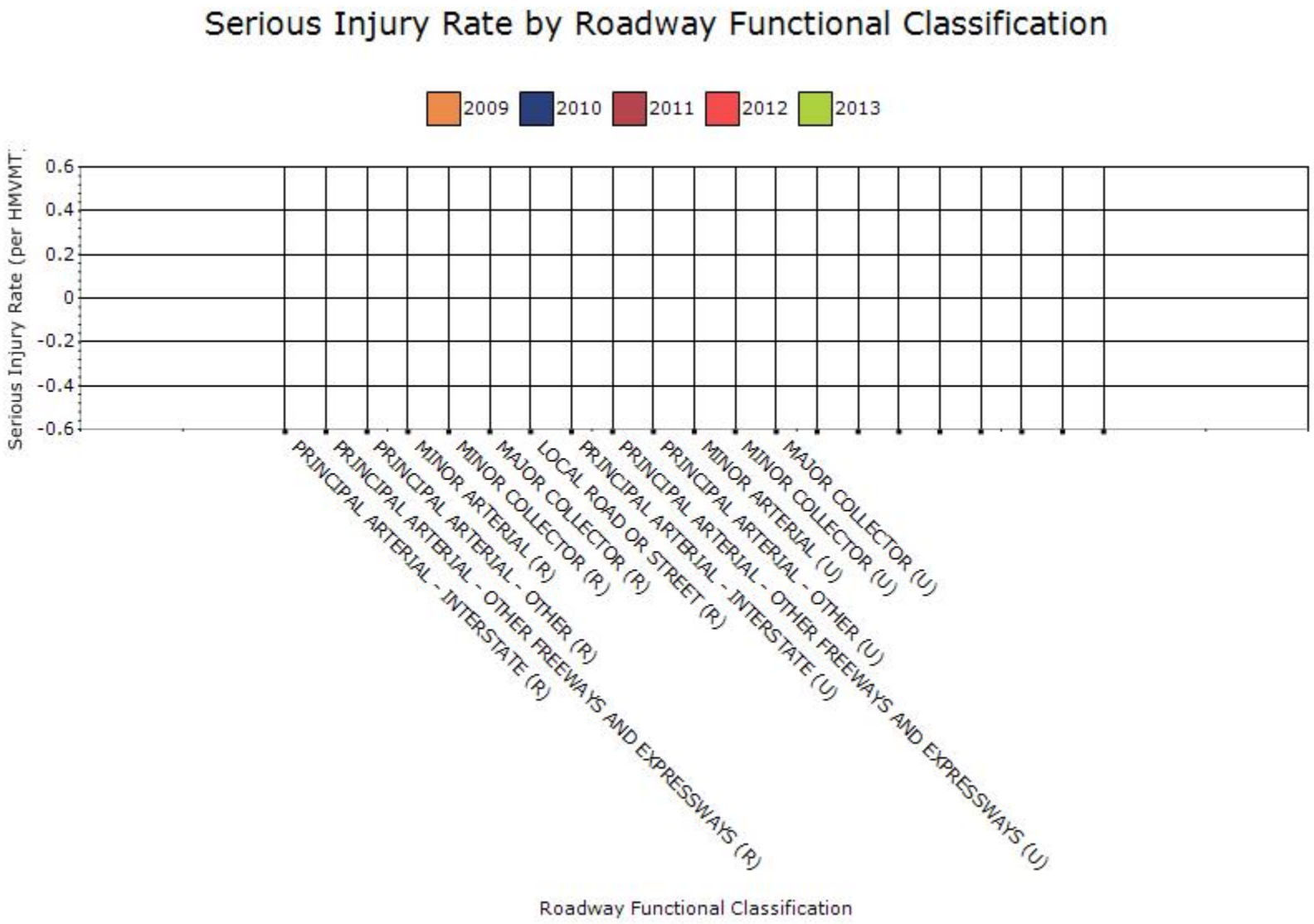
ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	0	0	0	0
URBAN MINOR ARTERIAL	0	0	0	0
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	0	0	0	0
RURAL CITY STREET	11	97.2	0	0
RURAL COUNTY TRUNK HIGHWAY	110.6	595.4	0	0
RURAL INTERSTATE HIGHWAY	23.8	149.4	0	0
RURAL STATE TRUNK HIGHWAY	202.8	1049.6	0	0
RURAL TOWN ROAD	71.8	416.6	0	0

URBAN CITY STREET	74.4	775.8	0	0
URBAN INTERSTATE HIGHWAY	9	74	0	0
URBAN STATE TRUNK HIGHWAY	56	466.8	0	0


Fatalities by Roadway Functional Classification
2009
2010
2011
2012
2013
# of Fatalities
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

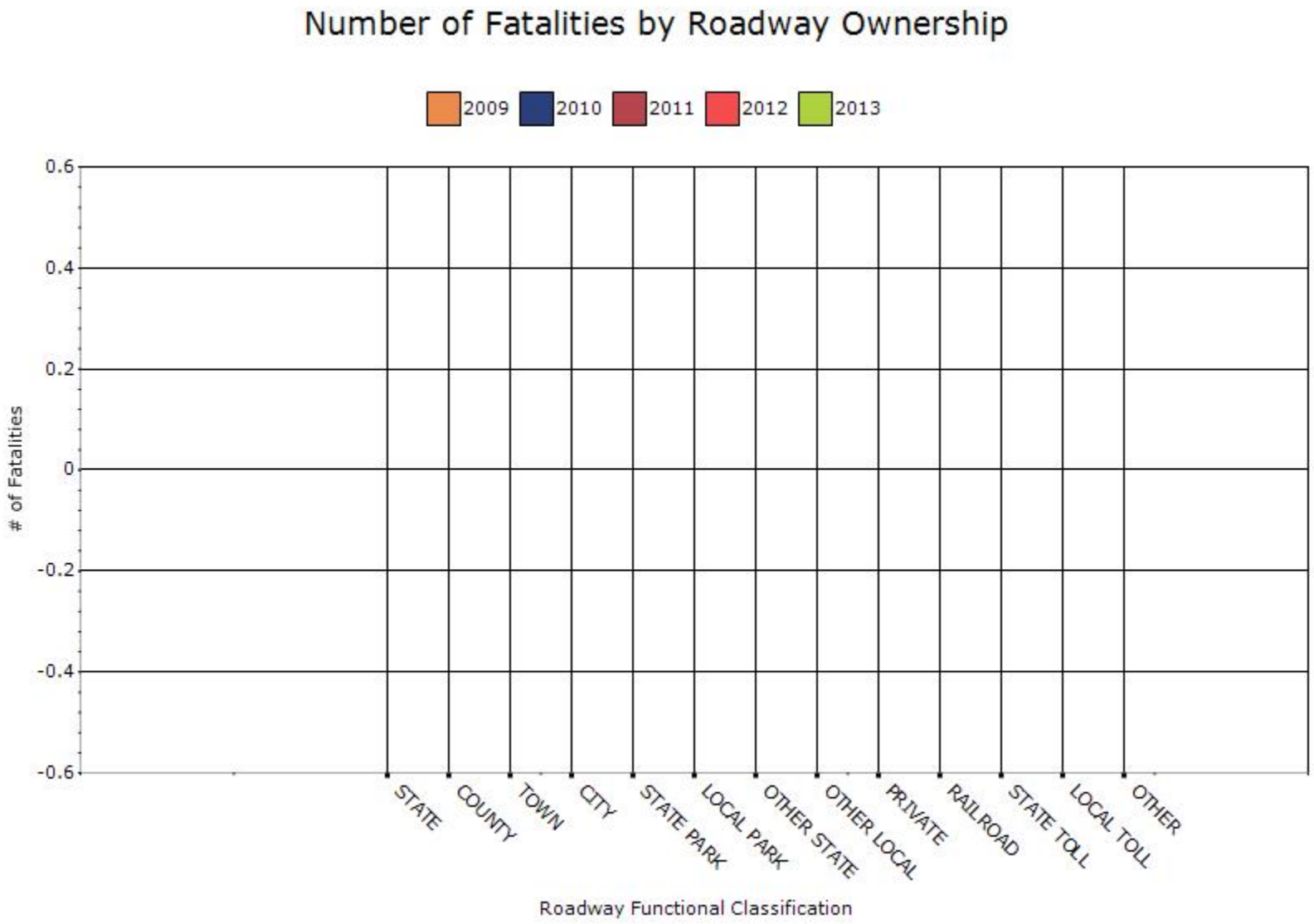

Serious Injuries by Roadway Functional Classification
2009
2010
2011
2012
2013
2000
1500
1000
500
0
# of Serious Injuries
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
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

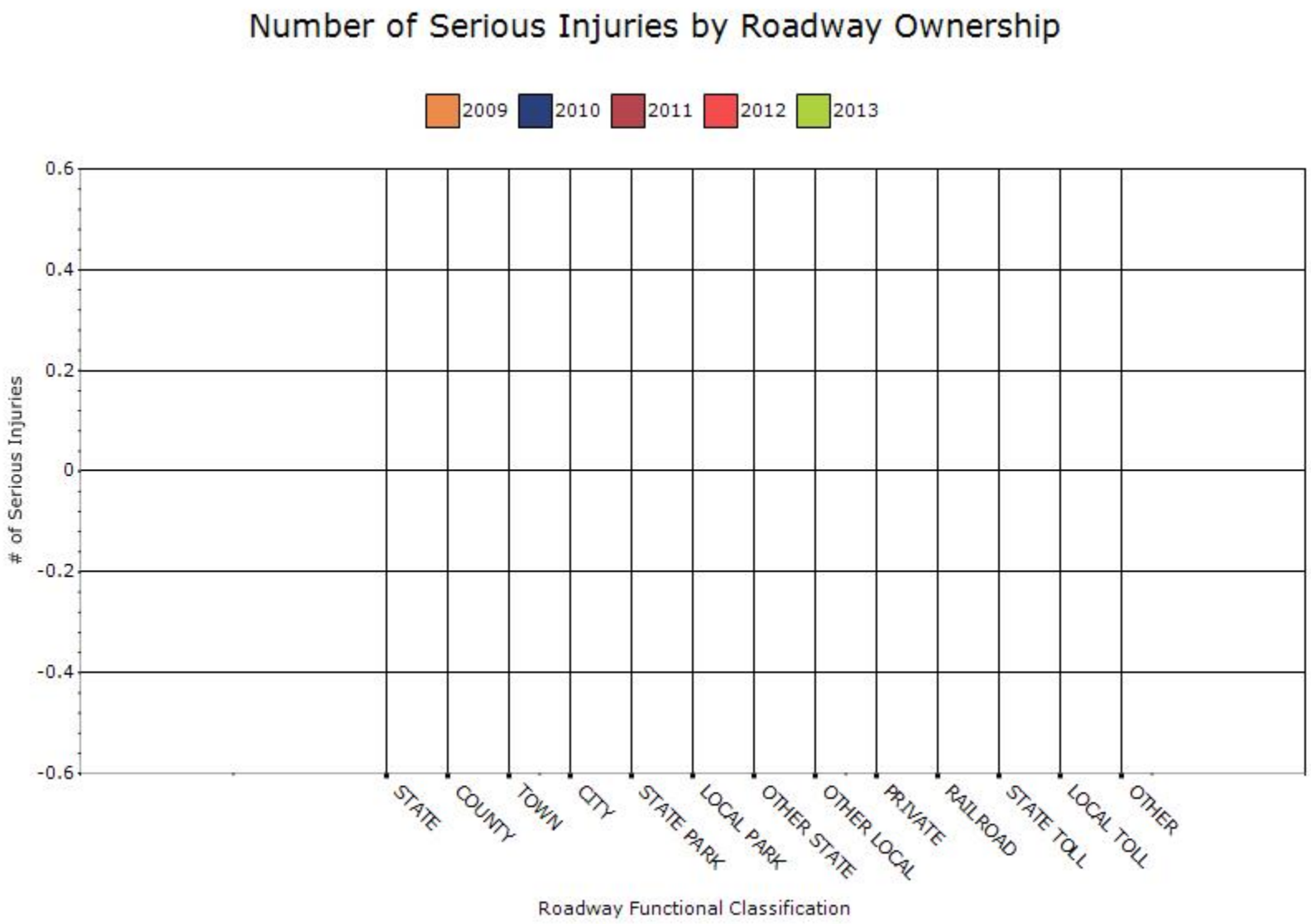

Fatality Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Fatality Rate (per HMVMT)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
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

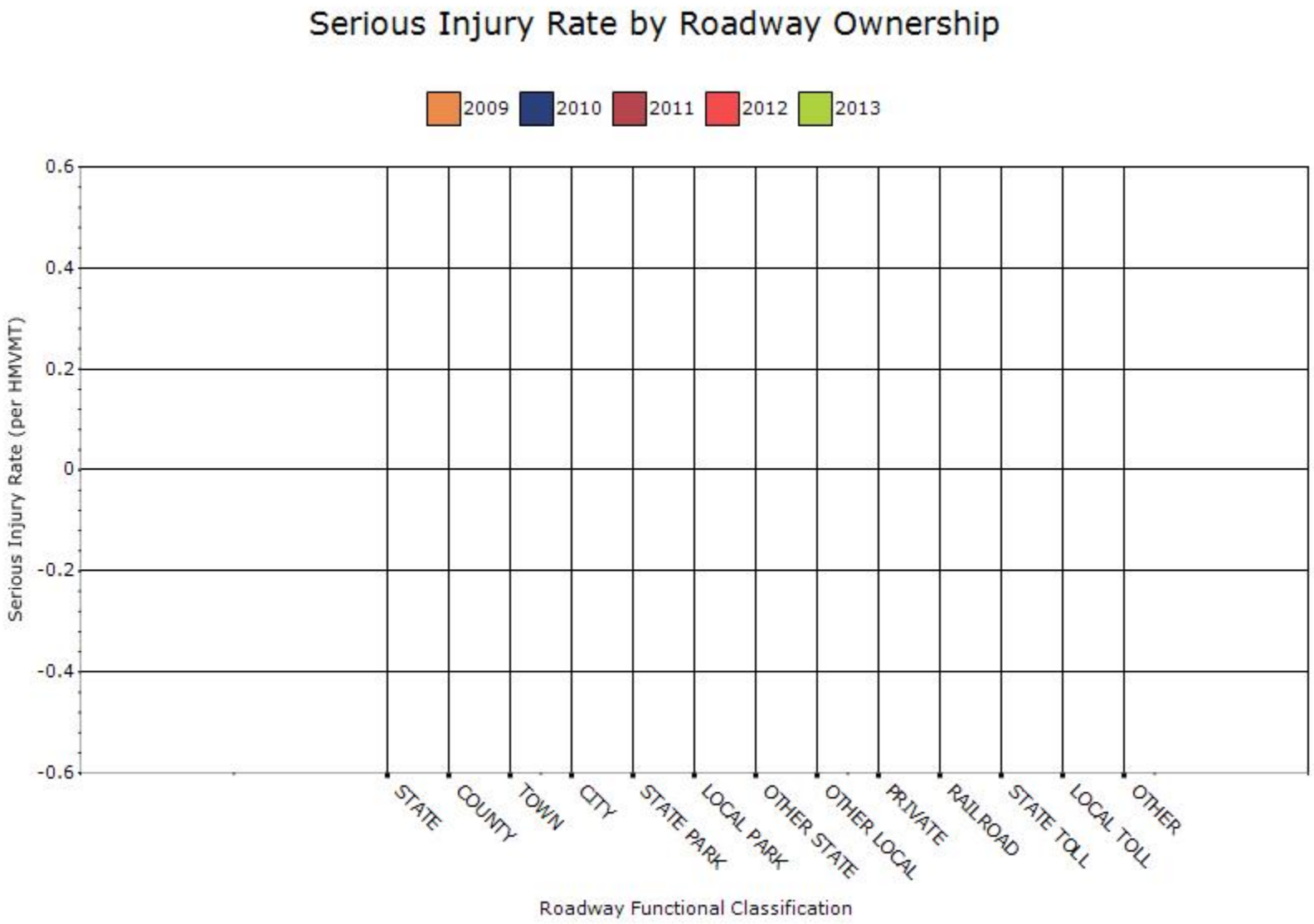
Year - 2013

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	0	0	0	0
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	0	0	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY	0	0	0	0
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


Number of Fatalities by Roadway Ownership
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# 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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# 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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Serious Injury 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

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

None.

Application of Special Rules

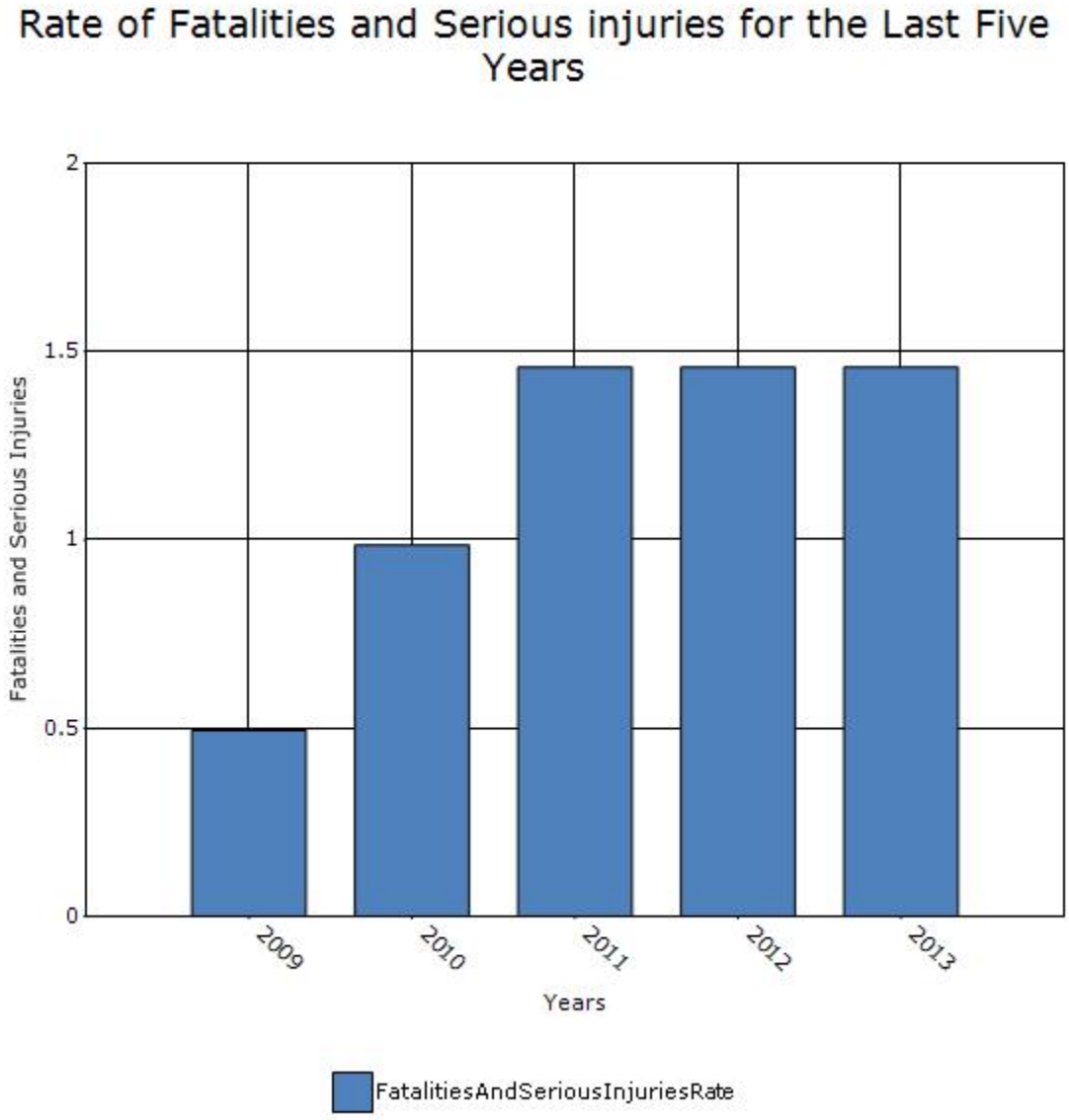
Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

Older Driver Performance Measures	2009	2010	2011	2012	2013
Fatality rate (per capita)	0.112	0.222	0.33	0.33	0.33
Serious injury rate (per capita)	0.382	0.762	1.126	1.126	1.126
Fatality and serious injury rate (per capita)	0.494	0.986	1.458	1.458	1.458

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

((F+SI 2012 Drivers and Pedestrians 65 years of age and older/2012 Population Figure)+(F+SI 2011 Drivers and Pedestrians 65 years of age and older/2011 Population Figure)+(F+SI 2010 Drivers and Pedestrians 65 years of age and older/2010 Population Figure)+(F+SI 2009 Drivers and Pedestrians 65 years of age and older/2009 Population Figure)+)+(F+SI 2008 Drivers and Pedestrians 65 years of age and older/2008 Population Figure))/5

((338/144)+(337/139)+(310/137)+(311/134)+(326/133))/5



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-Decrease in total severe and total injury crashes

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.

None.

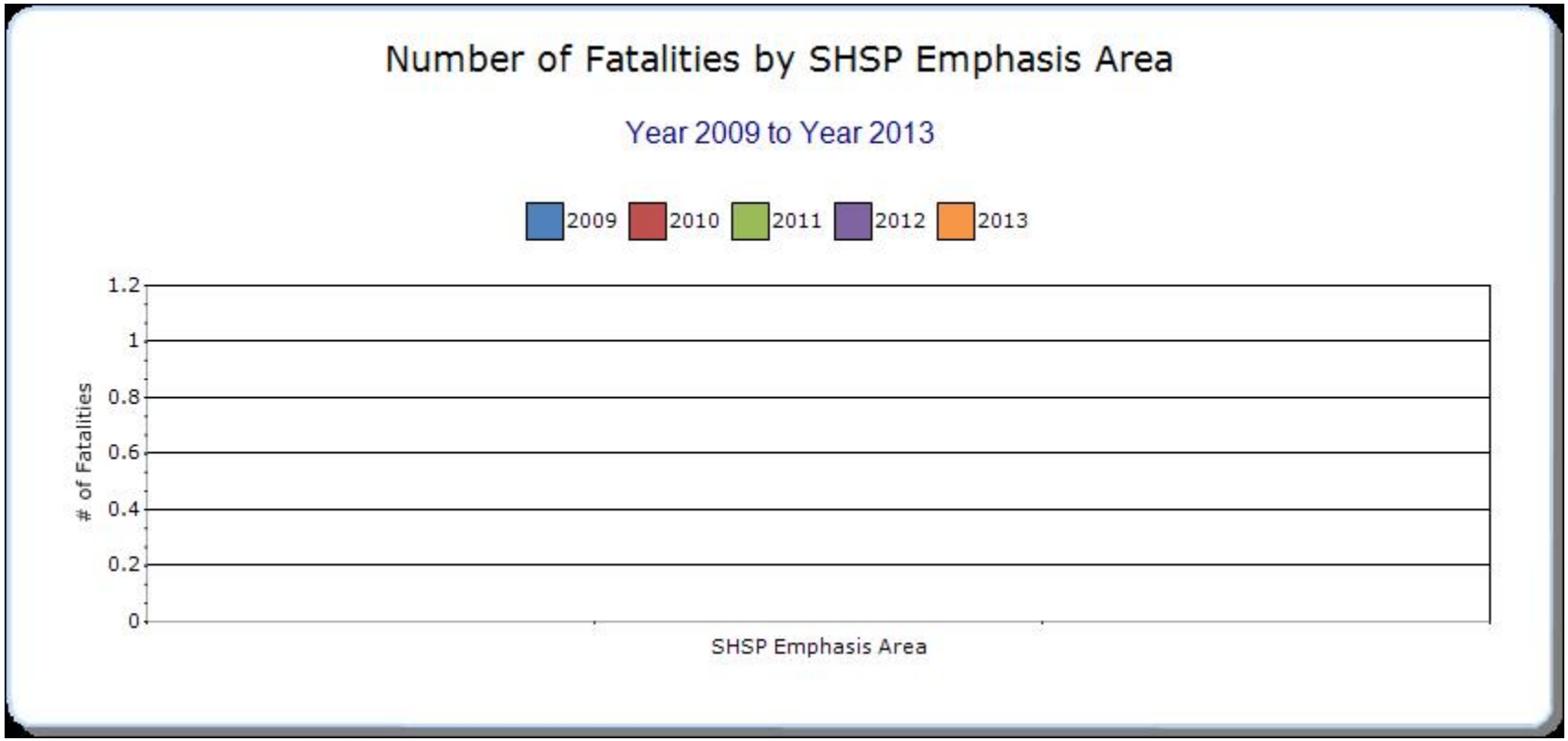
SHSP Emphasis Areas

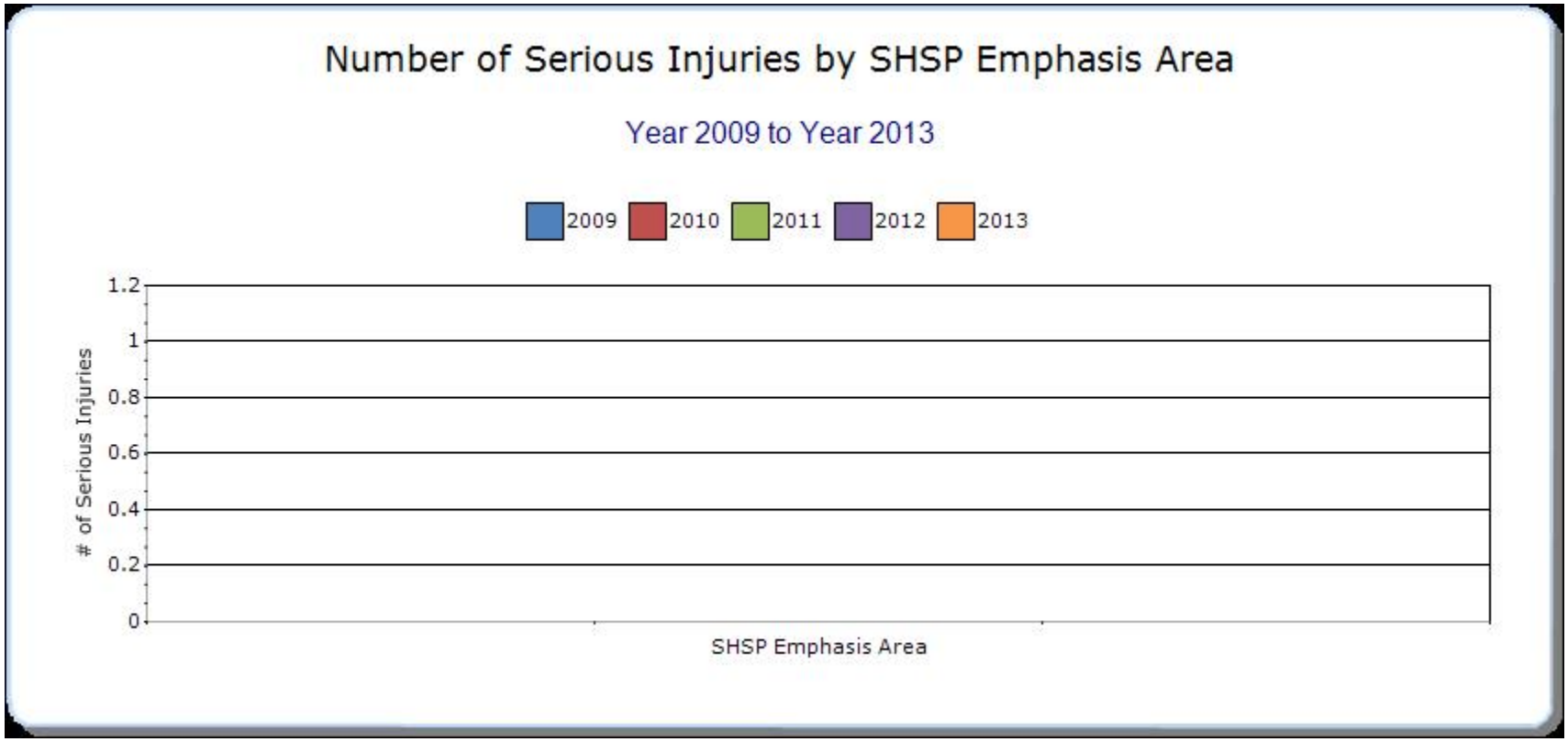
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

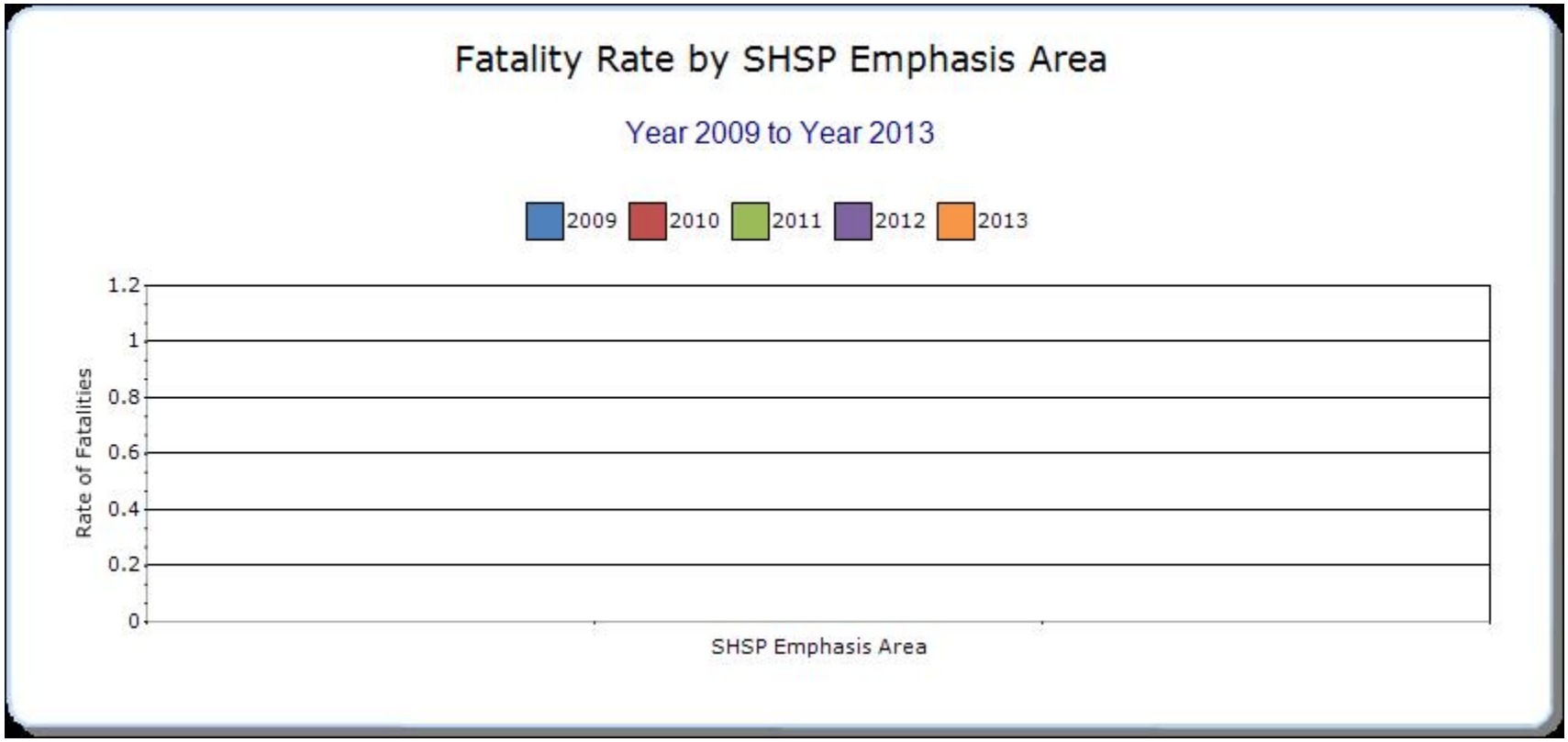
Year - 2013

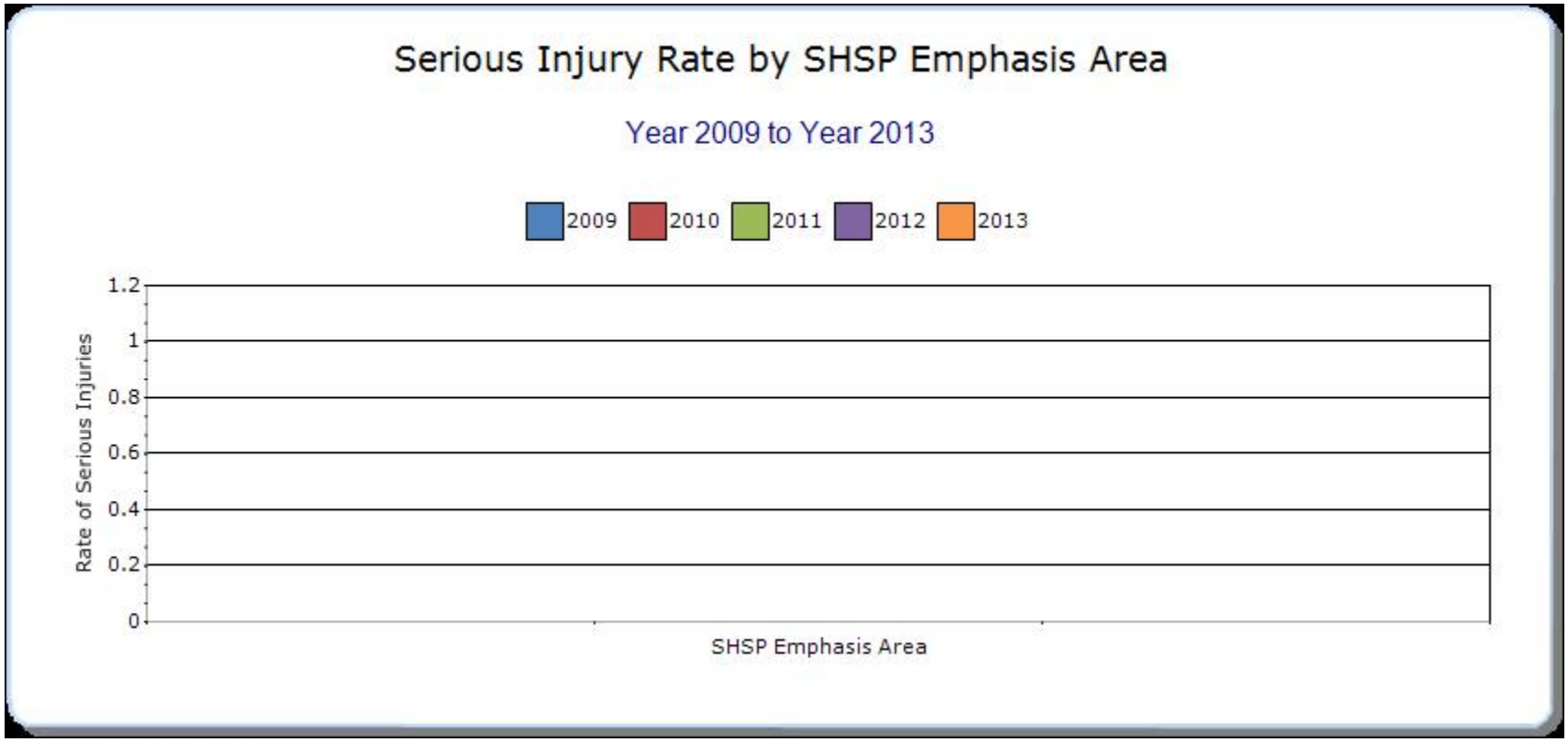
HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Improve Design and Operation of Intersections		156	1393	0	0	41605	20222	0
Reduce Speed-related Crashes		167	916	0	0	18389	7828	0
Prevent/Mitigate Roadway Departure Crashes		187	961	0	0	18916	6919	0
create Safer Work Zones		8	53	0	0	1613	686	0
Reduce Alcohol/Drug-impaired Driving		218	573	0	0	5491	3171	0
Improve Driver Alertness/Reduce Driver Distraction		125	855	0	0	20526	9521	0
Improve Occupant Protection		176	592	0	0	0	0	0
Improve Motorcycle Safety		94	621	0	0	2376	2302	0
Reduce Head-on Crashes		66	261	0	0	1470	1384	0

Improve Safe Travel in Bad Weather		105	774	0	0	30990	10443	0
Reduce Cross Median Crashes		0	0	0	0	0	0	0




Number of Serious Injuries by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
SHSP Emphasis Area

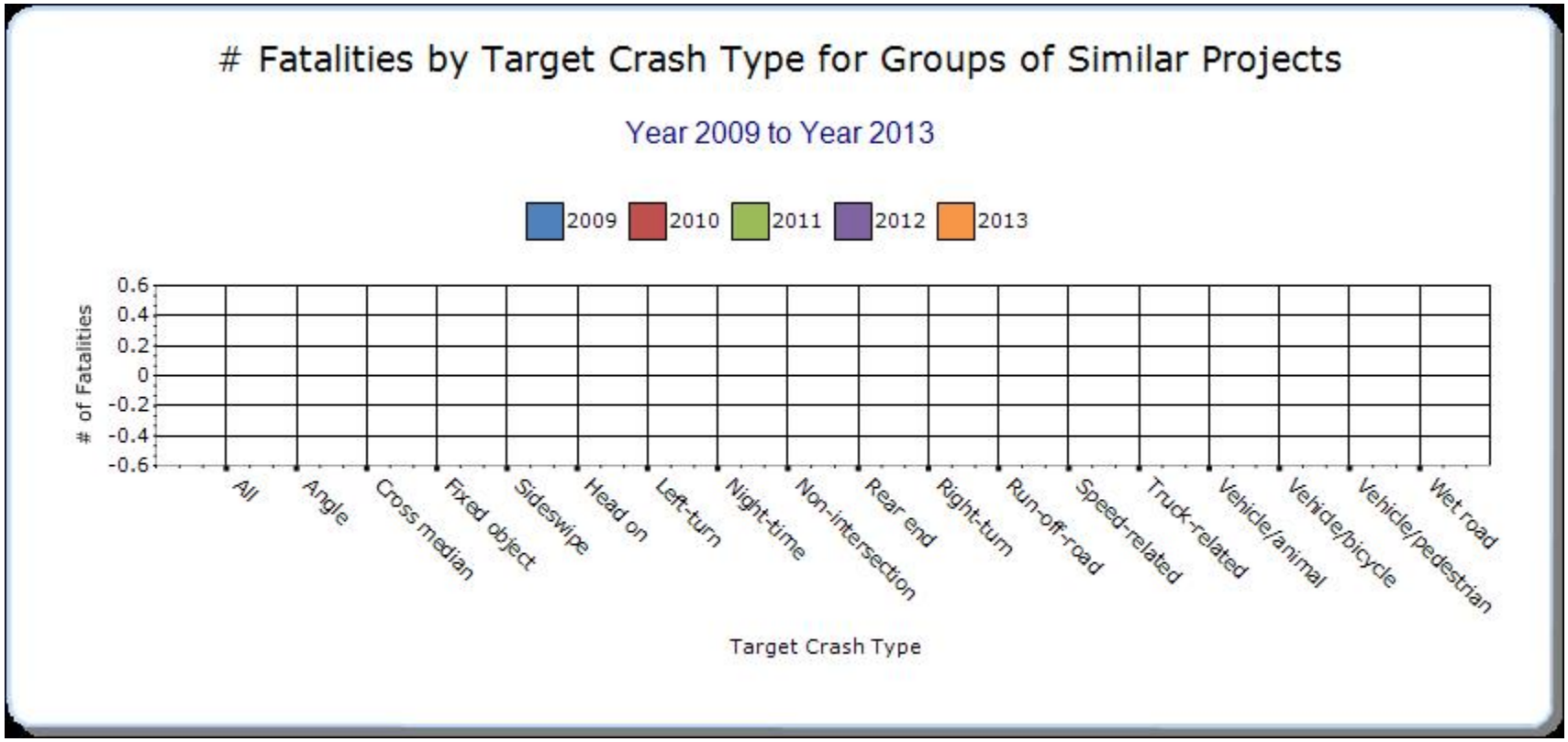

Serious Injury Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
SHSP Emphasis Area

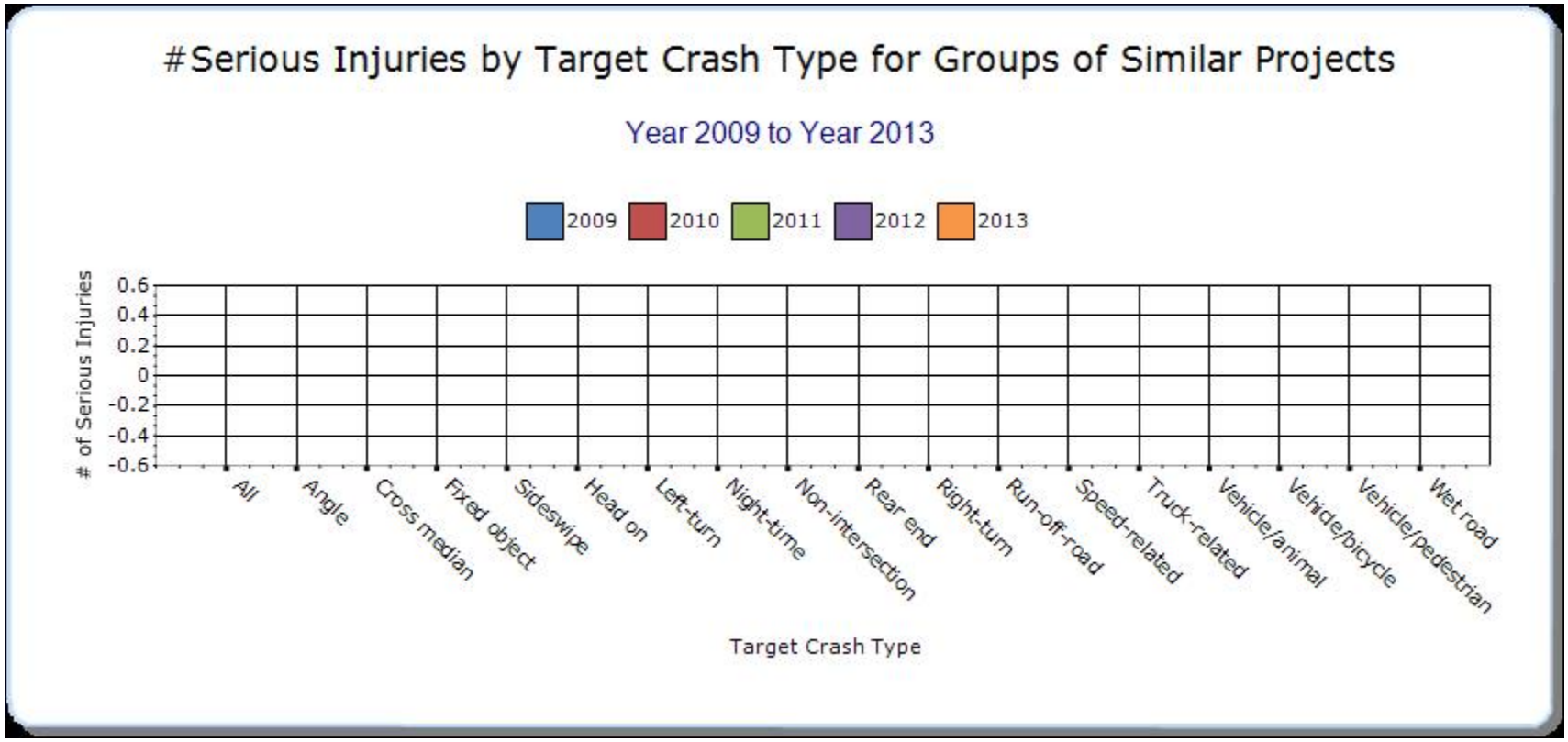
Groups of similar project types

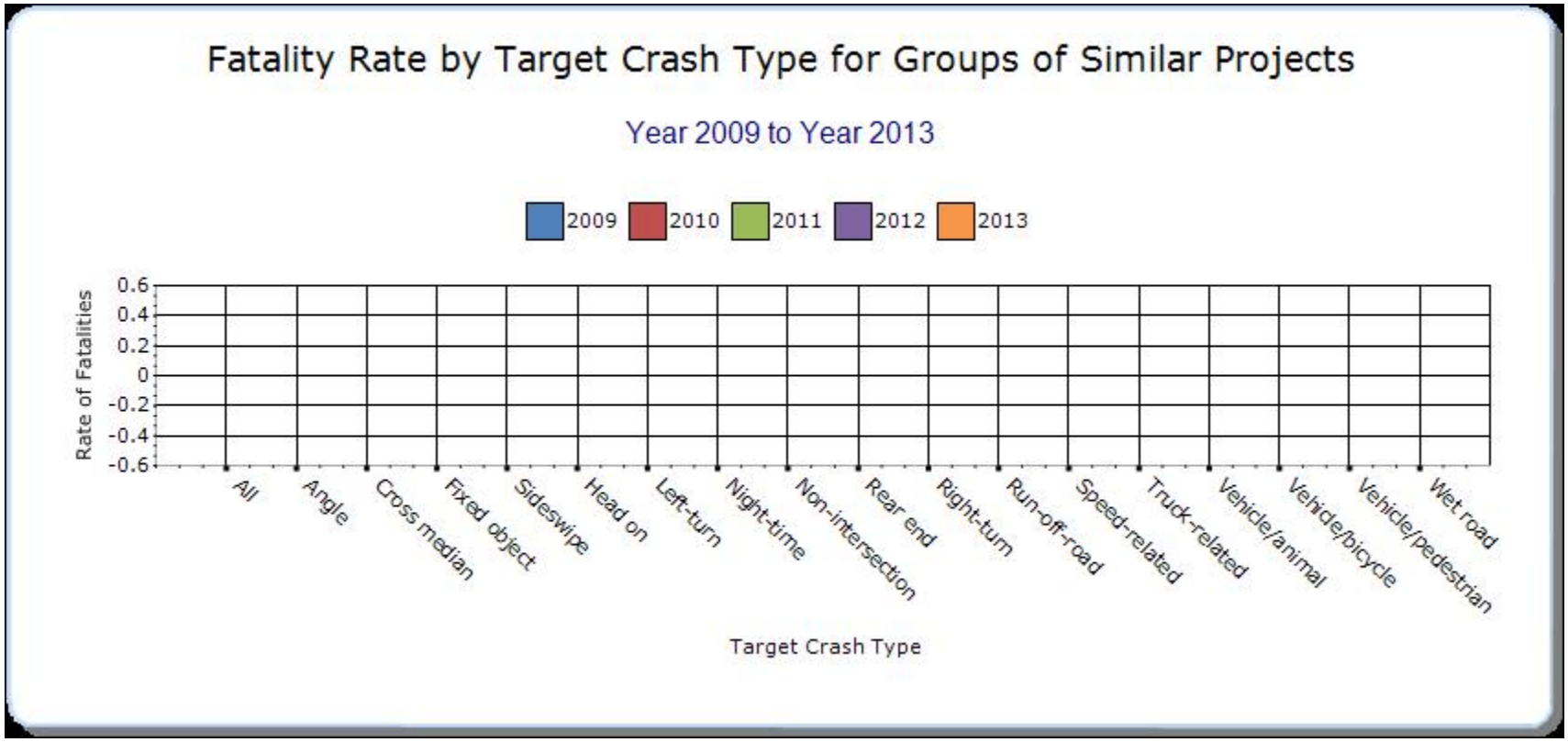
Present the overall effectiveness of groups of similar types of projects.

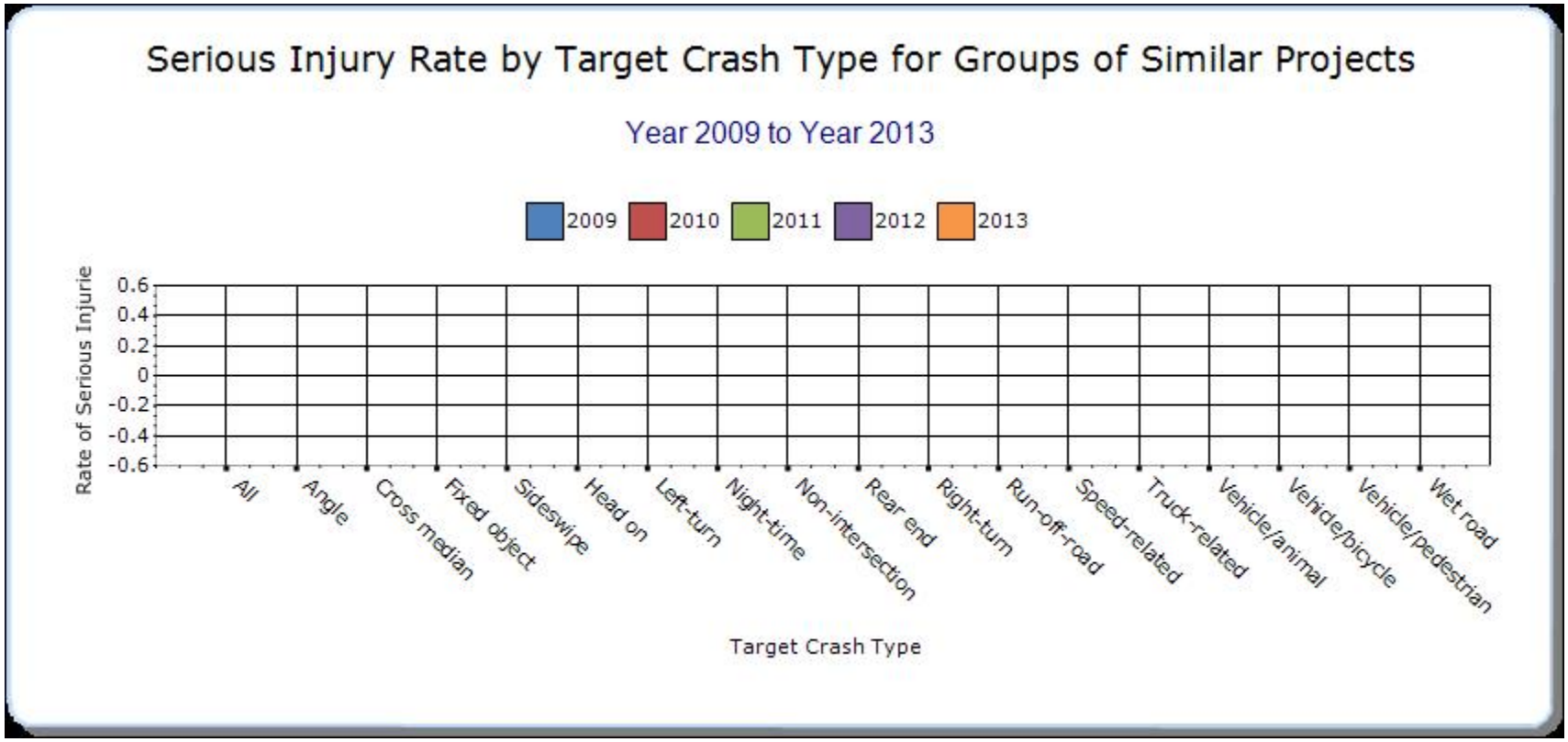
Year - 2013

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


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# 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
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
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
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
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
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

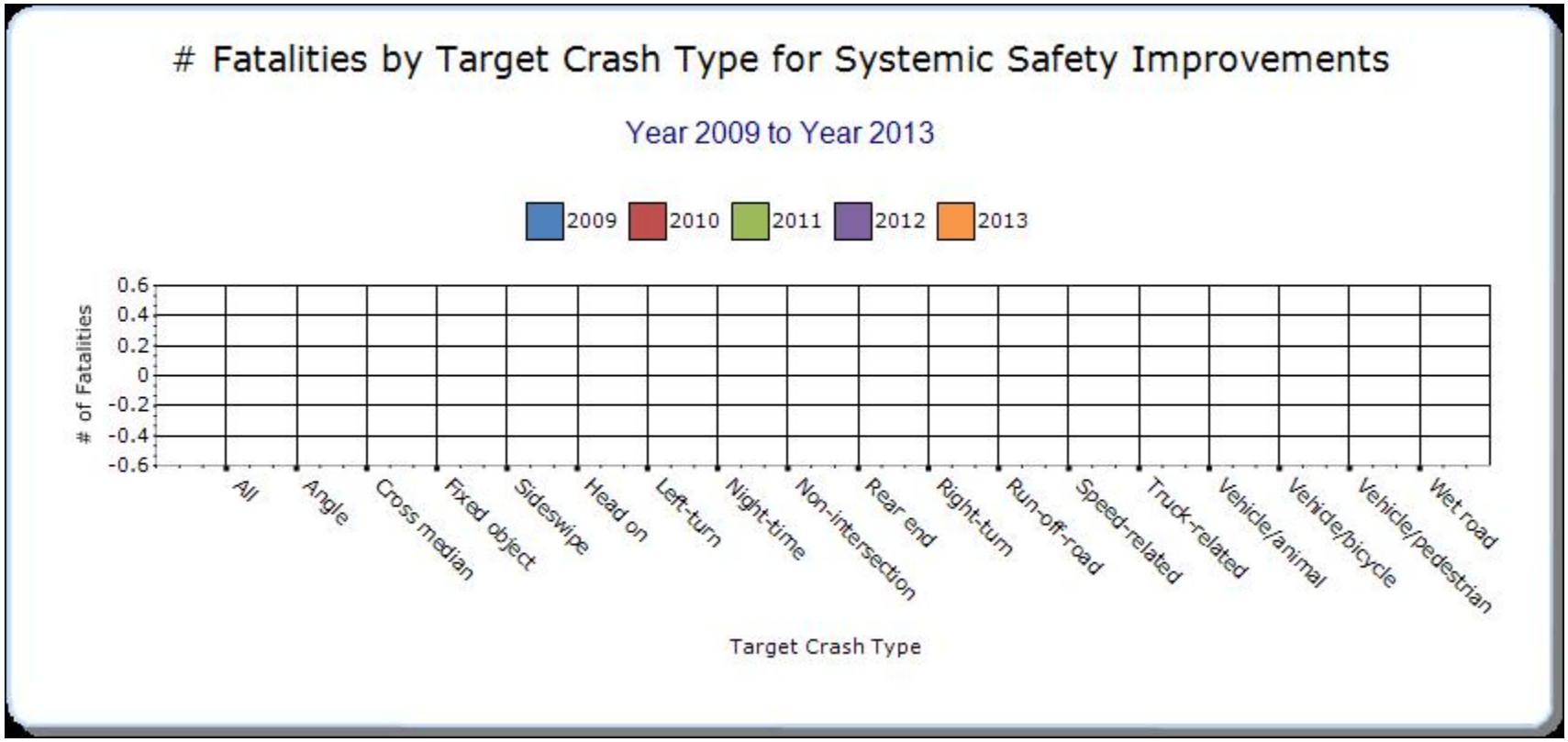

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Serious Injurie
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

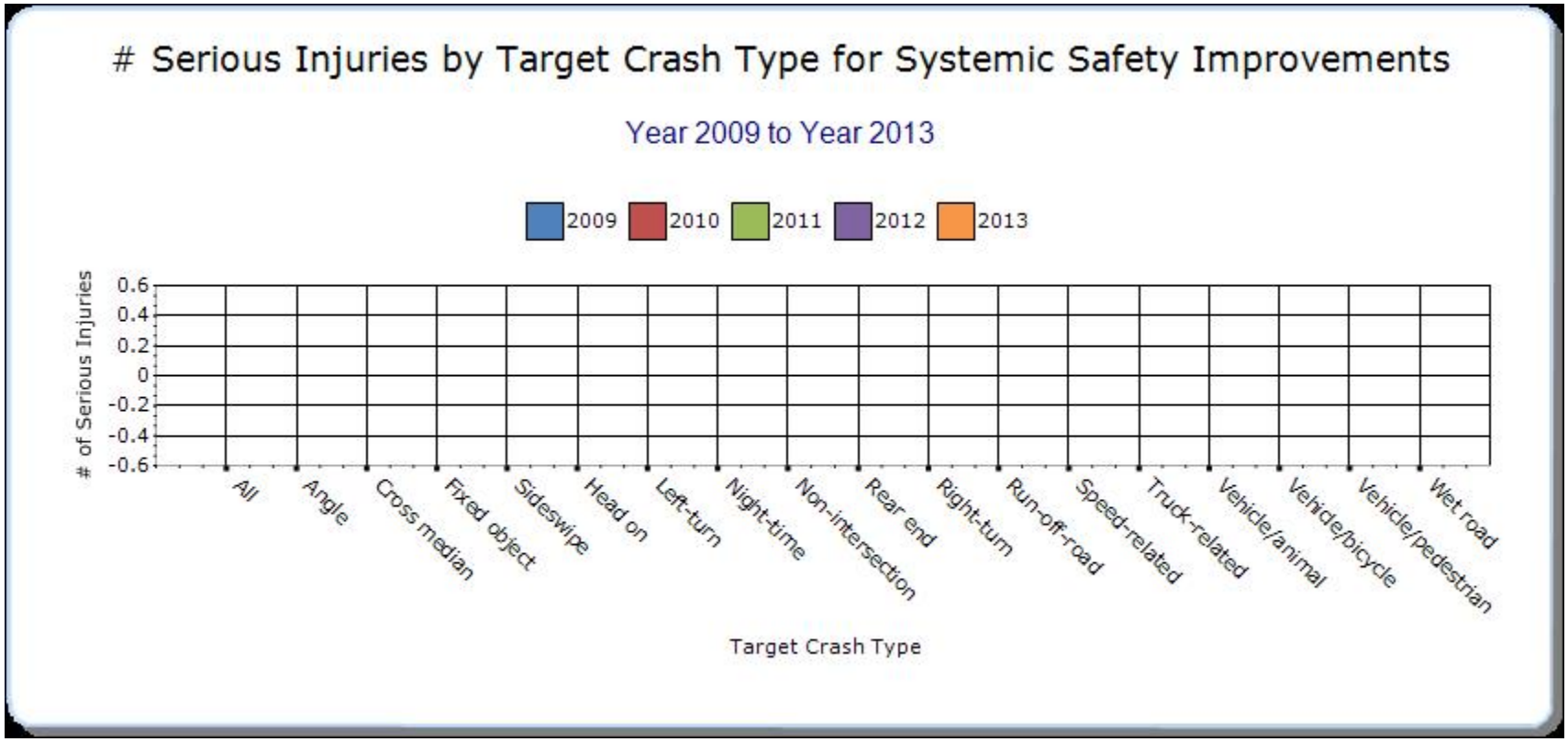
Systemic Treatments

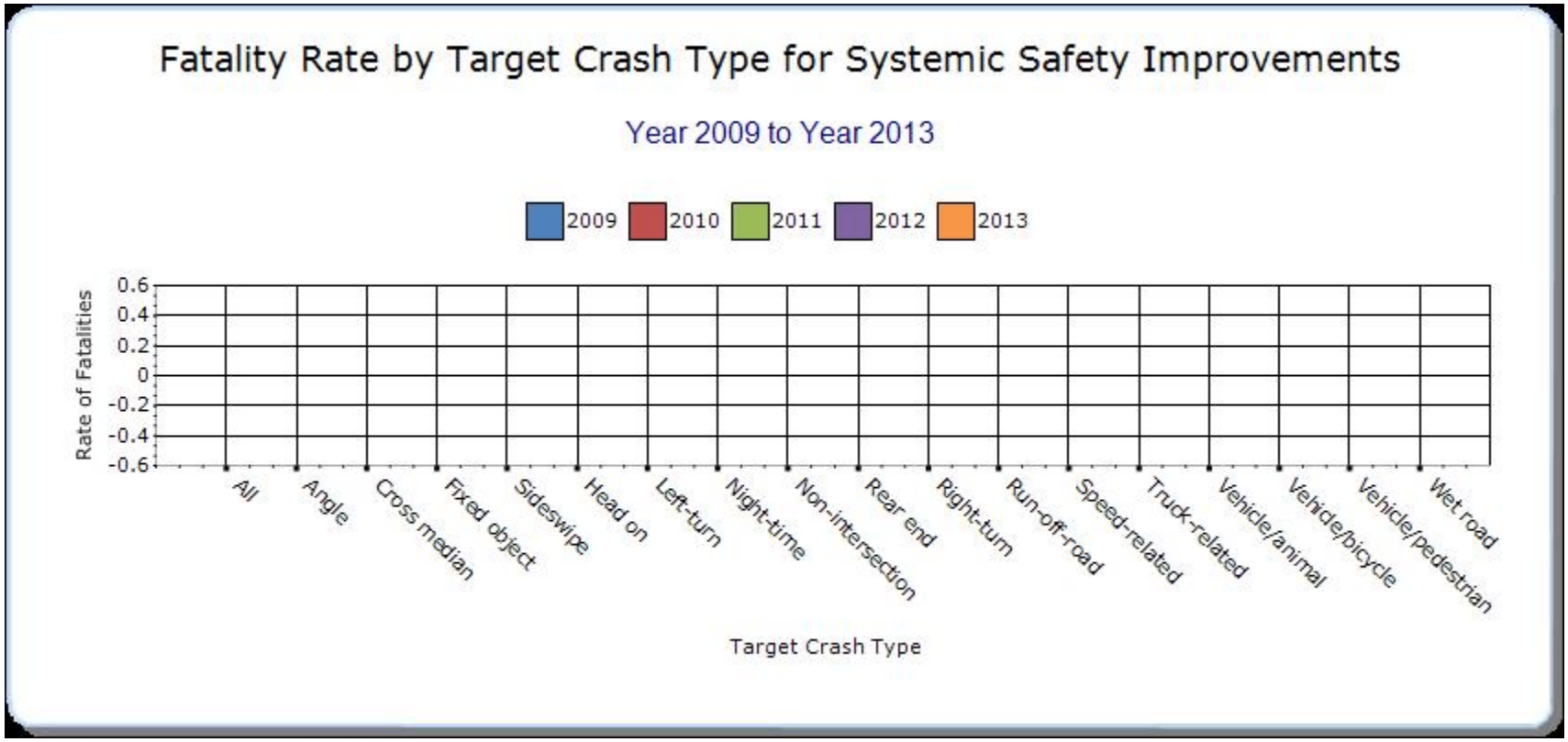
Present the overall effectiveness of systemic treatments.

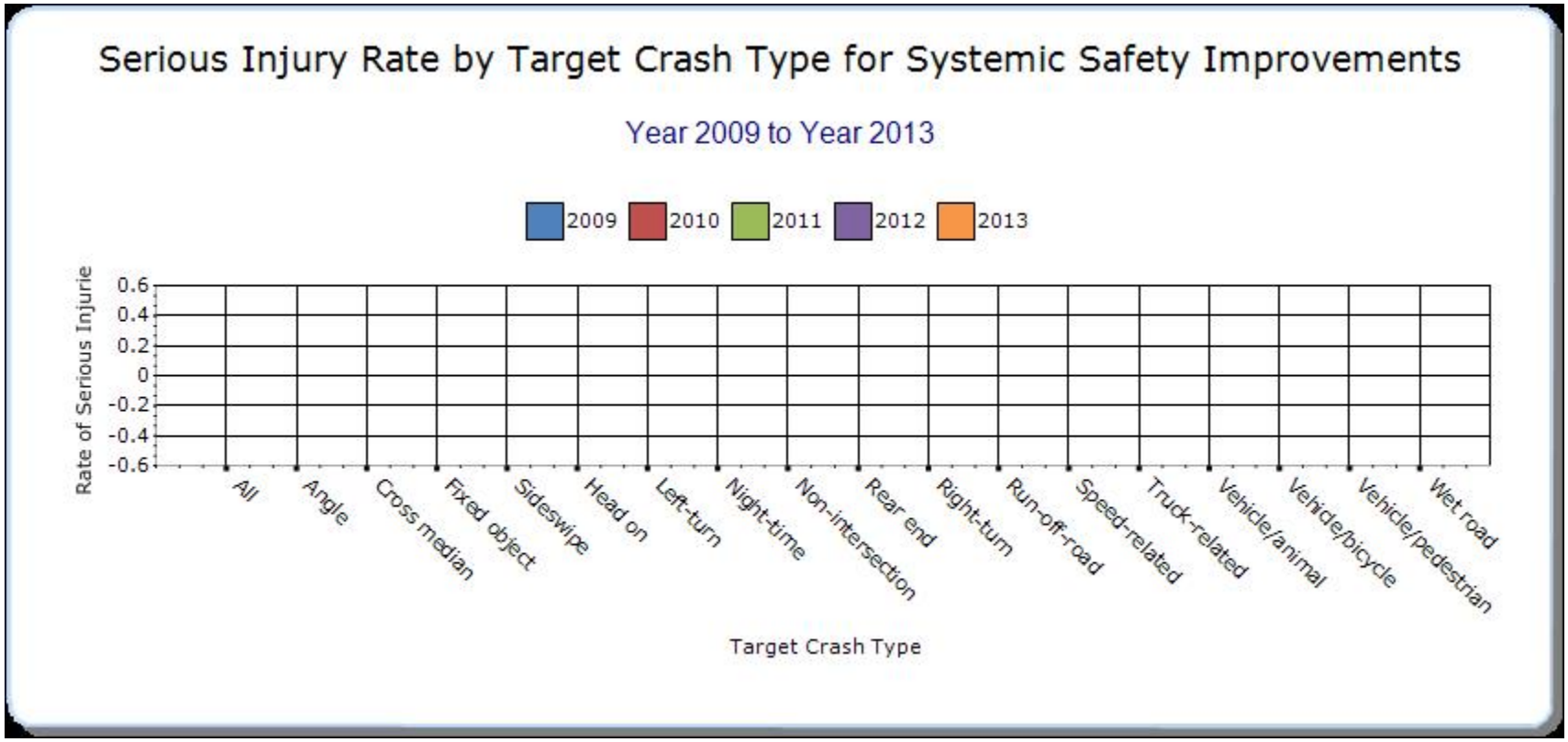
Year - 2013

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
N/A		0	0	0	0	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# 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
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
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
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
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
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 2009 to Year 2013
2009
2010
2011
2012
2013
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
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.

None.

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)

Optional Attachments

Sections	Files Attached

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.