Highway Safety Improvement Program
Data Driven Decisions

Iowa
Highway Safety Improvement Program
2015 Annual Report

Prepared by: IA

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."

Table of Contents

Executive Summary

This is the first year that a previously initiated local safety program has yielded project obligations. In addition, the state continues to fund the placement of median cable barriers as a systemic safety measure on interstate highways. Finally, it should be noted that Iowa is interested in modifying how HSIP funds are sub-allocated within the state, and how projects are selected. This is evidenced by the fact that a multi-state peer review was held in early 2015 to evaluate Iowa's current HSIP structure and to present possible modifications to Iowa DOT management. The goal is to have a new structure established in time for FY 2018 project selections that considers a higher distribution of funds to local roads above the $2 million per year currently spent as well as a formula for distribution of funds to DOT districts.

This is a test.

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.

Iowa's HSIP addresses local roads in two ways: through Local Road Safety Plans and through the HSIP-Secondary program.

Approximately $600,000 of HSIP funds were utilized this year to develop local road safety plans for 12 counties spread throughout Iowa. These plans are being developed to address local safety issues within specific counties, and they address driver-related crashes and countermeasures in addition to traditional engineering countermeasures. From an engineering standpoint, the plans are intended to be proactive rather than reactive. Roadway intersections, curves, and segments are being evaluated for risk

factors, and the plans will provide recommendations for systemic, low-cost safety treatments totaling at least $1 million per county. Ultimately, we hope to develop plans for all 99 counties in Iowa.

The HSIP-Secondary program was established in 2013 as a $2 million yearly set-aside out of Iowa's HSIP to address safety issues on the secondary (county-owned) roadway system. This program is focused on providing funding for projects that incorporate systemic, low-cost safety improvements, typically costing less than $10,000 per mile. Typical countermeasures include rumble strips, grooved-in pavement markings, improved signage, and guardrail updates. As word has gotten out about this new program, projects have been developed and completed at an increasing rate.

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

☐ Design

☐ Planning

☐ Maintenance

☐ Operations

☐ Governors Highway Safety Office

☒ Other: Other-Districts

Briefly describe coordination with internal partners.

Iowa DOT districts are typically charged with developing and overseeing HSIP projects, so they are consulted early in the HSIP planning process. HSIP projects are chosen that align with SHSP emphasis areas, typically intersections and lane departures. However, a large majority of funding goes toward addressing lane departure crashes through shoulder improvements, most commonly shoulder paving. The districts provide input on which projects align with their goals, staffing, and other planned project timelines. In recent years, shoulder paving projects have been selected in order to complete specific highway corridors. However, this practice may be nearing an end as administration of the HSIP program shifts to be more data driven.

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

☐ Metropolitan Planning Organizations

☐ Governors Highway Safety Office

☐ Local Government Association

☒ Other: Other-None.

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-None.

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

None.

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:		

Program: **Local Safety**

Date of Program Methodology: **2/26/2013**

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	☐ 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-Collaboration with county engineers

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.

County engineers identify projects for potential funding based on their knowledge of their system's performance.

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 1
- ☐ Incremental B/C
- ☐ Ranking based on net benefit
- ☒ Cost Effectiveness 2

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

74

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
- ☒ Rumble Strips
- ☒ Pavement/Shoulder Widening
- ☒ Install/Improve Pavement Marking and/or Delineation
- ☐ Clear Zone Improvements
- ☒ 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-SHSP

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-None

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

None.

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)	35157900	96 %	25573863	87 %
HRRRP (SAFETEA-LU)	1500000	4 %	3660600	12 %
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer – Section 164				
Incentive Grants - Section 163				
Incentive Grants (Section 406)	0	0 %	211022	1 %
Other Federal-aid Funds (i.e. STP, NHPP)				
State and Local Funds				

Totals	36657900	100%	29445485	100%

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

$5,349,900.00

How much funding is obligated to local safety projects?

$5,641,986.00

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

$540,000.00

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

$750,937.00

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.

Impediments to fully obligating programmed HSIP funds include proper estimating and long development timelines. Initial cost estimates tend to be high in order to account for project uncertainties and to avoid having to ask for more money at a later time. Project development timelines can be affected by multiple external forces including coordination, clearances, and unforeseen circumstances. Our goal is to work with project sponsors to improve the accuracy of cost estimates and to minimize time delays in order to obligate HSIP funds to the fullest extent.

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
HRRR-C054(90)--5R-54	Shoulder treatments Widen shoulder - paved or other	5.3 Miles	654000	784892	HRRRP (SAFETEA-LU)	Rural Major Collector	800	55	County Highway Agency	Lane Departure	Shoulder treatments
HRRR-C070(60)--5R-70	Shoulder treatments Widen shoulder - paved or other	1 Miles	500000	703236	HRRRP (SAFETEA-LU)	Rural Minor Collector	1860	55	County Highway Agency	Lane Departure	Shoulder treatments
HRRR-C078(168)--5R-78	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	500000	1268183	HRRRP (SAFETEA-LU)	Rural Minor Arterial	970	55	County Highway Agency	Intersections	Turn lanes
HSIP-S-C001(86)-	Roadway Rumble strips	6.4 Miles	50000	59000	HRRRP (SAFETEA	Rural Major Collector	1380	55	County Highway	Lane Departure	Rumble strips

-6C-01	- edge or shoulder				-LU)				Agency		
HSIP-S-C010(94)--6C-10	Roadway delineation Roadway delineation - other	41.3 Miles	325984.5	362205	HSIP (Section 148)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C024(111)--6C-24	Roadway delineation Roadway delineation - other	4.9 Miles	46800	421296	State and Local Funds	Rural Major Collector	510	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C025(97)--6C-25	Roadway delineation Roadway delineation - other	57.1 Miles	368199	506463	HSIP (Section 148)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C044(78)--6C-44	Roadway delineation Roadway delineation - other	30 Miles	200700	223000	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C045(73)--6C-45	Lighting Intersection lighting	2 Numbers	36842	40936	HRRRP (SAFETEA-LU)	Rural Major Collector	700	55	County Highway Agency	Intersections	Intersection lighting

HSIP-S-C045(74)--6C-45	Roadside Barrier-metal	2 Numbers	27000	47166	HRRRP (SAFETEA-LU)	Rural Major Collector	200	55	County Highway Agency	Lane Departure	Roadside safety
HSIP-S-C050(107)--6C-50	Roadway delineation Roadway delineation - other	36.5 Miles	231347	257052	HSIP (Section 148)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C053(77)--6C-53	Shoulder treatments Widen shoulder - paved or other	5 Miles	261917	2411809	State and Local Funds	Rural Major Collector	700	55	County Highway Agency	Lane Departure	Shoulder treatments
HSIP-S-C061(100)--6C-61	Roadway delineation Roadway delineation - other	49.8 Miles	297065	330072	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C063(117)--6C-63	Roadside Barrier end treatments (crash cushions, terminals)	13 Numbers	246465	277000	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Roadside safety

HSIP-S-C069(52)--6C-69	Roadway delineation Roadway delineation - other	30 Miles	216577	240641	HSIP (Section 148)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C085(124)--6C-85	Roadway delineation Roadway delineation - other	57 Miles	176700	196333	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C093(75)--6C-93	Roadway delineation Roadway delineation - other	44 Miles	247887	275430	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Improved delineation
HSIP-S-C095(62)--6C-95	Shoulder treatments Widen shoulder - paved or other	0.6 Miles	343345	381494	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Lane Departure	Shoulder treatments
HSIP-S-C096(127)--6C-96	Lighting Intersection lighting	2 Numbers	48902	54335	HRRRP (SAFETEA-LU)	Rural Major Collector	0	55	County Highway Agency	Intersections	Intersection lighting
HSIPX-014-	Shoulder treatments	8.3	126414	141300	HSIP (Section	Rural Principal	2100	55	State Highway	Lane	Shoulder treatment

4(64)--3L-50	Widen shoulder - paved or other	Miles	0	0	148)	Arterial - Other			Agency	Departure	s
HSIPX-018-2(113)--3L-21	Intersection geometry Auxiliary lanes - modify left-turn lane offset	1 Numbers	651667	724074	HSIP (Section 148)	Rural Principal Arterial - Other	2400	55	State Highway Agency	Intersections	Turn lanes
HSIPX-030-2(157)--3L-24	Shoulder treatments Widen shoulder - paved or other	7.9 Miles	1532389	1728379	HSIP (Section 148)	Rural Principal Arterial - Other	3780	55	State Highway Agency	Lane Departure	Shoulder treatments
HSIPX-030-2(158)--3L-24	Shoulder treatments Widen shoulder - paved or other	25.3 Miles	3025075	3361195	HSIP (Section 148)	Rural Principal Arterial - Other	3650	55	State Highway Agency	Lane Departure	Shoulder treatments
HSIPX-030-2(159)--	Shoulder treatments Widen shoulder -	8.7 Miles	1836900	2041000	HSIP (Section 148)	Rural Principal Arterial -	5400	55	State Highway Agency	Lane Departure	Shoulder treatments

3L-14	paved or other					Other					
HSIPX-034-6(90)--3L-68	Roadway Rumble strips - center	8.8 Miles	180000	100836	State and Local Funds	Rural Principal Arterial - Other Freeways and Expressways	3910	55	State Highway Agency	Lane Departure	Rumble strips
HSIPX-060-1(63)--3L-75	Intersection traffic control Pavement markings - add lane use symbols	8 Numbers	133972	148858	HSIP (Section 148)	Rural Principal Arterial - Other Freeways and Expressways	3380	65	State Highway Agency	Intersections	Improved delineation
HSIPX-071-4(50)--3L-05	Shoulder treatments Widen shoulder - paved or other	5.6 Miles	702375	396307 9	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Principal Arterial - Other	2720	55	State Highway Agency	Lane Departure	Shoulder treatments
HSIPX-071-4(51)--3L-	Shoulder treatments Widen	10.4 Miles	104421 9	594764 0	Other Federal-aid	Rural Principal Arterial -	2710	55	State Highway	Lane Departure	Shoulder treatment

05	shoulder - paved or other				Funds (i.e. STP, NHPP)	Other			Agency		s
HSIPX-071-7(55)--3L-11	Shoulder treatments Widen shoulder - paved or other	9.5 Miles	1225643	1361825	HSIP (Section 148)	Rural Principal Arterial - Other	3280	55	State Highway Agency	Lane Departure	Shoulder treatments
HSIPX-071-9(77)--3L-30	Shoulder treatments Widen shoulder - paved or other	4.9 Miles	843532	937258	HSIP (Section 148)	Rural Principal Arterial - Other	2030	55	State Highway Agency	Lane Departure	Shoulder treatments
HSIPX-086-1(17)--3L-30	Shoulder treatments Widen shoulder - paved or other	7.7 Miles	1676492	1862769	HSIP (Section 148)	Rural Minor Arterial	4266	55	State Highway Agency	Lane Departure	Shoulder treatments
HSIPX-218-2(144)--3L-44	Shoulder treatments Widen shoulder - paved or	12.1 Miles	3635820	4044000	HSIP (Section 148)	Rural Principal Arterial - Other	8800	65	State Highway Agency	Lane Departure	Shoulder treatments

	other										
HSIPX-218-7(230)--3L-07	Shoulder treatments Widen shoulder - paved or other	6.2 Miles	2360430	2629000	HSIP (Section 148)	Rural Principal Arterial - Other Freeways and Expressways	19400	65	State Highway Agency	Lane Departure	Shoulder treatments
IHSIPX-029-2(85)32--08-65	Roadside Barrier - cable	8.9 Miles	959710	1066345	HSIP (Section 148)	Rural Principal Arterial - Interstate	23500	70	State Highway Agency	Lane Departure	Cable barrier
IHSIPX-035-5(104)112--08-85	Roadside Barrier - cable	12.7 Miles	1615658	1795176	HSIP (Section 148)	Rural Principal Arterial - Interstate	27400	70	State Highway Agency	Lane Departure	Cable barrier
IHSIPX-035-6(127)147--08-40	Roadside Barrier - cable	18 Numbers	904455	1004950	HSIP (Section 148)	Rural Principal Arterial - Interstate	15000	70	State Highway Agency	Lane Departure	Roadside safety
STP-S-C001(83)--5E-01	Roadway Rumble strips - edge or shoulder	5.6 Miles	52340	2070493	Other Federal-aid Funds (i.e. STP,	Rural Major Collector	470	55	County Highway Agency	Lane Departure	Rumble strips

					NHPP)						
STP-S-C047(52)--5E-47	Shoulder treatments Widen shoulder - paved or other	12.8 Miles	270000	3660537	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Major Collector	480	55	County Highway Agency	Lane Departure	Shoulder treatments
HSIPX-000S(755)--3L-00	Non-infrastructure Transportation safety planning	12 Numbers	539915	599905	HSIP (Section 148)		0	0		Lane Departure	Local safety
SBIN(013)	Non-infrastructure Educational efforts	1 Numbers	4701	54392	Incentive Grants (Section 406)		0	0		Education	Deliver safety messages
SBIN(014)	Non-infrastructure Educational efforts	1 Numbers	27821	160826	Incentive Grants (Section 406)		0	0		Education	Deliver safety messages
SBIN(015)	Non-infrastructure Educational efforts	1 Numbers	175000	288392	Incentive Grants (Section 406)		0	0		Education	Deliver safety messages

BACS(004)	Non-infrastructure Educational efforts	1 Numbers	3500	244841	Incentive Grants (Section 406)		0	0		Education	Deliver safety messages

Progress in Achieving Safety Performance Targets

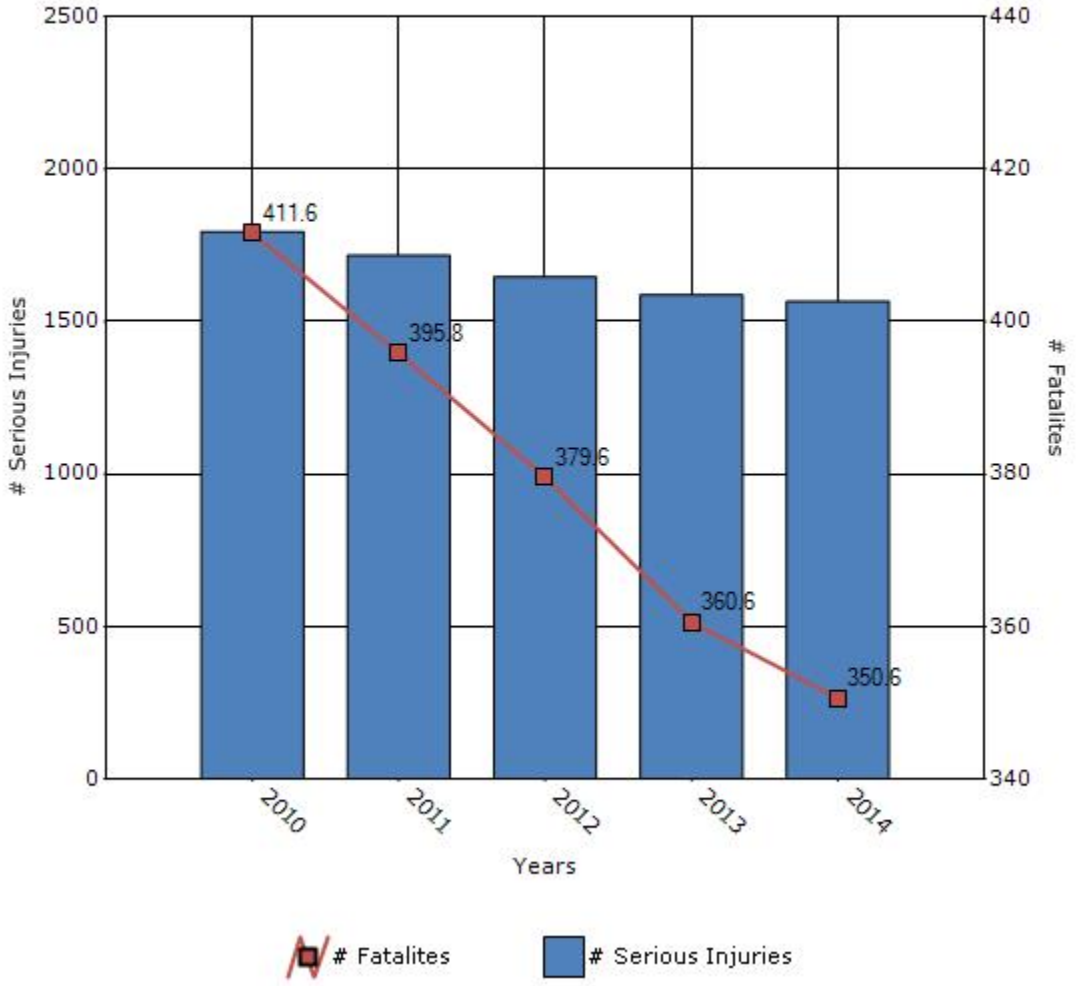
Overview of General Safety Trends

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

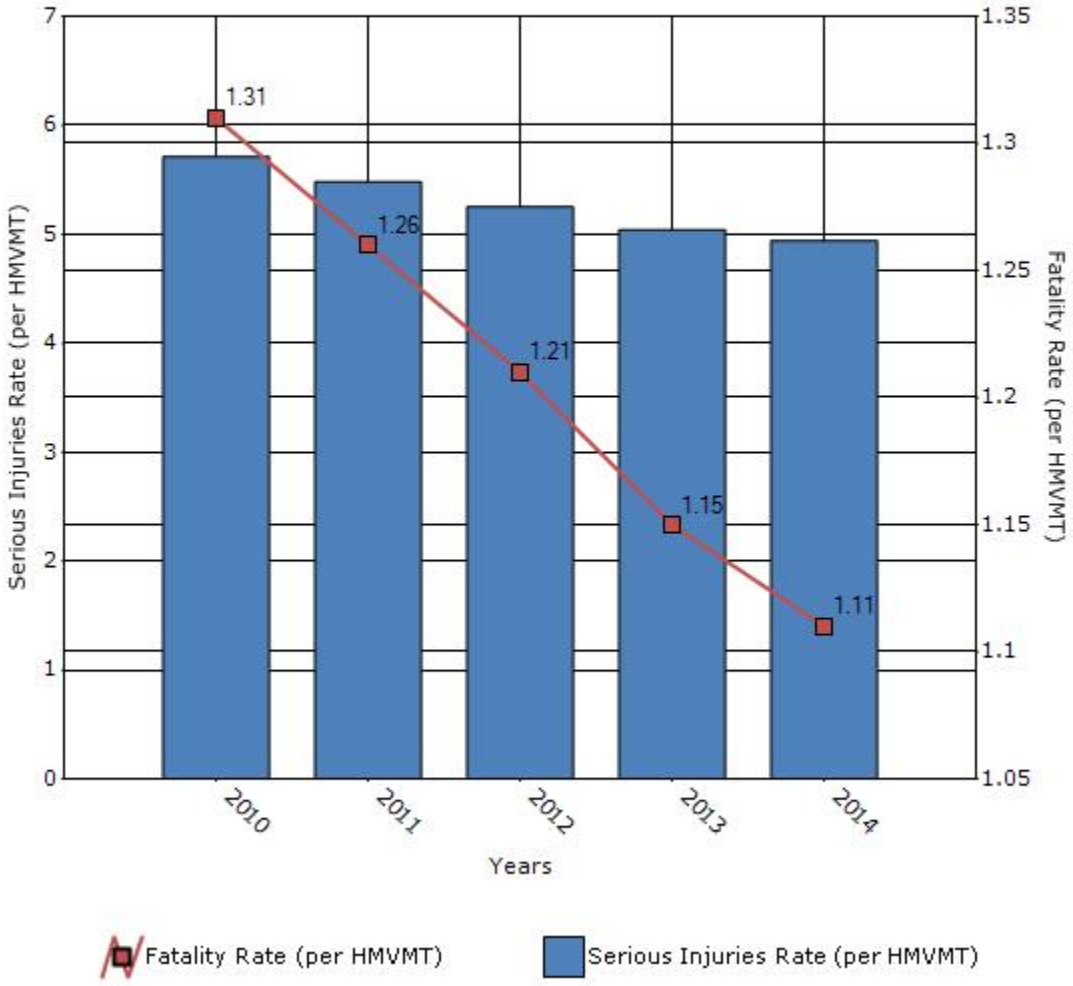
Performance Measures*	2010	2011	2012	2013	2014
Number of fatalities	411.6	395.8	379.6	360.6	350.6
Number of serious injuries	1794.2	1716.6	1646	1586.8	1565.6
Fatality rate (per HMVMT)	1.31	1.26	1.21	1.15	1.11
Serious injury rate (per HMVMT)	5.71	5.48	5.25	5.04	4.94

*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

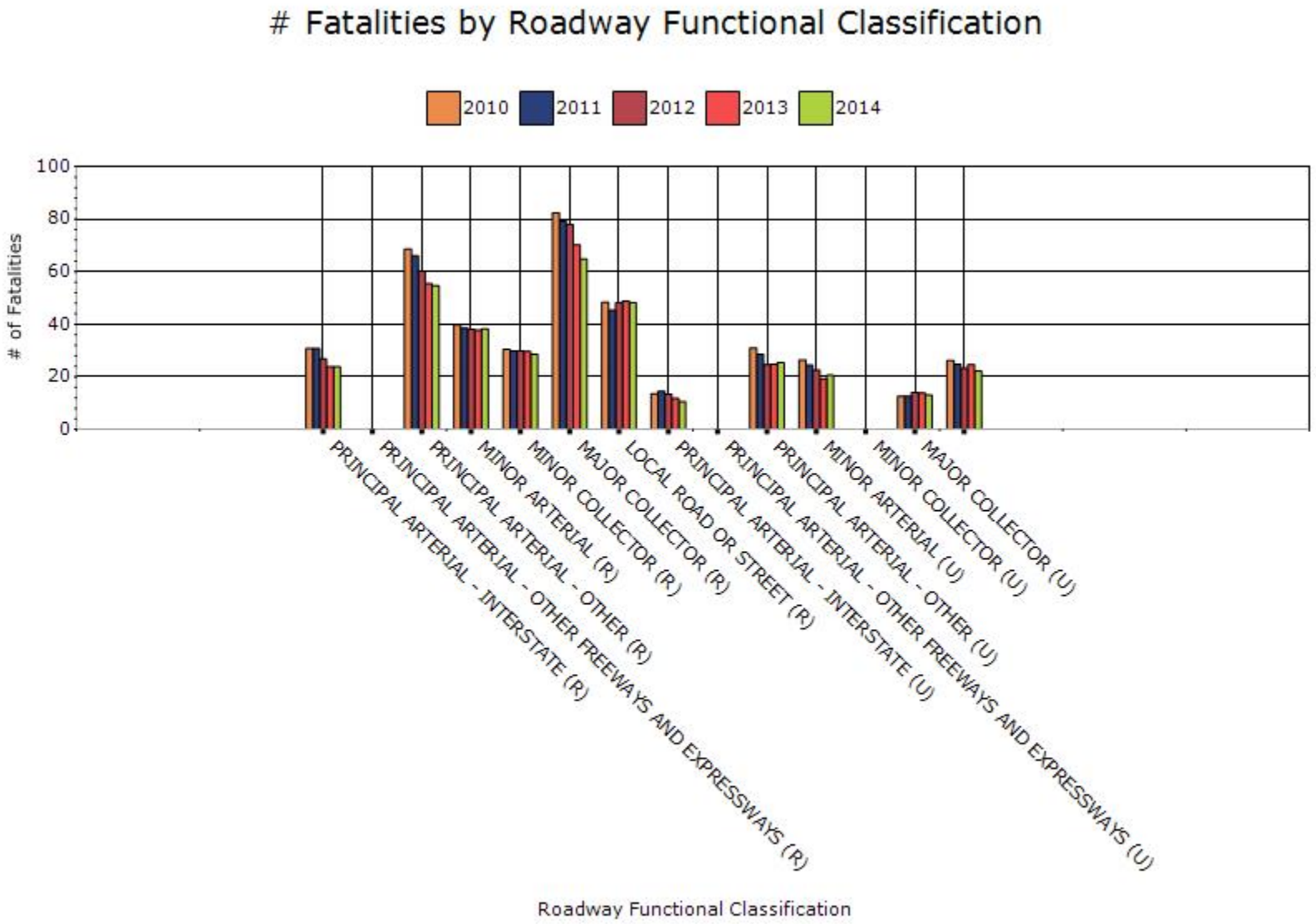


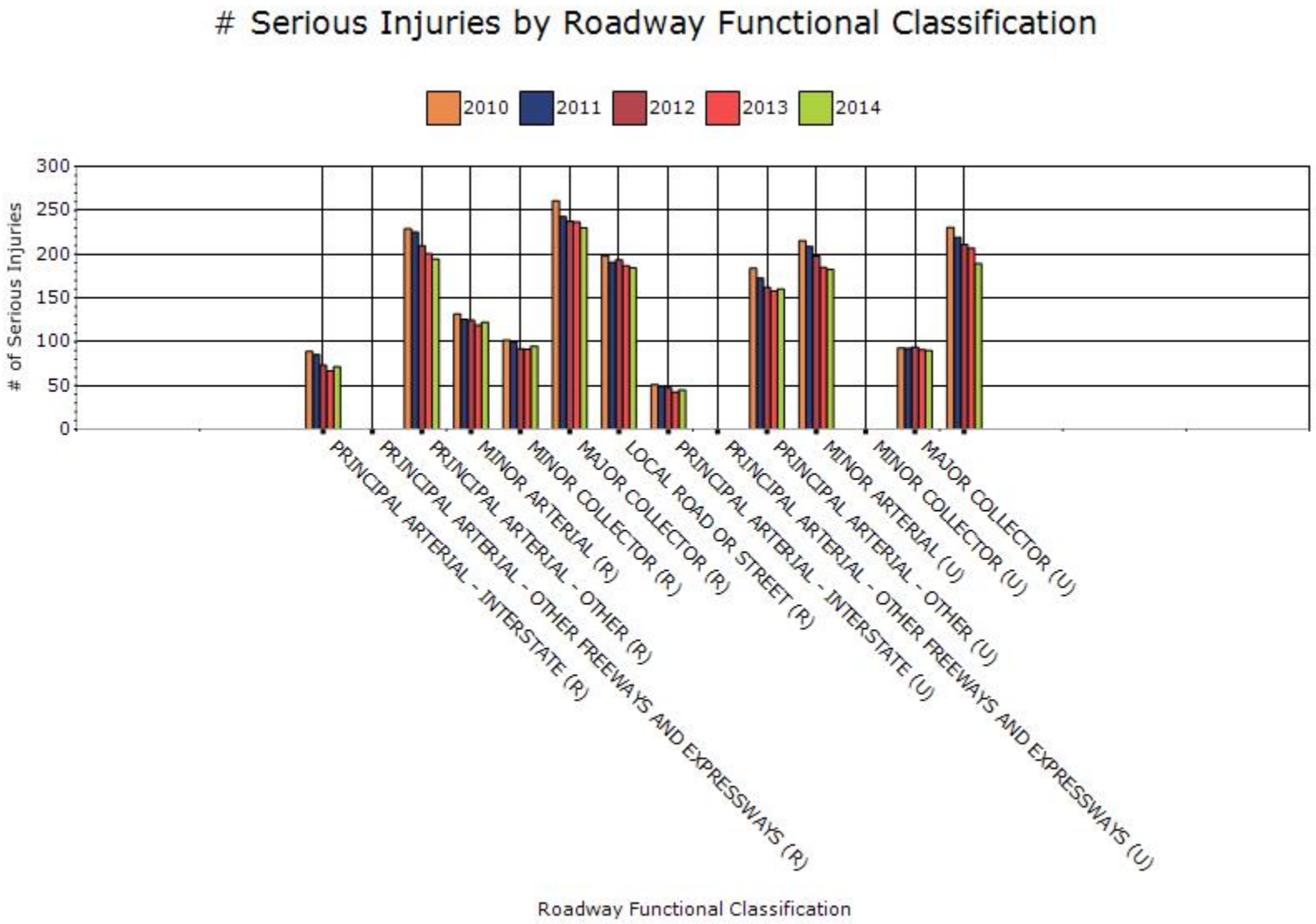
To the maximum extent possible, present performance measure* data by functional classification and ownership.

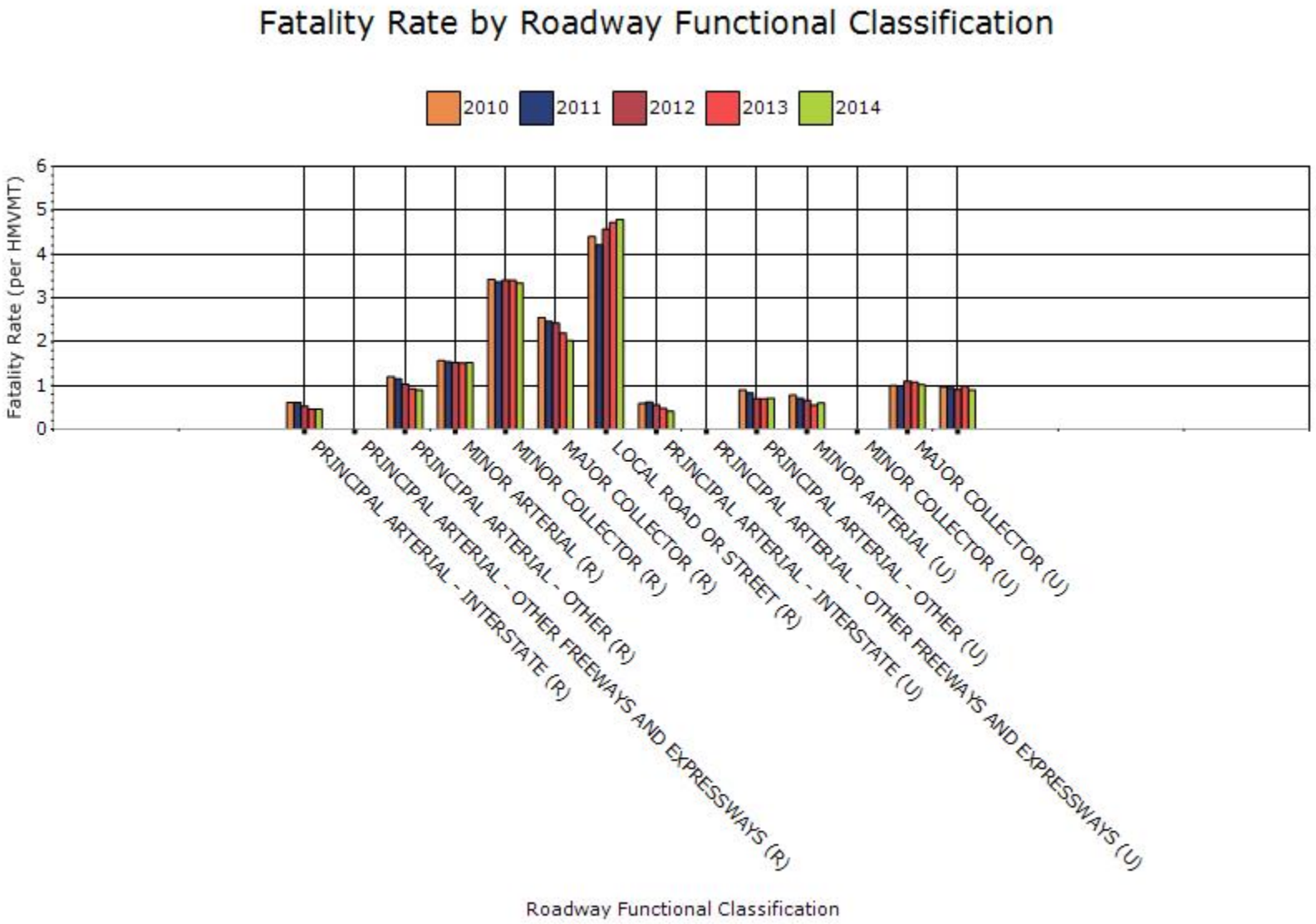
Year - 2014

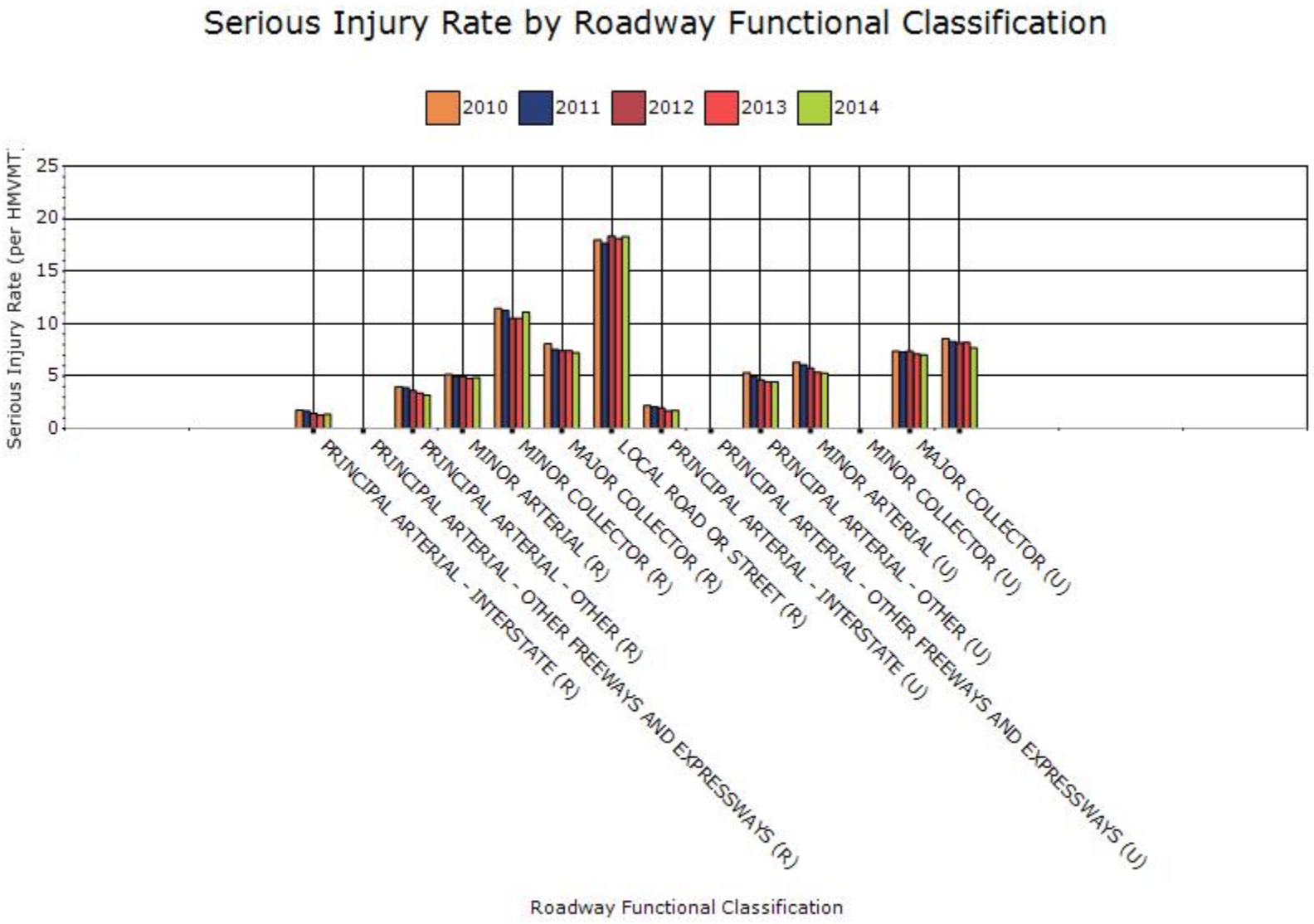
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	23.8	71.2	0.46	1.37
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	54.6	194.2	0.9	3.2
RURAL MINOR ARTERIAL	38.2	122.2	1.52	4.85
RURAL MINOR COLLECTOR	28.6	94.8	3.34	11.1
RURAL MAJOR COLLECTOR	64.8	230	2.03	7.22
RURAL LOCAL ROAD OR STREET	48.2	184.2	4.79	18.28
URBAN PRINCIPAL	10.6	45	0.41	1.73

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	25.4	160	0.71	4.45
URBAN MINOR ARTERIAL	20.6	182.4	0.6	5.28
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	13	89.8	1.02	7.02
URBAN LOCAL ROAD OR STREET	22.2	189.2	0.9	7.69


Fatalities by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Fatalities
100
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

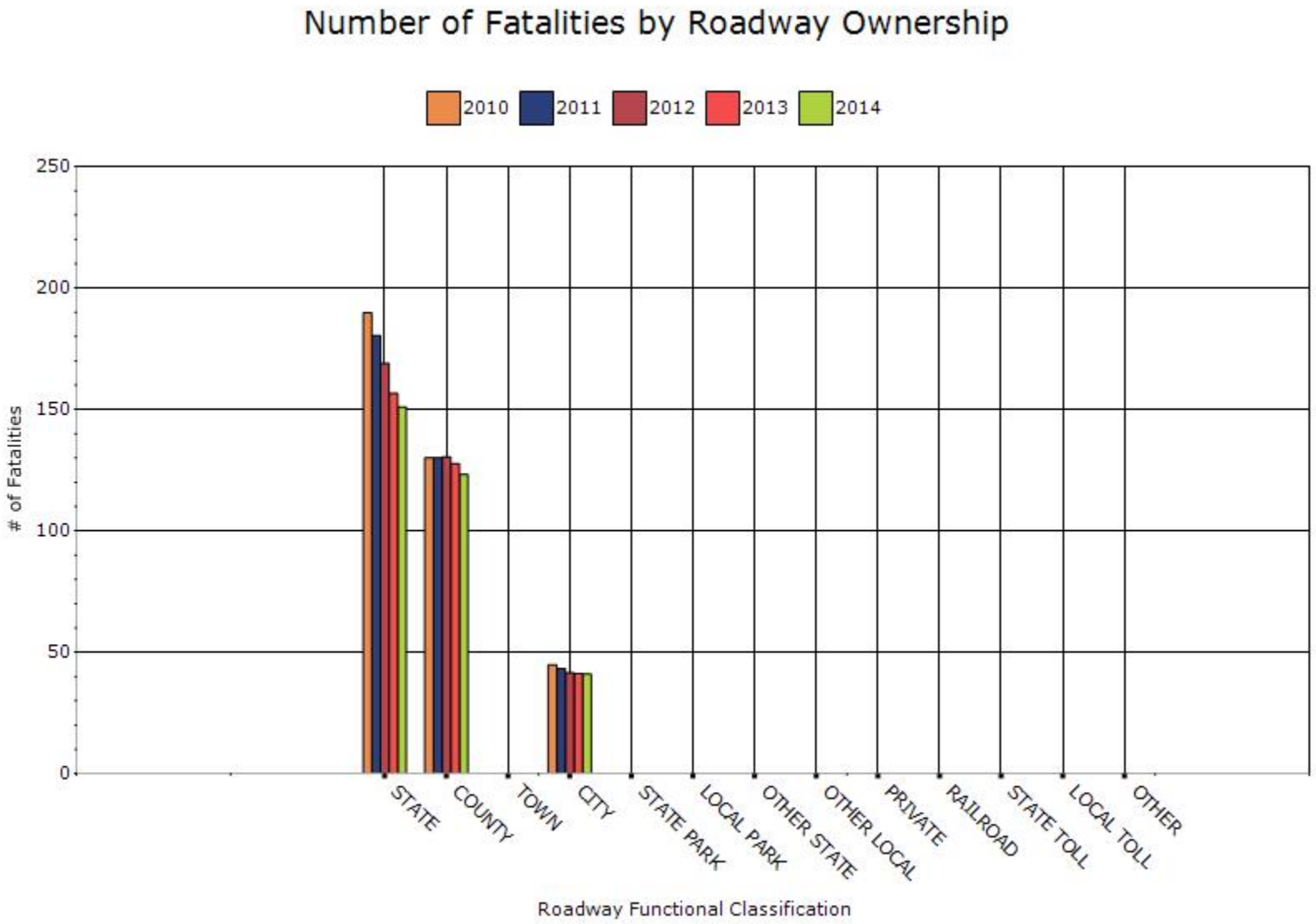

Serious Injuries by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Serious Injuries
300
250
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

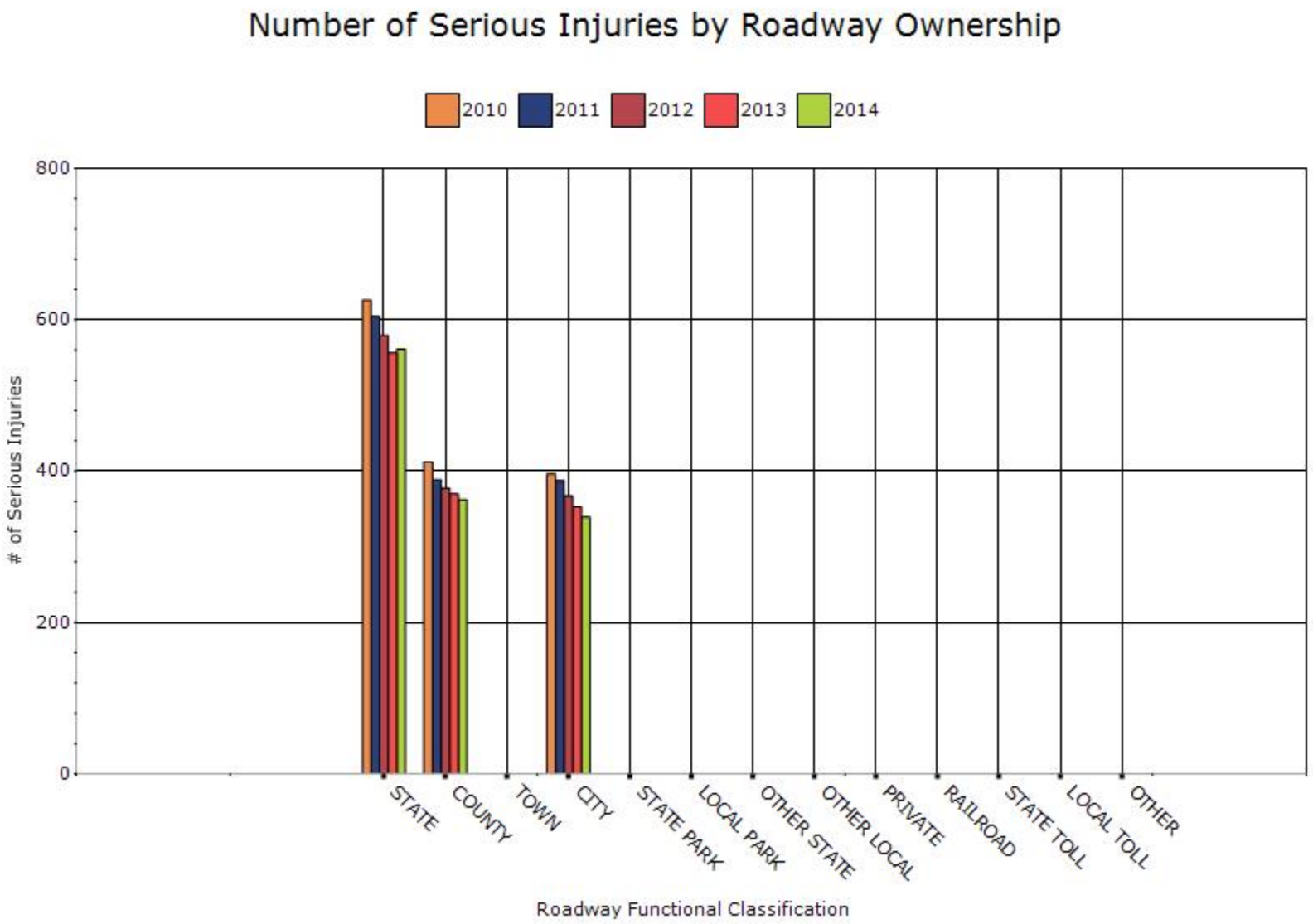

Fatality Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
0
1
2
3
4
5
6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL 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

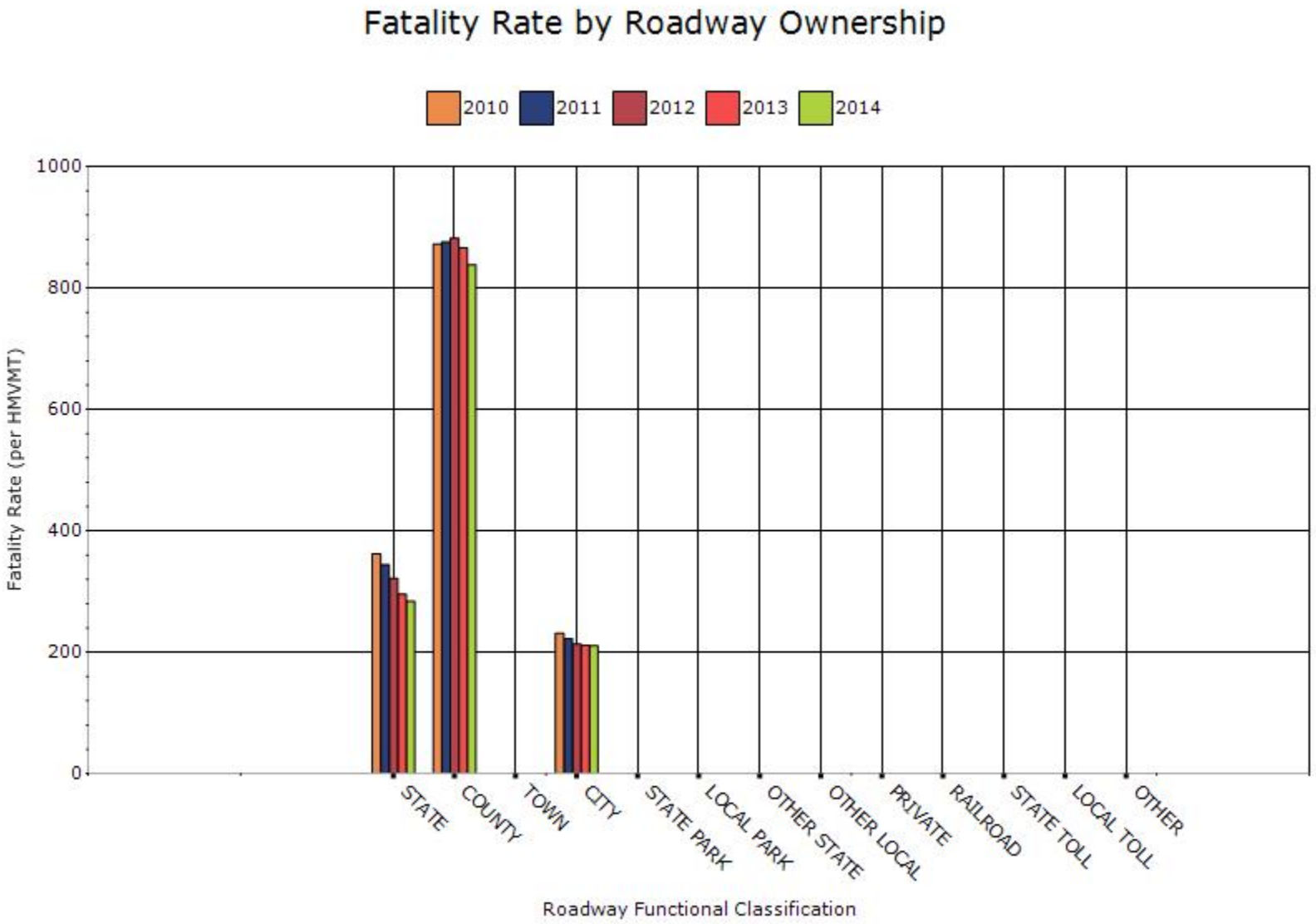

Serious Injury Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR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

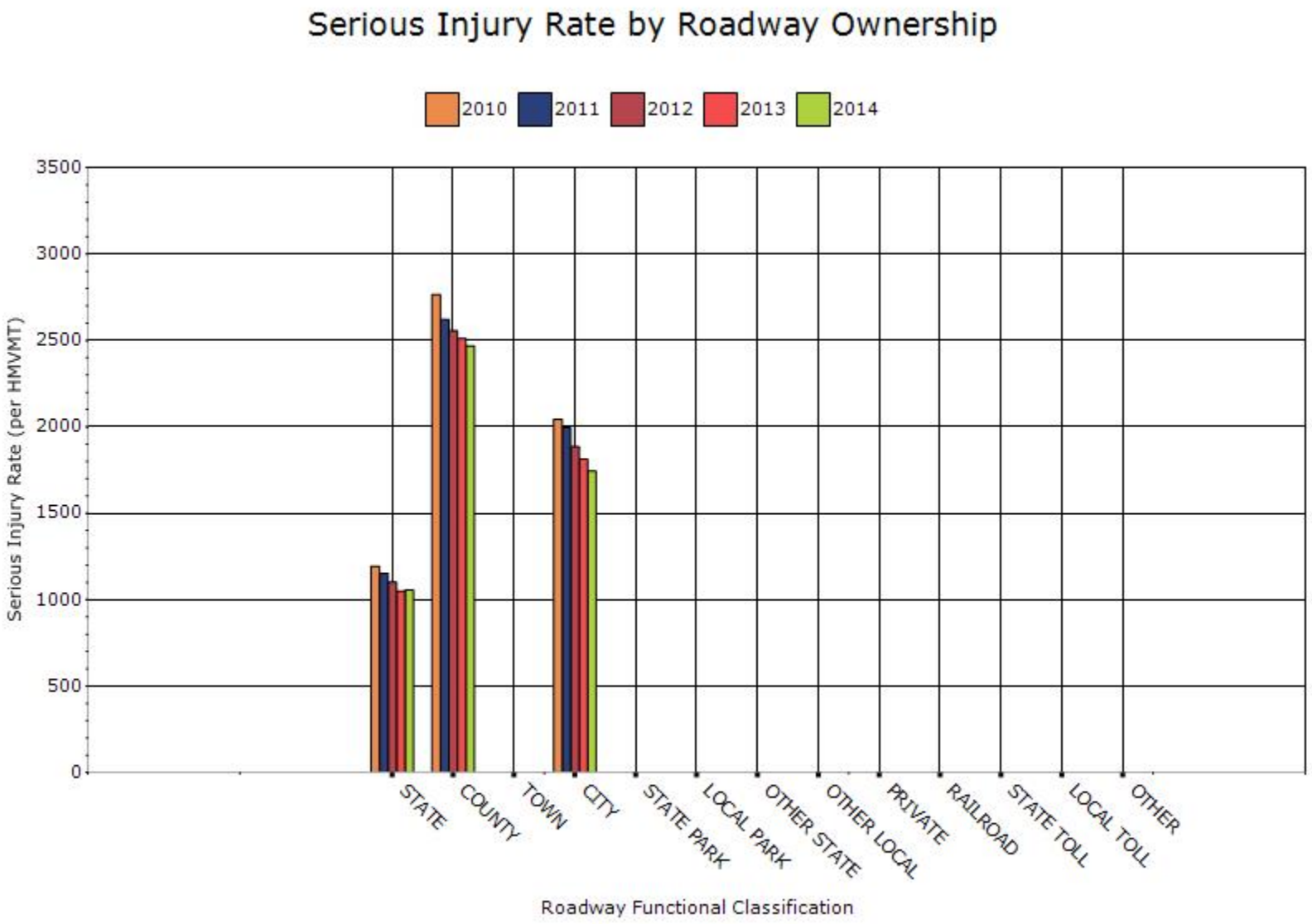
Year - 2014

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	151	561.4	284.02	1055.65
COUNTY HIGHWAY AGENCY	123.2	362.6	838.29	2467.5
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	41	339.4	210.62	1743.53
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
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
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
1000
800
600
400
200
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
3500
3000
2500
2000
1500
1000
500
0
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.

It appears that Iowa's HSIP investments are having a positive effect on the reduction of serious injuries and fatalities. However, it is noted that the fatality rate on locally owned roadways is significantly higher than for state-owned roadways. This is a disparity that we hope to address in future years through a possible increase in the percentage of funds that gets applied to the local system.

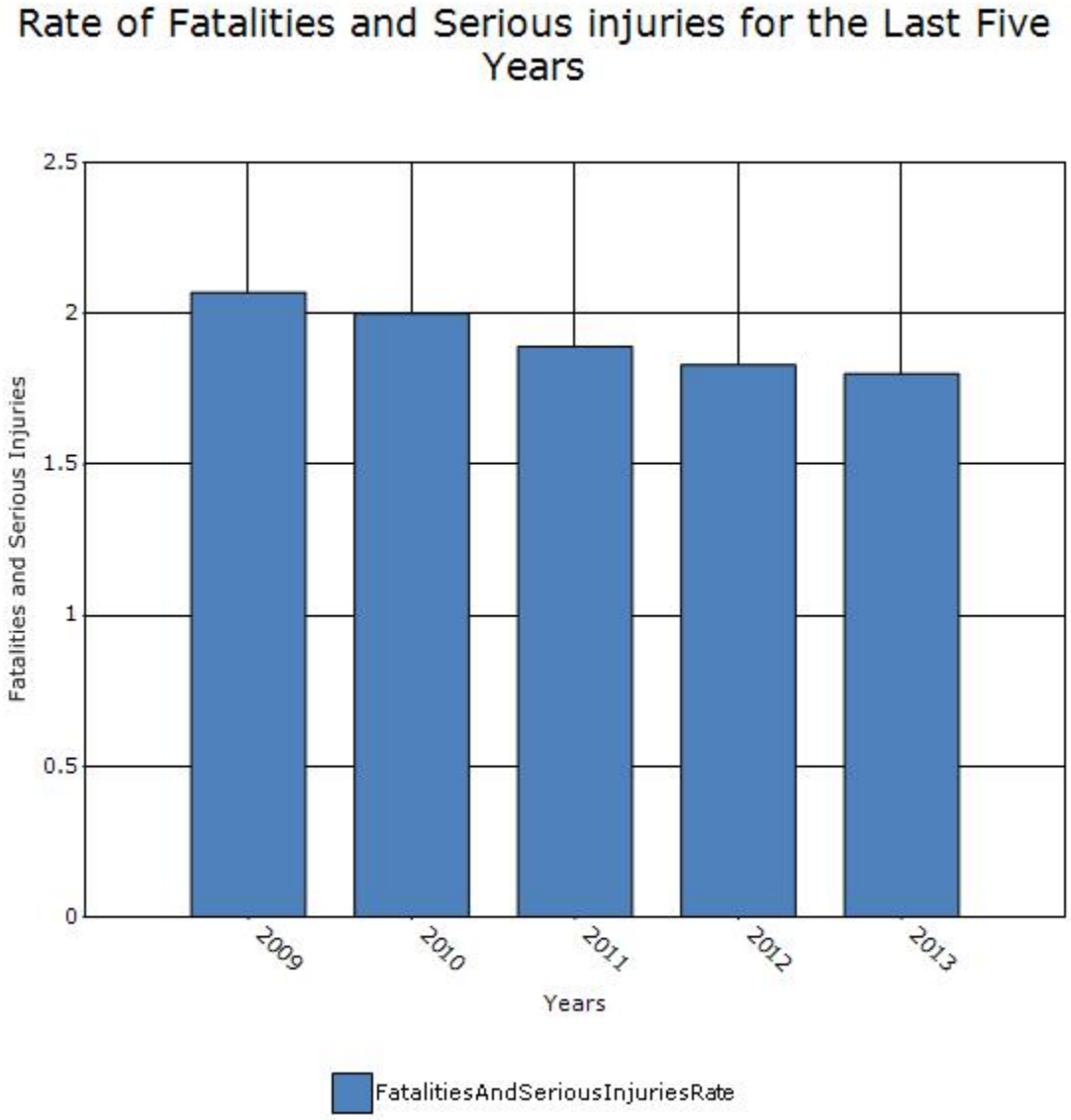
Application of Special Rules

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)	0.59	0.55	0.53	0.51	0.49
Serious injury rate (per capita)	1.49	1.45	1.36	1.32	1.31
Fatality and serious injury rate (per capita)	2.07	2	1.89	1.83	1.8

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

The number of older person fatalities and serious injuries in Iowa was summed for each year from 2005 to 2013. For each year, this sum was divided by the number of older persons per 1000 population in the State of Iowa, as published by FHWA, to determine a yearly rate.



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-Crash data

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.

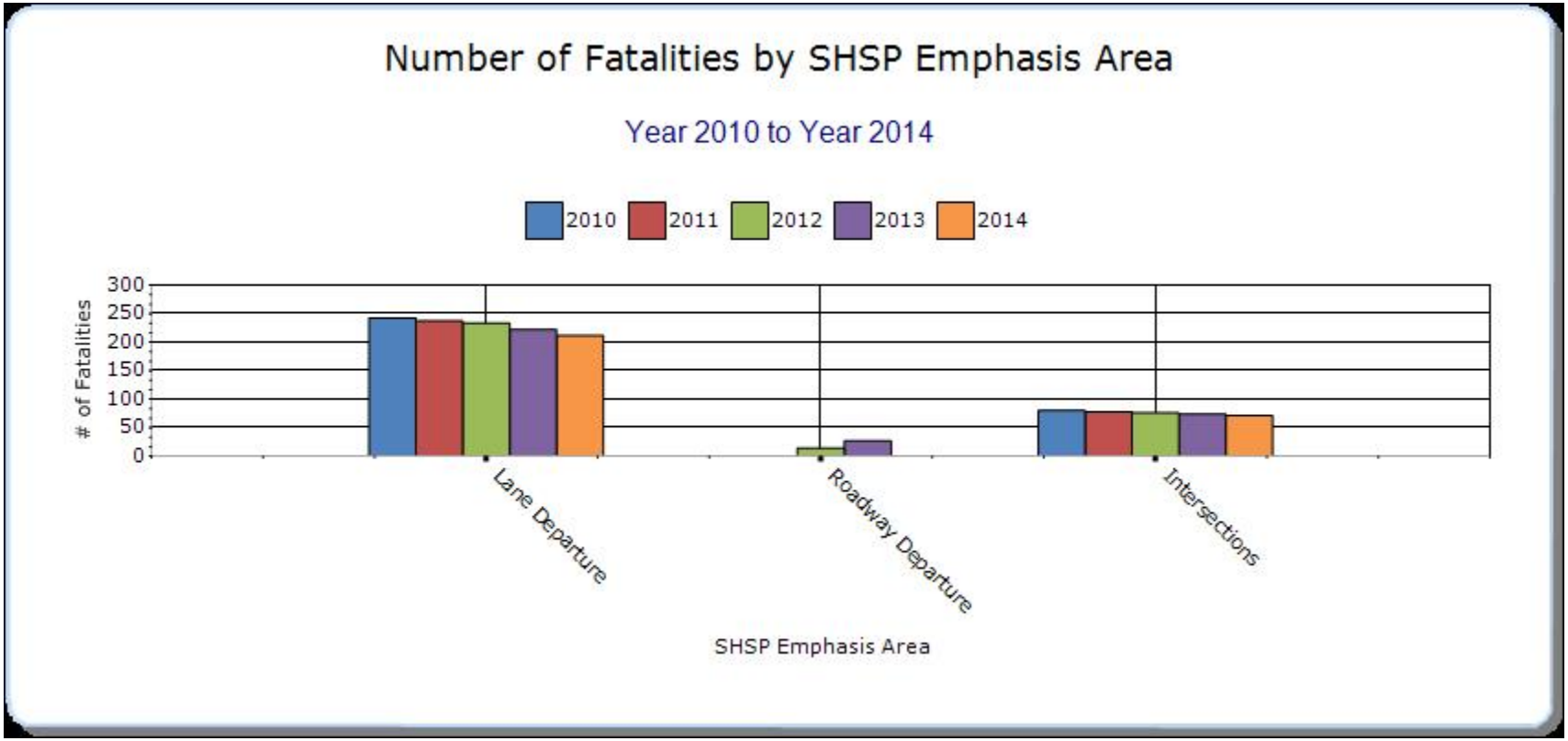
None.

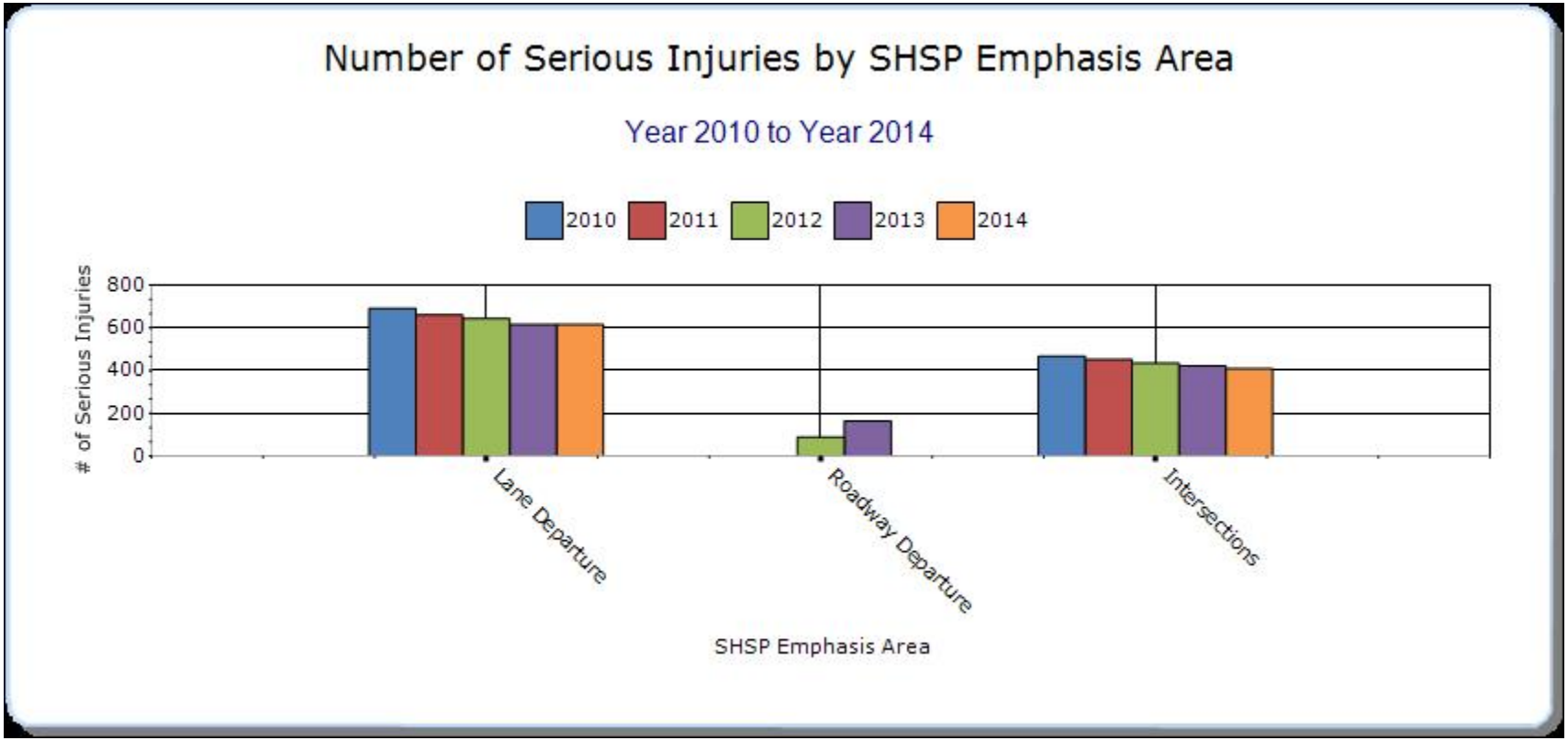
SHSP Emphasis Areas

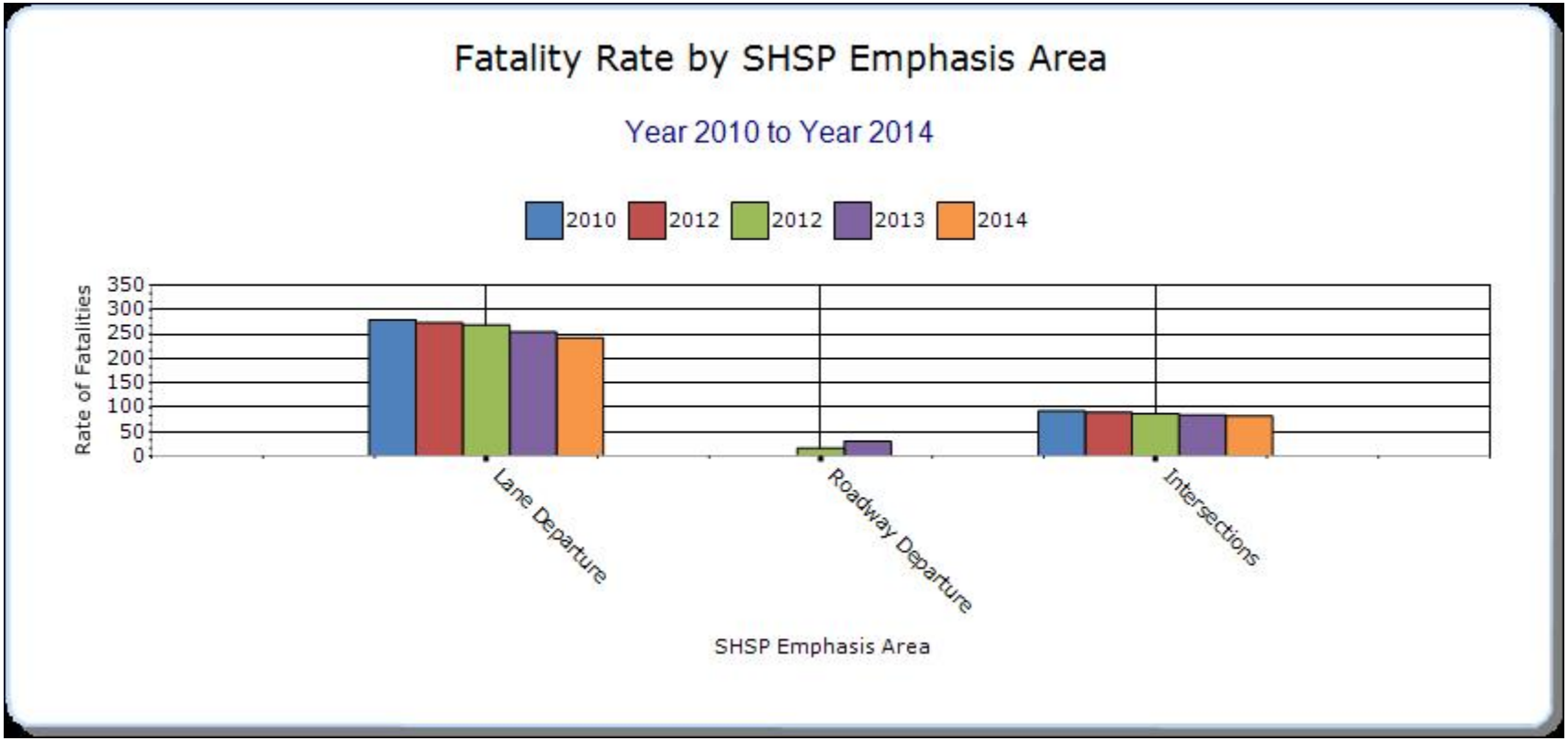
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

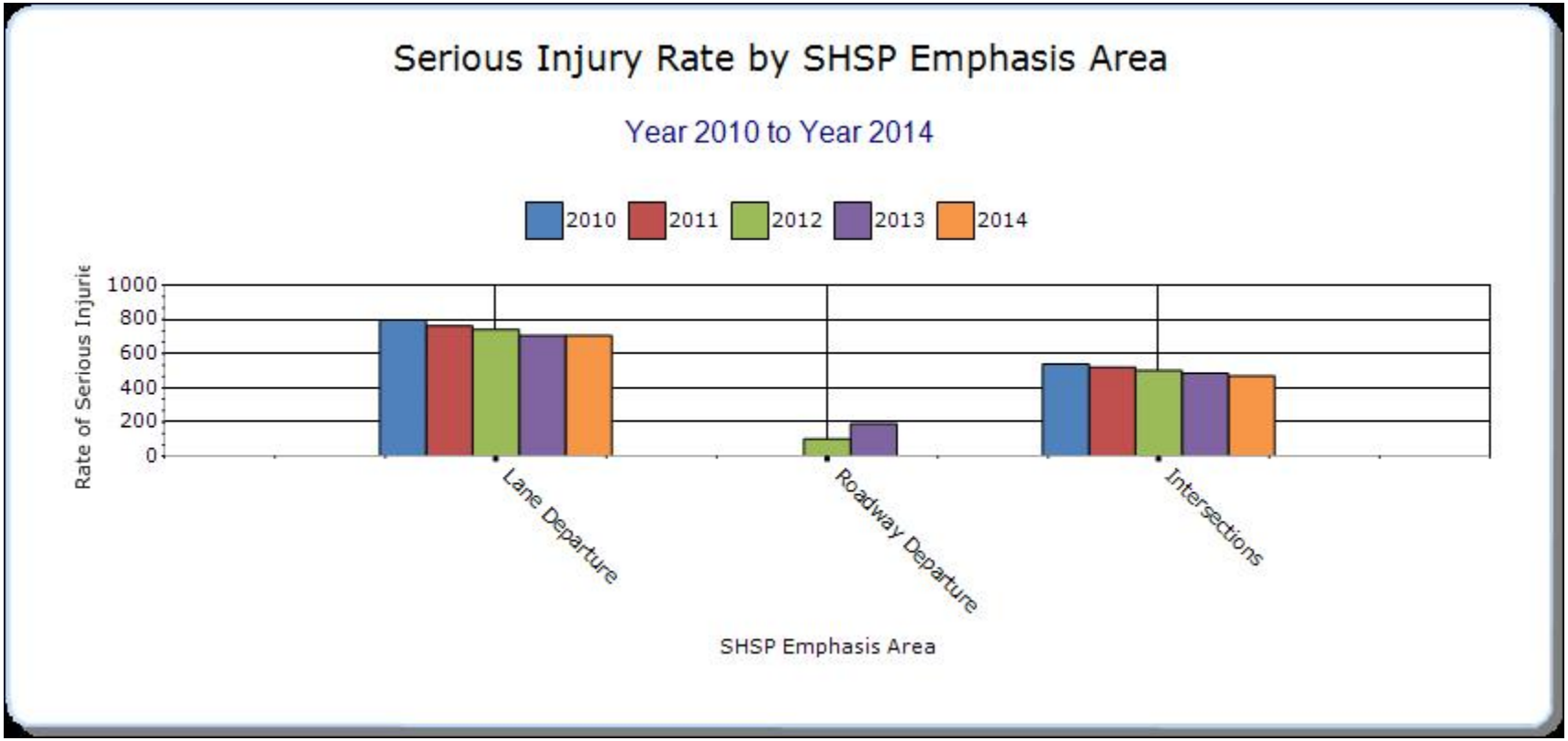
Year - 2014

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
Lane Departure	All	211.8	616	242.26	704.62	0	0	0
Intersections	Intersections	71.6	410.2	81.92	469.22	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
800
600
400
200
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
350
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area

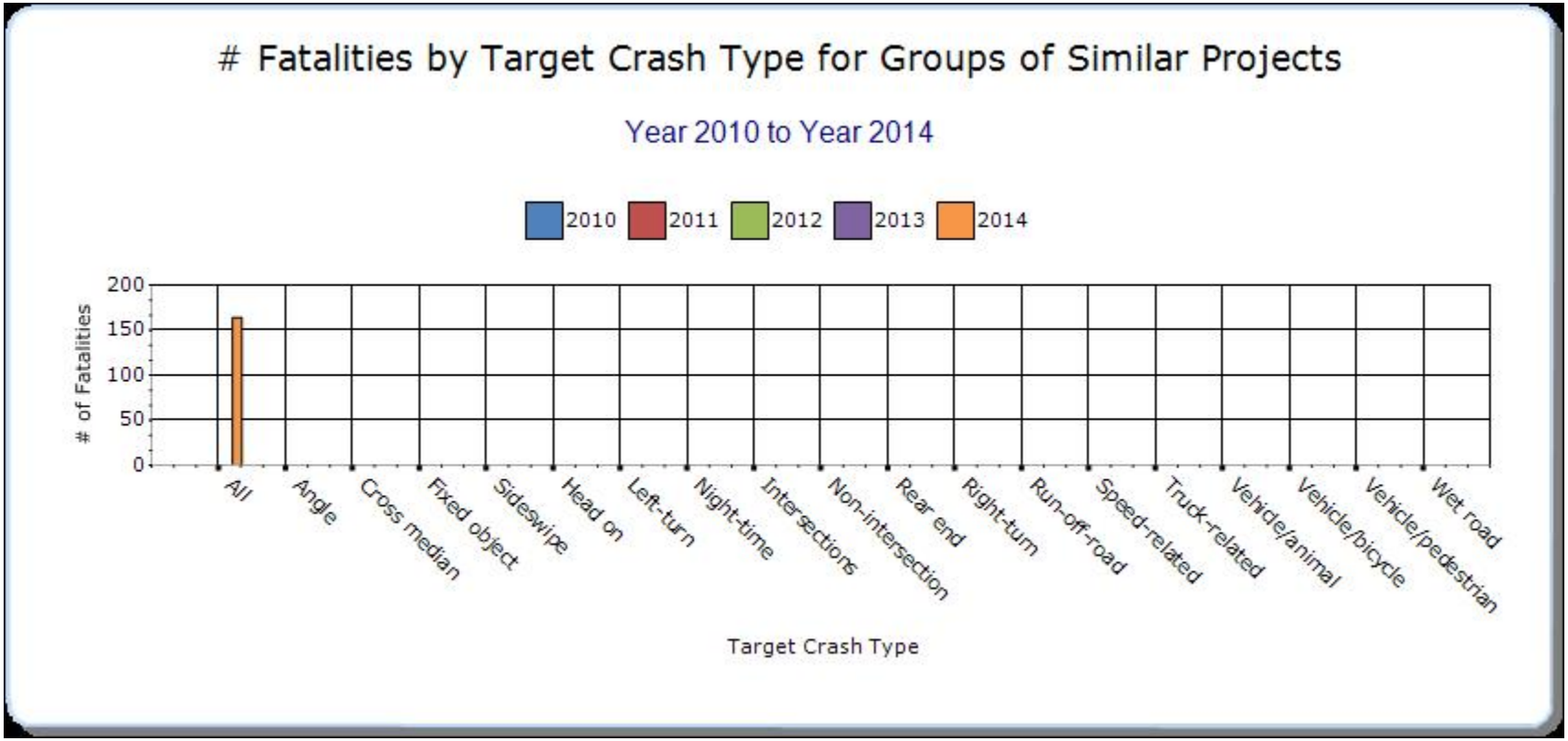

Serious Injury Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
1000
800
600
400
200
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area

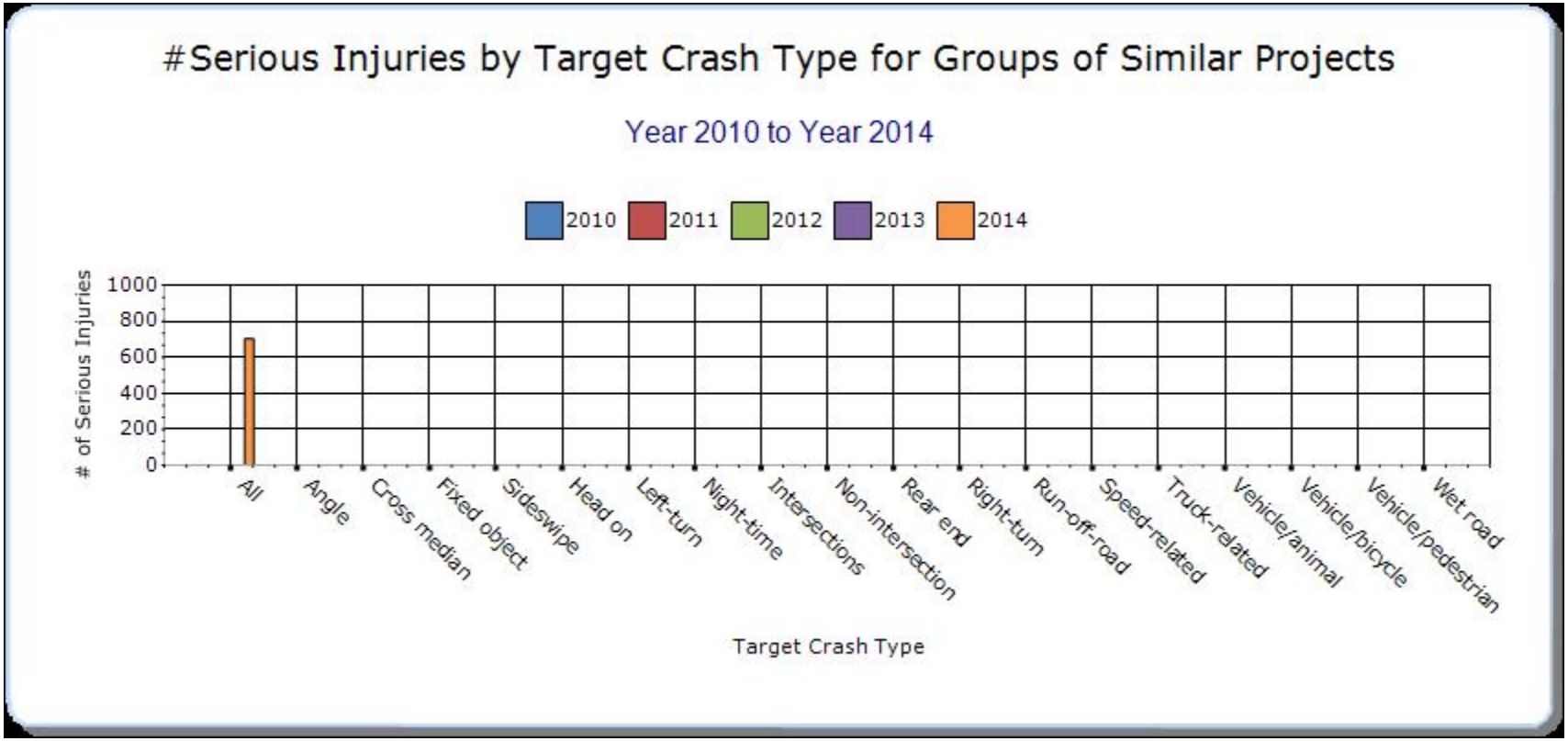
Groups of similar project types

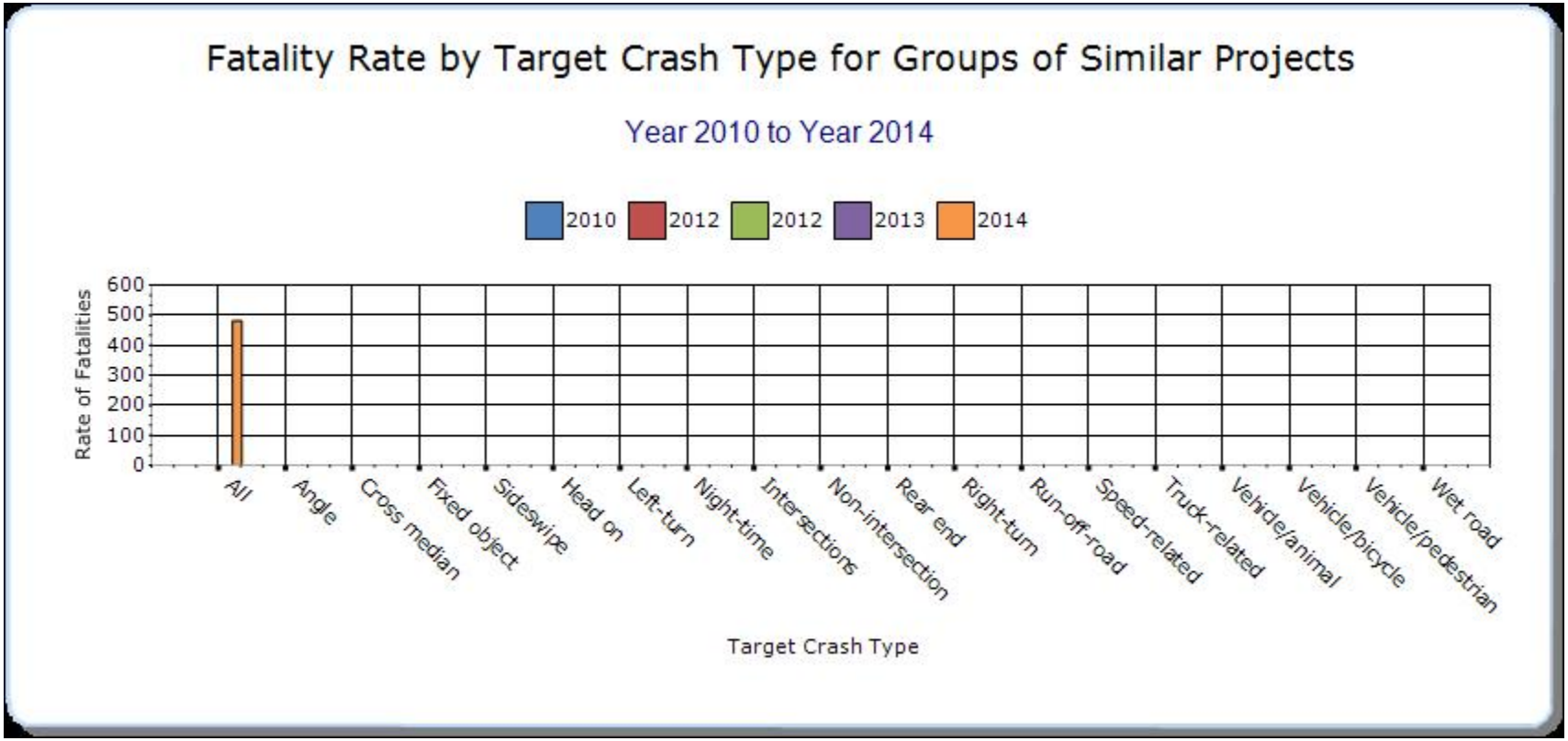
Present the overall effectiveness of groups of similar types of projects.

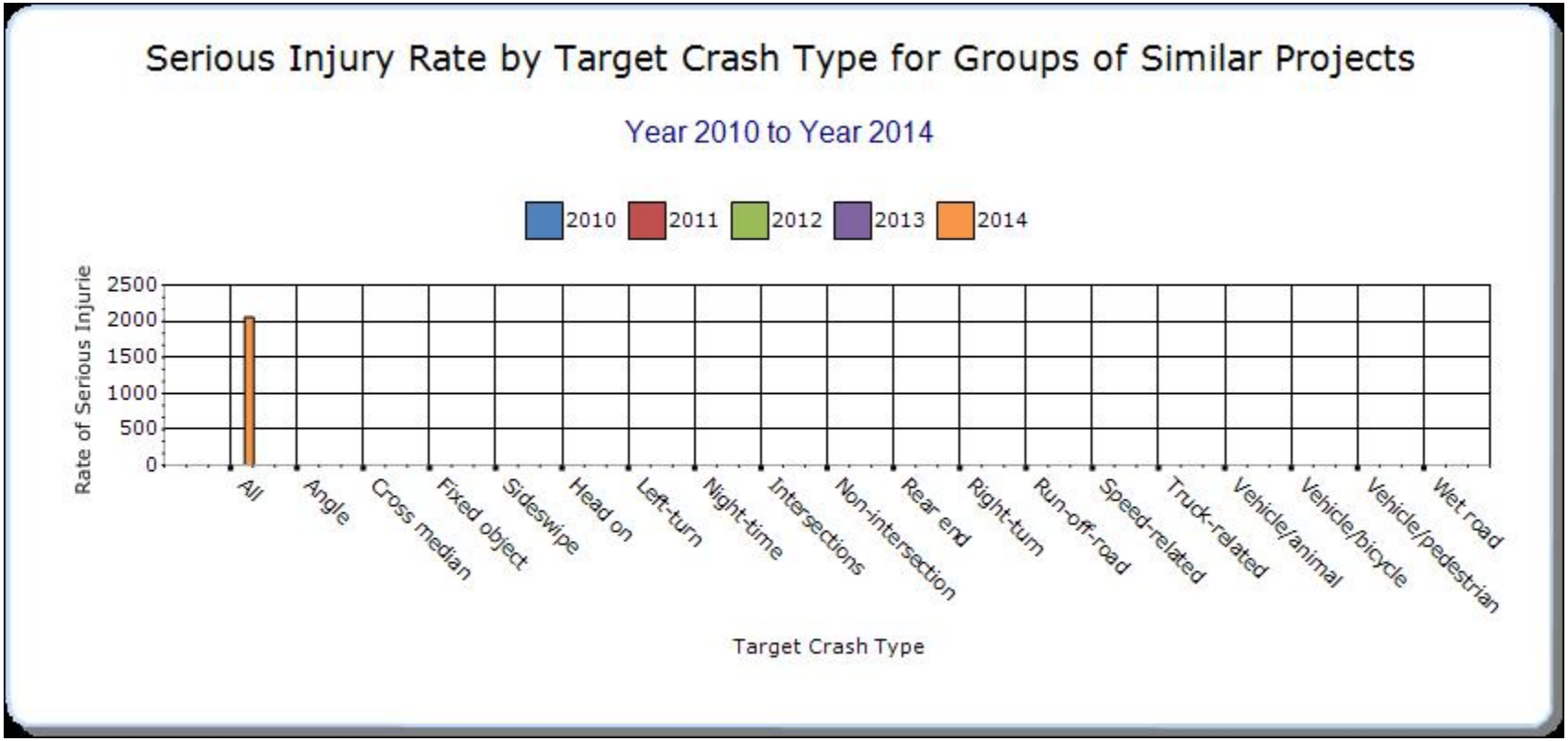
Year - 2014

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
Local Safety	All	164.2	702	480.64	2054.82	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
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
1000
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 Groups of Similar Projects
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
600
500
400
300
200
100
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
2500
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

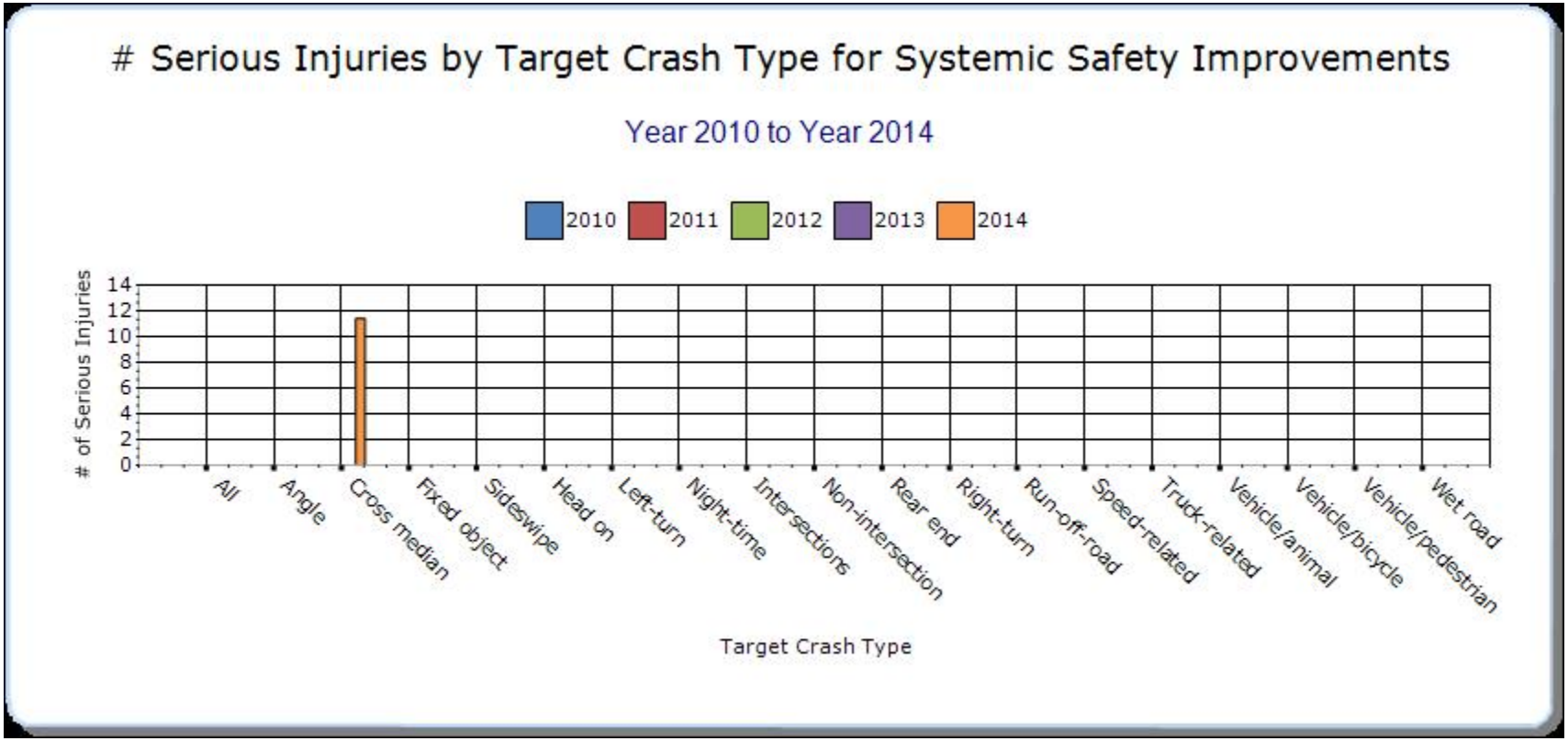
Systemic Treatments

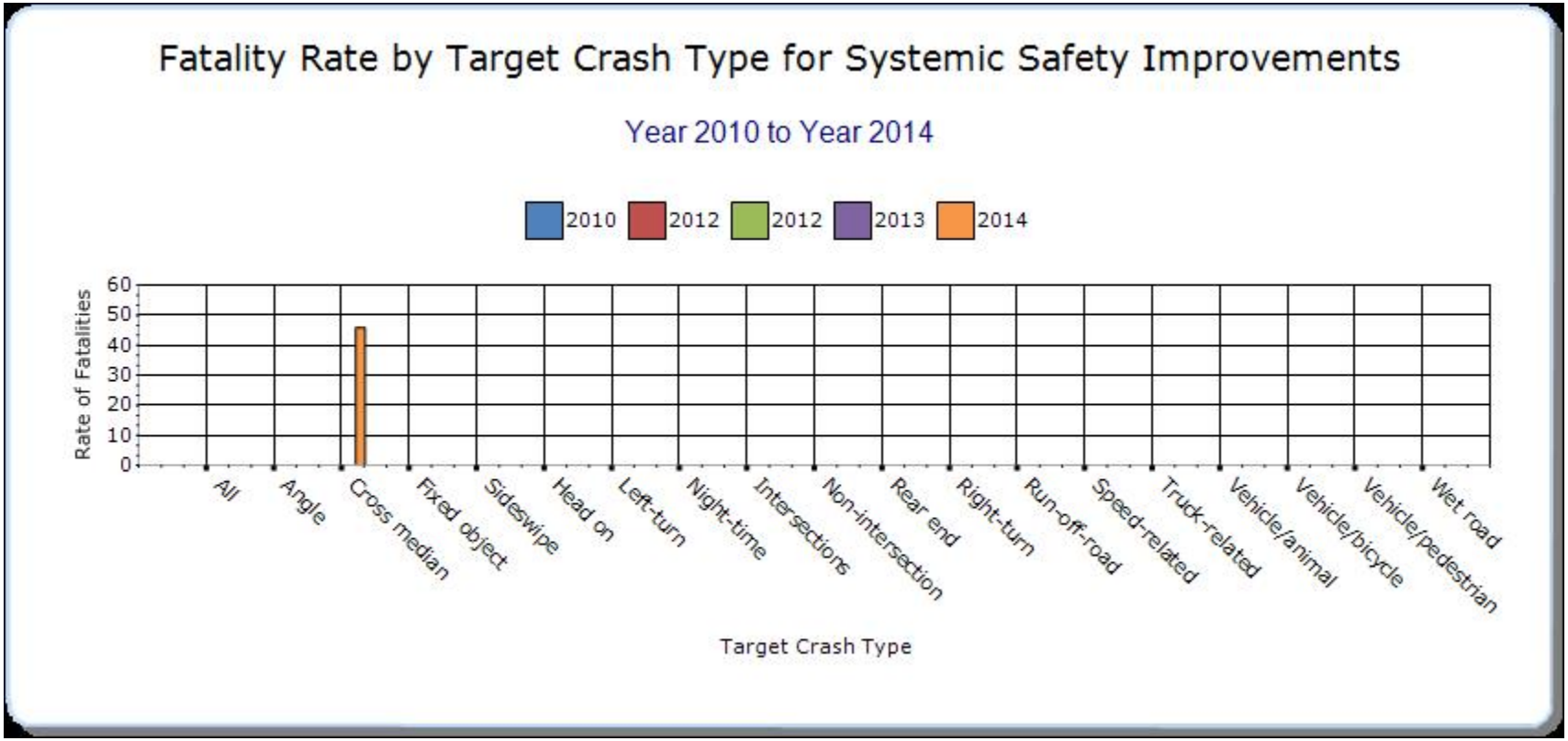
Present the overall effectiveness of systemic treatments.

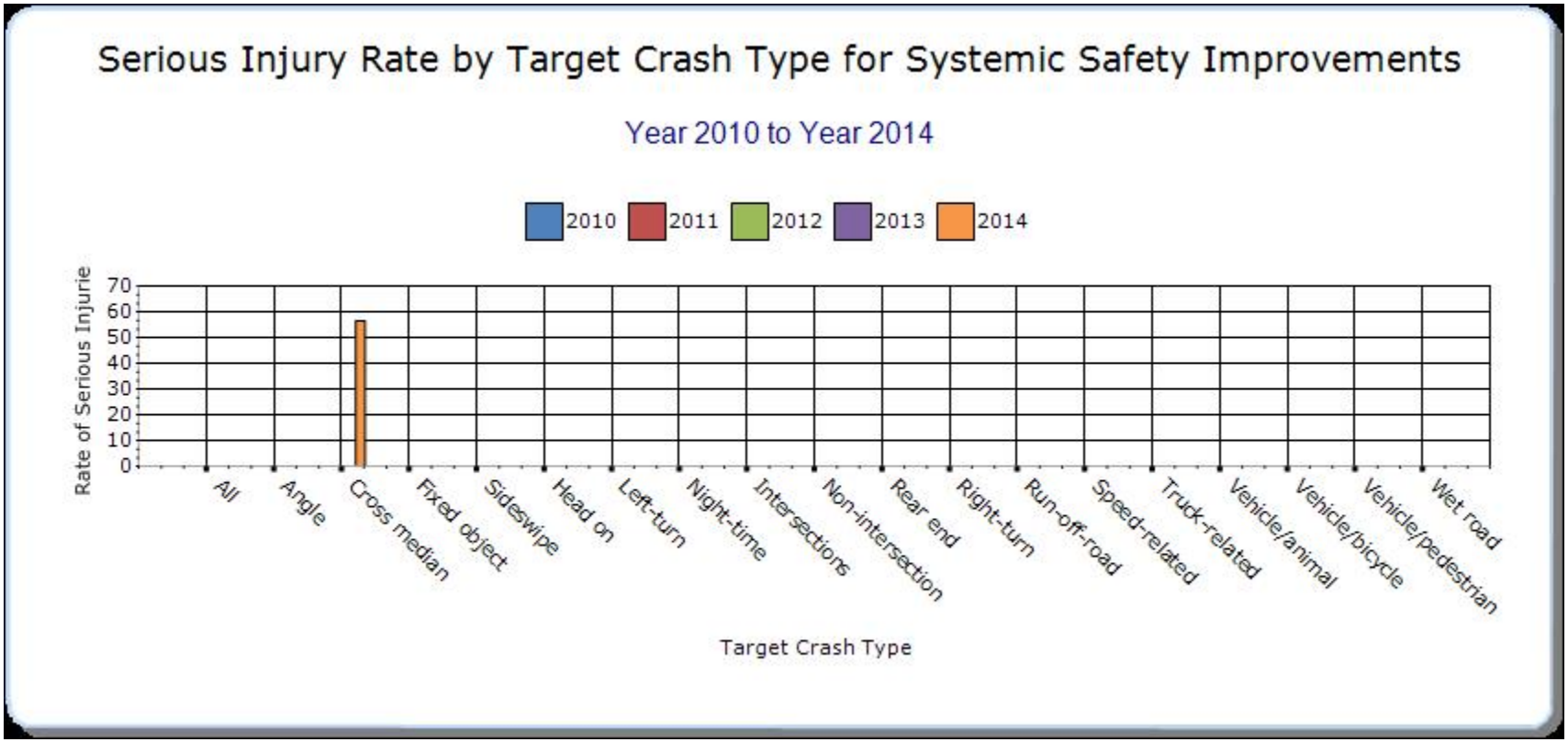
Year - 2014

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
Cable Median Barriers	Cross median	9.2	11.4	45.85	56.6	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
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


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
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


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
60
50
40
30
20
10
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 Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
70
60
50
40
30
20
10
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

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

None.

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)

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.