



Highway Safety Improvement Program
Data Driven Decisions

South Dakota
Highway Safety Improvement Program
2015 Annual Report

Prepared by: SD

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

Disclaimer.....	ii
Executive Summary.....	1
Introduction	2
Program Structure	2
Program Administration	2
Program Methodology.....	4
Progress in Implementing Projects	16
Funds Programmed.....	16
General Listing of Projects	19
Progress in Achieving Safety Performance Targets	26
Overview of General Safety Trends	26
Application of Special Rules	40
Assessment of the Effectiveness of the Improvements (Program Evaluation)	43
SHSP Emphasis Areas	45
Groups of similar project types.....	50
Systemic Treatments.....	55
Project Evaluation	61
Glossary.....	63

Executive Summary

The South Dakota Highway Safety Improvement Program (HSIP) is administered through the Office of Project Development in the South Dakota Department of Transportation (SDDOT) Central Office. The SDDOT uses Road Safety Audits (RSA), Roadway Safety Improvement (RSI) inspections, and a Safety Module software program to identify locations that would benefit from a safety improvement project. RSI inspections are developed by utilizing the South Dakota Department of Public Safety's (SDDPS) crash reporting database, SDDOT's roadway and traffic data, and ArcMap software to determine high crash locations. Both the RSA process and RSI inspections are available for use on all public roadways in South Dakota. HSIP projects are selected for implementation by determining which project will result in the greatest safety improvement for the investment. The overall coordination and collaboration efforts for HSIP projects involve Regional SDDOT personnel, City representatives, County representatives, Township representatives, Consulting Firms, Law Enforcement representatives, among other agencies. The SDDOT HSIP process will be explained in further detail in the Program Methodology section of this report.

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.

The SDDOT administers a County wide signing program which conducts approximately four County wide signing projects each year. Counties are prioritized by crash rate based on injury crashes and vehicle miles traveled.

Routes are also identified for improvements by conducting both RSI and RSAR inspections and by an over representation of crash clusters and higher than average crash rates.

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 SHSP is used along with crash record analysis and mapping to hold meetings with operation and maintenance personal to identify locations to apply safety improvements.

During the planning and design process of a project, the HSM and IHSDM software is used to compare options to increase safety.

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

- Metropolitan Planning Organizations
- Governors Highway Safety Office
- Local Government Association
- Other:

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-Meetings with operation and maintenance personal to identify crash locations to implement safety strategies.

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

The SDDOT has recently completed their SHSP. Emphasis has been placed on implementing safety strategies within the SHSP.

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:

Intersection

Date of Program Methodology: 3/1/2013

What data types were used in the program methodology?

Crashes

- All crashes
- Fatal crashes only
- Fatal and serious injury crashes only
- Other

Exposure

- Traffic
- Volume
- Population
- Lane miles
- Other

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features
- Other-Intersection Type

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

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

When ADT is available and intersects with State road.

How are highway safety improvement projects advanced for implementation?

Competitive application process

selection committee

Other-B/C ratio

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

Relative Weight in Scoring

Rank of Priority Consideration

Ranking based on B/C 1

Available funding

Incremental B/C 4

- Ranking based on net benefit 2
- Cost Effectiveness 2

Program: Horizontal Curve

Date of Program Methodology: 3/1/2013

What data types were used in the program methodology?

Crashes

- All crashes
- Fatal crashes only
- Fatal and serious injury crashes only
- Other

Exposure

- Traffic
- Volume
- Population
- Lane miles
- Other

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features
- 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-B/C ratio

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Ranking based on B/C | 1 |
| <input checked="" type="checkbox"/> Available funding | 4 |
| <input type="checkbox"/> Incremental B/C | |
| <input checked="" type="checkbox"/> Ranking based on net benefit | 2 |
| <input checked="" type="checkbox"/> Cost Effectiveness | 2 |

Program: Roadway Departure

Date of Program Methodology: 2/2/2014

What data types were used in the program methodology?

- | <i>Crashes</i> | <i>Exposure</i> | <i>Roadway</i> |
|--|---|---|
| <input checked="" type="checkbox"/> All crashes | <input checked="" type="checkbox"/> Traffic | <input type="checkbox"/> Median width |
| <input type="checkbox"/> Fatal crashes only | <input checked="" type="checkbox"/> Volume | <input checked="" type="checkbox"/> Horizontal curvature |
| <input type="checkbox"/> Fatal and serious injury crashes only | <input type="checkbox"/> Population | <input checked="" type="checkbox"/> Functional classification |
| <input type="checkbox"/> Other | <input type="checkbox"/> Lane miles | <input checked="" type="checkbox"/> Roadside features |
| | <input type="checkbox"/> Other | <input type="checkbox"/> 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-B/C ratio

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Ranking based on B/C | 1 |
| <input checked="" type="checkbox"/> Available funding | 4 |
| <input type="checkbox"/> Incremental B/C | |
| <input checked="" type="checkbox"/> Ranking based on net benefit | 2 |
| <input checked="" type="checkbox"/> Cost Effectiveness | 2 |

Program: Local Safety

Date of Program Methodology: 3/1/2015

What data types were used in the program methodology?

Crashes

All crashes

Fatal crashes only

Fatal and serious injury
crashes only

Other

Exposure

Traffic

Volume

Population

Lane miles

Other

Roadway

Median width

Horizontal curvature

Functional classification

Roadside features

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

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

Crash rates and crash clusters

How are highway safety improvement projects advanced for implementation?

- Competitive application process
- selection committee
- Other-SDDOT Project Development Personnel

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Ranking based on B/C | 1 |
| <input checked="" type="checkbox"/> Available funding | 4 |
| <input type="checkbox"/> Incremental B/C | |
| <input checked="" type="checkbox"/> Ranking based on net benefit | 2 |
| <input checked="" type="checkbox"/> Cost Effectiveness | 2 |

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

33

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

- | | |
|--|---|
| <input type="checkbox"/> Cable Median Barriers | <input checked="" type="checkbox"/> Rumble Strips |
| <input type="checkbox"/> Traffic Control Device Rehabilitation | <input checked="" type="checkbox"/> Pavement/Shoulder Widening |
| <input checked="" type="checkbox"/> Install/Improve Signing | <input checked="" type="checkbox"/> Install/Improve Pavement Marking and/or Delineation |
| <input checked="" type="checkbox"/> Upgrade Guard Rails | <input type="checkbox"/> Clear Zone Improvements |
| <input type="checkbox"/> Safety Edge | <input type="checkbox"/> Install/Improve Lighting |

Add/Upgrade/Modify/Remove Traffic Signal Other

What process is used to identify potential countermeasures?

Engineering Study

Road Safety Assessment

Other:

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:

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

The county wide signing project prioritization process has changed. The process now calculates a crash rate for each county based on number of injury crashes and vehicle miles traveled.

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)	9202000	43 %	10462000	49 %
HRRRP (SAFETEA-LU)	429000	2 %	429000	2 %
HRRR Special Rule				
Penalty Transfer - Section 154	2884000	13 %	3810000	18 %
Penalty Transfer - Section 164	9034000	42 %	6520500	31 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)				
State and Local Funds				

Totals	21549000	100%	21221500	100%
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How much funding is programmed to local (non-state owned and maintained) safety projects?

\$6,407,000.00

How much funding is obligated to local safety projects?

\$5,709,380.00

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

\$1,043,000.00

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

\$130,500.00

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

\$15,158.00

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.

Typical project obstacles such as estimating project costs to be programmed, projects timeline slipping due to environmental impacts, right-of-way impacts, can all be expected on any type of project.

Ways to overcome these obstacles is to do a better job of estimating projects and when scheduling projects allow for the proper time to accomplish environmental and ROW activities.

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

The proper emphasis to project management needs to be placed to ensure an HSIP project is kept on schedule and with in budget from the beginning to the end of the life of the project.

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
High Friction Surface Treatment	Roadway Pavement surface - high friction surface	0.7 Miles	40500	361106	HSIP (Section 148)	Rural Principal Arterial - Other	4000	55	State Highway Agency	Roadway Departure	Provide skid-resistant pavement surfaces on identified locations.
High Friction Surface Treatment	Roadway Pavement surface - high friction surface	2.1 Miles	54000	452845	HSIP (Section 148)	Urban Principal Arterial - Interstate	30000	65	State Highway Agency	Roadway Departure	Provide skid-resistant pavement surfaces on identified locations.
Corridor Signing	Roadway signs and traffic control	113 Miles	534276	534276	Penalty Transfer – Section	Rural Principal Arterial -	3500	80	State Highway Agency	Roadway Departure	Provide proper signage

	Roadway signs (including post) - new or updated				164	Other					
Signing and Delineation	Roadway signs and traffic control Roadway signs (including post) - new or updated	27221 Number s	873804	873804	Penalty Transfer - Section 154	Rural Minor Arterial	200	65	County Highway Agency	Roadway Departure	Provide proper signage
Signing and Delineation	Roadway signs and traffic control Roadway signs (including post) - new or updated	37841 Number s	156187 1	156187 1	Penalty Transfer - Section 154	Rural Minor Arterial	200	65	County Highway Agency	Roadway Departure	Provide proper signage
Signing and Delineation	Roadway signs and traffic control	39439 Number s	117011 9	117011 9	Penalty Transfer - Section 154	Rural Minor Arterial	200	65	County Highway Agency	Roadway Departure	Provide proper signage

	Roadway signs (including post) - new or updated										
Signing and Delineation	Roadway signs and traffic control Roadway signs (including post) - new or updated	36542 Numbers	152143 6	152143 6	Penalty Transfer – Section 164	Rural Minor Arterial	200	65	County Highway Agency	Roadway Departure	Provide proper signage
Signing Upgrades	Roadway signs and traffic control Roadway signs (including post) - new or updated	126 Numbers	71487	71487	Penalty Transfer – Section 164	Rural Principal Arterial - Other	3500	65	State Highway Agency	Roadway Departure	Provide proper signage
Install rumble strips	Roadway Rumble strips - edge or shoulder	41.5 Miles	92708	92708	HSIP (Section 148)	Rural Principal Arterial - Other	1000	65	State Highway Agency	Roadway Departure	Provide edge line rumble strip/stripe

Shoulder widening, Milling and AC Surfacing	Shoulder treatments Widen shoulder - paved or other	6.3 Miles	333036 9	553646 2	Penalty Transfer – Section 164	Rural Minor Arterial	850	55	State Highway Agency	Roadway Departure	Apply shoulder treatments - Widen shoulders
Shoulder widening, Milling and AC Surfacing	Shoulder treatments Widen shoulder - paved or other	2 Miles	174965 7	229496 6	HSIP (Section 148)	Rural Minor Arterial	5430	55	State Highway Agency	Roadway Departure	Apply shoulder treatments - Widen shoulders
Cold plastics durable pavement marking	Roadway delineation Longitudinal pavement markings - remarking	14 Miles	139787	139787	HSIP (Section 148)	Rural Principal Arterial - Other	3300	70	State Highway Agency	Lane Departure	Install edge lines
Durable pavement marking	Roadway delineation Longitudinal pavement markings - remarking	28 Miles	462186	462186	HSIP (Section 148)	Rural Principal Arterial - Interstate	4000 0	65	State Highway Agency	Lane Departure	Install edge lines
Durable pavement	Roadway delineation Longitudinal	2.14 Miles	270917	270917	HSIP (Section	Rural Principal Arterial -	2300	65	State Highway	Lane Departure	Install edge lines

marking	pavement markings - remarking				148)	Other			Agency		
Sprayable Durable Pavement Marking	Roadway delineation Longitudinal pavement markings - remarking	24 Miles	214583	214583	HSIP (Section 148)	Rural Principal Arterial - Other	3200	70	State Highway Agency	Lane Departure	Install edge lines
Intersection Improvements	Intersection geometry Intersection geometry - other	0.2 Miles	78834	78834	HSIP (Section 148)	Rural Principal Arterial - Other	800	50	State Highway Agency	Intersections	Redesign intersection to improve sight distance
Durable pavement marking	Roadway delineation Longitudinal pavement markings - remarking	8.2 Miles	243847	243847	HSIP (Section 148)	Rural Principal Arterial - Interstate	2300	80	State Highway Agency	Lane Departure	Install edge lines
Corridor Signing	Roadway signs and traffic control Roadway signs	112.7 Miles	173298	173298	HSIP (Section 148)	Rural Principal Arterial - Interstate	6000	80	State Highway Agency	Roadway Departure	Provide proper signage

	(including post) - new or updated										
Durable pavement marking	Roadway delineation Longitudinal pavement markings - new	4 Miles	19375	19375	HRRRP (SAFETE A-LU)	Rural Minor Arterial	1425	25	County Highway Agency	Lane Departure	Install edge lines
Rumble Stripes and Pavement Markings	Roadway Rumble strips - edge or shoulder	80.7 Miles	499615	499615	HRRRP (SAFETE A-LU)	Rural Minor Arterial	600	65	Indian Tribe Nation	Roadway Departure	Provide edge line rumble strip/stripe and pavement markings
Corridor Signing	Roadway signs and traffic control Roadway signs (including post) - new or updated	633 Miles	788524	788524	HSIP (Section 148)	Rural Principal Arterial - Other	1166	65	State Highway Agency	Roadway Departure	Provide proper signage
Roadway Safety audit	Non-infrastructur	15 Number	18000	18000	HSIP (Section	Statewide, all function	1000	55	Statewide, all public	Statewide, all SHSP	Statewide, all SHSP

Reviews	e Road safety audits	s			148)	classes			roadways	emphasis areas	strategies
Local Government Highway Safety Engineering	Non-infrastructure Transportation safety planning	1000 Numbers	62500	62500	Penalty Transfer – Section 164	Statewide, all local public roadways	500	55	County Highway Agency	Statewide, all SHSP emphasis areas	Statewide, all SHSP strategies
Promote Highway Safety	Non-infrastructure Educational efforts	100 Numbers	50000	50000	HSIP (Section 148)	Statewide, all function classes	500	55	Statewide	Roadway Departure	Promote highway safety with media campaigns

Progress in Achieving Safety Performance Targets

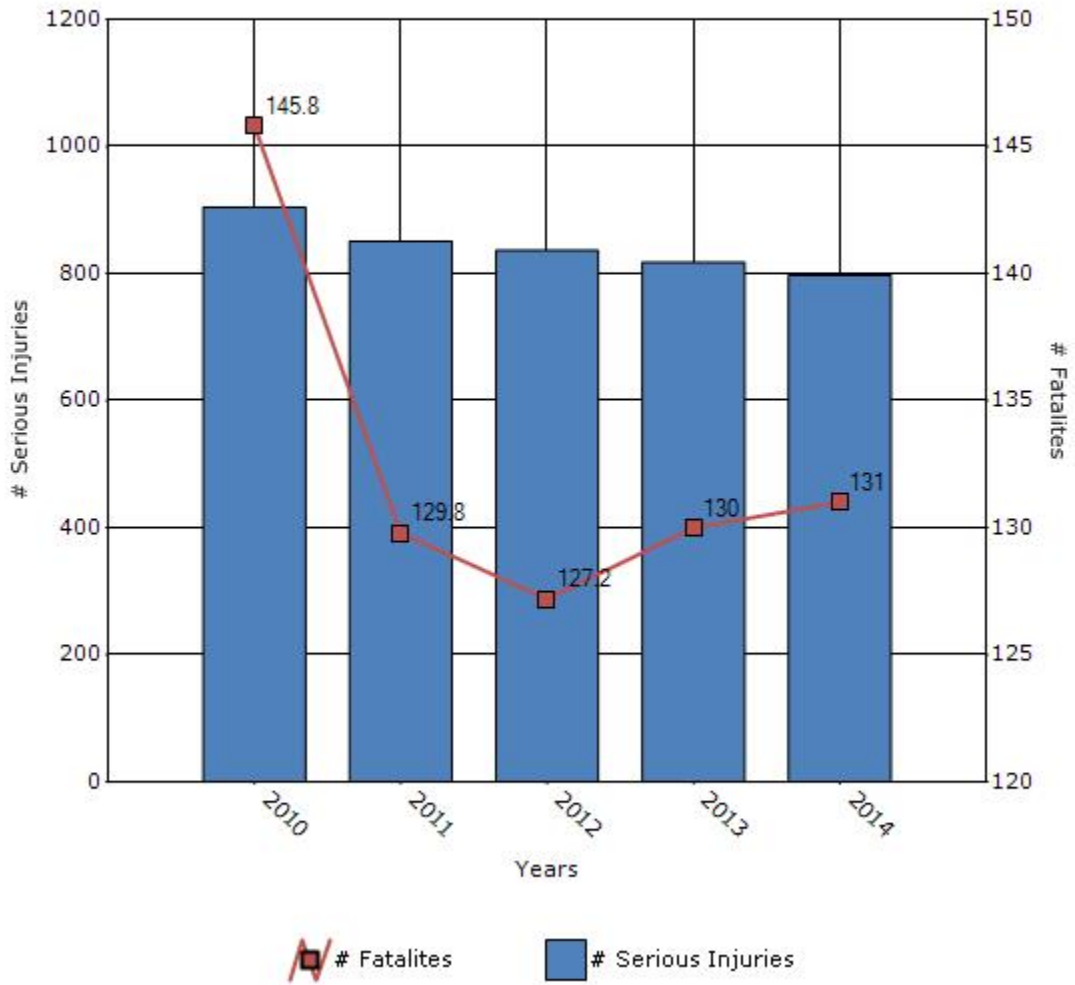
Overview of General Safety Trends

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

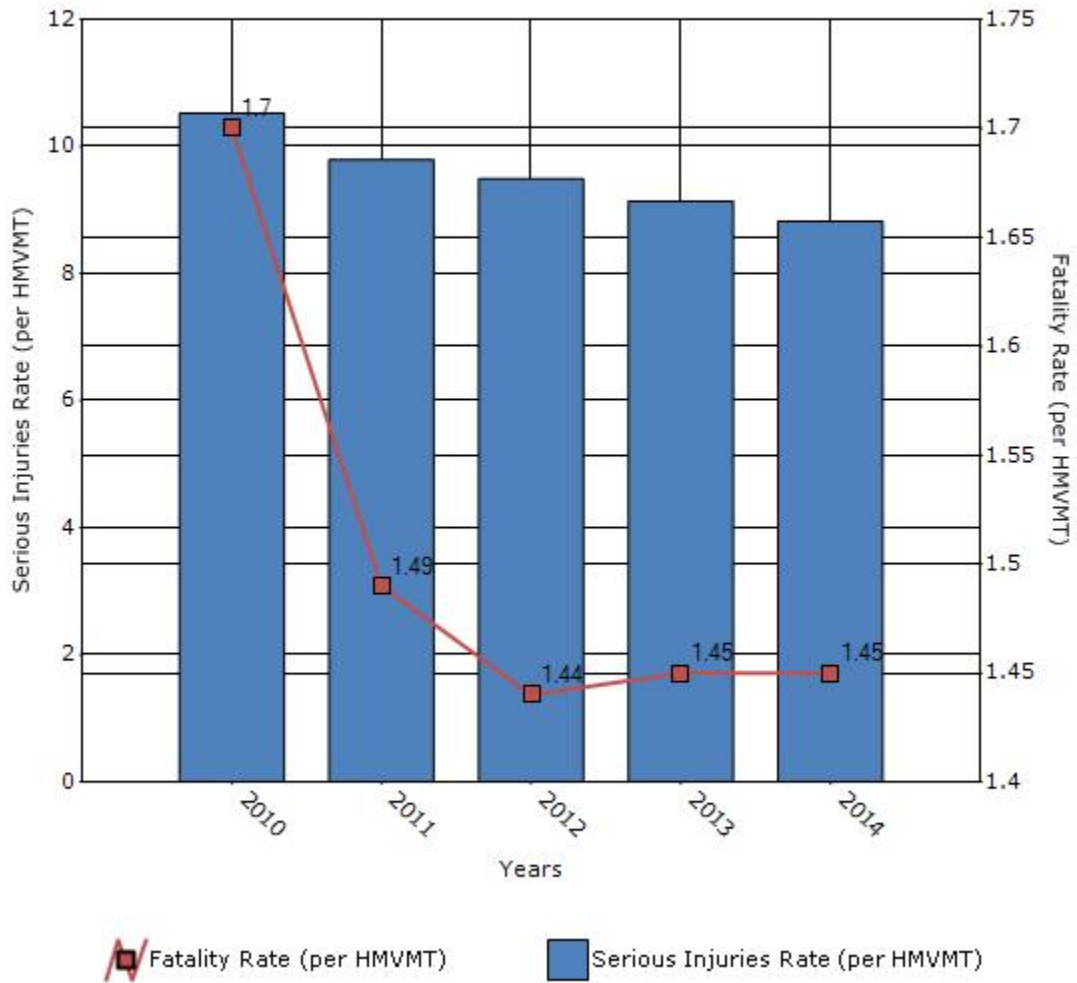
Performance Measures*	2010	2011	2012	2013	2014
Number of fatalities	145.8	129.8	127.2	130	131
Number of serious injuries	904.4	850.8	836.4	818	797.2
Fatality rate (per HMVMT)	1.7	1.49	1.44	1.45	1.45
Serious injury rate (per HMVMT)	10.52	9.79	9.49	9.14	8.82

*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



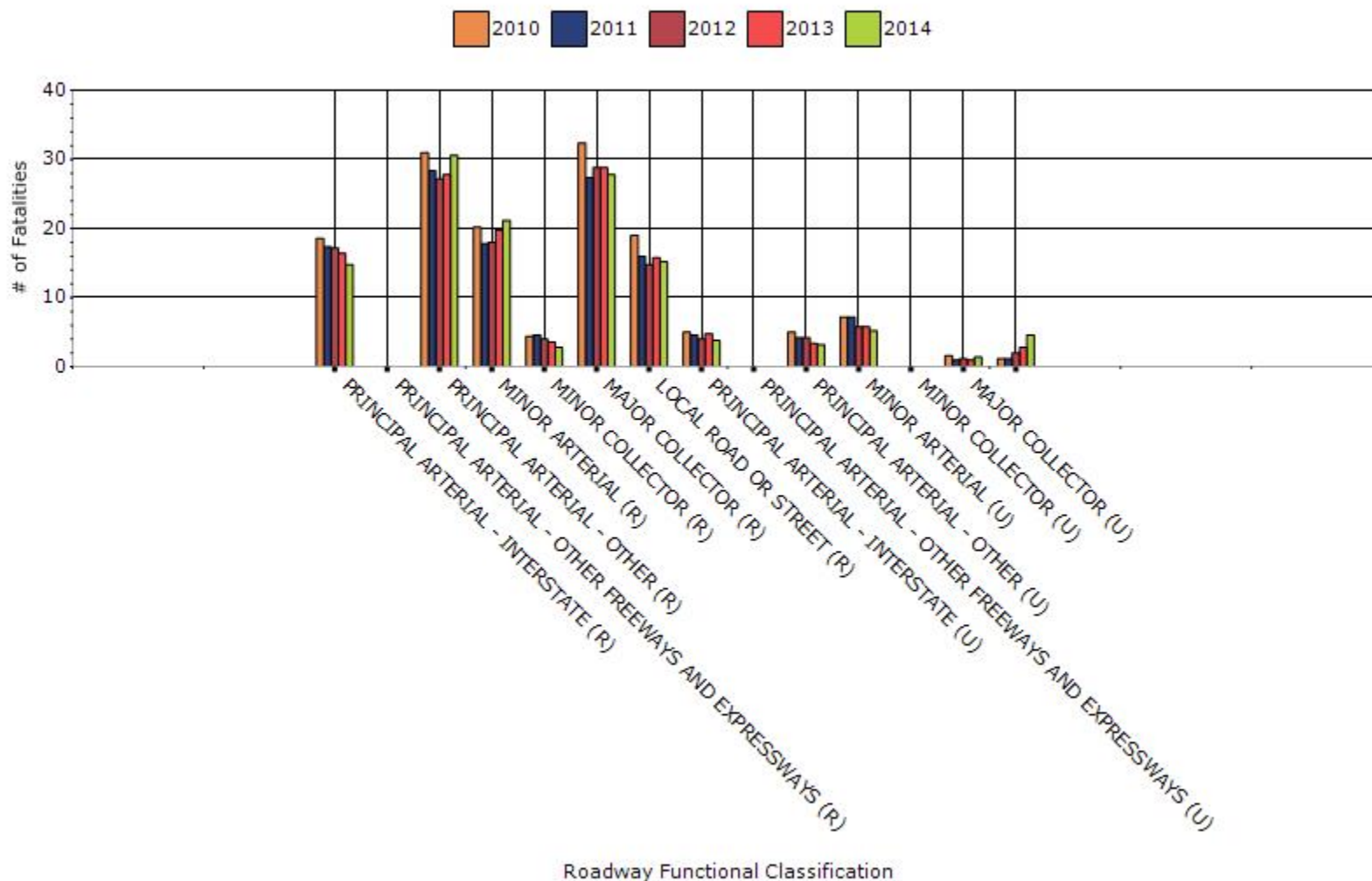
To the maximum extent possible, present performance measure* data by functional classification and ownership.

Year - 2014

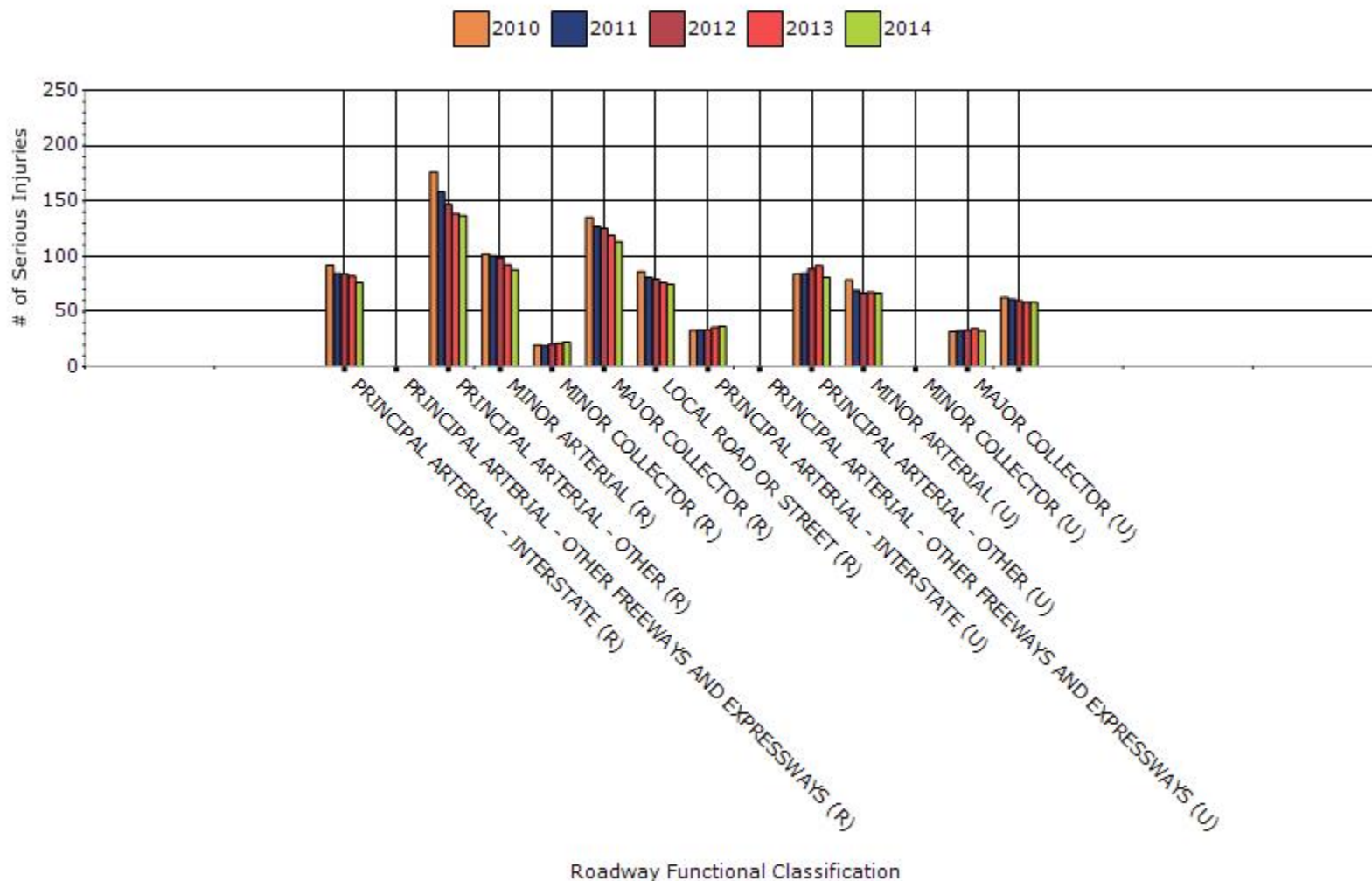
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	14.8	76.2	0.74	3.84
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	30.6	136.8	1.72	7.65
RURAL MINOR ARTERIAL	21.2	87.6	2.12	8.68
RURAL MINOR COLLECTOR	2.8	22.2	2	15.58
RURAL MAJOR COLLECTOR	27.8	113	2.68	10.91
RURAL LOCAL ROAD OR STREET	15.2	74.6	3.29	16.13
URBAN PRINCIPAL	3.8	36.4	0.58	5.42

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	3.2	80.8	0.61	15.43
URBAN MINOR ARTERIAL	5.2	66.8	0.59	7.53
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	1.4	32.6	0.55	12.96
URBAN LOCAL ROAD OR STREET	4.6	58.2	1.76	22.66

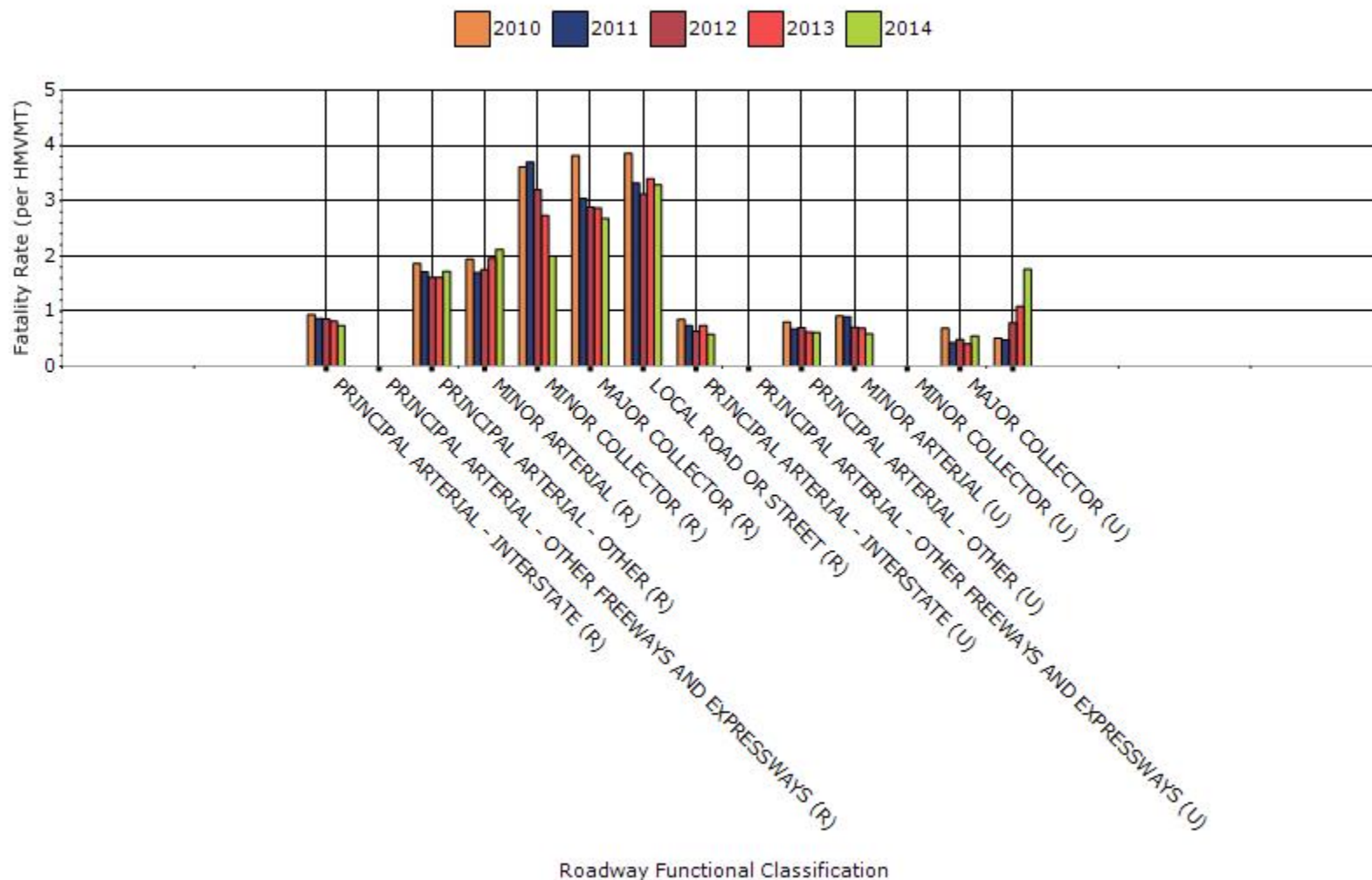
Fatalities by Roadway Functional Classification



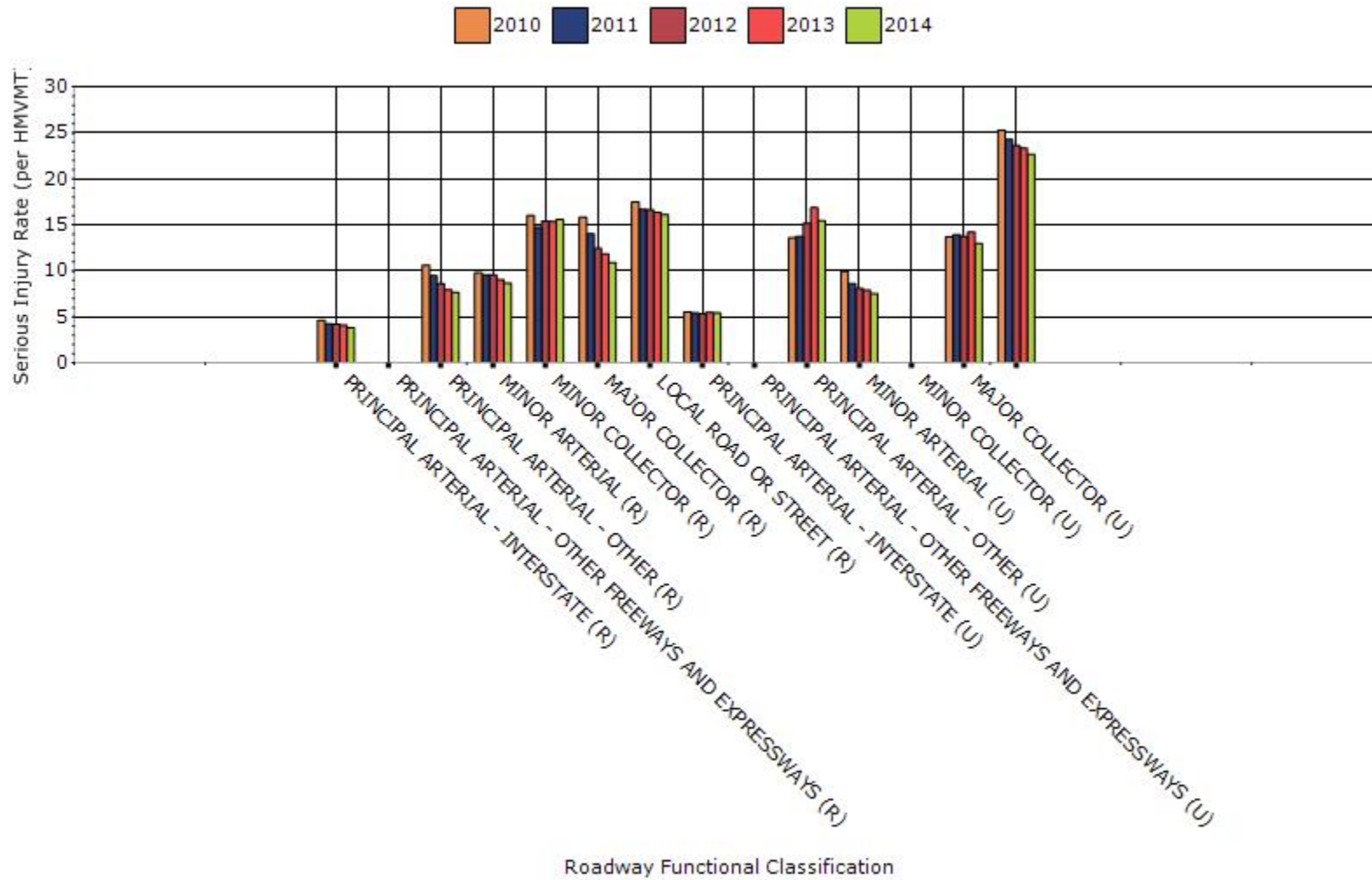
Serious Injuries by Roadway Functional Classification



Fatality Rate by Roadway Functional Classification



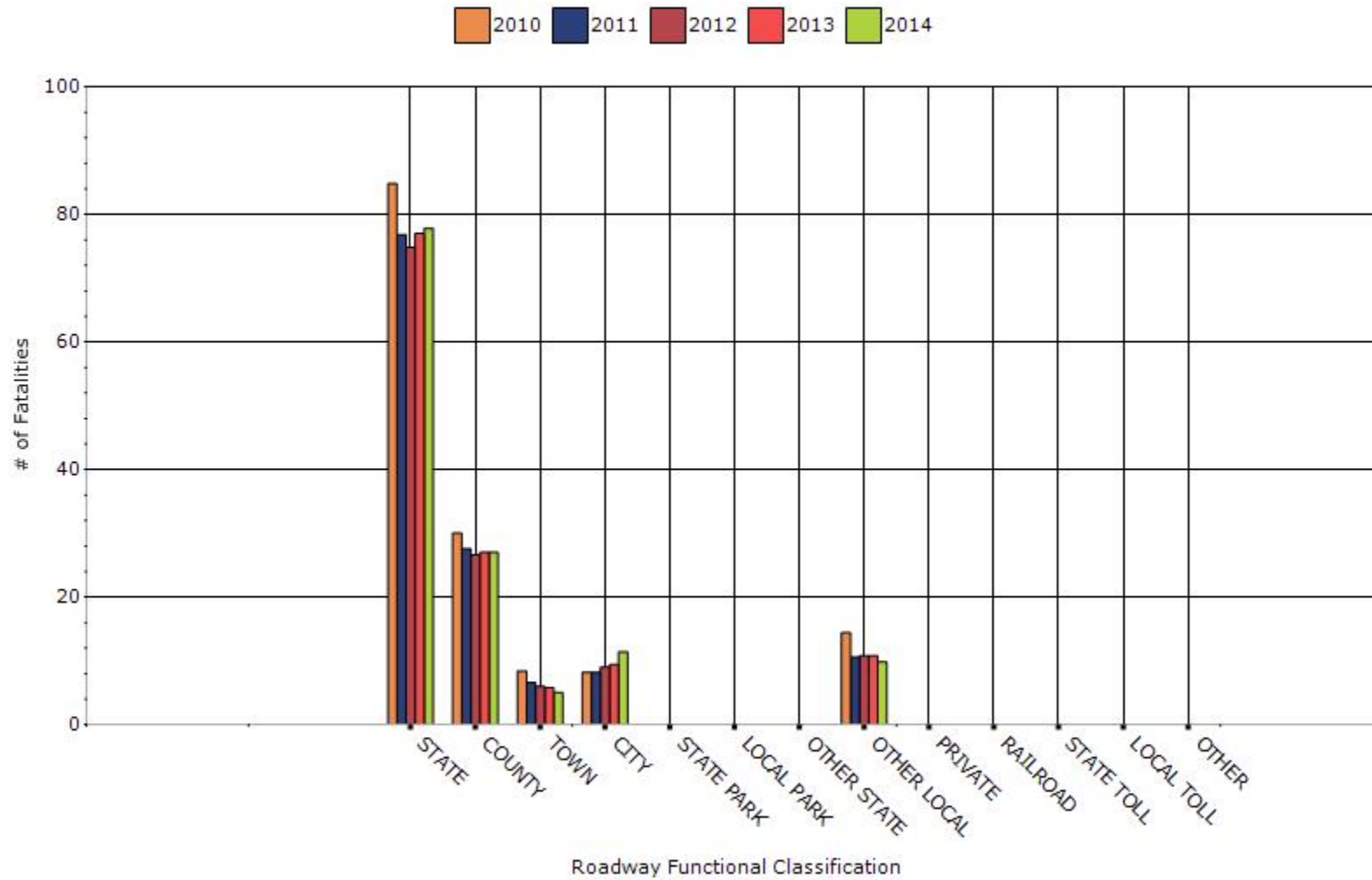
Serious Injury Rate by Roadway Functional Classification



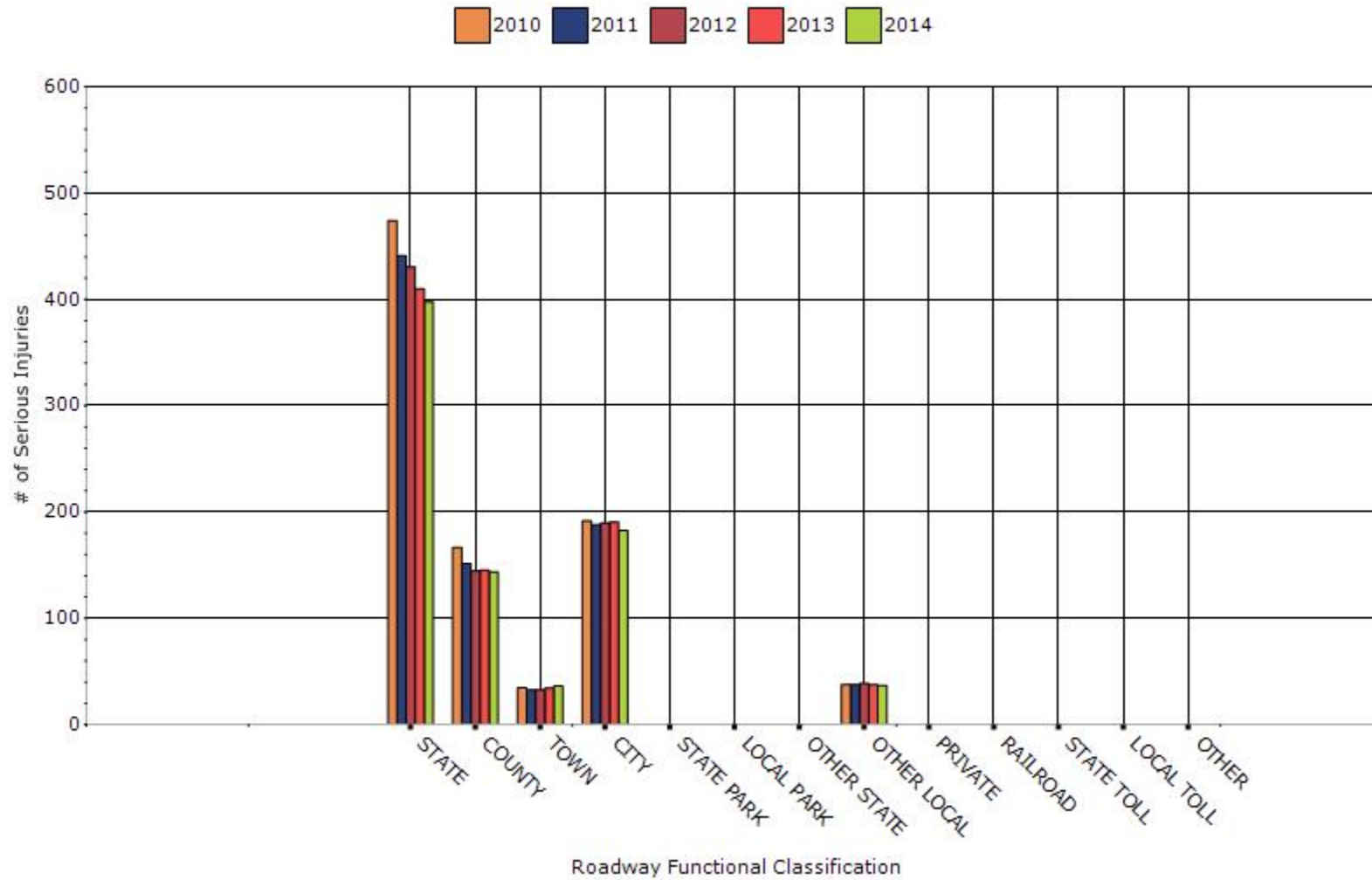
Year - 2014

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	77.8	397.8	1.28	6.52
COUNTY HIGHWAY AGENCY	27	143.8	2.11	11.27
TOWN OR TOWNSHIP HIGHWAY AGENCY	5	36.2	2.03	14.75
CITY OF MUNICIPAL HIGHWAY AGENCY	11.4	182.8	0.88	14.25
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	9.8	36.6	7.28	26.21
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

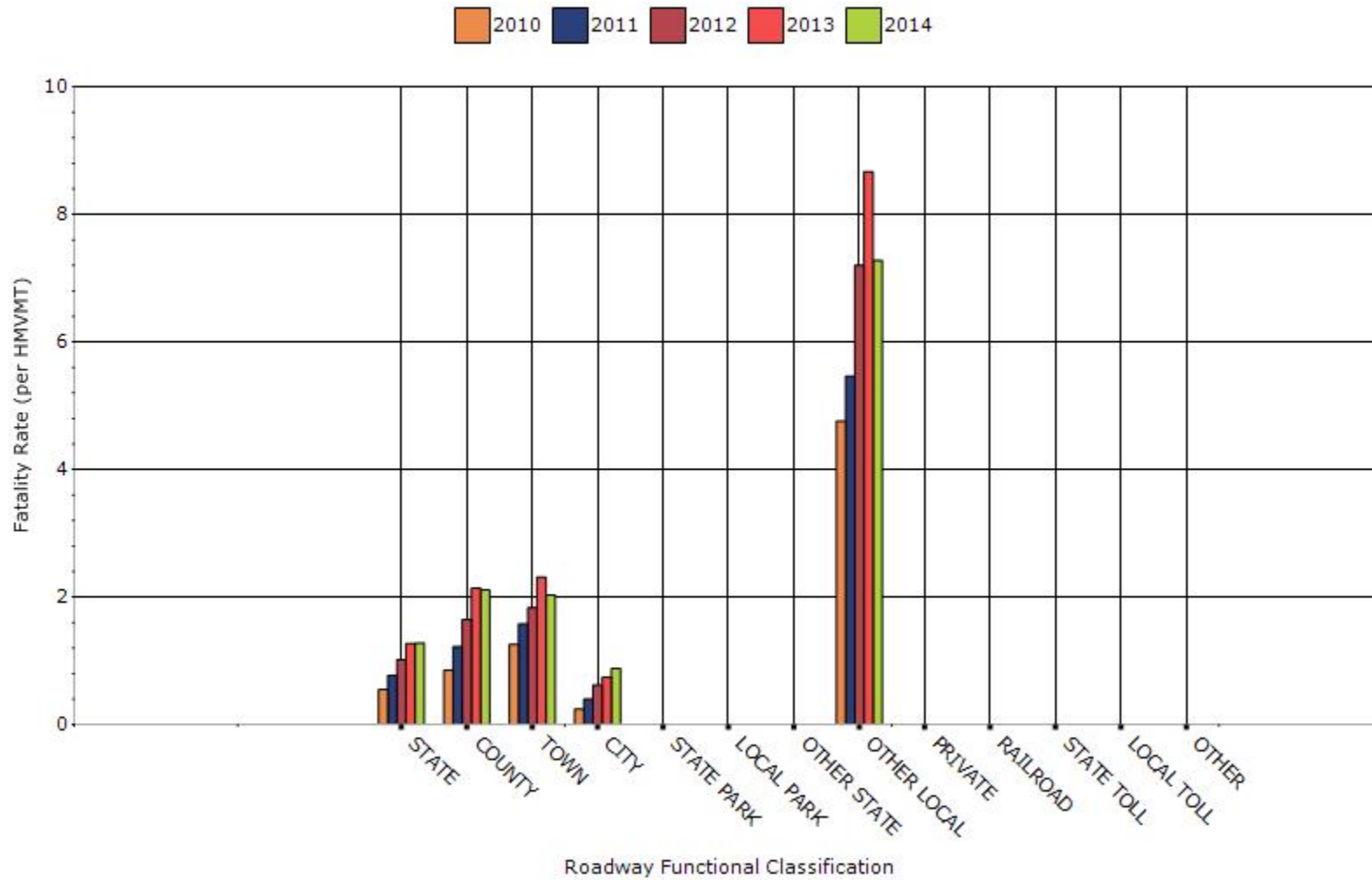
Number of Fatalities by Roadway Ownership



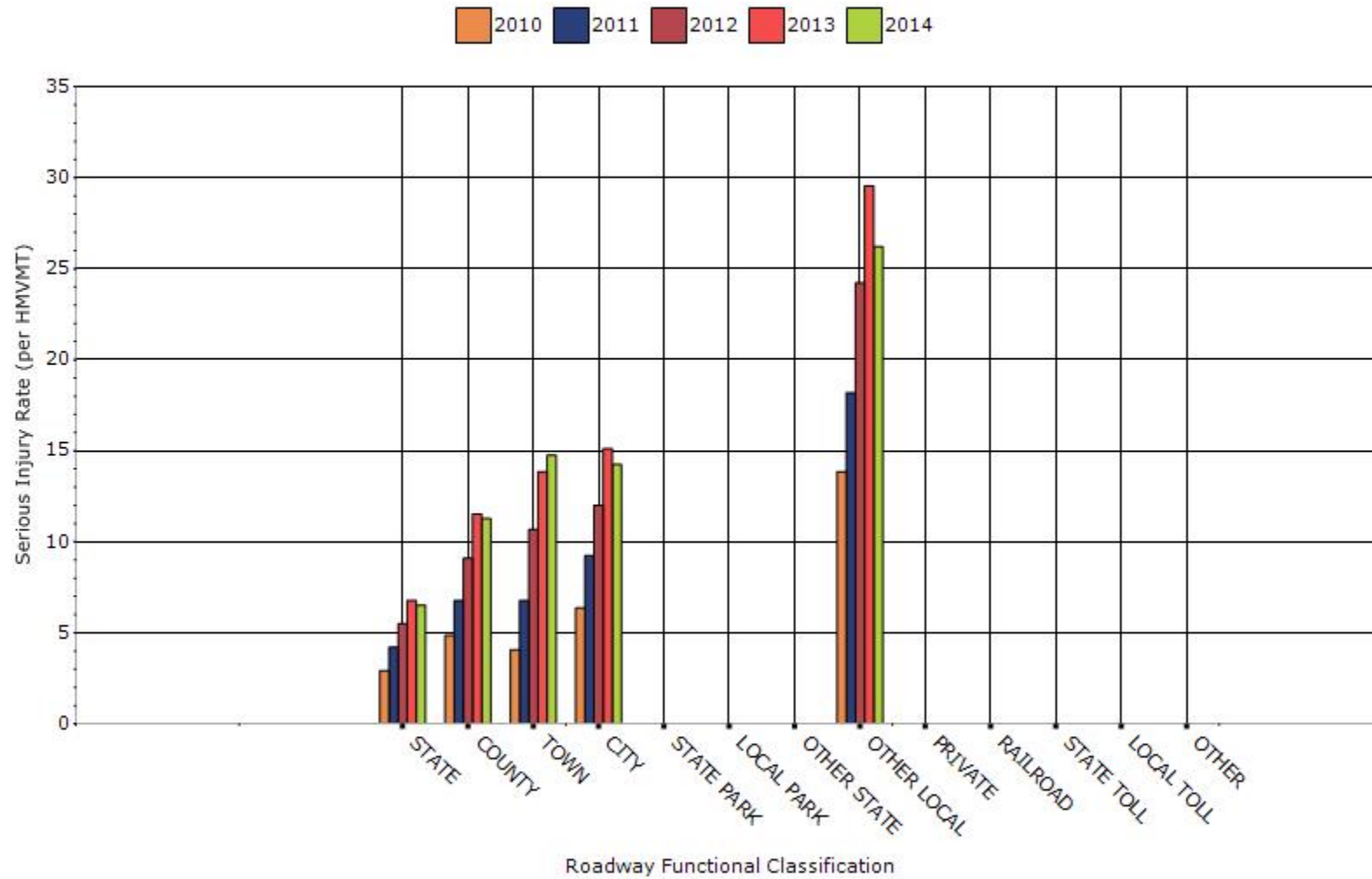
Number of Serious Injuries by Roadway Ownership



Fatality Rate by Roadway Ownership



Serious Injury Rate by Roadway Ownership



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

The crash rates are shown very high for the "other - local system" category. This is caused by a difference between how crashes are coded and the availability of VMT data. If crashes are not coded as either state, county, or township they are lumped into the "other - local system" while this category represents a very small portion of the vehicle miles traveled.

The overall crash trend seems to be going down, but the amount of distracted driving seems to be rising with more use of hand held devices by drivers. At this time the number of crashes that have an element of distracted driving involved can not be quantified.

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)	0.1	0.11	0.104	0.102	0.108
Serious injury rate (per capita)	0.474	0.462	0.444	0.45	0.436
Fatality and serious injury rate (per capita)	0.574	0.574	0.55	0.554	0.544

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

2005 Fatality rate (per capita) = $12/136 = 0.09$

2006 Fatality rate (per capita) = $20/143 = 0.14$

2007 Fatality rate (per capita) = $15/143 = 0.10$

2008 Fatality rate (per capita) = $15/144 = 0.10$

2009 Fatality rate (per capita) = $10/144 = 0.07$

2010 Fatality rate (per capita) = $20/144 = 0.14$

2011 Fatality rate (per capita) = $16/146 = 0.11$

2012 Fatality rate (per capita) = $13/145 = 0.09$

2013 Fatality rate (per capita) = $19/147 = 0.13$

2005 Serious Injury rate (per capita) = $77/136 = 0.57$

2006 Serious Injury rate (per capita) = $72/143 = 0.50$

2007 Serious Injury rate (per capita) = $60/143 = 0.42$

2008 Serious Injury rate (per capita) = $61/144 = 0.42$

2009 Serious Injury rate (per capita) = $66/144 = 0.46$

2010 Serious Injury rate (per capita) = $74/144 = 0.51$

2011 Serious Injury rate (per capita) = $60/146 = 0.41$

2012 Serious Injury rate (per capita) = $65/145 = 0.45$

2013 Serious Injury rate (per capita) = $52/147 = 0.48$

2005 Fatal + Serious Injury rate (per capita) = $(12+77)/136 = 0.65$

2006 Fatal + Serious Injury rate (per capita) = $(20+72)/143 = 0.64$

2007 Fatal + Serious Injury rate (per capita) = $(15+60)/143 = 0.52$

2008 Fatal + Serious Injury rate (per capita) = $(15+61)/144 = 0.53$

2009 Fatal + Serious Injury rate (per capita) = $(10+66)/144 = 0.53$

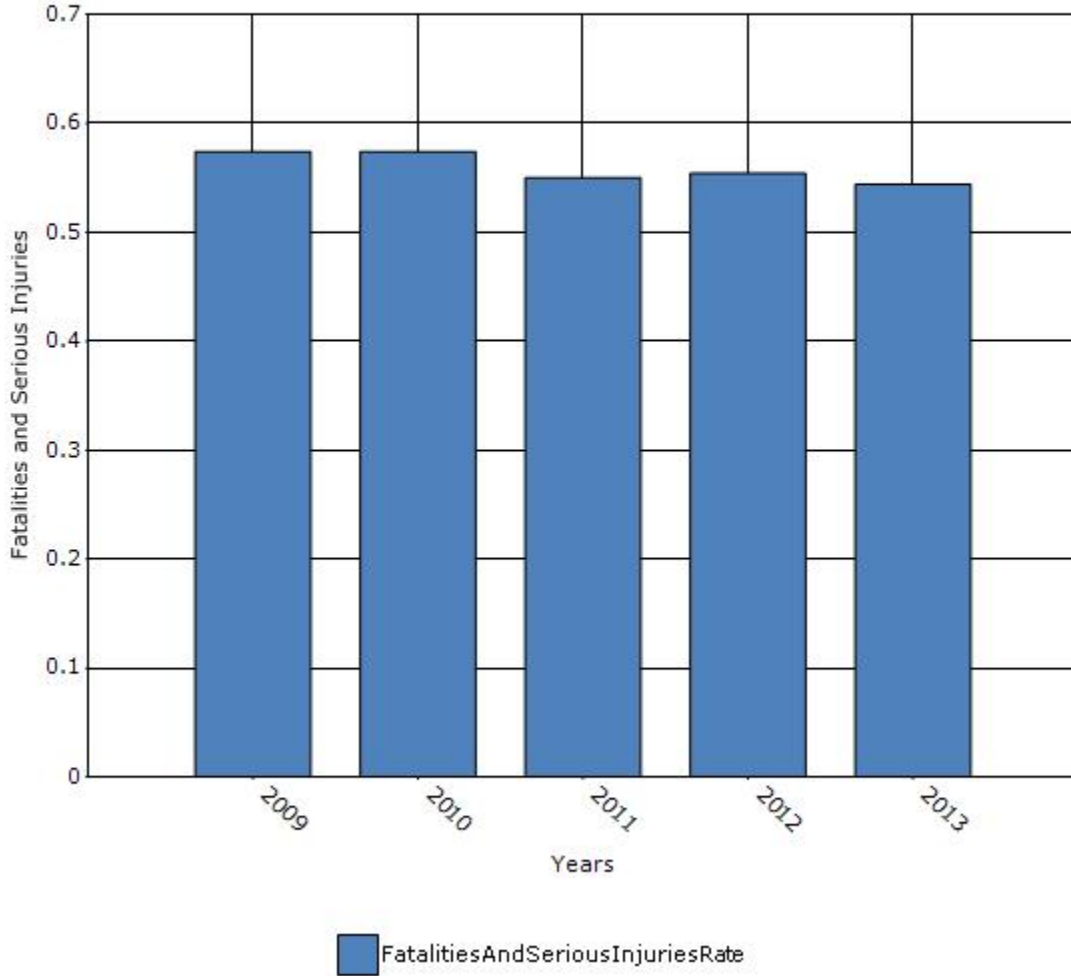
2010 Fatal + Serious Injury rate (per capita) = $(20+74)/144 = 0.65$

2011 Fatal + Serious Injury rate (per capita) = $(16+60)/146 = 0.52$

2012 Fatal + Serious Injury rate (per capita) = $(13+65)/136 = 0.54$

2013 Fatal + Serious Injury rate (per capita) = $(19+52)/147 = 0.48$

Rate of Fatalities and Serious injuries for the Last Five Years



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-Reduction in number of fatal and serious 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: Other-Exploring more systemic improvements

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

Systemic improvements have been explored such as horizontal curve delineation, signal corridor timing, corridor signing projects, and intersection improvements. The use of high friction surface treatments

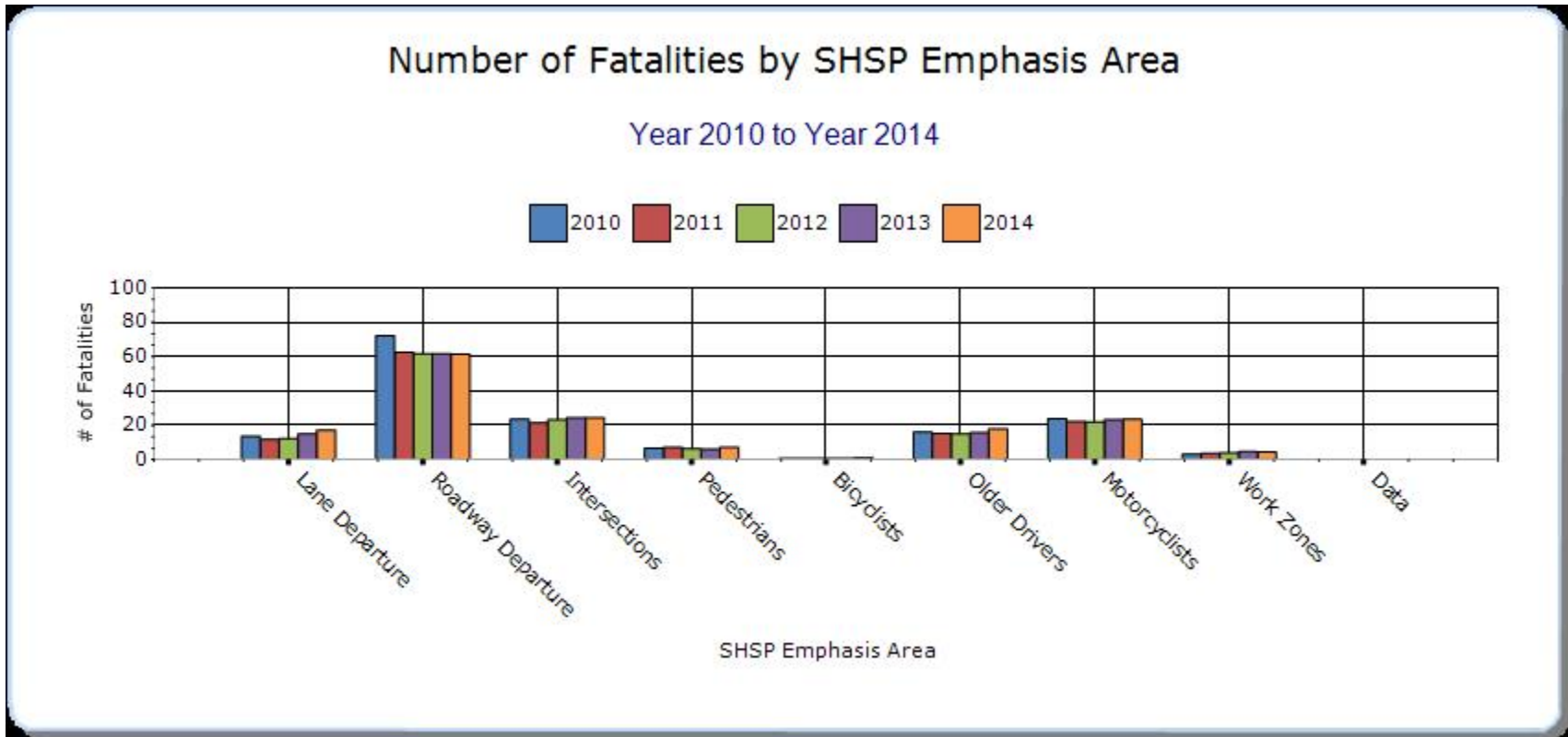
(HFST) along with additional projects to use HFST. Exploring the use of ITS projects such as South Dakota's first Rural Intersection Conflict Warning System.

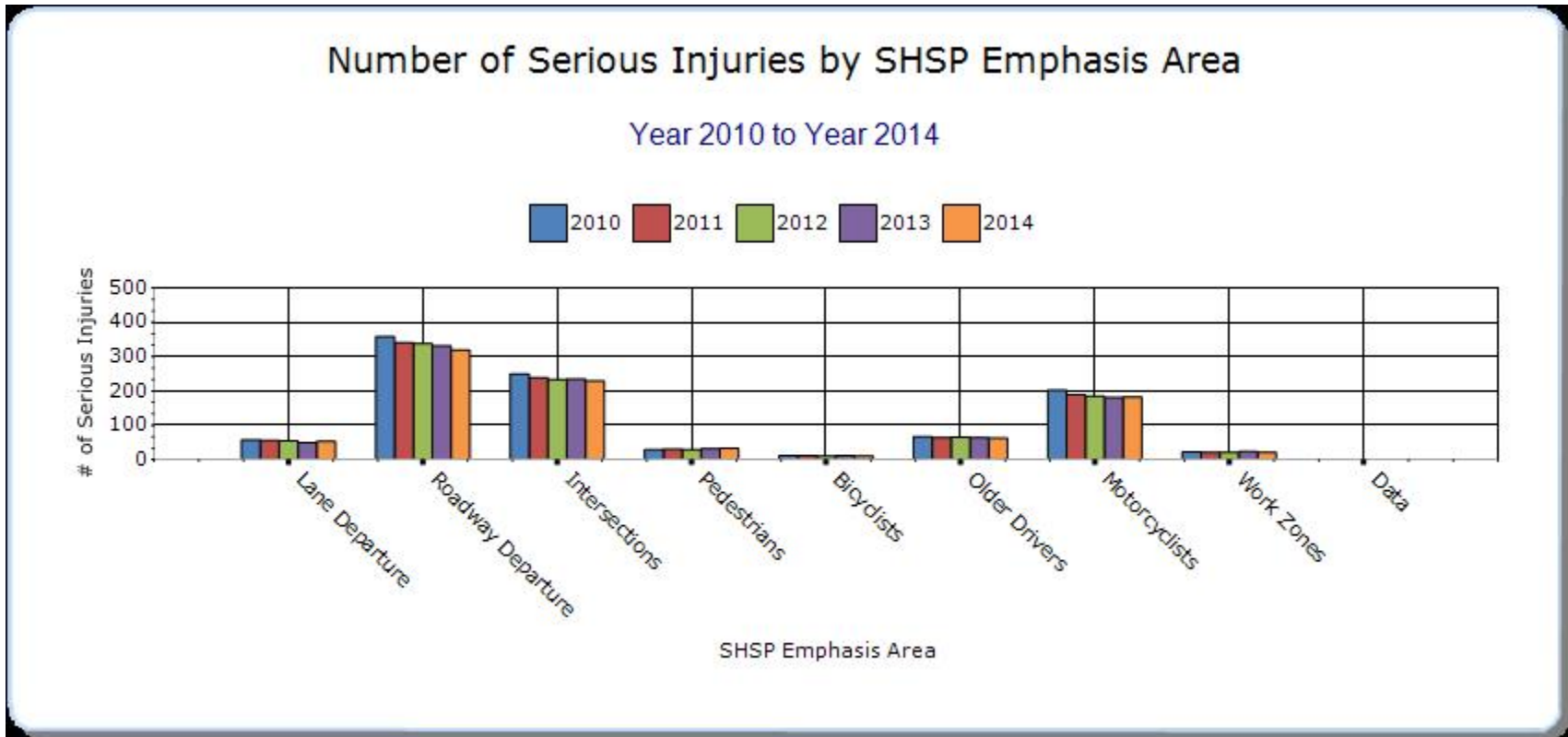
SHSP Emphasis Areas

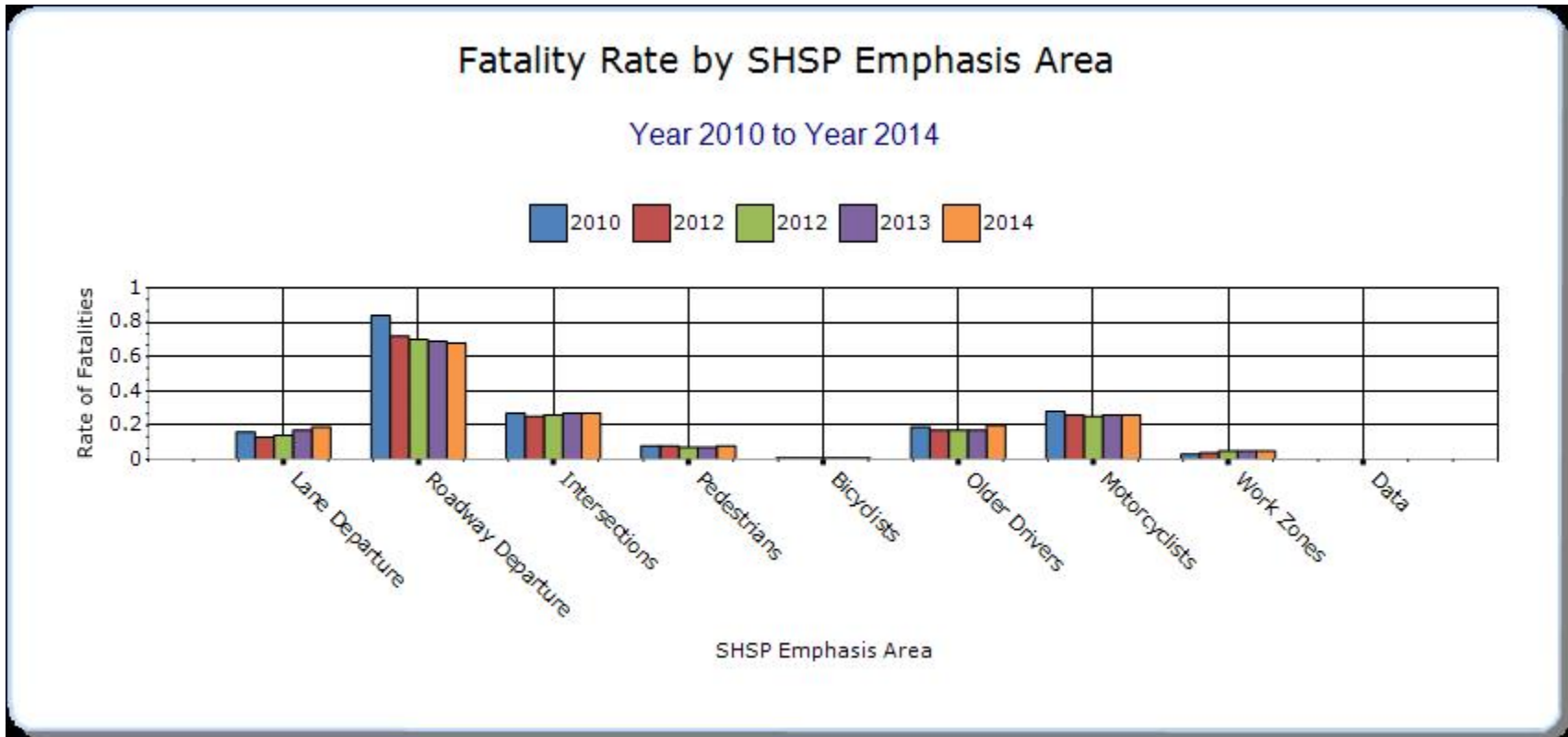
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

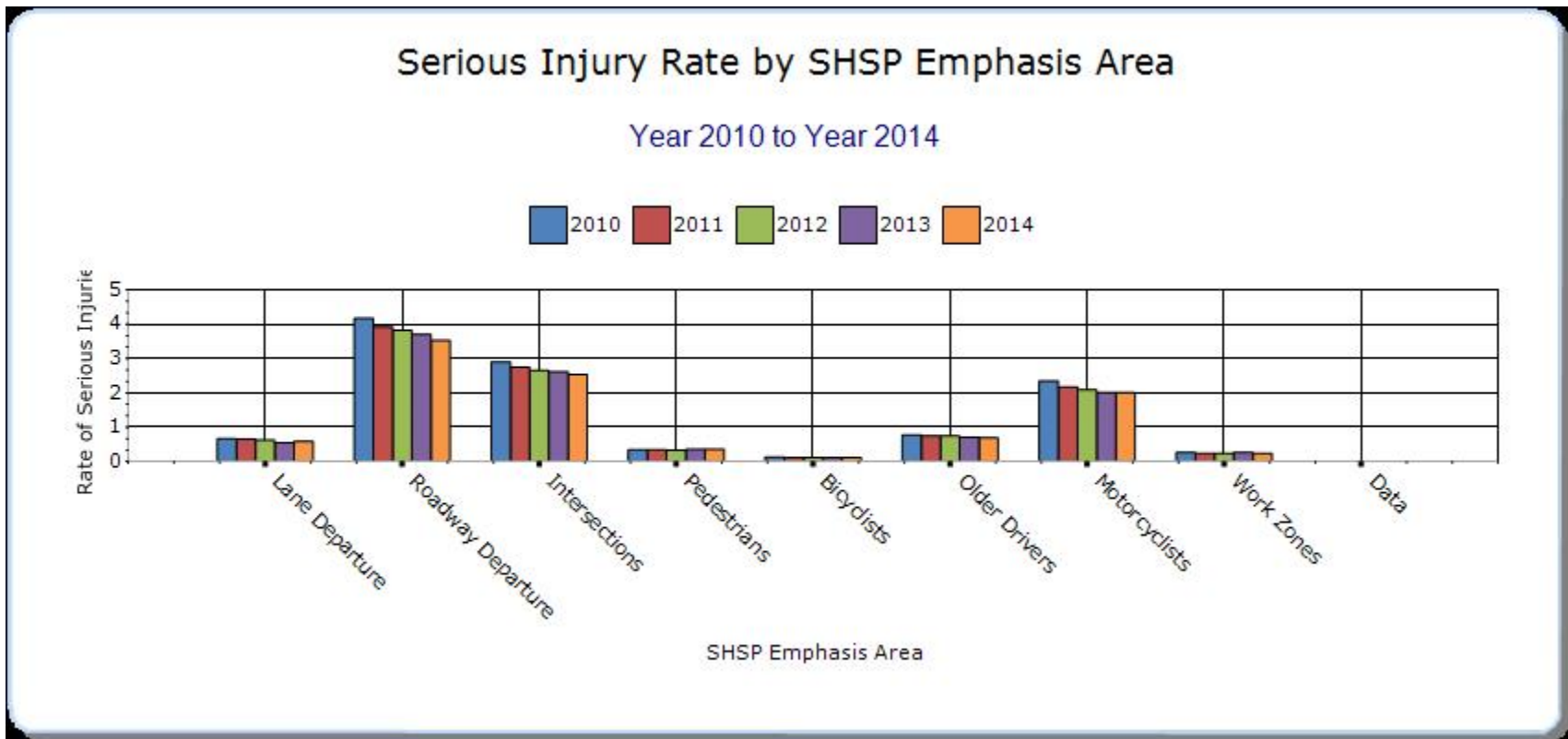
Year - 2014

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	Run-off-road	17.2	52.8	0.19	0.59	0	0	0
Roadway Departure	Run-off-road	61.4	318.6	0.68	3.53	0	0	0
Intersections	Intersections	24.4	229.2	0.27	2.54	0	0	0
Pedestrians	Vehicle/pedestrian	7.2	32.4	0.08	0.36	0	0	0
Bicyclists	Vehicle/bicycle	1	10.2	0.01	0.11	0	0	0
Older Drivers	All	18	62.4	0.2	0.69	0	0	0
Motorcyclists	All	23.4	181.8	0.26	2.01	0	0	0
Work Zones	All	4.4	21.4	0.05	0.24	0	0	0







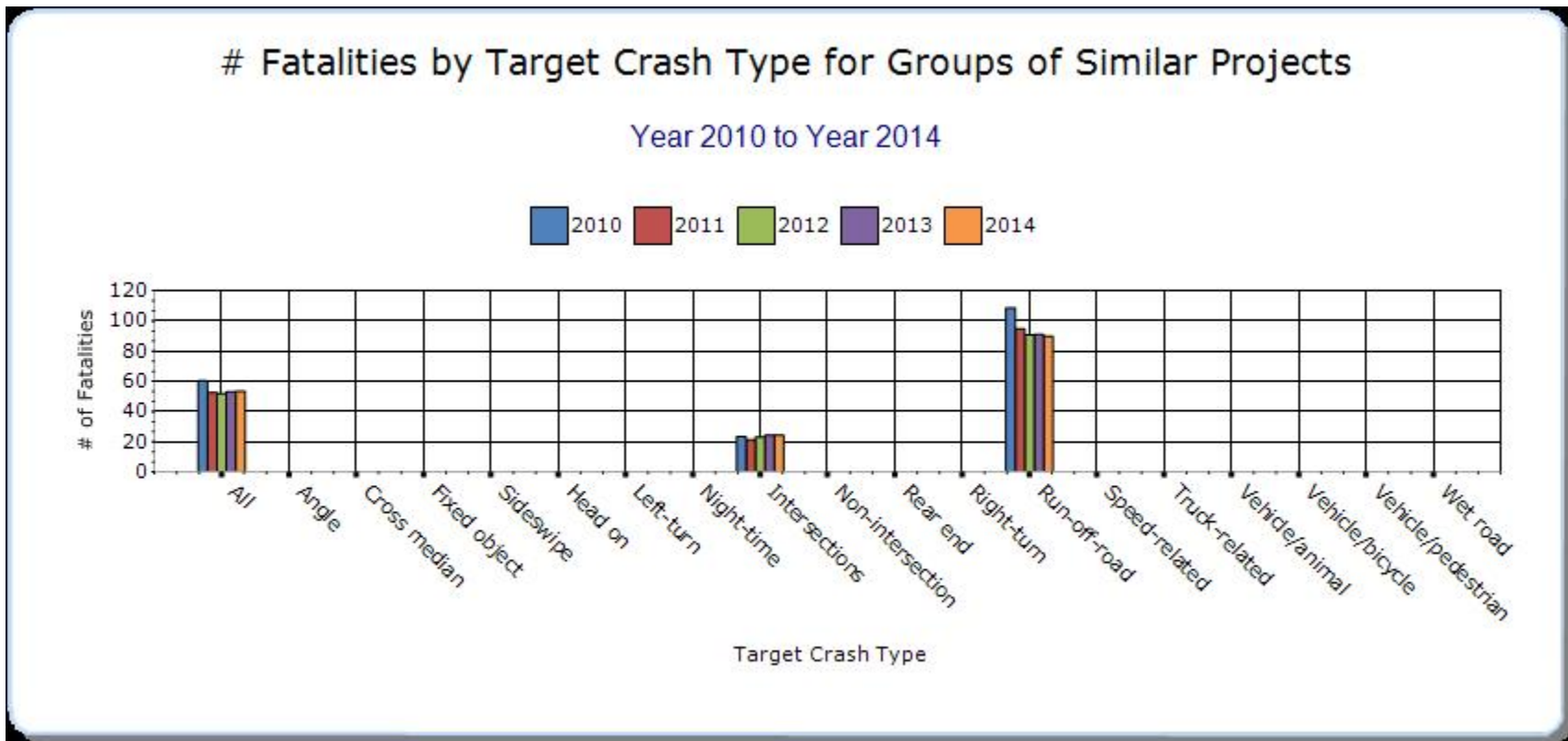


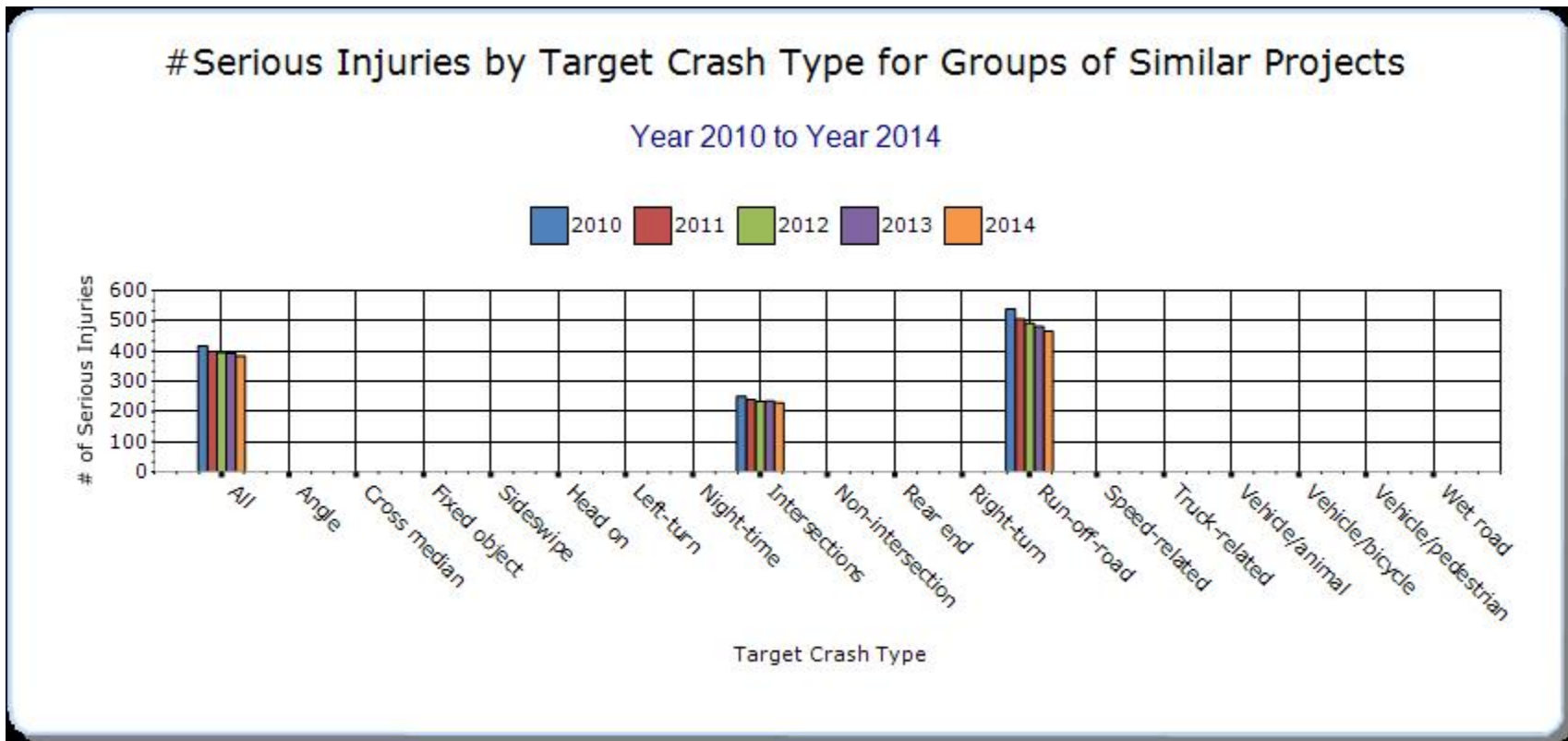
Groups of similar project types

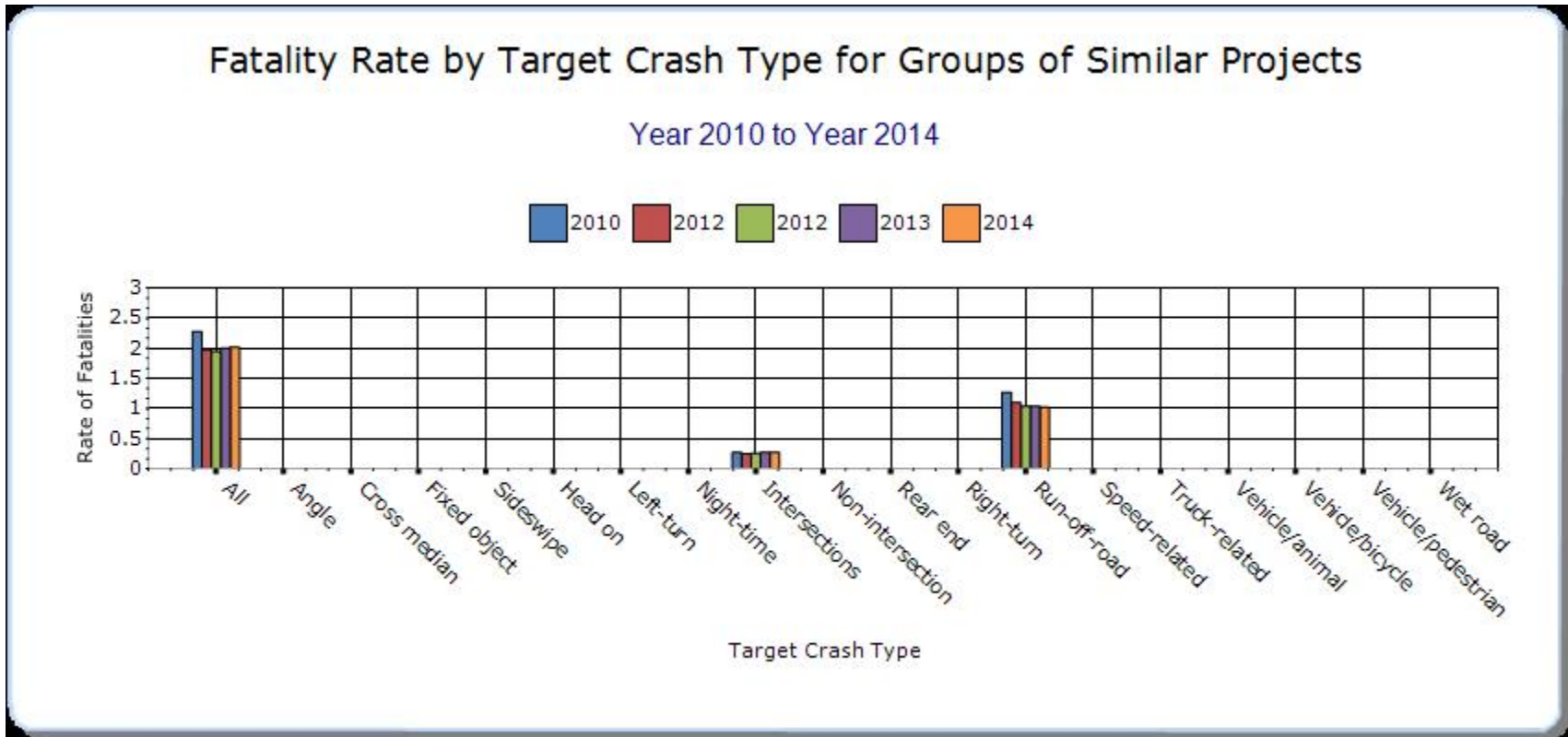
Present the overall effectiveness of groups of similar types of projects.

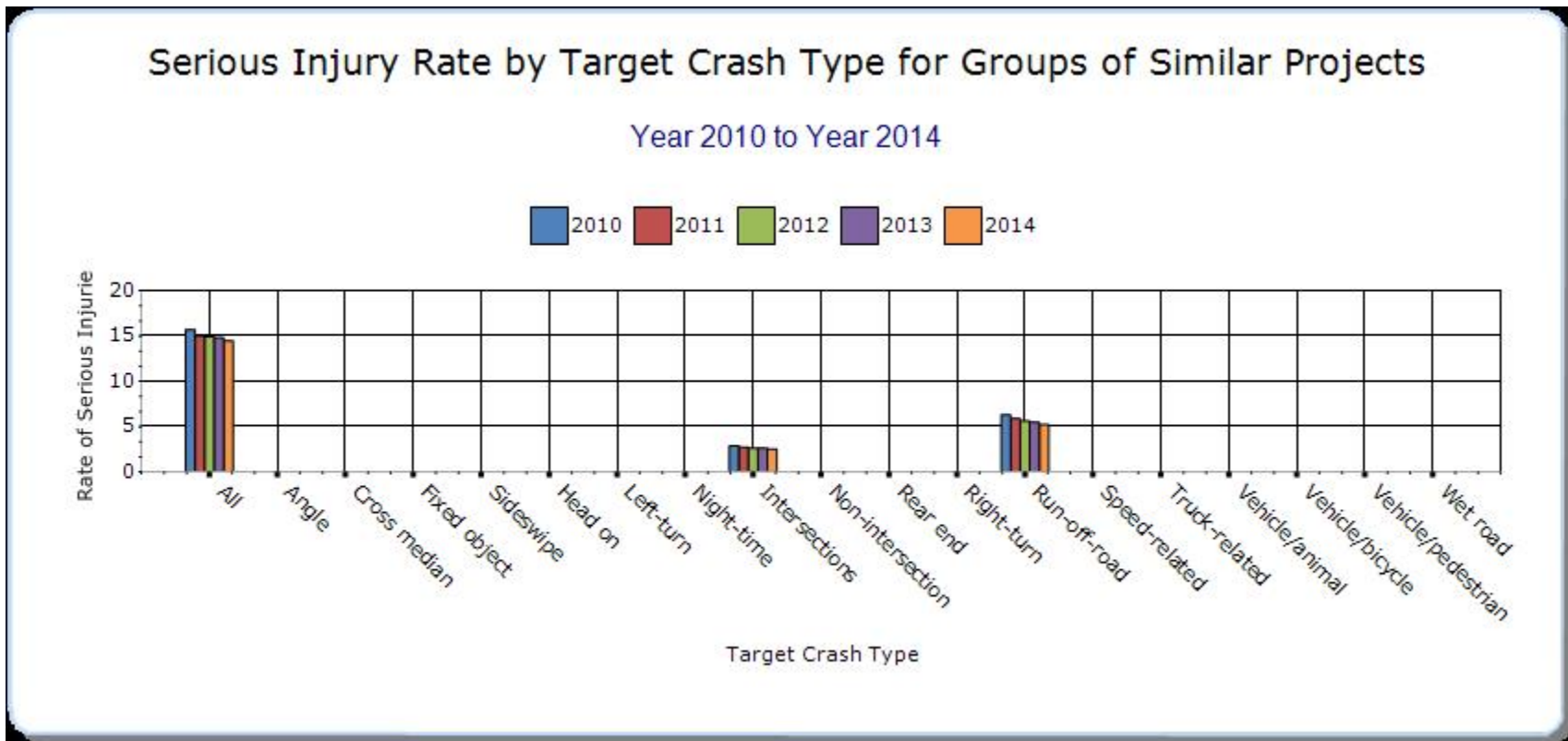
Year - 2014

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
Horizontal Curve	Run-off-road	28.4	147	0.34	1.73	0	0	0
Local Safety	All	53.4	383.8	2.02	14.48	0	0	0
Roadway Departure	Run-off-road	61.4	318.6	0.68	3.52	0	0	0
Intersection	Intersections	24.4	229.2	0.27	2.53	0	0	0







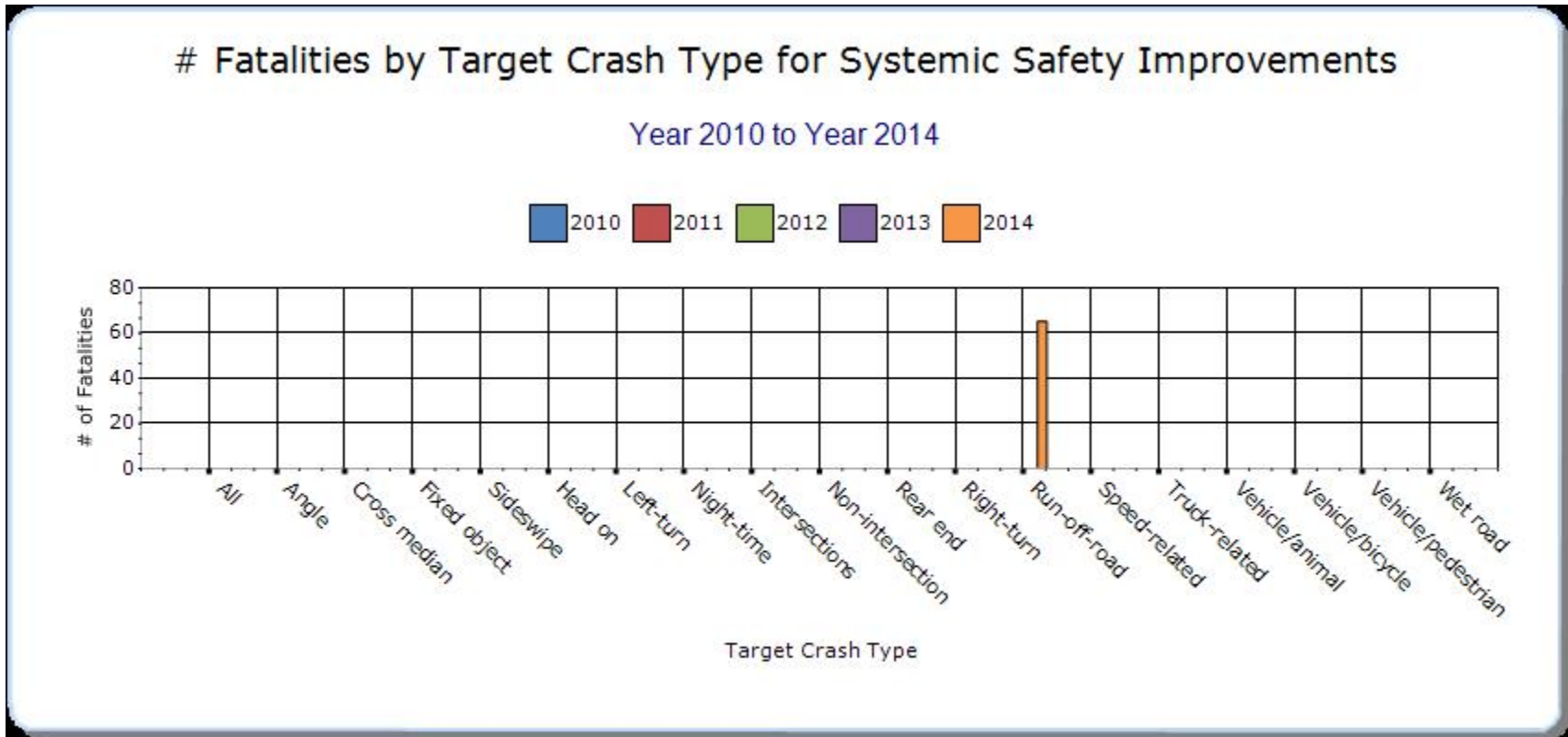


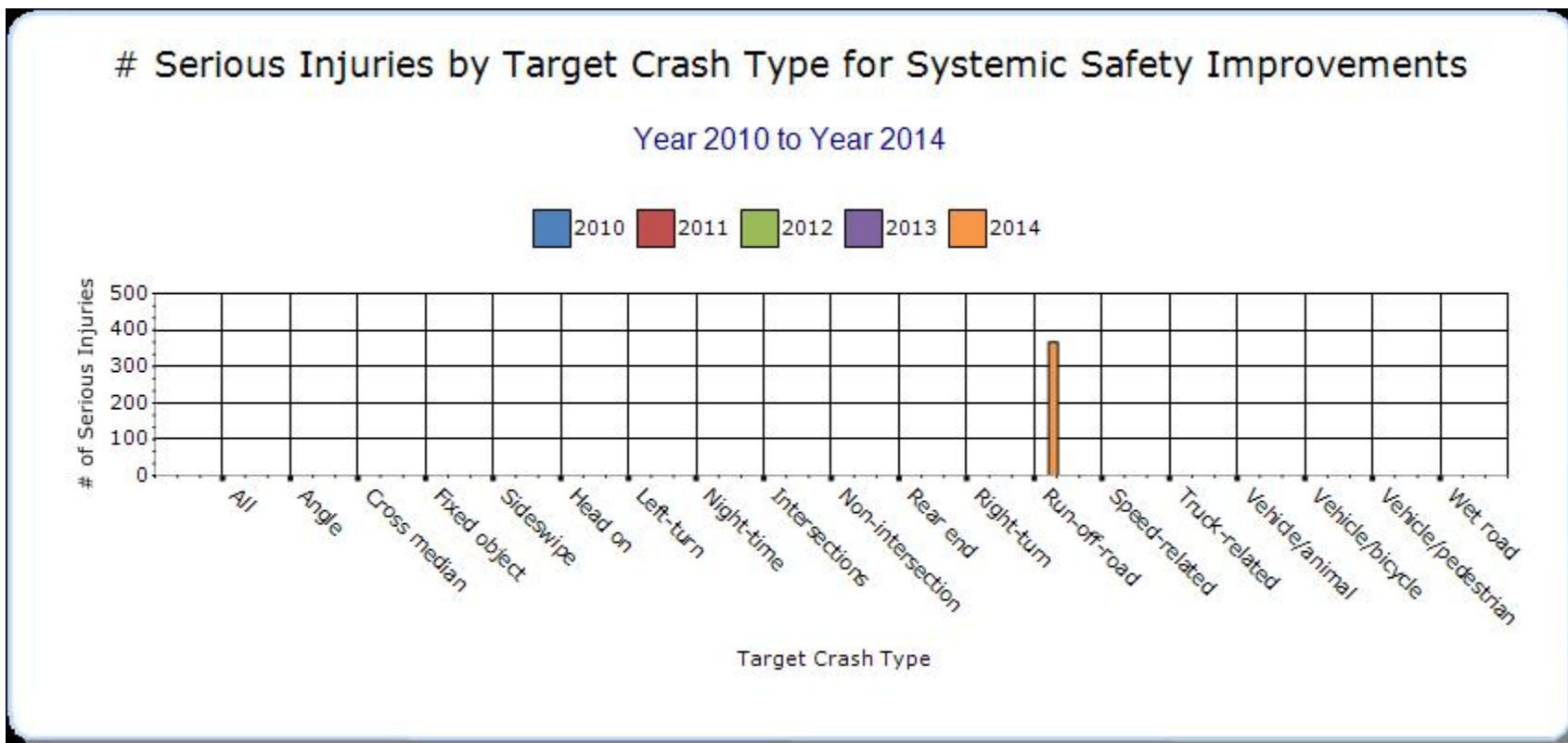
Systemic Treatments

Present the overall effectiveness of systemic treatments.

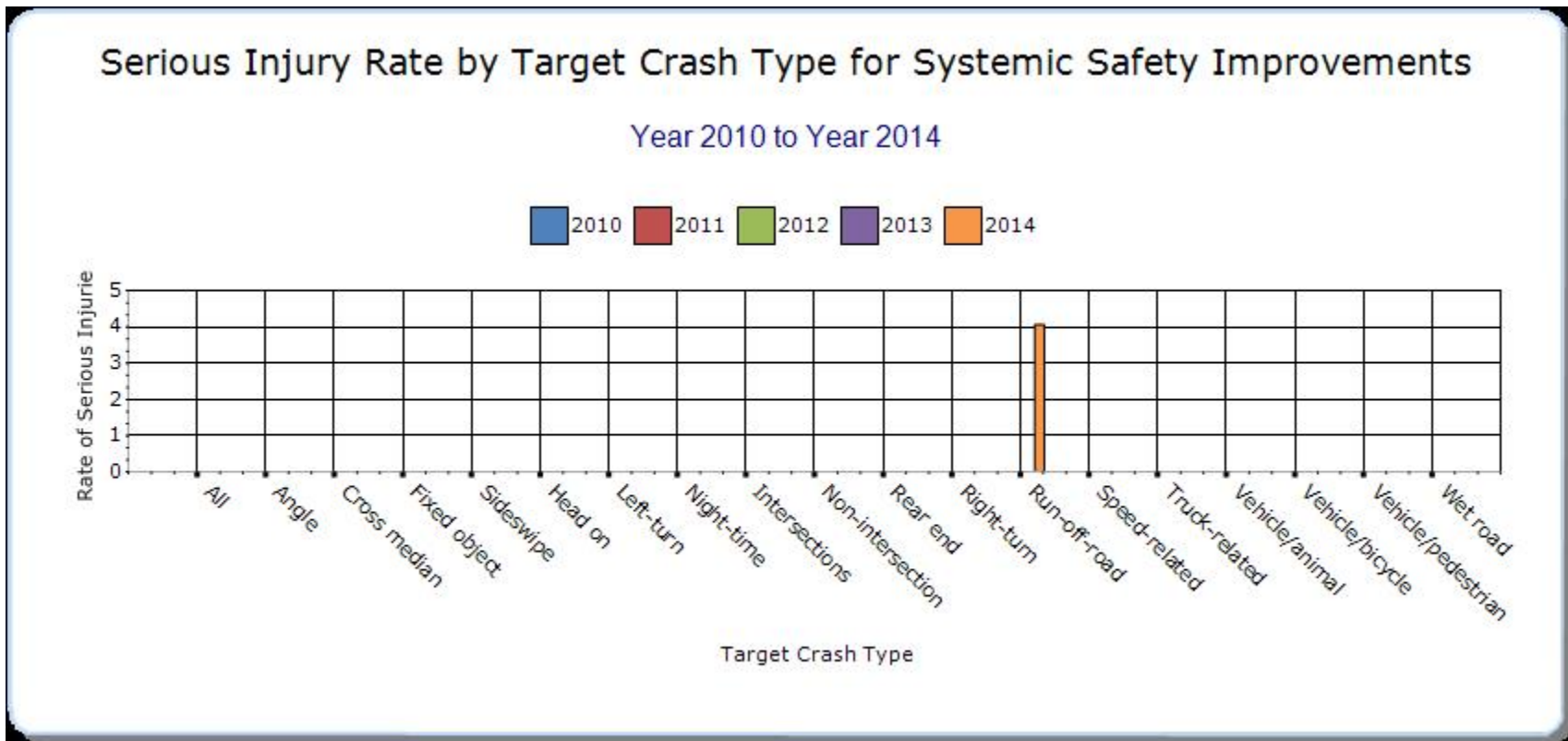
Year - 2014

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
Rumble Strips	Run-off-road	65.2	366.8	0.72	4.06	0	0	0









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

The SDDOT has found a reduction of 21% of targeted crashes with the deployment of stand alone shoulder rumble stripe projects. Shoulder rumble strips showed a reduction of 24% of fatal crashes, 20% of injury crashes and 8% of all crash types.

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)
Intersection of West Main Avenue and Sheridan Lake Road in Rapid City	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal timing - signal coordination	0	2	7	13	22	0	1	1	6	8	20

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.