Highway Safety Improvement Program

Data Driven Decisions

North Dakota
Highway Safety Improvement Program
2016 Annual Report

Prepared by: ND

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

During the past year the NDDOT has progressed with a systemic process to identify high risk intersections and horizontal curves on the state highway system. This data-driven process is called the "State Road Safety Program" (SRSP). Through the SRSP, low-cost countermeasures are recommended at each location and projects are being developed and programmed into the safety program. The systemic process for non-state locations is based on the "Local Road Safety Program" (LRSP). In the past year local agencies continue to apply for safety projects using the LRSP.

In addition to the systemic processes of the SRSP and the LRSP, the NDDOT continues to use the traditional "reactive" process of identifying high crash locations for development of HSIP projects. The combination of risk assessment (systemic) and high-crash locations (reactive) will provide a balanced approach to identify and program effective HSIP projects over the next few years.

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?

Other-Solicitation process

The NDDOT sends out an annual solicitation letter to state and local agencies each year. These agencies fill out an application form for potential projects based on the high crash listings and their own knowledge of safety issues. These applications are evaluated by the NDDOT Programming Division. The NDDOT also has a more systemic approach with "Local Road Safety Plan" (LRSP) and the "State Road Safety Plan (SRSP). These plans identify potential projects on both local roadways and state roadways based on a risk assessment. Safety projects may be developed directly from the risk assessment instead of chasing "hot spot" locations.

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

The NDDOT addresses safety on local roads through the Local Road Safety Program (LRSP).

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

Design
Planning
Governors Highway Safety Office
Other-Safety Division, Local Government

Briefly describe coordination with internal partners.

Design
The Design Division is included in the distribution of the high crash listings. All road safety reviews require at least one member of the Design Division. Their participation and review of at-risk locations helps in the development of potential project countermeasures.

Planning
The Planning Division provides data for the development of the HSIP. Roadway features are collected and maintained in the Planning Division include: traffic volume, truck volumes, traffic projections, roadway features, roadway viewer (for state highways) and mapping. The Planning Division is also included in the distribution of the high crash listings.

Safety Division
Crash data and statistics are provided by the Safety Division. This information is used to identify areas of focus through the Strategic Highway Safety Plan (SHSP). The Safety Division also participates in road safety reviews.

Local Government
Members of the Local Government Division provide project development through city, county and tribal agencies. The local government assists in the solicitation of safety projects. They also participate in road safety reviews.

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

Metropolitan Planning Organizations
Other-Cities, Counties, and Tribal Governments
Other-Law enforcement

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

Other-No change

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

Schedule for HSIP requests:

- Fall – send out HSIP solicitation letter and high crash location lists/maps, HSIP application forms (SFN 59959) are due by the end of the year
- Winter – NDDOT analysis of HSIP requests and Draft HSIP project listing
- Spring – verify the construction year for previously approved projects
- Summer – finalize HSIP project listing, send responses out on approvals (or non-approvals) for the HSIP applications
- August 31st – Final HSIP project list due to FHWA, HSIP online reporting due

Program Methodology

Select the programs that are administered under the HSIP.

Intersection Roadway Departure

Program: **Intersection**
Date of Program Methodology: **6/17/2014**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Traffic	Horizontal curvature
		Other-Intersection skew, intersections of curves, intersection traffic control device, presence of adjacent development

What project identification methodology was used for this program?
Crash frequency
Equivalent property damage only (EPDO Crash frequency)
Other-Systemic project identification, local agency or NDDOT district requests

Are local roads (non-state owned and operated) included or addressed in this program?
Yes
If yes, are local road projects identified using the same methodology as state roads?
Yes

How are highway safety improvement projects advanced for implementation?
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).
Rank of Priority Consideration

Available funding	1
Ranking based on net benefit	2
Cost Effectiveness	3

Program: **Roadway Departure**
Date of Program Methodology: **6/17/2014**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Traffic	Horizontal curvature
		Roadside features

Other-shoulder width, access density

What project identification methodology was used for this program?
Crash frequency
Equivalent property damage only (EPDO Crash frequency)
Other-Systemic (risk assessment)

Are local roads (non-state owned and operated) included or addressed in this program?
Yes
If yes, are local road projects identified using the same methodology as state roads?
Yes

How are highway safety improvement projects advanced for implementation?
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).
Rank of Priority Consideration

Available funding	1
Ranking based on net benefit	2
Cost Effectiveness	3

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

34%

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

Rumble Strips
Traffic Control Device Rehabilitation
Pavement/Shoulder Widening
Install/Improve Signing
Install/Improve Pavement Marking and/or Delineation
Install/Improve Lighting

What process is used to identify potential countermeasures?

Engineering Study
Road Safety Assessment

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

Other-No change

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.

Federal Fiscal Year

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

Funding Category	Programmed*		Obligated	
HSIP (Section 148)	$3,782,393.00	42 %	$4,371,745.00	46 %
Penalty Transfer – Section 164	$5,140,255.00	58 %	$5,140,255.00	54 %
Totals	$8,922,648.00	100%	$9,512,000.00	100%

All amounts shown are Federal.

Programmed from STIP Export of 2016 on 6/22/16 including one amendment (Burlington)

Section 164 amount is off of W10A

Obligated amount is from 2016 construction year spreadsheet as of 6/22/16

Did not assume State and Local funds were "match" dollars for the federal funds

How much funding is programmed to local (non-state owned and operated) safety projects?
$468,000.00
How much funding is obligated to local safety projects?
$468,000.00

How much funding is programmed to non-infrastructure safety projects?
$0.00
How much funding is obligated to non-infrastructure safety projects?
$0.00

How much funding was transferred in to the HSIP from other core program areas during the reporting period?
$0.00
How much funding was transferred out of the HSIP to other core program areas during the reporting period?
$0.00

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

None

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
Turn lanes on US 2 at 19th Ave NW, 65th St NW	Intersection geometry Auxiliary lanes - add left-turn lane		867000	963000	HSIP (Section 148)	Rural Principal Arterial - Other		60	State Highway Agency	Intersections	
US 2 Turn Lanes (Minot District)	Intersection geometry Auxiliary lanes - add left-turn lane		2091000	2323000	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Intersections	
US 83 Various Intersections	Intersection geometry Auxiliary lanes - add right-turn lane		603000	669000	HSIP (Section 148)	Rural Principal Arterial - Other		65	State Highway Agency	Intersections	
US 83 Radial-T intersections	Intersection geometry Intersection geometrics - modify skew angle		1645000	1828000	HSIP (Section 148)	Rural Principal Arterial - Other		65	State Highway Agency	Intersections	
Districtwide retroreflectivity	Roadway signs and traffic control Sign sheeting - upgrade or replacement		1912000	2125000	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Older Drivers	
US 281 at S Jct ND 15	Intersection geometry Auxiliary lanes - add right-		85000	95000	HSIP (Sectio	Rural Principal		65	State Highway	Intersections	

	turn lane				n 148)	Arterial - Other			Agency		
US 2 & ND 18	Intersection geometry Intersection geometrics - miscellaneous/other/unspecified		738000	820000	HSIP (Section 148)	Rural Principal Arterial - Other		70	State Highway Agency	Intersections	
E Jct of ND 13 & ND 32 (E of Gwinner)	Intersection geometry Auxiliary lanes - add left-turn lane		905000	1005000	HSIP (Section 148)	Rural Principal Arterial - Other		65	State Highway Agency	Intersections	
US 2 & Johnson St / 29th Ave NW	Lighting Site lighting - intersection		89000	98000	HSIP (Section 148)	Rural Principal Arterial - Other		60	State Highway Agency	Intersections	
Burke County Road Projects	Roadway signs and traffic control Roadway signs (including post) - new or updated		467000	518000	HSIP (Section 148)	Rural Major Collector			County Highway Agency	Lane Departure	
Various Locations - Individual	Miscellaneous		100000	111111	HSIP (Section 148)						
Highway Safety Improvements	Miscellaneous		112500	125000	HSIP (Section 148)						
Small Scale Improvements	Miscellaneous		100000	111000	HSIP (Section 148)						
SHSP Planning and Implementation	Non-infrastructure		45000	50000	HSIP (Section 148)						

Yield installation at passive RR Xings	Railroad grade crossings		250000	277778	HSIP (Section 148)						

Progress in Achieving Safety Performance Targets

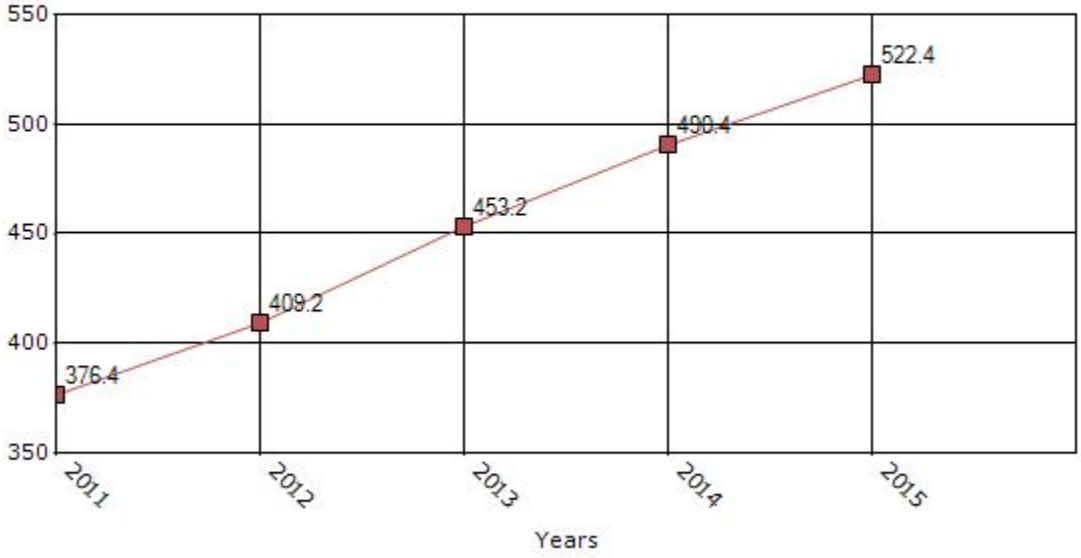
Overview of General Safety Trends

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

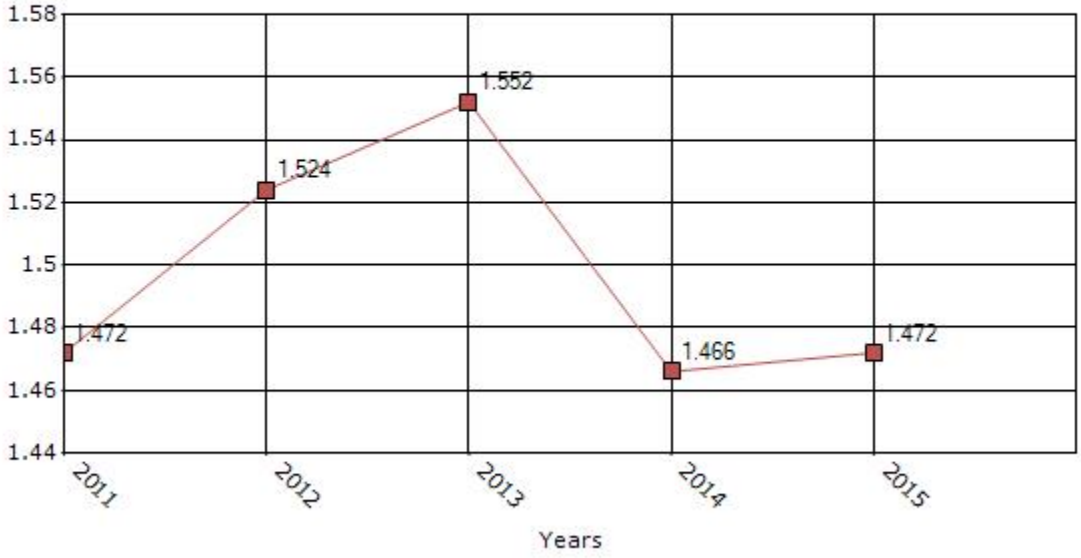
Performance Measures*	2011	2012	2013	2014	2015
Number of fatalities	121.6	133.4	142.2	141.2	146.4
Number of serious injuries	376.4	409.2	453.2	490.4	522.4
Fatality rate (per HMVMT)	1.472	1.524	1.552	1.466	1.472
Serious injury rate (per HMVMT)	4.612	4.68	4.924	5.026	5.182

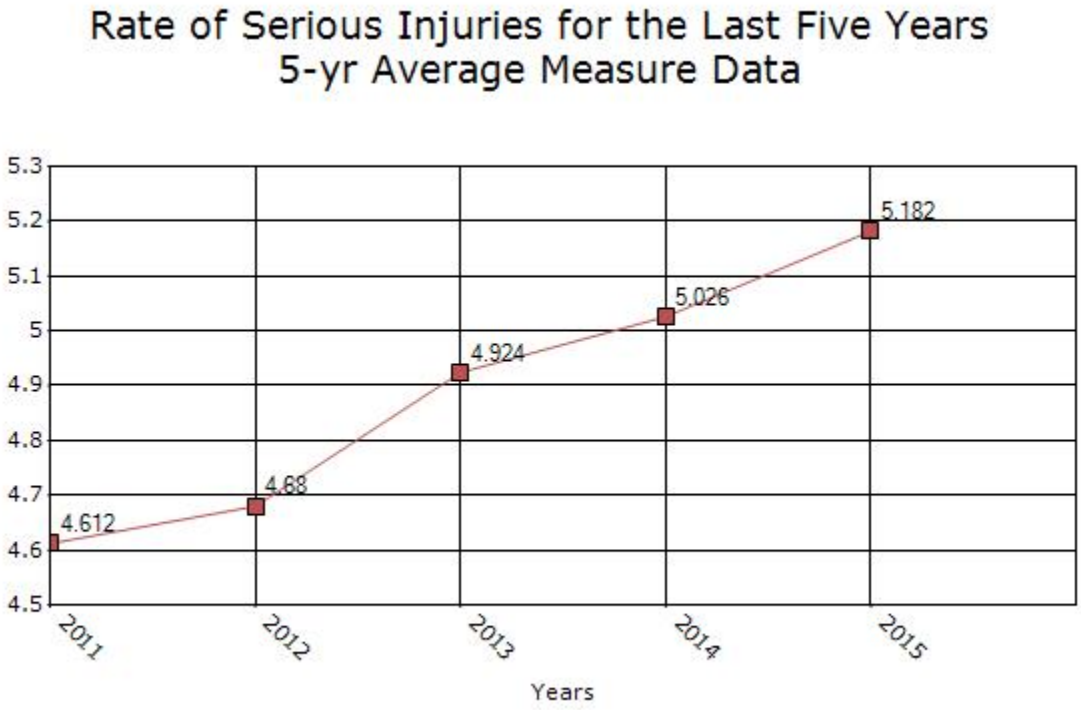
*Performance measure data is presented using a five-year rolling average.

Number of Serious Injuries for the Last Five Years
5-yr Average Measure Data



Rate of Fatalities for the Last Five Years
5-yr Average Measure Data



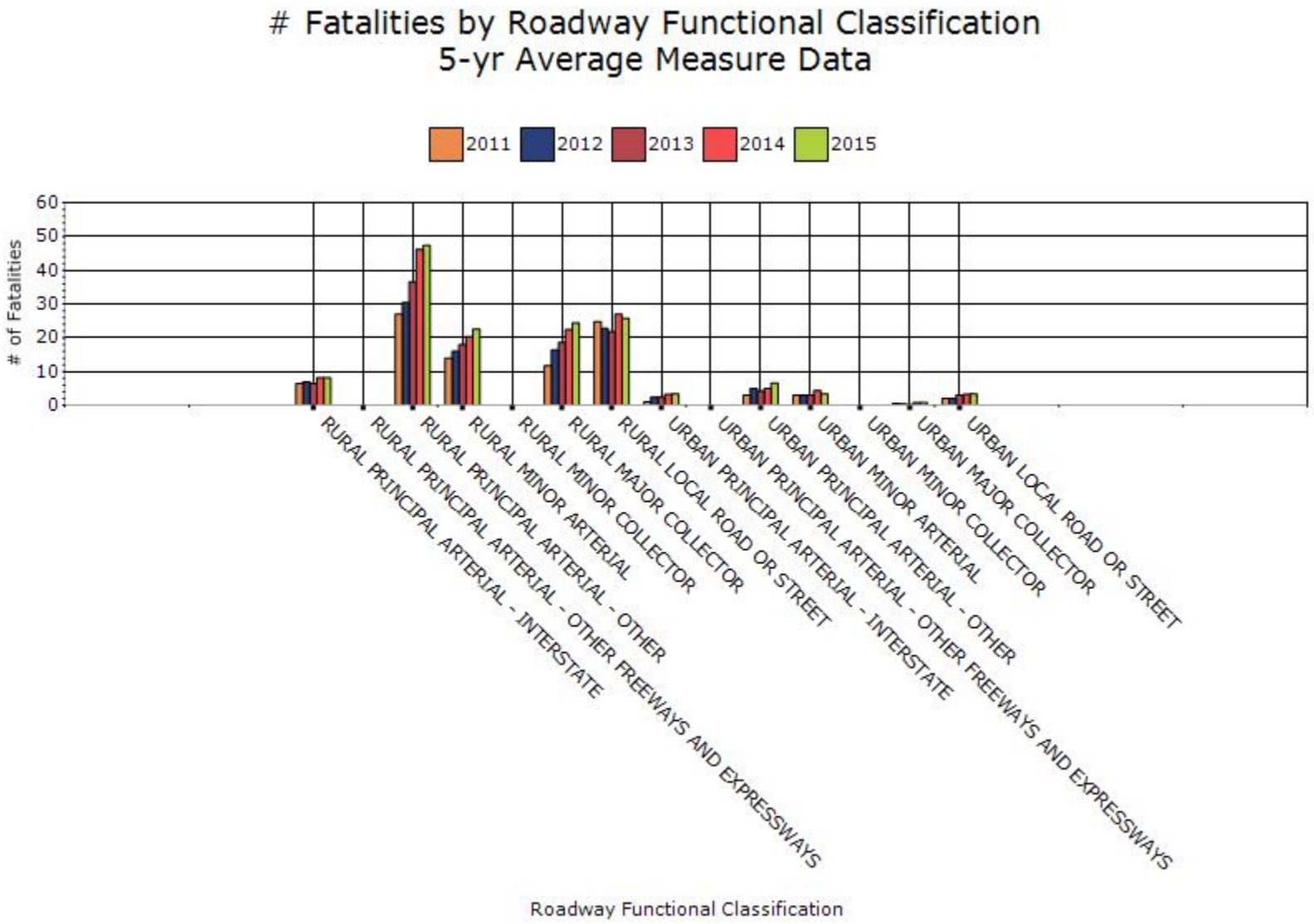

Rate of Serious Injuries for the Last Five Years
5-yr Average Measure Data
5.3
5.2
5.1
5
4.9
4.8
4.7
4.6
4.5
4.612
4.68
4.924
5.026
5.182
2011
2012
2013
2014
2015
Years

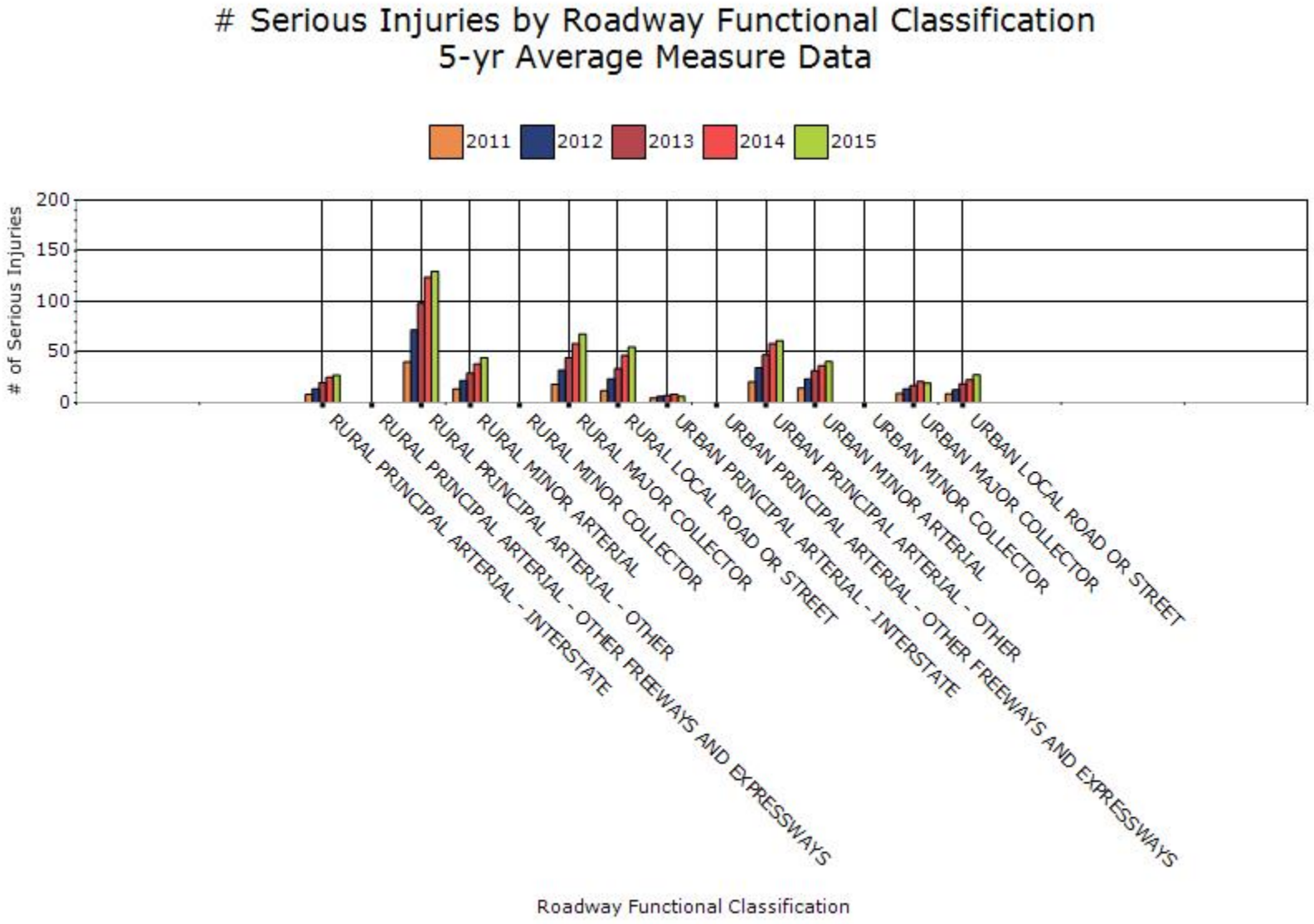
To the maximum extent possible, present performance measure* data by functional classification and ownership.

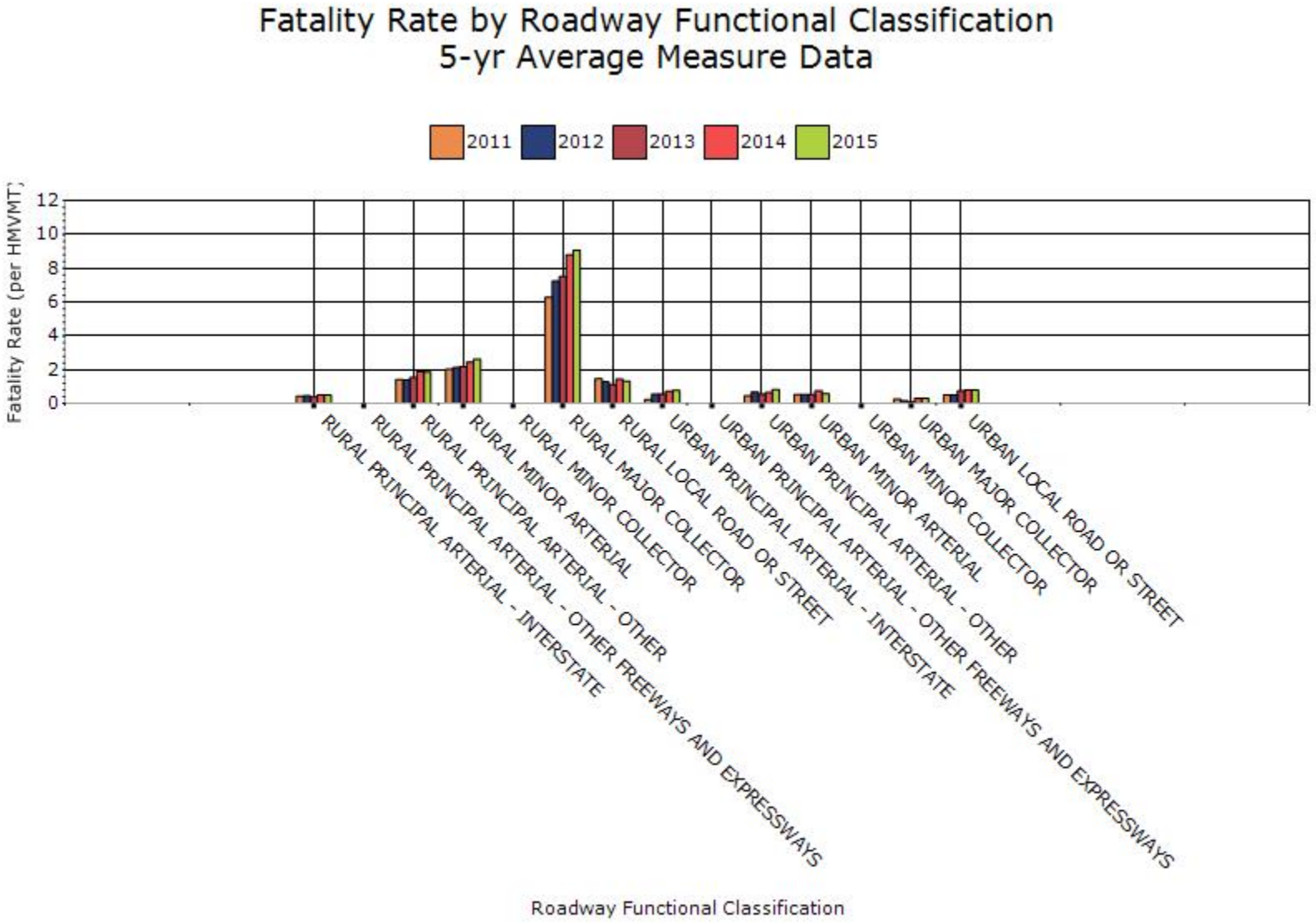
Year - 2015

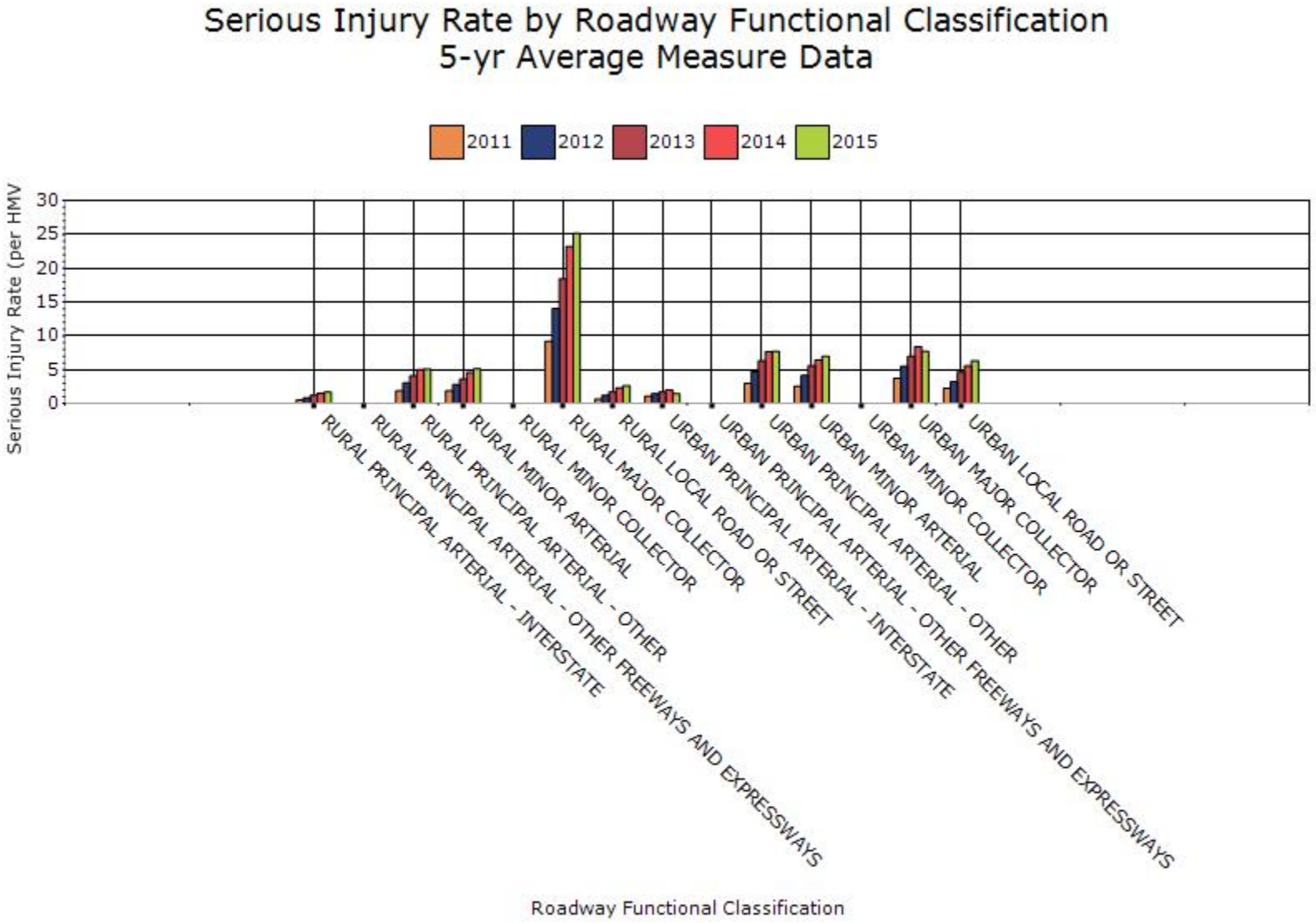
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	8.2	27.4	0.5	1.66
RURAL PRINCIPAL ARTERIAL - OTHER	47.4	129.8	1.86	5.09
RURAL MINOR ARTERIAL	22.6	44.6	2.62	5.12
RURAL MAJOR COLLECTOR	24.4	68	9.06	25.15
RURAL LOCAL ROAD OR STREET	25.8	55.2	1.32	2.62
URBAN PRINCIPAL ARTERIAL - INTERSTATE	3.4	6.4	0.77	1.43
URBAN PRINCIPAL ARTERIAL - OTHER	6.6	61.4	0.83	7.71
URBAN MINOR ARTERIAL	3.4	40.6	0.58	6.96
URBAN MAJOR	0.8	19.6	0.31	7.71

COLLECTOR				
URBAN LOCAL ROAD OR STREET	3.4	27.6	0.79	6.33


Fatalities by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Fatalities
60
50
40
30
20
10
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification

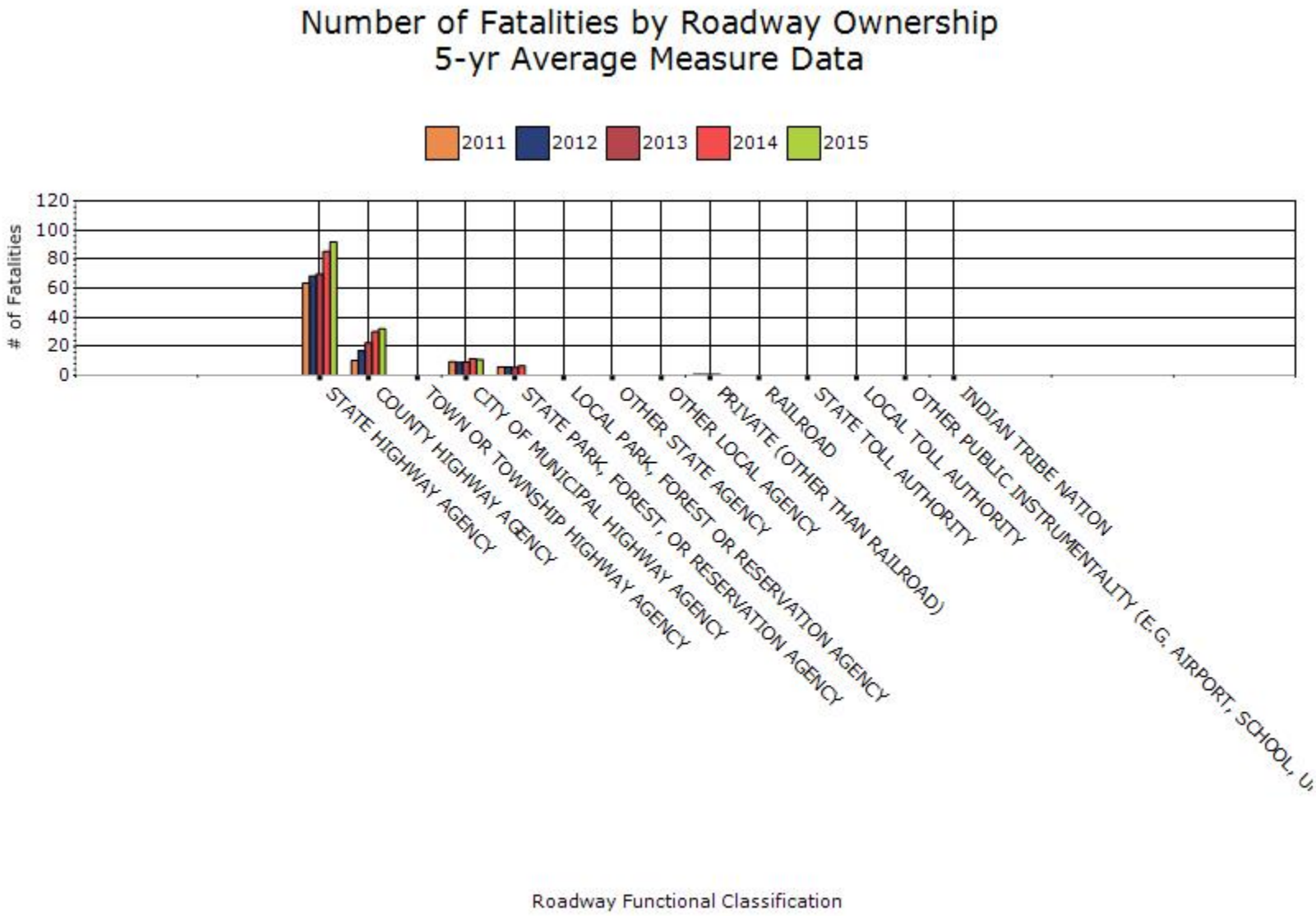

Serious Injuries by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Serious Injuries
200
150
100
50
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification

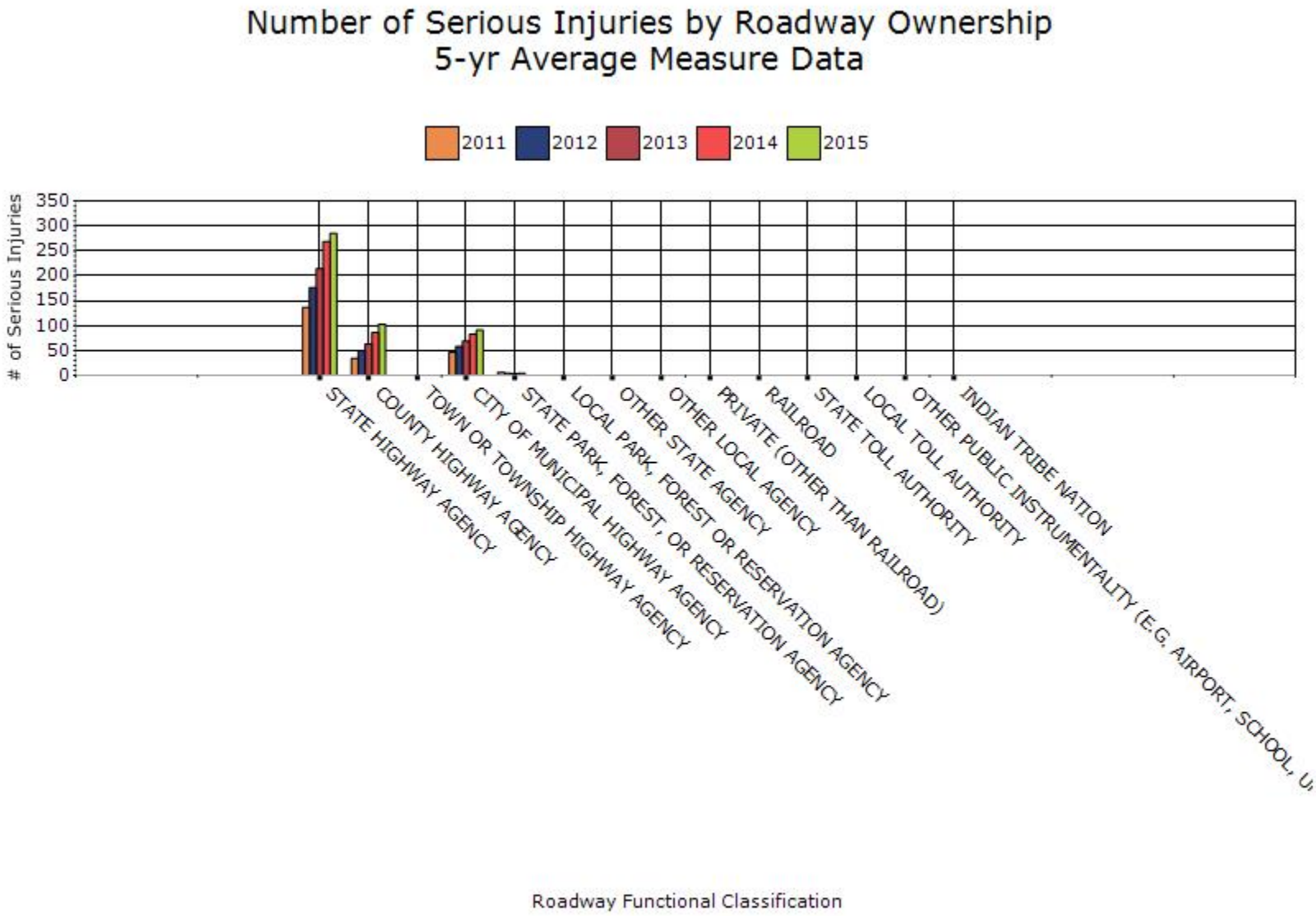

Fatality Rate by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
Fatality Rate (per HMVMT)
0
2
4
6
8
10
12
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification


Serious Injury Rate by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
Serious Injury Rate (per HMV
30
25
20
15
10
5
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification

Year - 2015

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	91.8	284.8	1.28	3.96
COUNTY HIGHWAY AGENCY	32	102.8	1.52	4.86
CITY OF MUNICIPAL HIGHWAY AGENCY	10.8	91	1.46	13.24


Number of Fatalities by Roadway Ownership
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Fatalities
120
100
80
60
40
20
0
STATE HIGHWAY AGENCY
COUNTY HIGHWAY AGENCY
TOWN OR TOWNSHIP HIGHWAY AGENCY
CITY OF MUNICIPAL HIGHWAY AGENCY
STATE PARK, FOREST, OR RESERVATION AGENCY
LOCAL PARK, FOREST OR RESERVATION AGENCY
OTHER STATE AGENCY
OTHER LOCAL AGENCY
PRIVATE (OTHER THAN RAILROAD)
RAILROAD
STATE TOLL AUTHORITY
LOCAL TOLL AUTHORITY
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, U
INDIAN TRIBE NATION
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Serious Injuries
350
300
250
200
150
100
50
0
STATE HIGHWAY AGENCY
COUNTY HIGHWAY AGENCY
TOWN OR TOWNSHIP HIGHWAY AGENCY
CITY OF MUNICIPAL HIGHWAY AGENCY
STATE PARK, FOREST, OR RESERVATION AGENCY
LOCAL PARK, FOREST OR RESERVATION AGENCY
OTHER STATE AGENCY
OTHER LOCAL AGENCY
PRIVATE (OTHER THAN RAILROAD)
RAILROAD
STATE TOLL AUTHORITY
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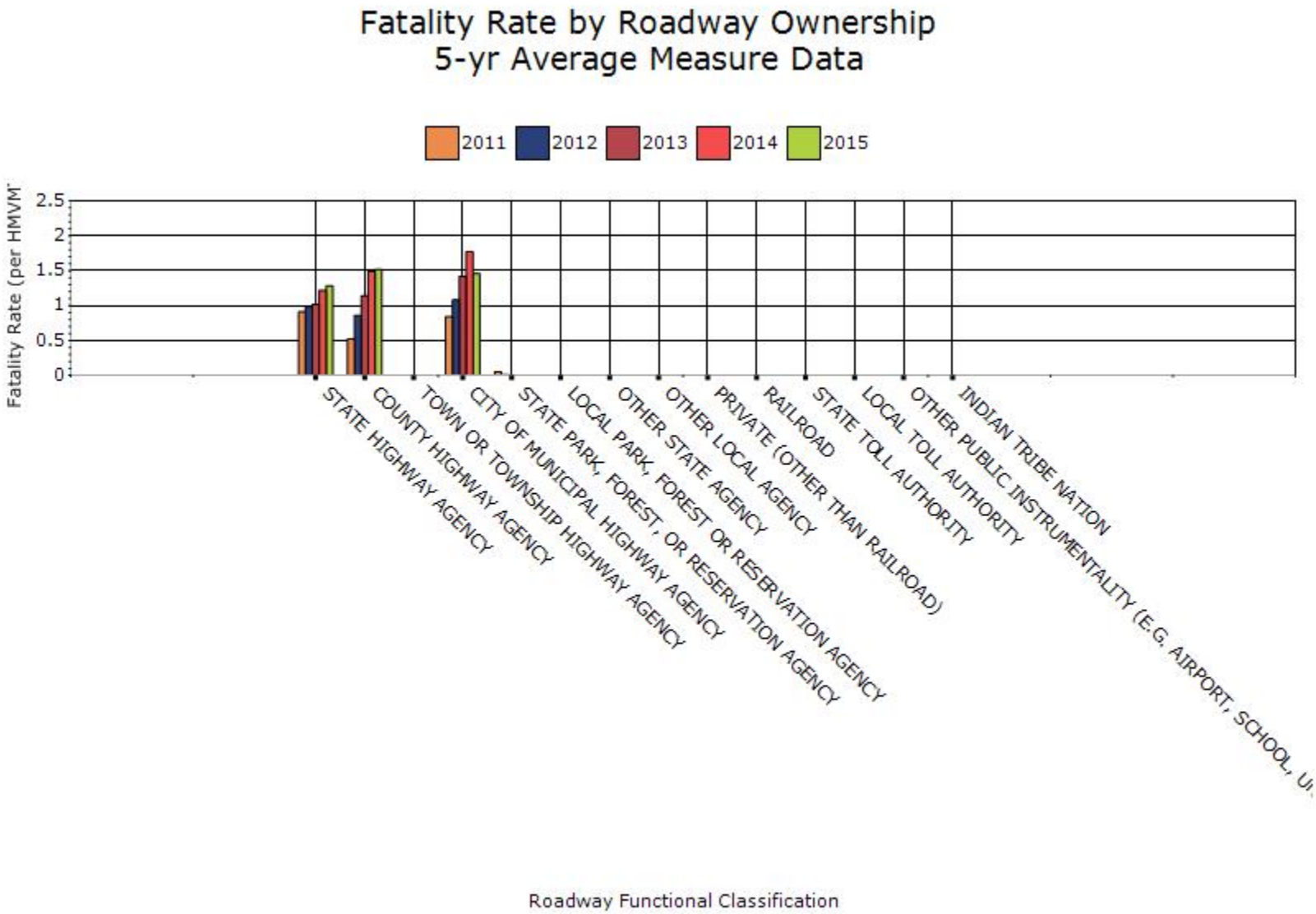
Fatality Rate by Roadway Ownership
5-yr Average Measure Data
2011
2012
2013
2014
2015
Fatality Rate (per HMVM
2.5
2
1.5
1
0.5
0
STATE HIGHWAY AGENCY
COUNTY HIGHWAY AGENCY
TOWN OR TOWNSHIP HIGHWAY AGENCY
CITY OF MUNICIPAL HIGHWAY AGENCY
STATE PARK, FOREST, OR RESERVATION AGENCY
LOCAL PARK, FOREST OR RESERVATION AGENCY
OTHER STATE AGENCY
OTHER LOCAL AGENCY
PRIVATE (OTHER THAN RAILROAD)
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STATE TOLL AUTHORITY
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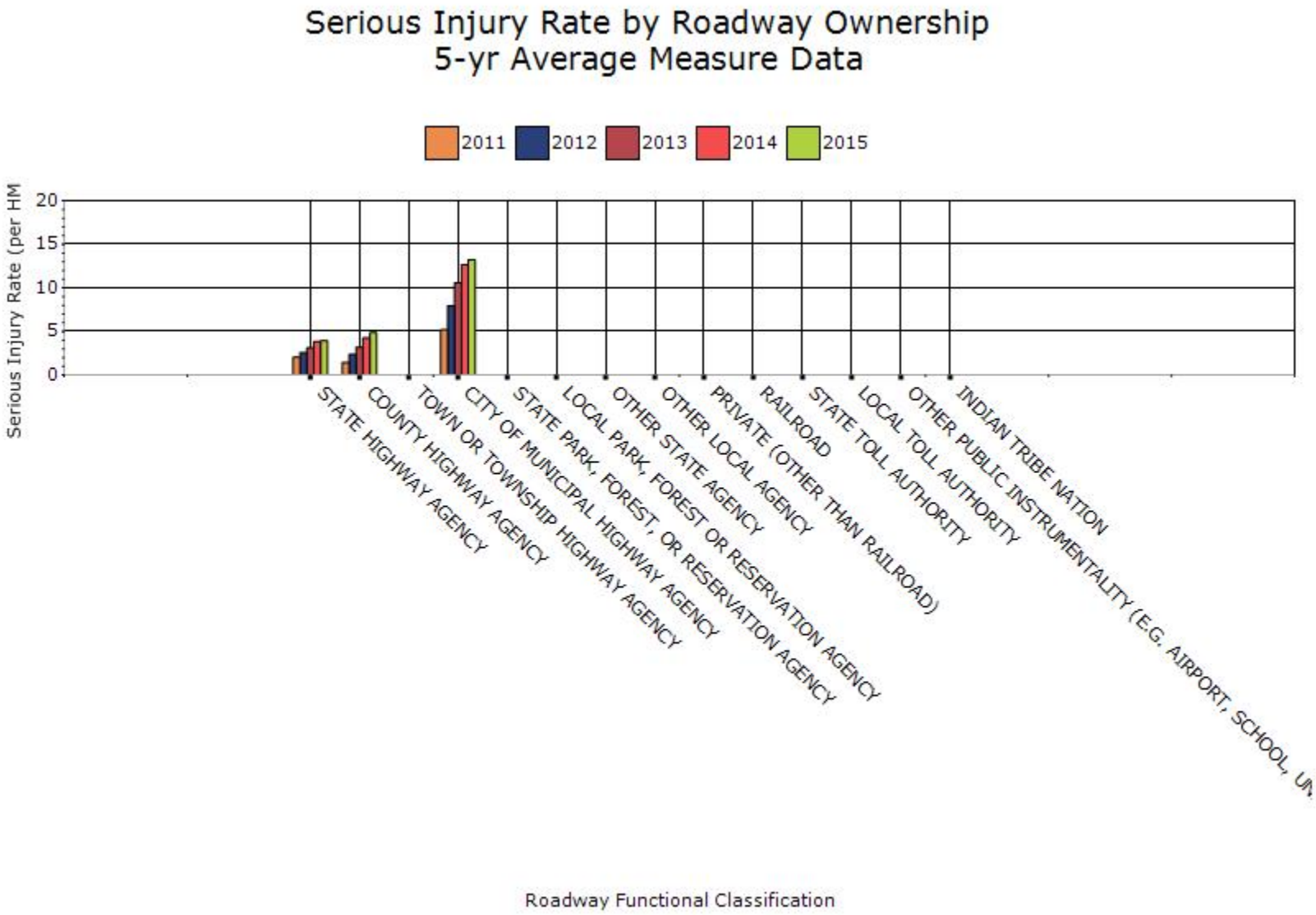
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
5-yr Average Measure Data
2011
2012
2013
2014
2015
Serious Injury Rate (per HM
20
15
10
5
0
STATE HIGHWAY AGENCY
COUNTY HIGHWAY AGENCY
TOWN OR TOWNSHIP HIGHWAY AGENCY
CITY OF MUNICIPAL HIGHWAY AGENCY
STATE PARK, FOREST, OR RESERVATION AGENCY
LOCAL PARK, FOREST OR RESERVATION AGENCY
OTHER STATE AGENCY
OTHER LOCAL AGENCY
PRIVATE (OTHER THAN RAILROAD)
RAILROAD
STATE TOLL AUTHORITY
LOCAL TOLL AUTHORITY
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UN
INDIAN TRIBE NATION
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	**2010**	**2011**	**2012**	**2013**	**2014**
Fatality rate (per capita)	0.046	0.072	0.084	0.08	0.078
Serious injury rate (per capita)	0.074	0.112	0.13	0.152	0.188
Fatality and serious injury rate (per capita)	0.12	0.184	0.216	0.234	0.268

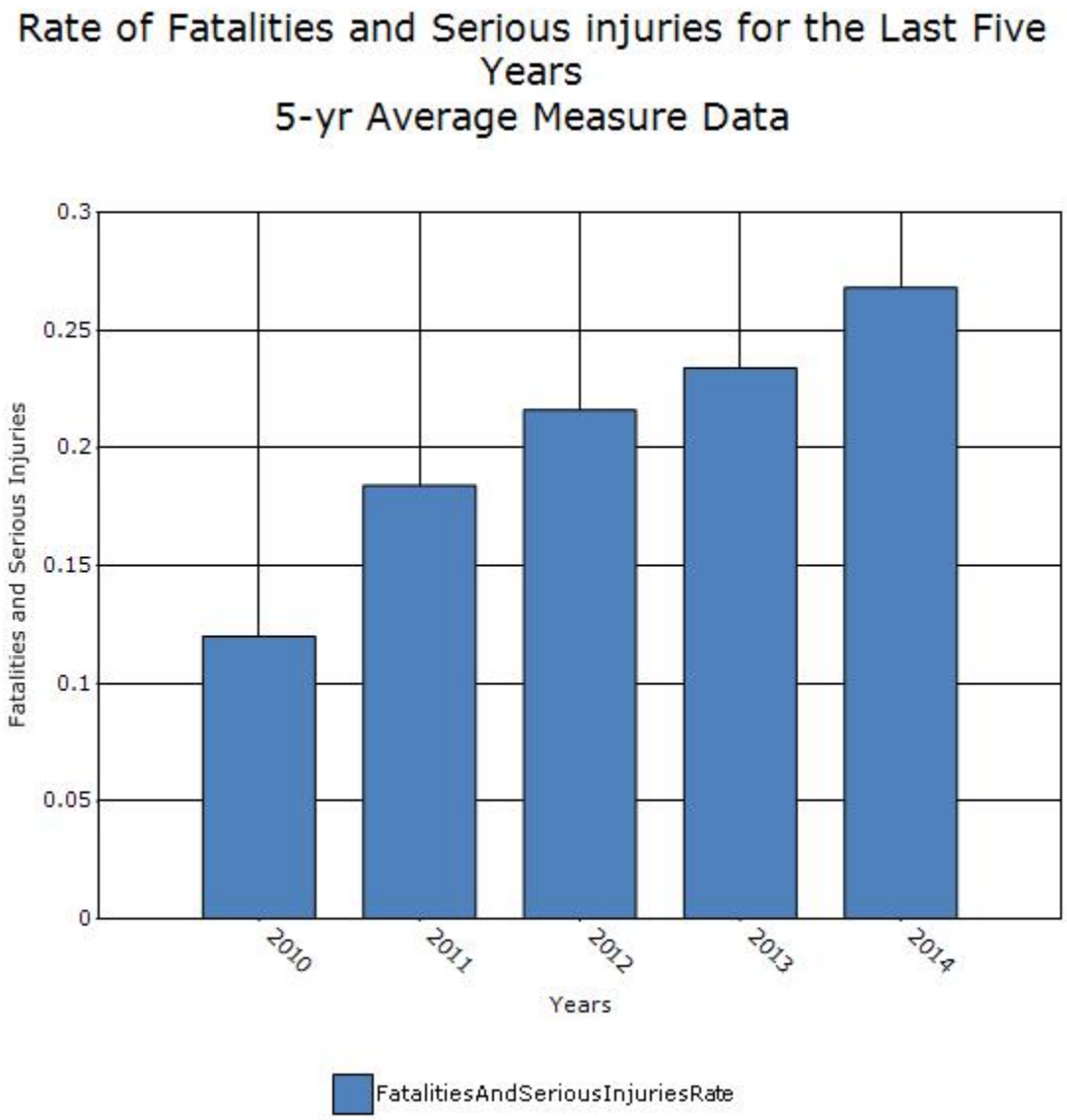
*Performance measure data is presented using a five-year rolling average.

	Fatalities Age 65+	Serious Inj Age 65+	Population 65+	Fatal+Injury Rate
2007	6	9	144,000	0.10
2008	11	8	146,000	0.13
2009	12	10	147,000	0.15
2010	5	27	145,000	0.22
2011	19	27	144,000	0.32
2012	15	22	144,000	0.26
2013	8	23	142,000	0.22
2014	10	36	142,000	0.32
2015	17	45	142,000	0.44

Example calculations:

Fatality plus injury rate for 2007 = (6+9)/144 = 0.10

2007 - 2011 Average of fatalities and serious injuries = (0.10+0.13+0.15+0.22+0.32) / 5 = 0.18



Does the older driver special rule apply to your state?

Yes

If yes, describe the approach to include respective strategies to address the increase in those rates in the State SHSP.

North Dakota intends to have further consideration for older drivers in the next update to the SHSP.

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?

Other-The Local Road Safety Program (LRSP) is being considered an ongoing success for NDDOT's HSIP. This is because the NDDOT has recieved an increased number of project requests from local public agencies (LPAs) where in previous years their input has been minimal. Developing HSIP projects on the local roadway systems has been a goal of the NDDOT and it is expected that these projects will help reduce the number of fatalities and serious injuries for all users.

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

Other-Implementation of the State Road Safety Program (SRSP) has been the most significant change in this reporting period.

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

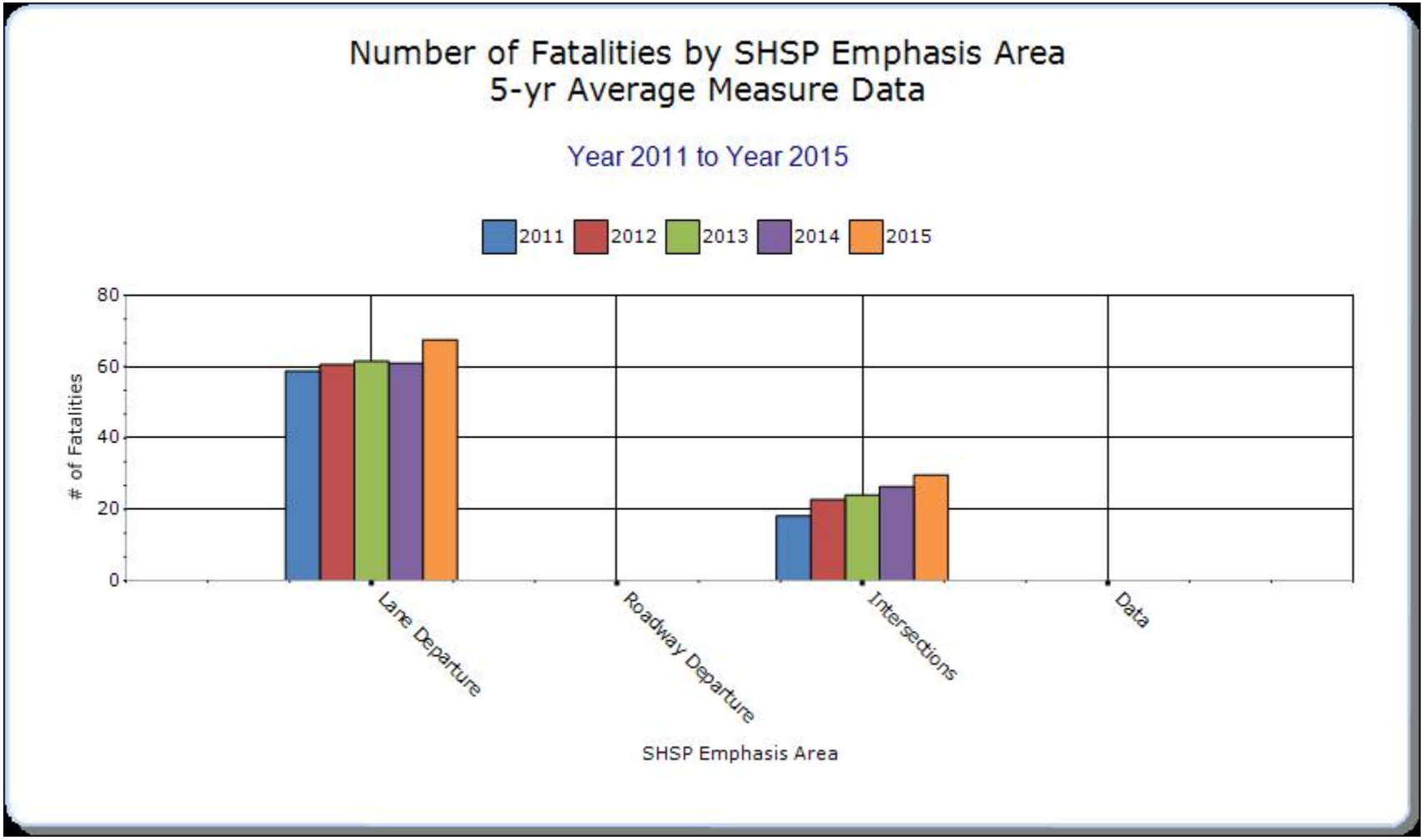
None

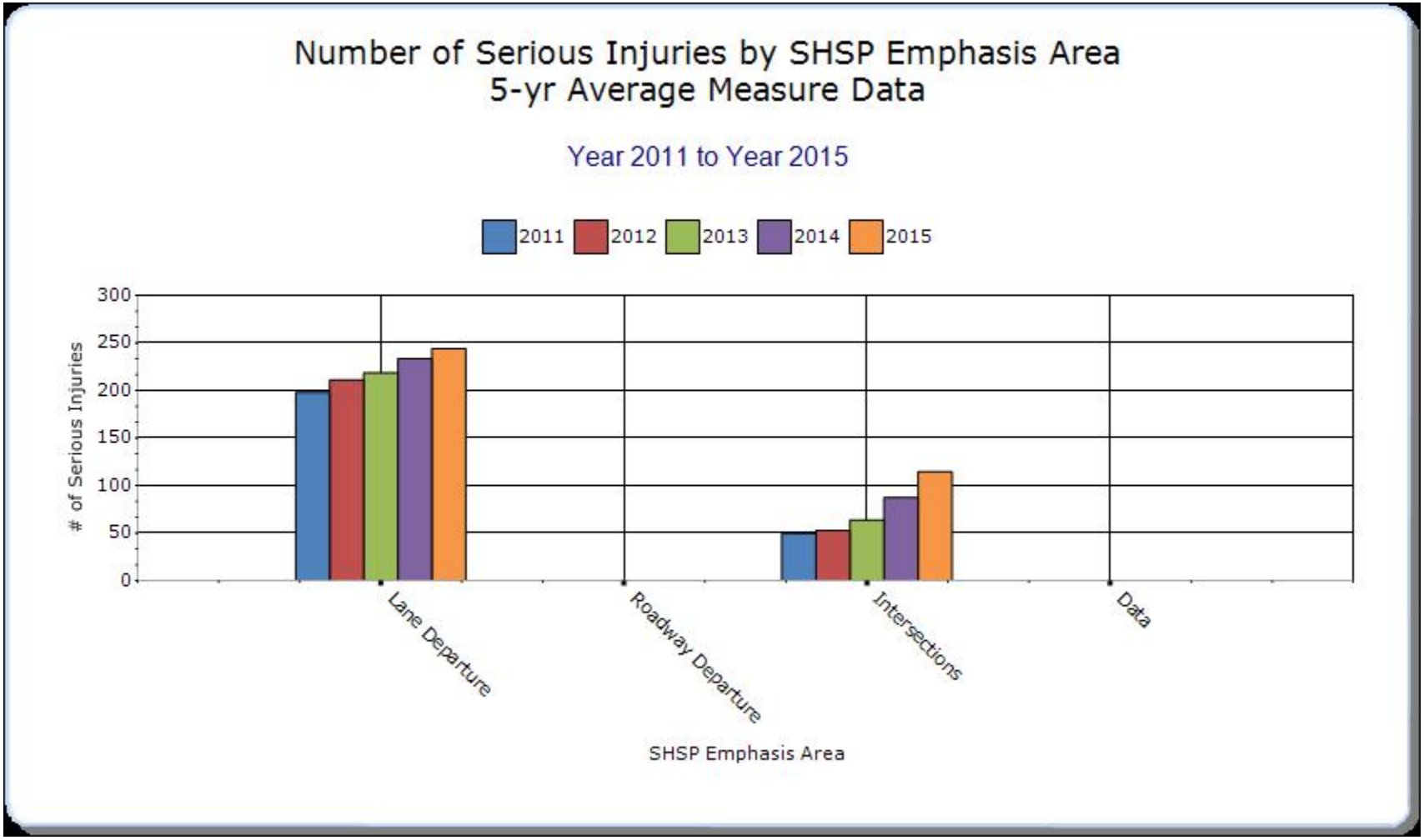
SHSP Emphasis Areas

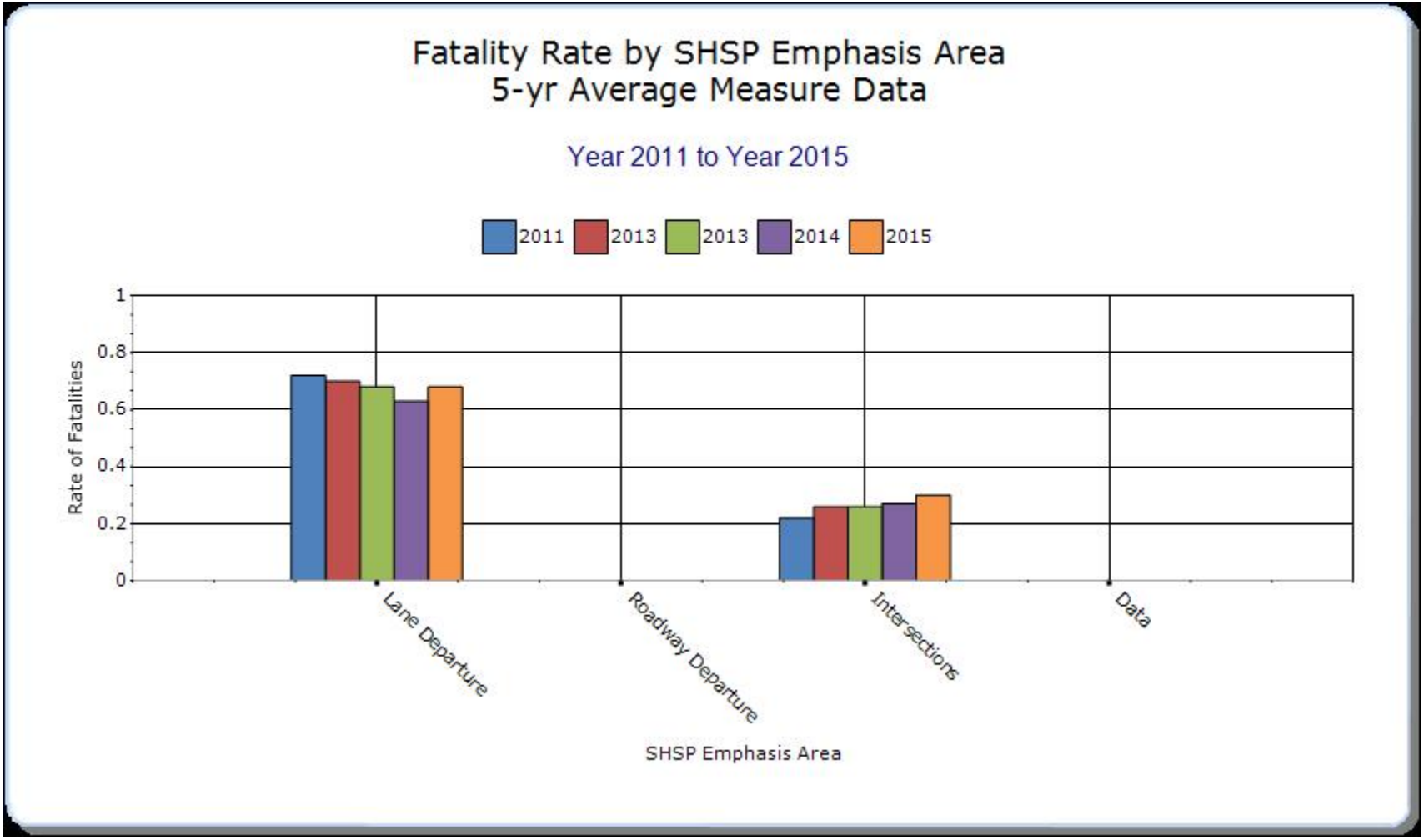
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

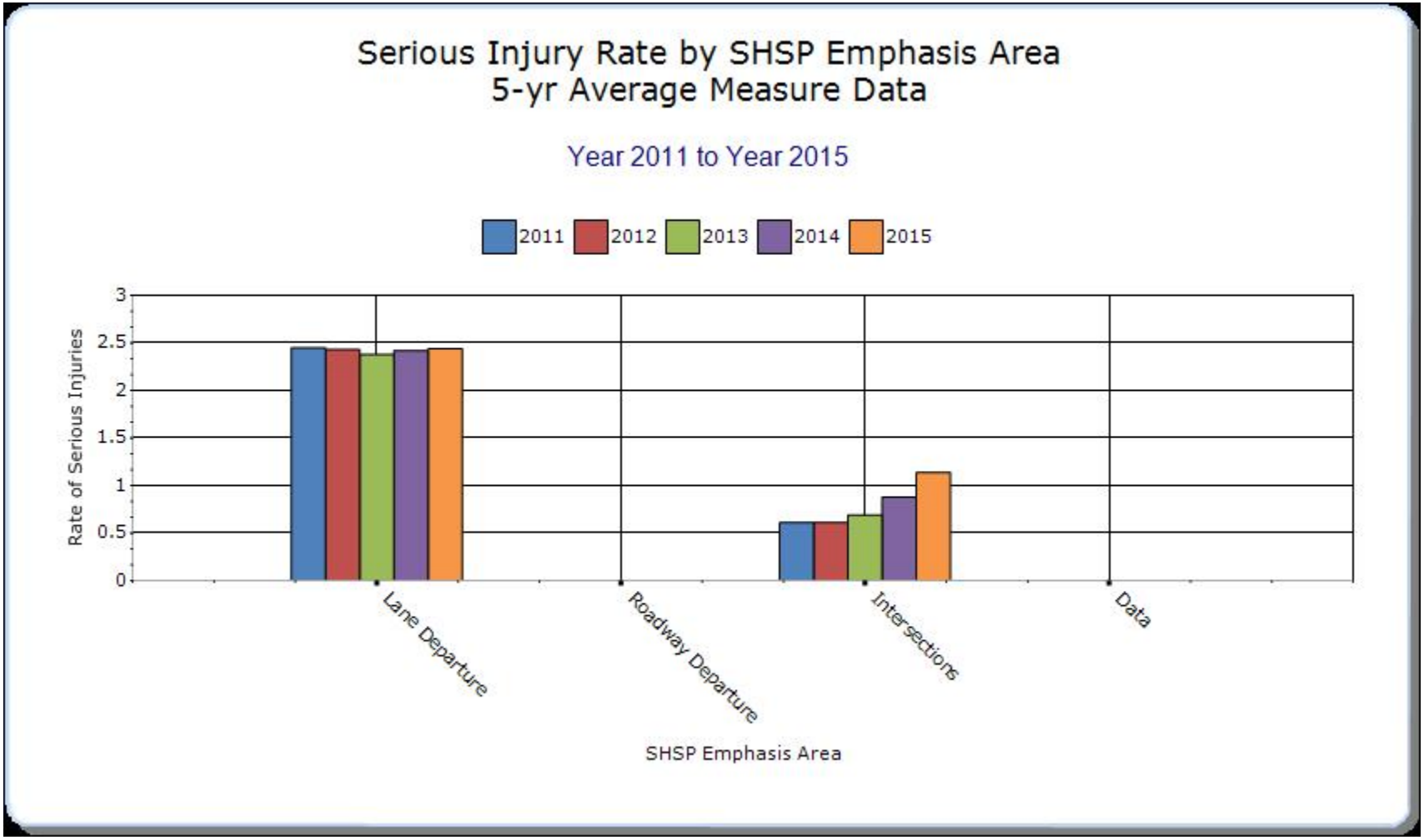
Year - 2015

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		67.6	244	0.68	2.44			
Intersections		29.6	114.8	0.3	1.14			


Number of Fatalities by SHSP Emphasis Area
5-yr Average Measure Data
Year 2011 to Year 2015
2011
2012
2013
2014
2015
80
60
40
20
0
# of Fatalities
Lane Departure
Roadway Departure
Intersections
Data
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
5-yr Average Measure Data
Year 2011 to Year 2015
2011
2012
2013
2014
2015
300
250
200
150
100
50
0
# of Serious Injuries
Lane Departure
Roadway Departure
Intersections
Data
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
5-yr Average Measure Data
Year 2011 to Year 2015
2011
2013
2013
2014
2015
Rate of Fatalities
1
0.8
0.6
0.4
0.2
0
Lane Departure
Roadway Departure
Intersections
Data
SHSP Emphasis Area



Groups of similar project types

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

Year - 2015

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
Intersection		29.6	114.8	0.3	1.14			

Systemic Treatments

Present the overall effectiveness of systemic treatments.

Year - 2015

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		67.6	244	0.68	2.44			

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)
n/a														

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.
Systematic refers to an approach where an agency deploys countermeasures at all locations across a system.
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.