Highway Safety Improvement Program

Data Driven Decisions

Hawaii
Highway Safety Improvement Program
2013 Annual Report

Prepared by: HI

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 8

Funds Programmed 8

General Listing of Projects 12

Progress in Achieving Safety Performance Targets ..... **Error! Bookmark not defined.**

Overview of General Safety Trends ..... **Error! Bookmark not defined.**

Application of Special Rules ..... **Error! Bookmark not defined.**

Assessment of the Effectiveness of the Improvements (Program Evaluation) 34

SHSP Emphasis Areas ..... **Error! Bookmark not defined.**

Groups of similar project types ..... **Error! Bookmark not defined.**

Systemic Treatments ..... **Error! Bookmark not defined.**

Glossary 60

Executive Summary

State of Hawaii 2013 23 U.S.C. 148(g) Annual Highway Safety Improvement Program 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.

High accident listings and accident data for county roads are submitted to the county offices for internal design use. Local agencies can submit project proposals to be considered on the Statewide Transportation Improvement Program (STIP) and the projects can be funded through HSIP funds if they are cost-effective. In addition, HRRRP Funds were offered to the counties in January 2008.

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

☒Design

☒Planning

☒Maintenance

☒Operations

☒Governors Highway Safety Office

☒Other: Other-Highway Safety Office assists with the management of non-infrastructure HSIP funds.

Briefly describe coordination with internal partners.

The HSIP project locations are evaluated to determine if other projects submitted by internal partners can be coordinated or project scope can be incorporated within existing projects.

Internal partners assist with project selection preparation of preliminary project scope through field investigations.

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

☐Metropolitan Planning Organizations

☐Governors Highway Safety Office

☒Local Government Association

☒Other: Other-Police departments

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.

A listing of projects representing all four counties is submitted to be considered on the STIP, when possible. Focus is more on corridor low-cost safety improvements versus black spots.

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: **Crash Data**

Date of Program Methodology: 9/9/2006

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

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.

The listings for county roads are ranked according to the accident frequency instead of the rates because of the lack of traffic volume data.

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ selection committee

☒ Other-Submitted to be included in the STIP. Follow with collaboration with Districts.

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	2
☒ Available funding	3
☐ Incremental B/C	

☐ Ranking based on net benefit

☒ Cost Effectiveness 1

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

0

Highway safety improvment program funds are used to address which of the following systemic improvments?

☐ Cable Median Barriers

☐ Rumble Strips

☐ Traffic Control Device Rehabilitation

☐ Pavement/Shoulder Widening

☐ Install/Improve Signing

☐ Install/Improve Pavement Marking and/or Delineation

☐ Upgrade Guard Rails

☐ Clear Zone Improvements

☐ Safety Edge

☐ Install/Improve Lighting

☐ Add/Upgrade/Modify/Remove Traffic Signal

☐ Other

What process is used to identify potential countermeasures?

☒ Engineering Study

☐ Road Safety Assessment

☐ Other:

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.

During this period, run off roadway and median crossover type accidents were targeted. HDOT is currently focusing on reducing fatalities and serious injury type accidents by implementing low-cost safety improvement projects along corridors with a history of theses types of accidents. In Hawaii, these types of accidents have a greater potential of reducing fatalities and serious injury accidents cost-effectively, in comparison to "black spot" type projects.HDOT is collaborating with the University of Hawaii to develop a Systemic Roadway Departure Plan. With the development of this plan, HDOT hopes to address more systemic safety improvements with proven low-cost safety countermeasures.

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)	2112910	18 %	2593296	35 %
HRRRP (SAFETEA-LU)	787090	7 %	787090	11 %
HRRR Special Rule				
Penalty Transfer - Section 154	3512499	31 %	1014195	14 %
Penalty Transfer – Section 164	3512499	31 %	2962230	40 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)				
State and Local Funds				
Other RHCP	1571813	14 %	0	0 %
Totals	11496811	100%	7356811	100%

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

$412,743.00

How much funding is obligated to local safety projects?

$412,743.00

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

$670,000.00

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

$670,000.00

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

$7,024,998.00

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.

The penalty transfer is impacting the HSIP core obligation rate. Our administration plans to introduce legislation to attain compliance. Systemic Roadway Departure Program may improve the obligation of funds when developed and implemented. We would like to have more projects initiated and assigned for design and construction. There is an inability of design staff to handle the workload. Areas such as: 106, right-of-way, and environmental requirements delay projects.

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

Progress of all HSIP projects is monitored very closely. HSIP program staff follow-up with project managers and fiscal staff on a regular basis to track project schedules and make adjustments and modifications to the program to minimize the potential for lapsing funds, as well as spend HSIP funds efficiently.

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
Interstate Route H-3 Safety Improvements, vicinity from Kamehameha Highway to Kaneohe Marine Base	Roadway Rumble strips - edge or shoulder	5 Miles	2962230	2962230	Penalty Transfer – Section 164	Urban Principal Arterial - Interstate	19453	55	State Highway Agency	Keeping vehicles in the roadway	Install rumble strips
Honoapiilani Highway Safety Improvements at Kaanapali & Halelo	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	1 Numbers	1014195	1014195	Penalty Transfer - Section 154	Urban Minor Arterial	34350	40	State Highway Agency	Improving the design and operation of highway intersecti	Improve traffic control system

										ons	
Maunaloa Highway Resurfacing, Maunaloa Village to Mahana	Roadway Rumble strips - edge or shoulder	6 Miles	696900	696900	HSIP (Section 148)	Rural Major Collector	802	45	State Highway Agency	Keeping vehicles in the roadway	Install rumble strips
Kaumualii Highway Safety Improvements, Kahili Mountain Park Road to Eleele Road	Roadway signs and traffic control Curve-related warning signs and flashers	7 Miles	1226396	1226396	HSIP (Section 148)	Rural Minor Arterial	14349	50	State Highway Agency	Improving motorcycle safety and increasing motorcycle awareness	Install signs and flashers where the roadway is confusing.
Haliimaile Road Resurfacing and Safety Improvements, Phase 2, MP 1.3 to Baldwin Avenue	Roadway Rumble strips - edge or shoulder	1 Miles	81053	81053	HRRRP (SAFETEA-LU)	Urban Minor Collector	4435	30	County Highway Agency	Keeping vehicles in the roadway	Install rumble strips
Kuhio Highway	Roadway Rumble strips -	3 Miles	70603	70603	HRRRP (SAFETE	Rural Major	486	35	State Highway	Keeping vehicles	Install rumble

Safety Improvements, Hanalei Bridge to Waikoko Bridge	edge or shoulder		7	7	A-LU)	Collector	3		Agency	in the roadway	strips
Non-infrastructure Flex	Non-infrastructure		670000	670000	HSIP (Section 148)						Education and enforcement

Progress in Achieving Safety Performance Targets

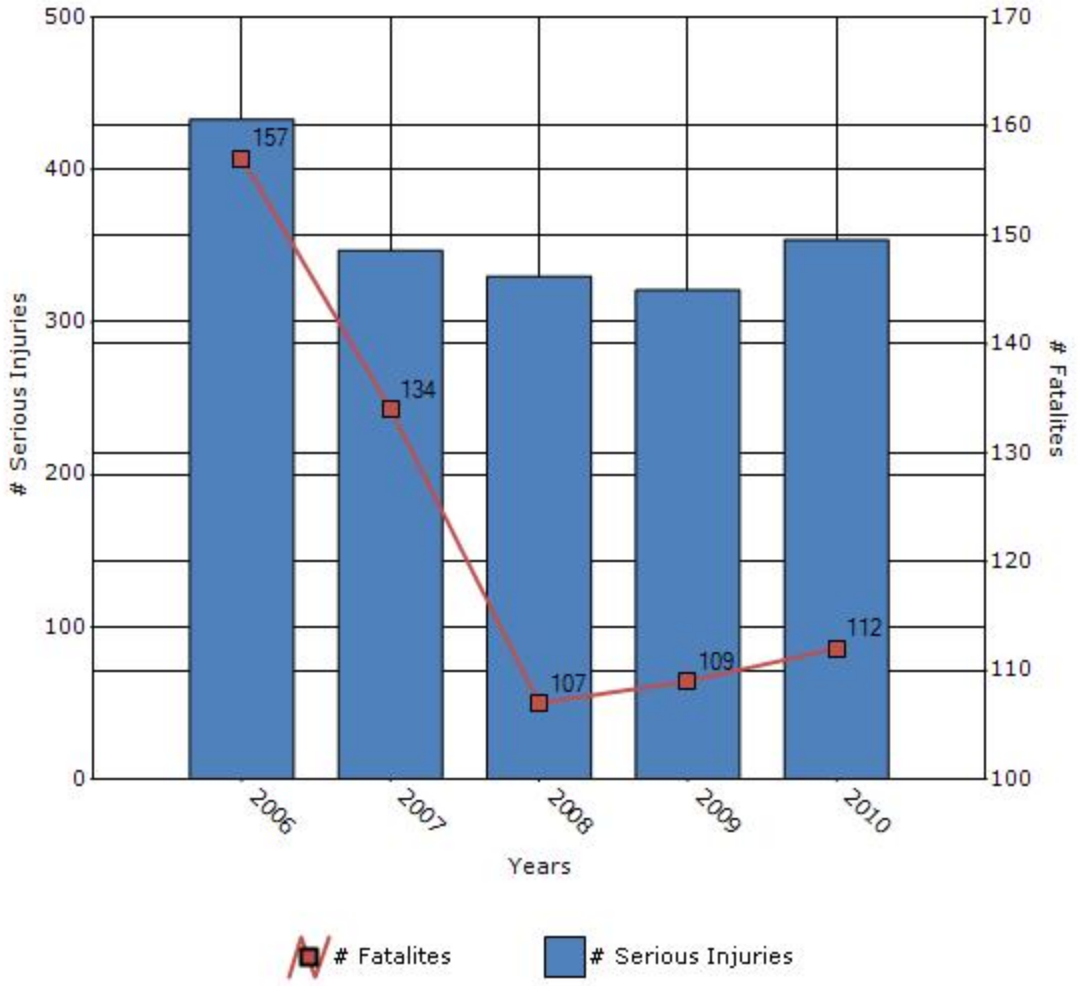
Overview of General Safety Trends

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

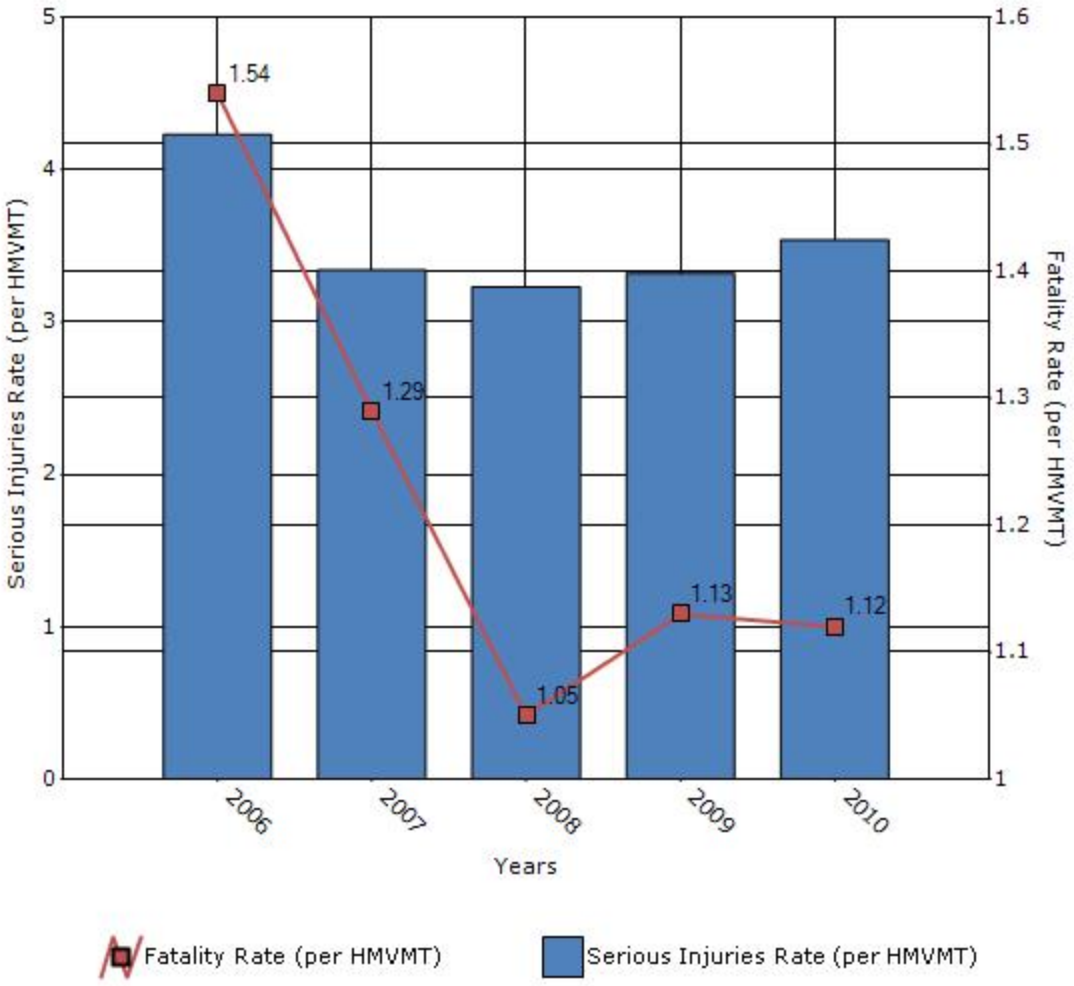
Performance Measures*	2006	2007	2008	2009	2010
Number of fatalities	157	134	107	109	112
Number of serious injuries	433	347	330	321	354
Fatality rate (per HMVMT)	1.54	1.29	1.05	1.13	1.12
Serious injury rate (per HMVMT)	4.23	3.34	3.23	3.32	3.54

*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

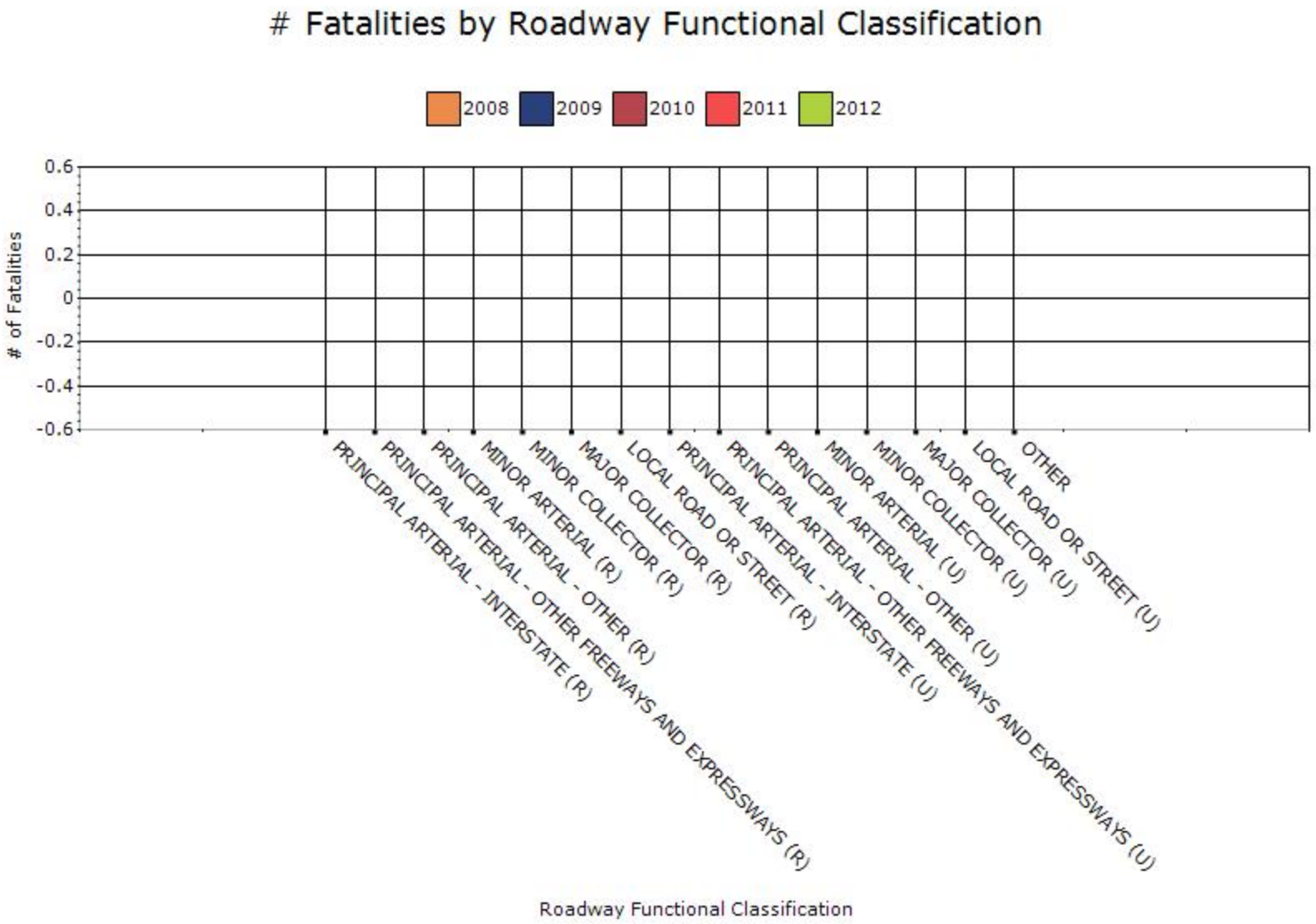


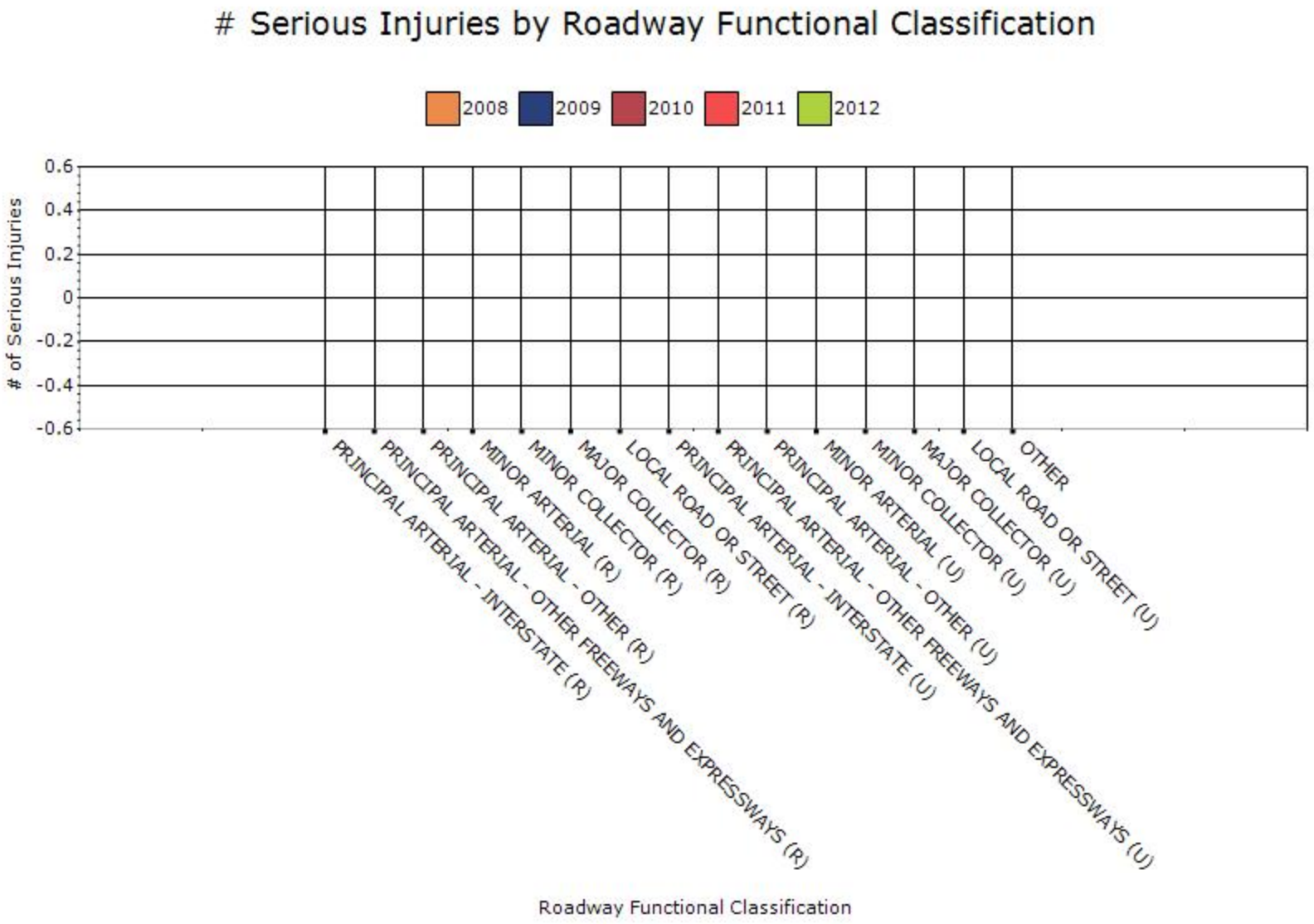
To the maximum extent possible, present performance measure* data by functional classification and ownership.

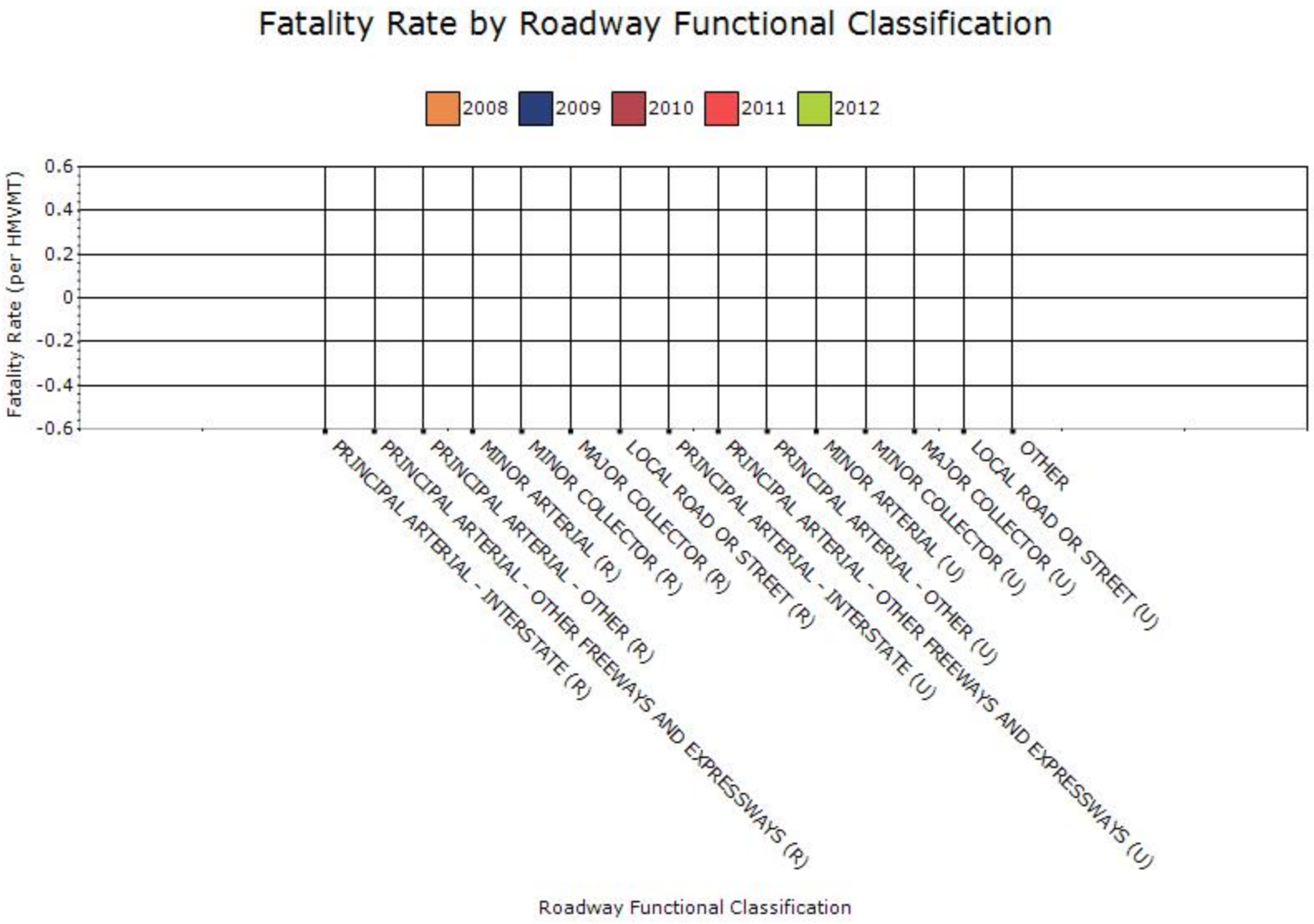
Year - 2012

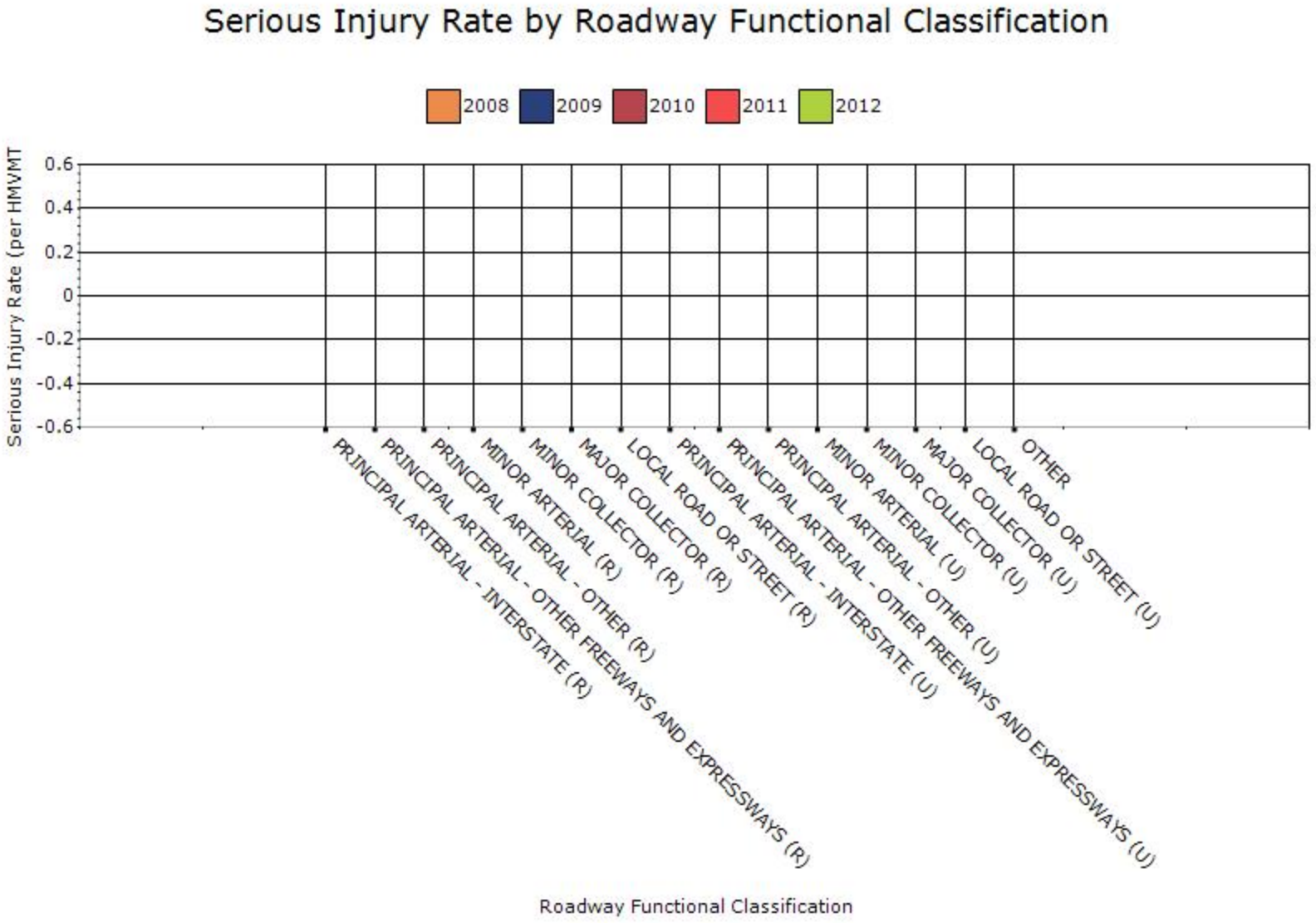
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	0	0	0	0
RURAL MINOR ARTERIAL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

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	0	0	0	0
URBAN MINOR ARTERIAL	0	0	0	0
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	0	0	0	0
URBAN LOCAL ROAD OR STREET	0	0	0	0
OTHER - UNABLE TO PROVIDE INFORMATION AT THIS TIME.	0	0	0	0
OTHER - UNABLE TO PROVIDE INFORMATION AT THIS TIME.	0	0	0	0


Fatalities by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification


Serious Injuries by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Serious Injuries
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

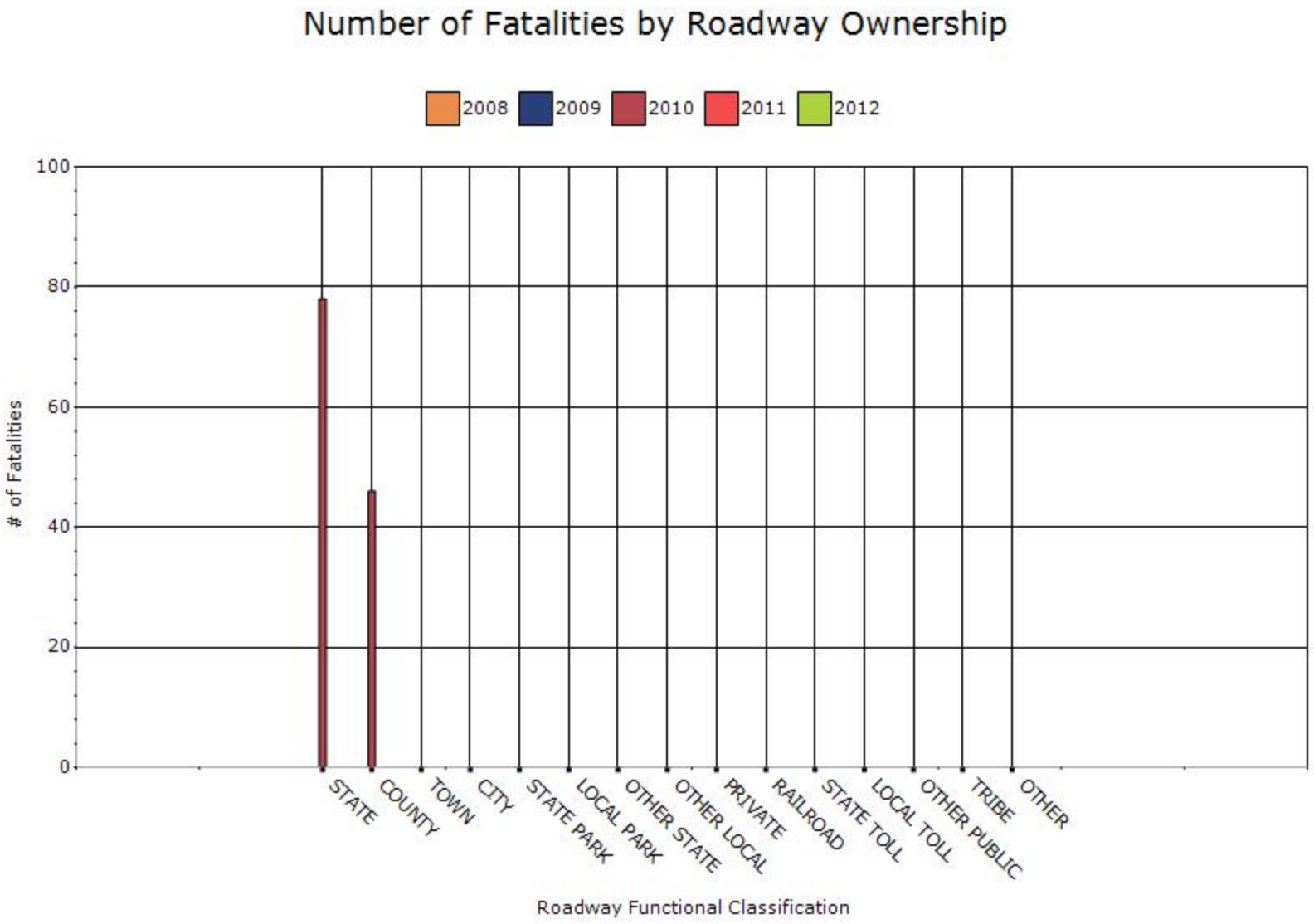

Fatality Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Fatality Rate (per HMVMT)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

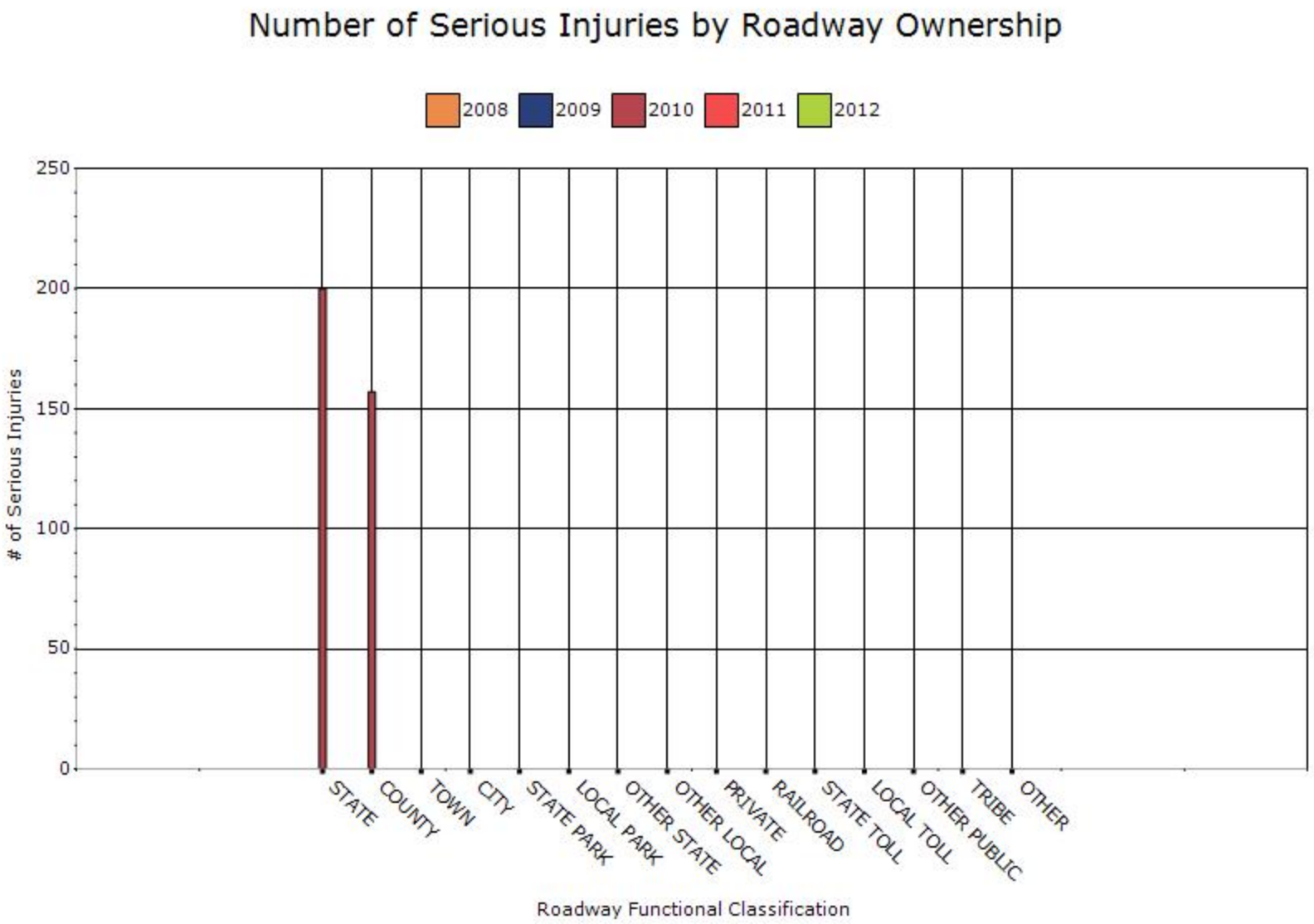

Serious Injury Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Serious Injury Rate (per HMVMT
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

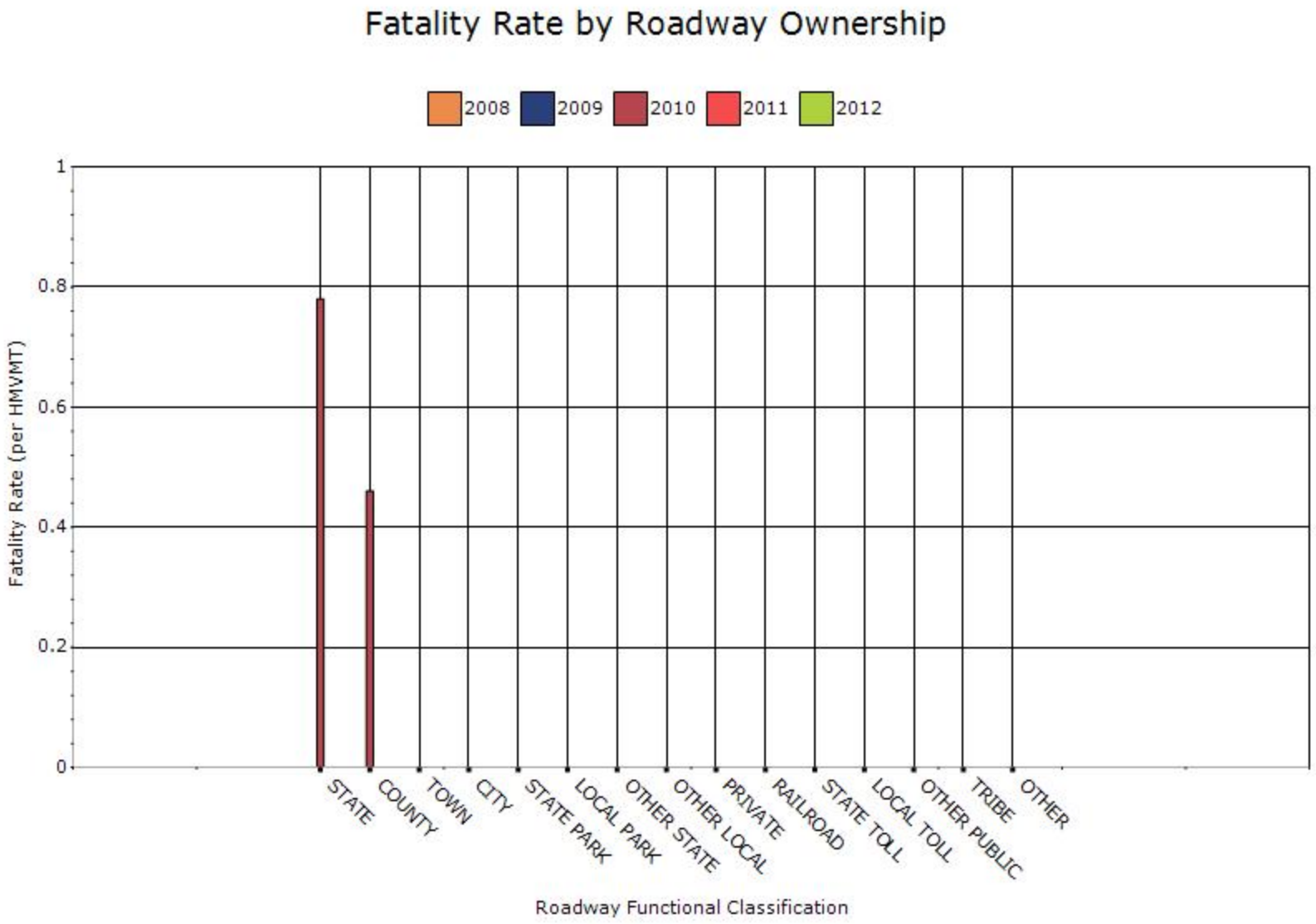
Year - 2012

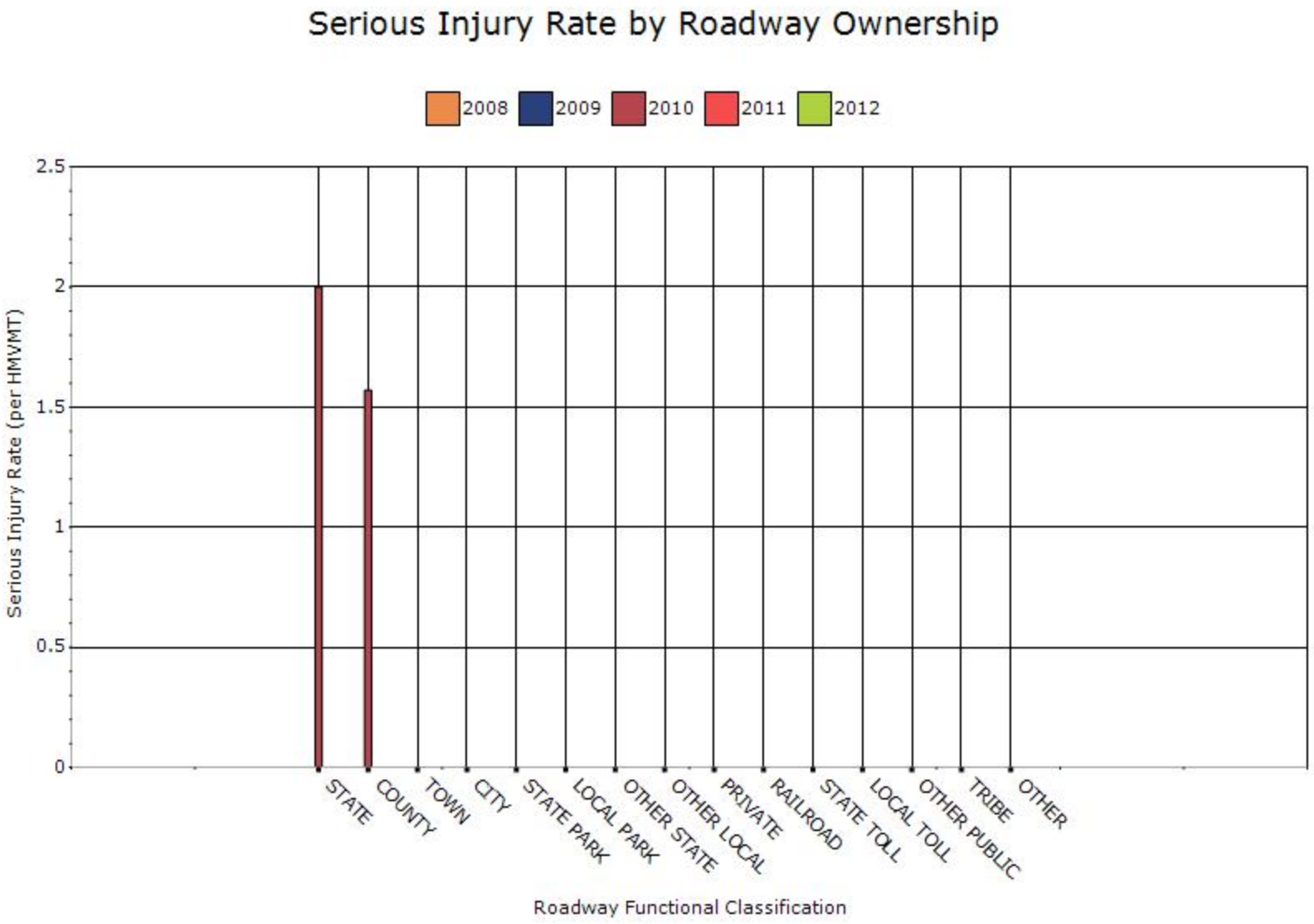
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	0	0	0	0
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	0	0	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY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

RAILROAD	0	0	0	0
STATE TOLL AUTHORITY	0	0	0	0
LOCAL TOLL AUTHORITY	0	0	0	0
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)	0	0	0	0
INDIAN TRIBE NATION	0	0	0	0
OTHER	0	0	0	0
OTHER	0	0	0	0


Number of Fatalities by Roadway Ownership
2008
2009
2010
2011
2012
100
80
60
40
20
0
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2008
2009
2010
2011
2012
250
200
150
100
50
0
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Fatality Rate by Roadway Ownership
2008
2009
2010
2011
2012
Fatality Rate (per HMVMT)
1
0.8
0.6
0.4
0.2
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2008
2009
2010
2011
2012
Serious Injury Rate (per HMVMT)
2.5
2
1.5
1
0.5
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification

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

An uptrend in the statistics should not imply a decrease in safety of the infrastructure. The economy is not accounted for in these figures, yet it has a significant impact on driver behavior and safety on the roadways.

Please note that the numbers provided for the performance measures are not for rolling averages.

We are unable to provide information at this time for function classification.

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**	**2008**	**2009**	**2010**	**2011**	**2012**
Fatality rate (per capita)	0.13	0.06	0.11	0	0
Serious injury rate (per capita)	2.24	2.2	2.44	0	0
Fatality and serious injury rate (per capita)	0	0.28	0	0.24	0

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

** Please note that 2011 data is unavailable at this time. ORT requires a value to be entered for fatality and serious injury rate (per capita) for 2009 and 2011. 2008 and 2010 values were calculated and entered into the 2009 and 2011 cells to satisfy program.

Calculation Rate for 2007-2010 (Year = X)

Fatality Rate = F (X) Drivers and Pedestrians 65 years of age and older/(X) Population figure

Serious Injury Rate = SI (X) Drivers and Pedestrians 65 years of age and older/(X) Population figure

Calculation Rate for 2008 Fatality and Serious Injury Rate =

[(F+SI 2004 Drivers and Pedestrians 65 years of age and older/2004 population figure) +

(F+SI 2005 Drivers and Pedestrians 65 years of age and older/2005 population figure) +

(F+SI 2006 Drivers and Pedestrians 65 years of age and older/2006 population figure) +

(F+SI 2007 Drivers and Pedestrians 65 years of age and older/2007 population figure) +

(F+SI 2008 Drivers and Pedestrians 65 years of age and older/2008 population figure)]/5

Calculation Rate for 2010 Fatality and Serious Injury Rate =

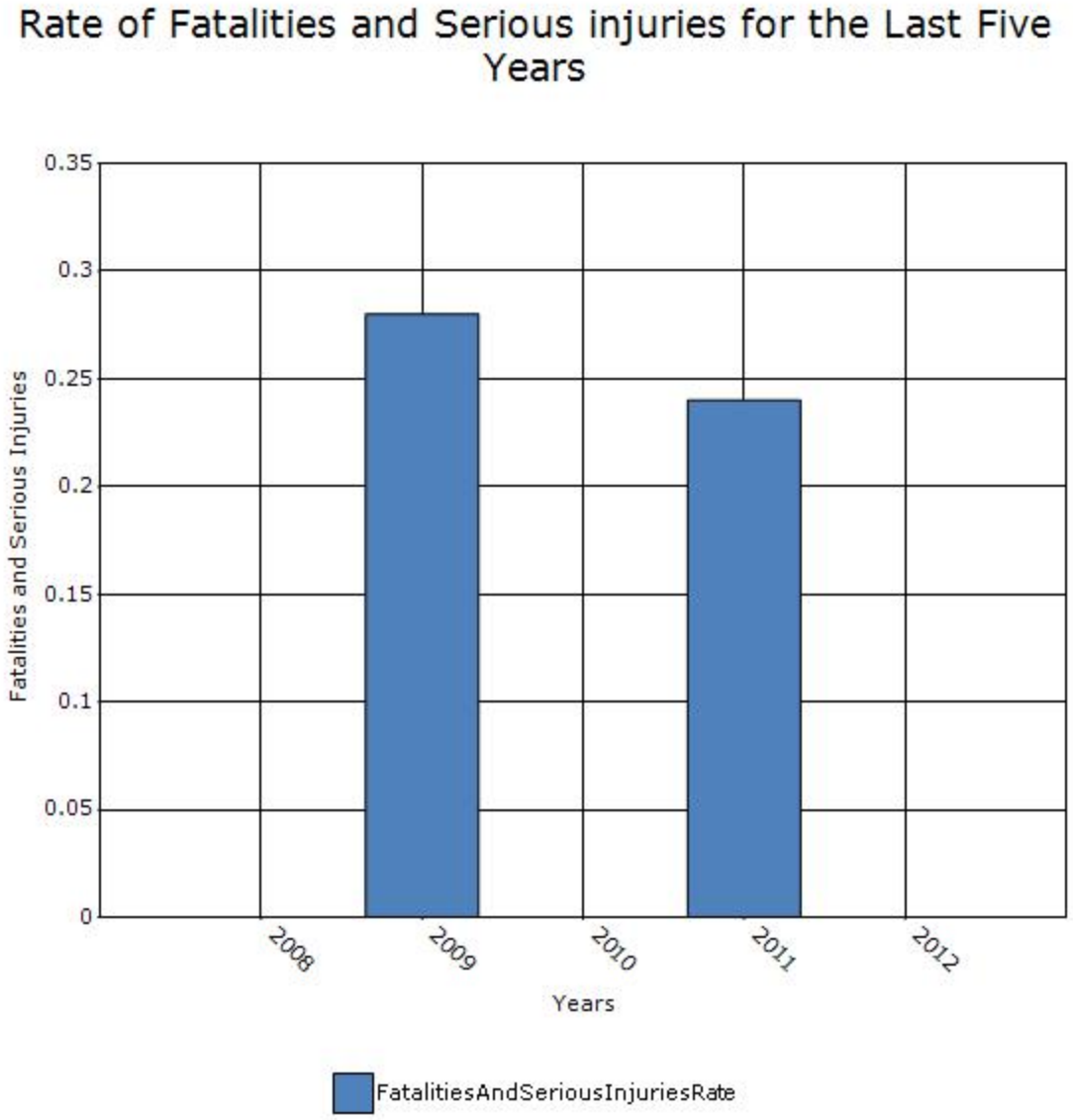
[(F+SI 2006 Drivers and Pedestrians 65 years of age and older/2006 population figure) +

(F+SI 2007 Drivers and Pedestrians 65 years of age and older/2007 population figure) +

(F+SI 2008 Drivers and Pedestrians 65 years of age and older/2008 population figure) +

(F+SI 2009 Drivers and Pedestrians 65 years of age and older/2009population figure) +

(F+SI 2010 Drivers and Pedestrians 65 years of age and older/2010 population figure)]/5



Does the older driver special rule apply to your state?

No

Assessment of the Effectiveness of the Improvements (Program Evaluation)

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program?

☐ None

☒ Benefit/cost

☐ Policy change

☐ Other:

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

☒ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☐ None

☐ Other:

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

No signification program changes since last reporting period.

SHSP Emphasis Areas

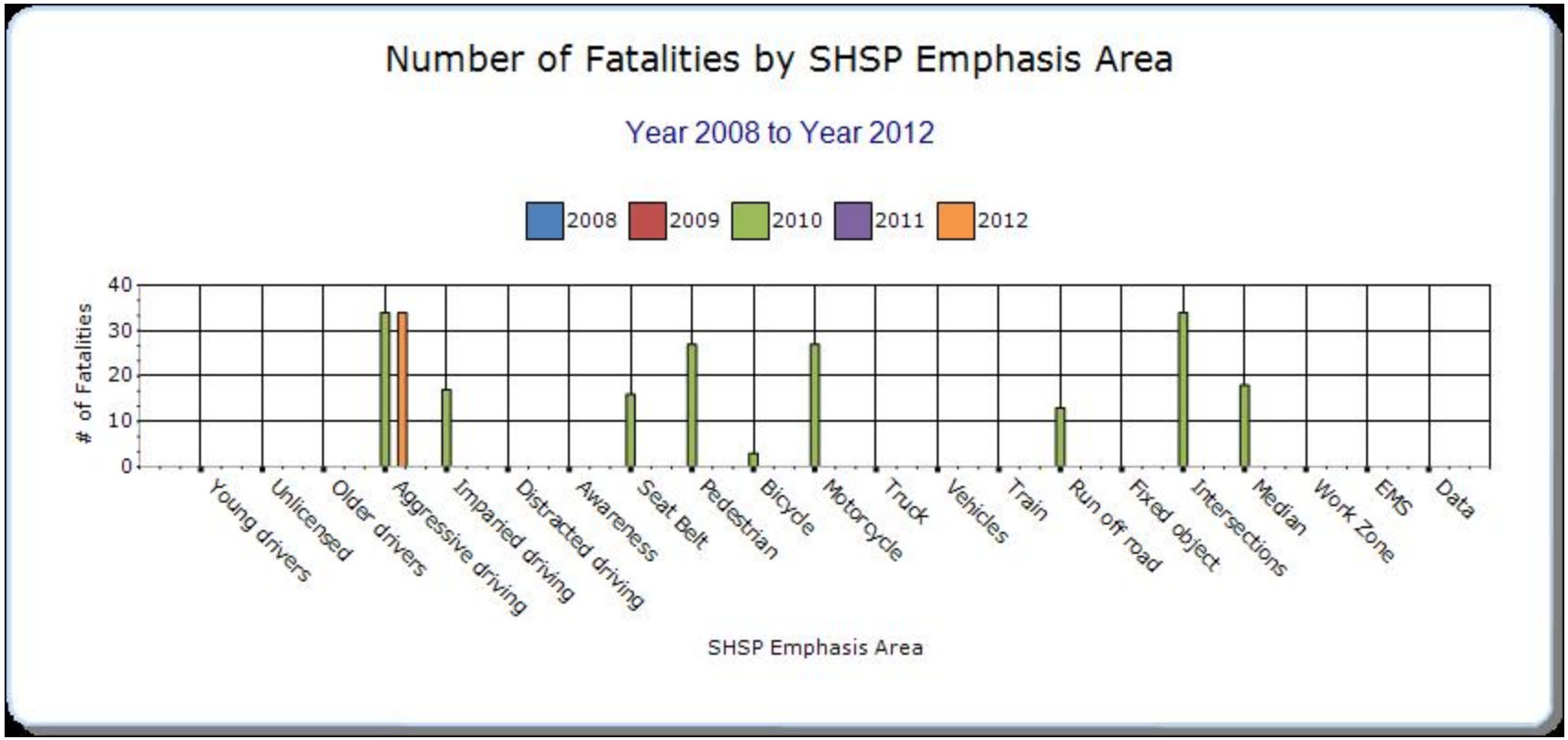
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

Year - 2012

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
Instituting graduated licensing for younger drivers		**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ensuring drivers are licensed and fully competent		0	0	0	0	0	0	0
Sustaining proficiency in older drivers		0	0	0	0	0	0	0
Curbing aggressive driving	Speed-related	34	86	0.33	0.83	0	0	0
Reducing impaired driving		0	0	0	0	0	0	0
Keeping drivers alert		0	0	0	0	0	0	0
Increasing driver safety awareness		0	0	0	0	0	0	0
Increasing seat belt use and improving		0	0	0	0	0	0	0

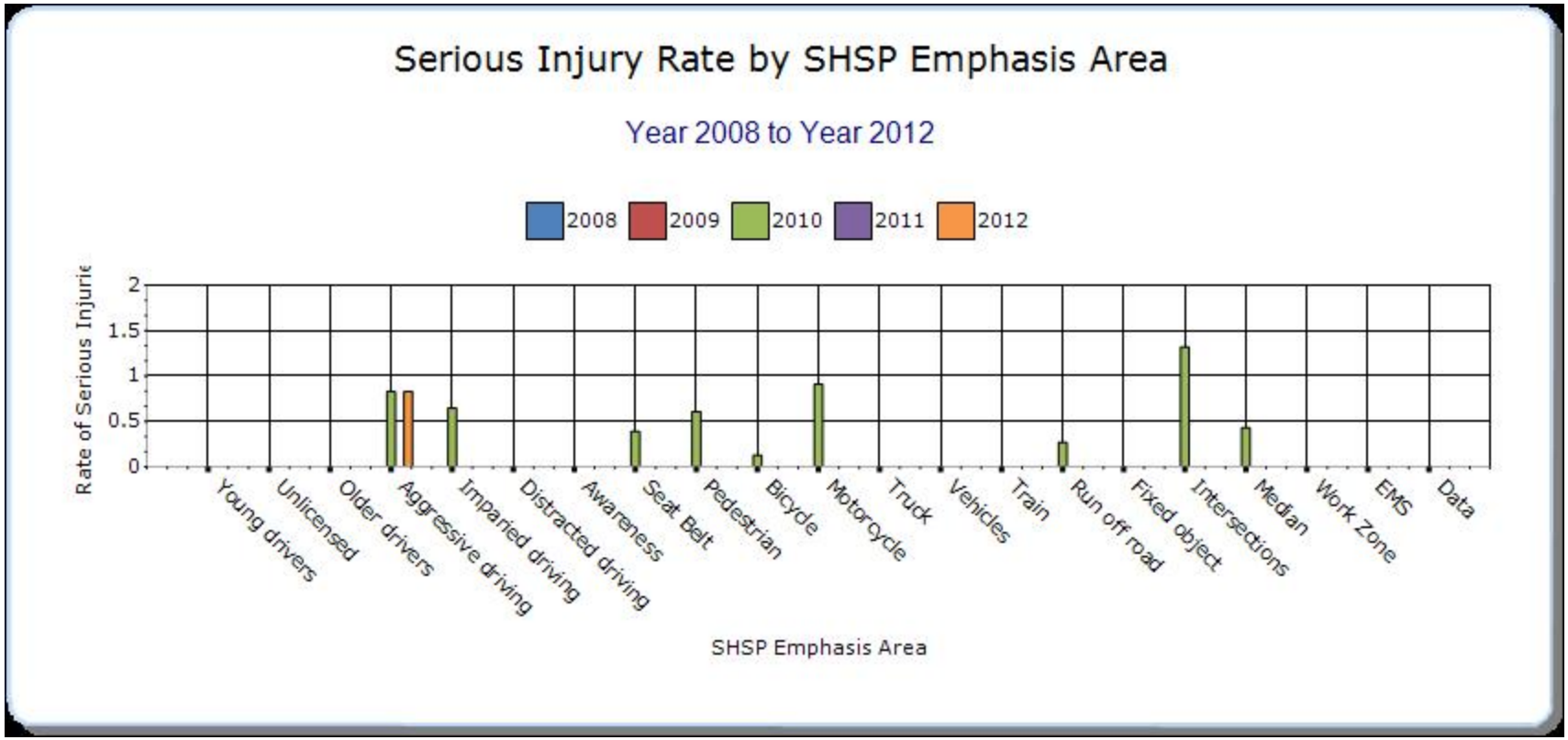
airbag effectiveness								
Making walking and street crossing easier		0	0	0	0	0	0	0
Ensuring safer bicycle travel		0	0	0	0	0	0	0
Improving motorcycle safety and increasing motorcycle awareness		0	0	0	0	0	0	0
Making truck travel safer		0	0	0	0	0	0	0
Increasing safety enhancements in vehicles		0	0	0	0	0	0	0
Reducing vehicle-train crashes		0	0	0	0	0	0	0
Keeping vehicles in the roadway		0	0	0	0	0	0	0
Minimizing the consequences of leaving the road		0	0	0	0	0	0	0
Improving the design and operation of		0	0	0	0	0	0	0

highway intersections								
Reducing head-on and across-median crashes		0	0	0	0	0	0	0
Designing safer work zones		0	0	0	0	0	0	0
Enhancing emergency medical capabilities to increase survivability		0	0	0	0	0	0	0
Improving information and decision support systems		0	0	0	0	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Fatalities
40
30
20
10
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Impaired driving
Distracted driving
Awareness
Seat Belt
Pedestrian
Bicycle
Motorcycle
Truck
Vehicles
Train
Run off road
Fixed object
Intersections
Median
Work Zone
EMS
Data
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Serious Injuries
200
150
100
50
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Impaired driving
Distracted driving
Awareness
Seat Belt
Pedestrian
Bicycle
Motorcycle
Truck
Vehicles
Train
Run off road
Fixed object
Intersections
Median
Work Zone
EMS
Data
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Fatalities
0.4
0.3
0.2
0.1
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Impaired driving
Distracted driving
Awareness
Seat Belt
Pedestrian
Bicycle
Motorcycle
Truck
Vehicles
Train
Run off road
Fixed object
Intersections
Median
Work Zone
EMS
Data
SHSP Emphasis Area

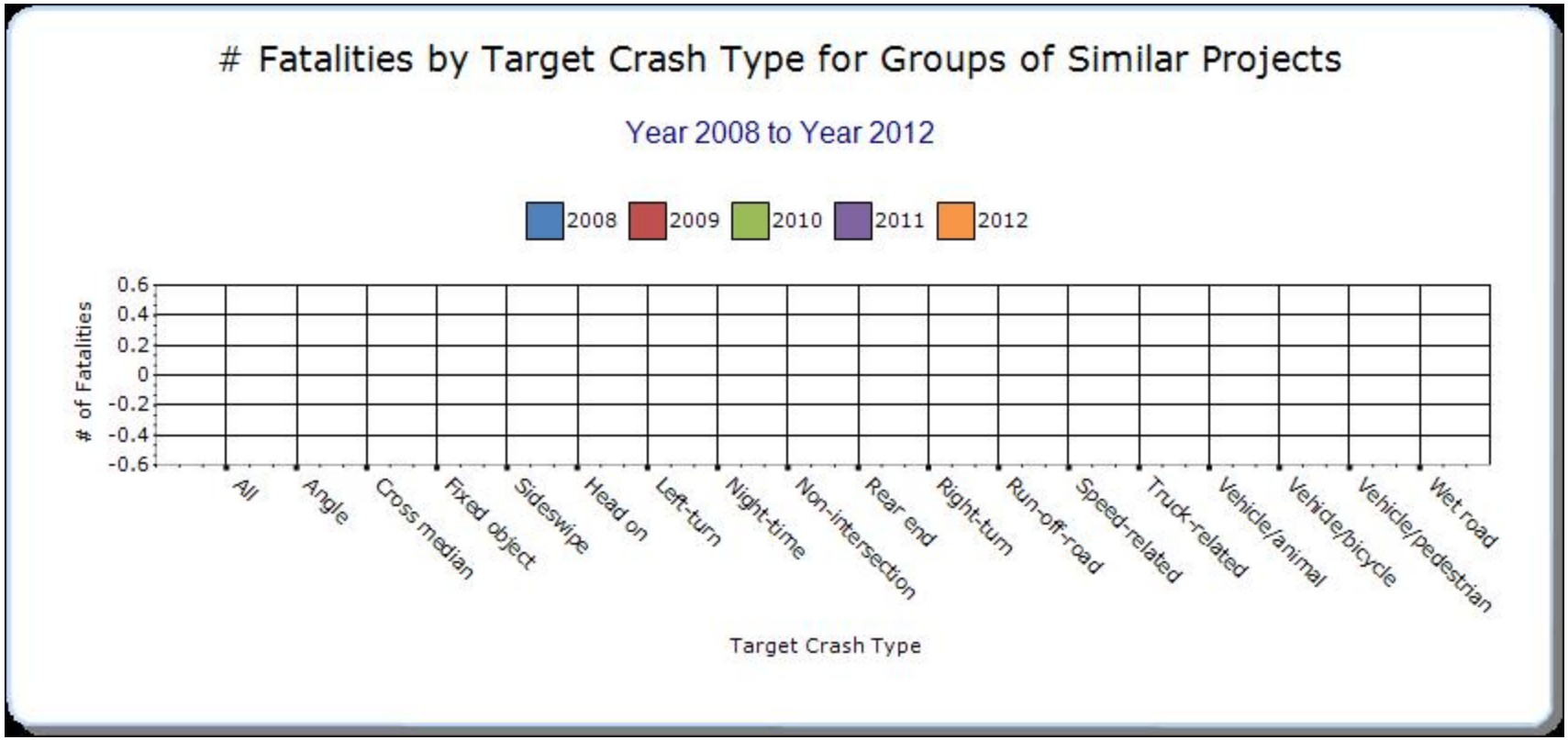

Serious Injury Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
2
1.5
1
0.5
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Impaired driving
Distracted driving
Awareness
Seat Belt
Pedestrian
Bicycle
Motorcycle
Truck
Vehicles
Train
Run off road
Fixed object
Intersections
Median
Work Zone
EMS
Data
SHSP Emphasis Area

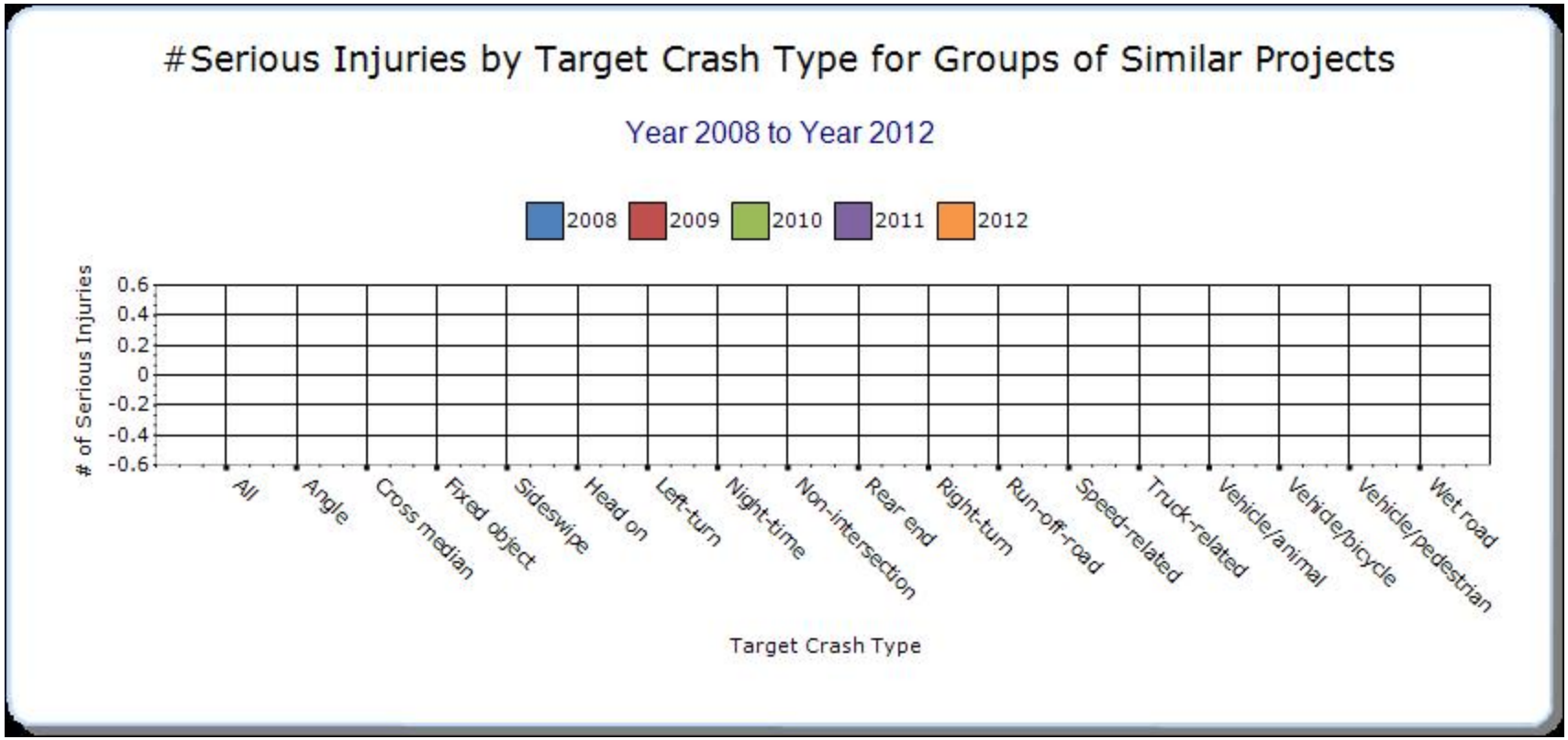
Groups of similar project types

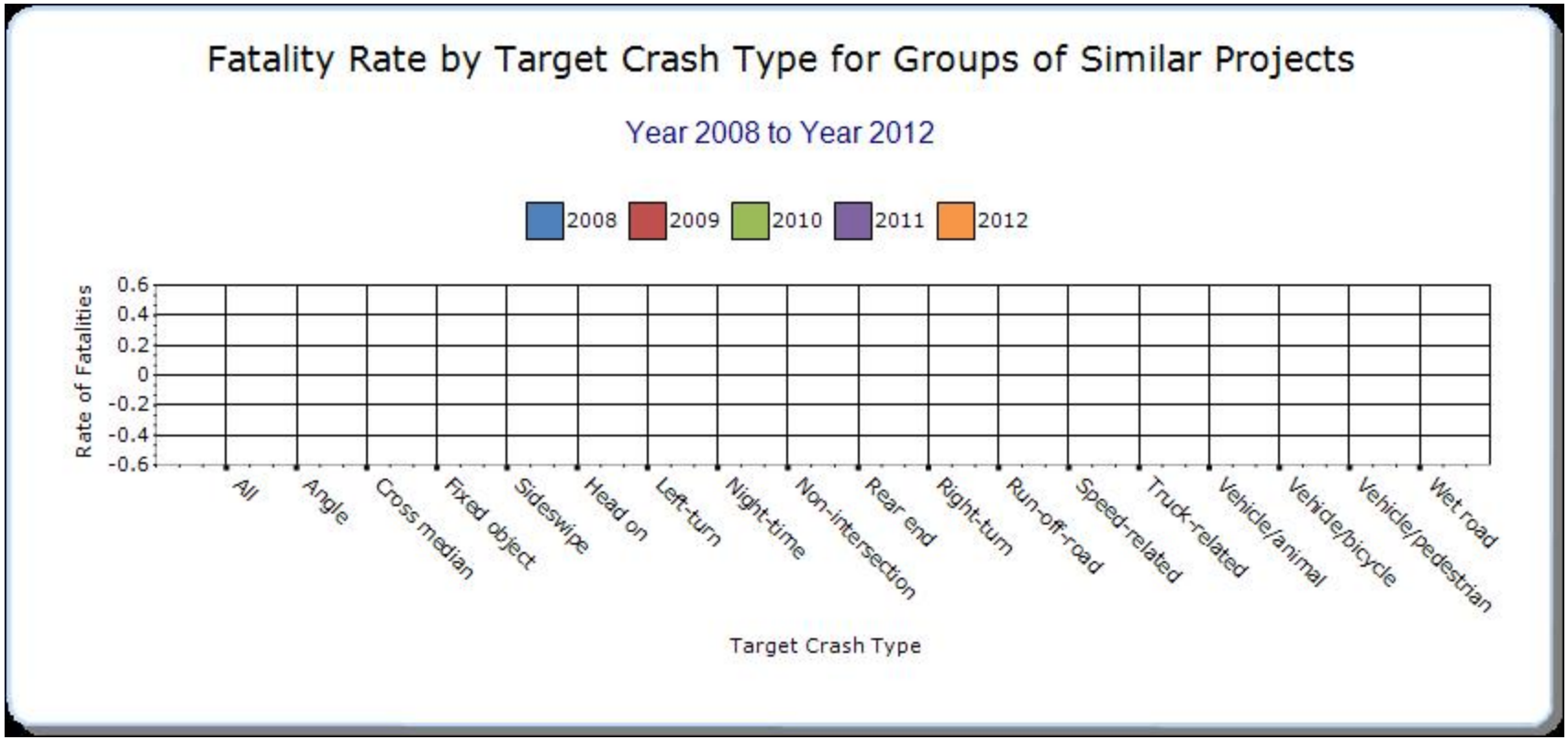
Present the overall effectiveness of groups of similar types of projects.

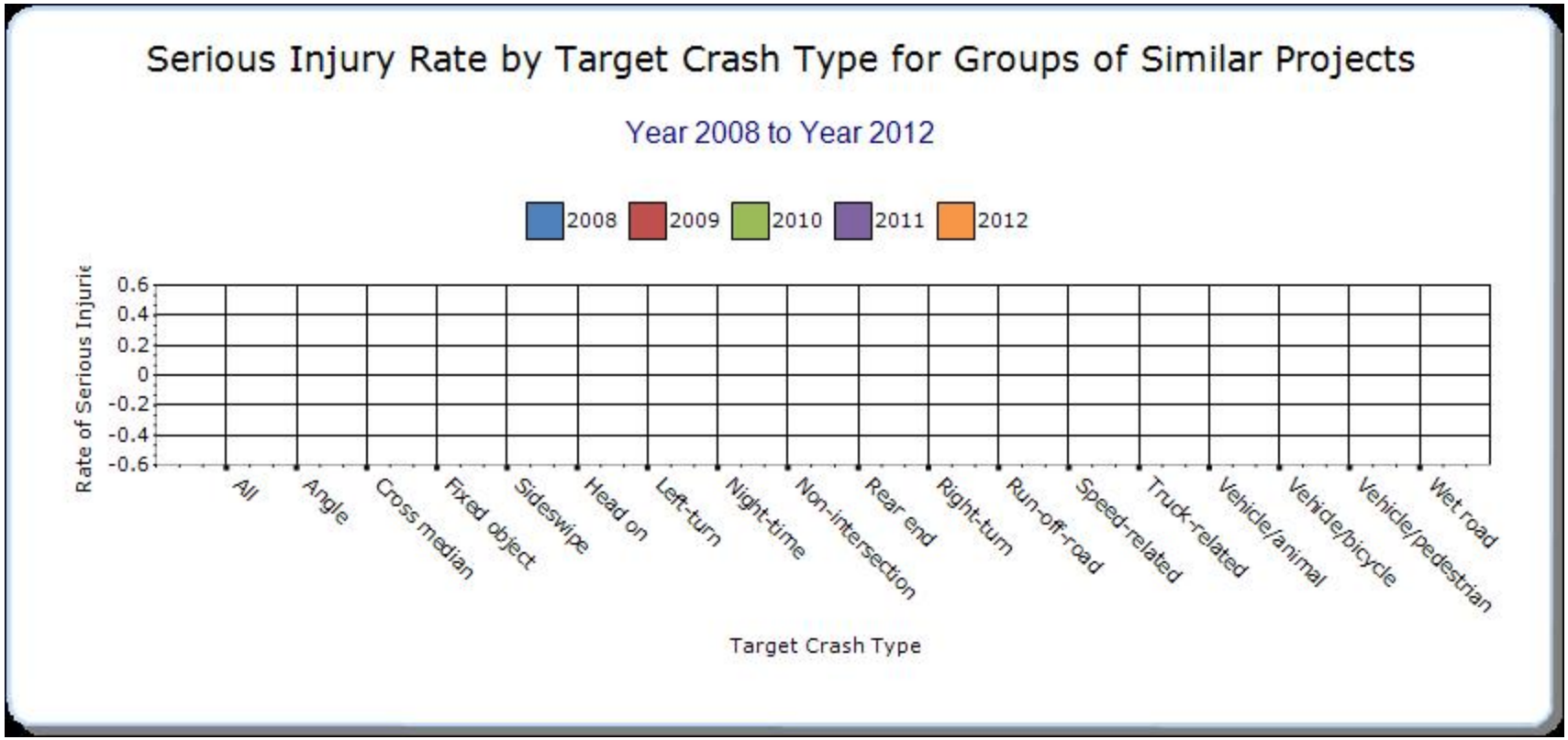
Year - 2012

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
Backplates with retroreflective borders		**0**	**0**	**0**	**0**	**0**	**0**	**0**
Milled rumble strips		0	0	0	0	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Serious Injuries
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Fatality Rate by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

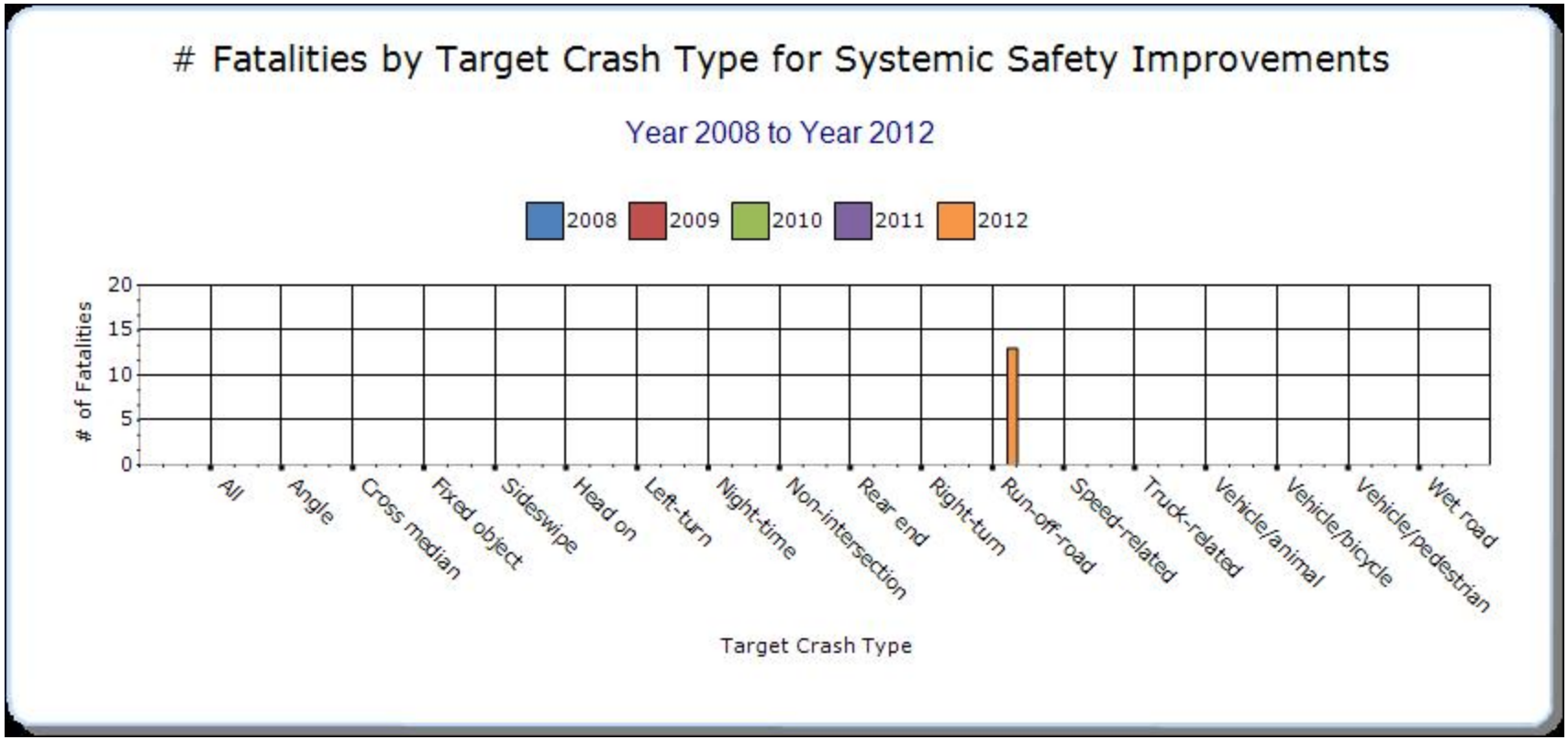

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

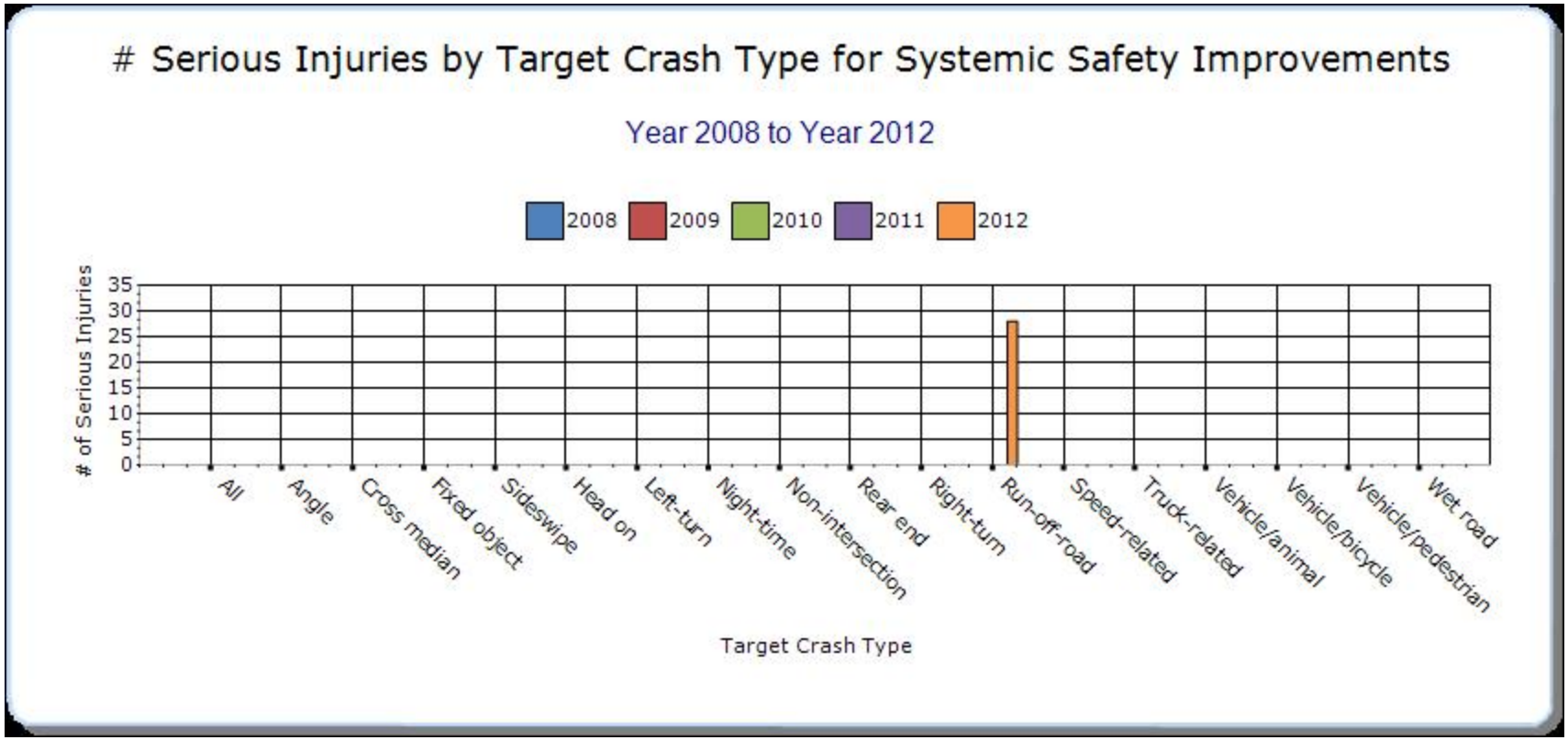
Systemic Treatments

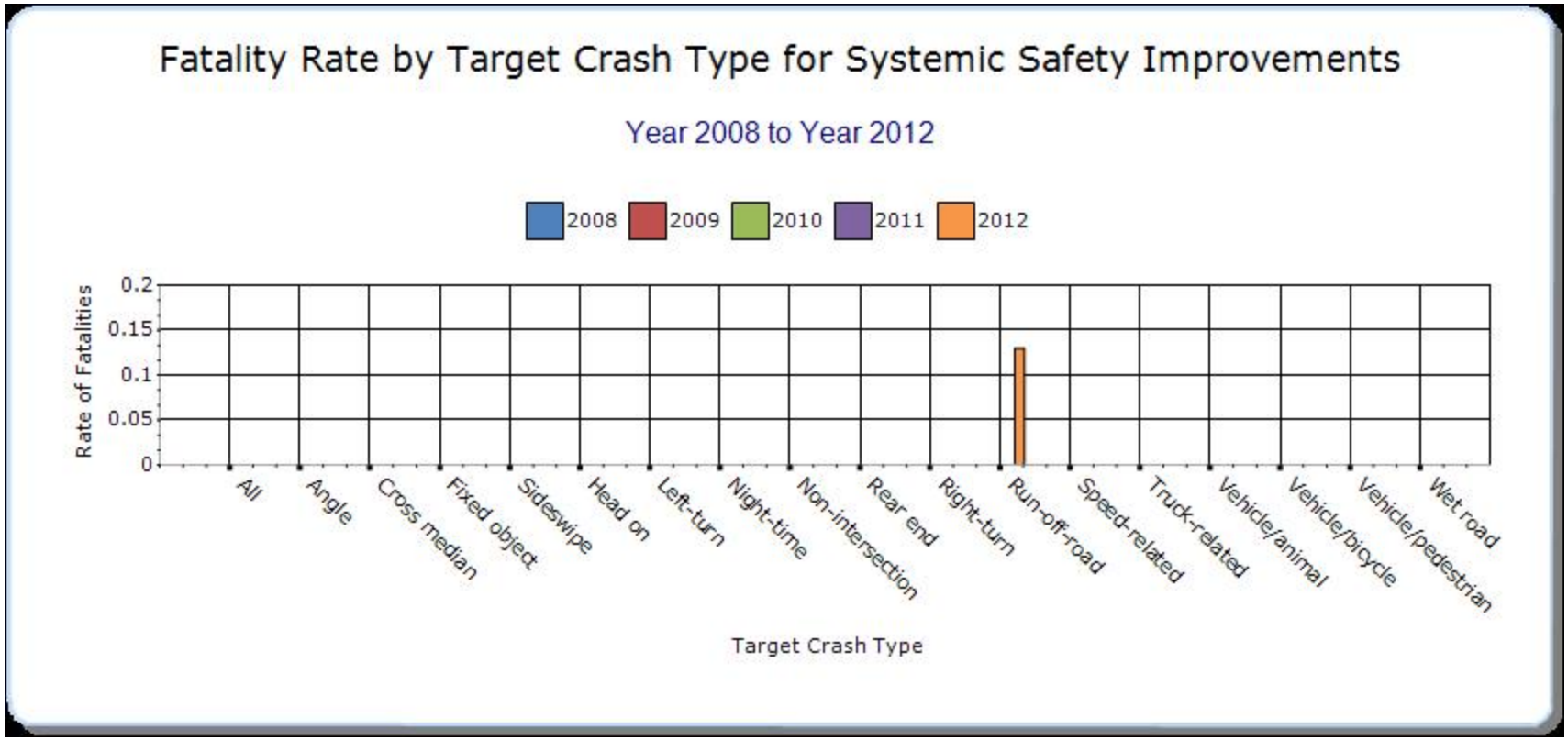
Present the overall effectiveness of systemic treatments..

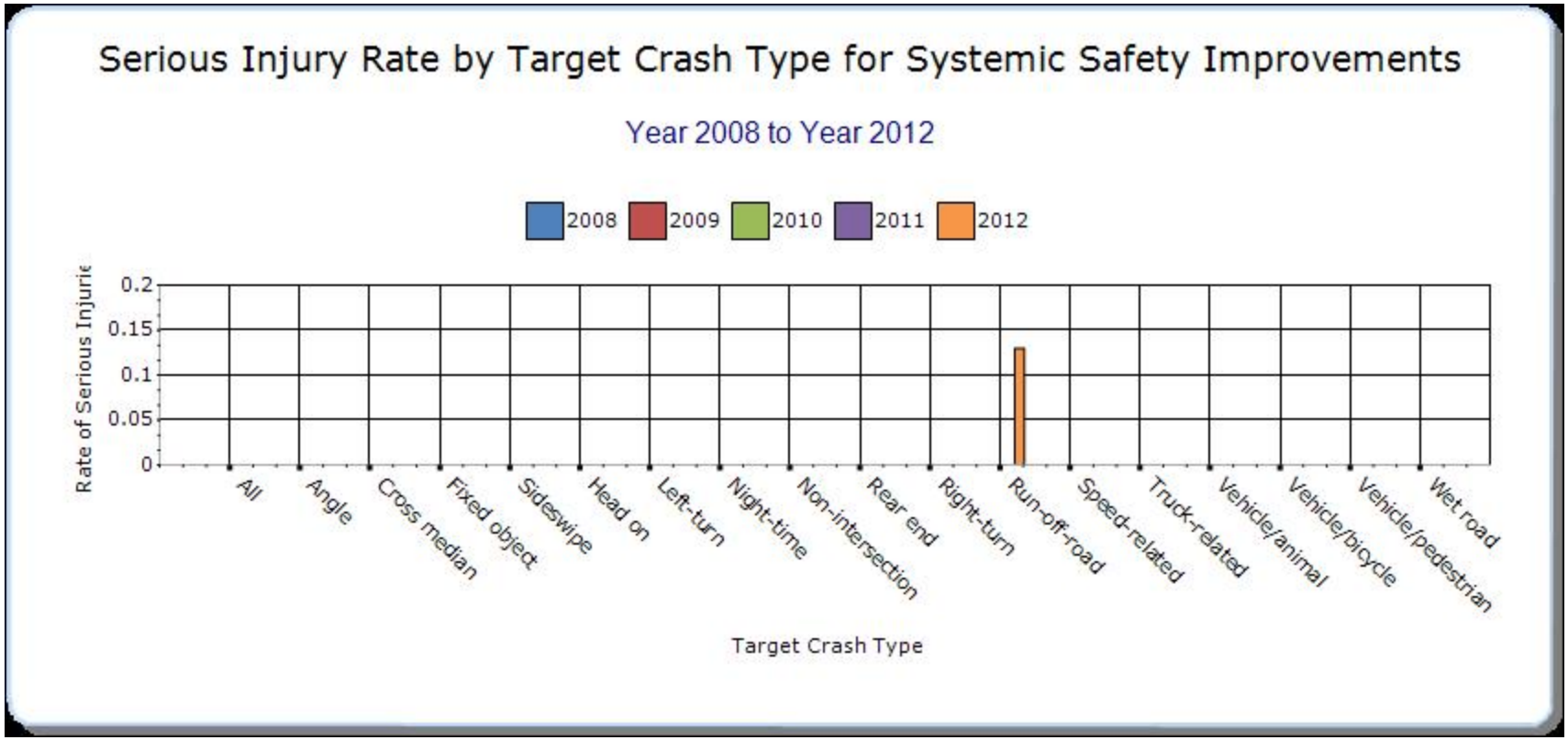
Year - 2012

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
Safety Edge	Run-off-road	13	28	0.13	0.27	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Fatalities
20
15
10
5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Serious Injuries
35
30
25
20
15
10
5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Fatalities
0.2
0.15
0.1
0.05
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Serious Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
0.2
0.15
0.1
0.05
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

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

The State of Hawaii considers fatal and serious injury accidents for all analyses along with the total number of major traffic accidents. It would be beneficial to have a consistent definition of a serious injury among all National Transportation offices. Please note that the SHSP Emphasis Areas and HSIP Sub-program Types data reflect fatal accidents not fatalities. We will be working towards providing more of the requested data with next year's submittal.

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-Other Injury	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-Other Injury	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
Kamehameha Highway Intersection Improvements at Leilehua Golf Course Road	Urban Principal Arterial - Other Freeways and Expressways	Intersection traffic control	Install traffic signal system	3	1	11	6	21	0	0	3	5	8	7.17

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.