Highway Safety Improvement Program

Data Driven Decisions

Delaware
Highway Safety Improvement Program
2013 Annual Report

Prepared by: DE

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 5

Progress in Implementing Projects 15

Funds Programmed 15

General Listing of Projects 18

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) 55

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

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

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

Glossary 80

Executive Summary

The Delaware Department of Transportation (DelDOT) has prepared this Annual Report for state fiscal year 2013 (July 1, 2012 – June 30, 2013) to demonstrate the success of their safety program. Crash statistics reported in this Annual Report are for calendar year 2012 (January 1, 2012 – December 31, 2012). During the 2013 reporting period, DelDOT continued its successful core HSIP programs – Hazard Elimination Program (HEP), High Risk Rural Roads Program (HRRRP), Highway Rail-Grade Crossing Program (HRGX), and Strategic Highway Safety Plan (SHSP).

On an annual basis, HEP and HRRRP sites are selected using the Critical Rate methodology to identify high crash locations for all HSIP components. The Critical Ratio method (also known as the Rate Quality Control Method) uses a statistical test to determine whether the crash rate at a particular location is significantly higher than a predetermined average crash rate for locations of similar characteristics. A total of 50 corridors were studied under HEP and HRRRP and 5 highway-grade crossings were studied under HRGX. All three programs continued to identify both low-cost remedial improvements and long-term safety improvement needs. The success of these programs is demonstrated by the number of fatalities and serious injuries (based on 5-year rolling averages) gradually decreasing from 2008 to 2012. In addition, DelDOT worked towards the development of a new crash analysis reporting system, and continued to identify future program-level needs and changes related to the MAP-21 legislation.

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.

All roadways throughout the state are eligible for safety funding; however, the calculations used to identify high crash locations for the Hazard Elimination Program (HEP) include state roadways in DelDOT's road inventory where traffic volumes are available. Traffic volume data is required in order to calculate crash rates required for the critical ratio calculations and is not available on subdivision streets and municipal roadways. Based on a review of statewide crash data on all public roadways from 2009 to 2011, only 4 percent of fatal and incapacitating injury crashes occur on subdivision streets and municipal roadways, indicating that crashes reported on these roadways would not likely meet the minimum crash criteria for the various HSIP elements.

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.

Strategic Highway Safety Plan (SHSP) - Delaware's SHSP is a statewide-coordinated safety plan that provides a comprehensive framework, identifies specific goals and objectives, and integrates the four E's - engineering, education, enforcement and emergency medical services (EMS). Delaware's SHSP coordinating agencies include DelDOT, Federal Highway Administration (FHWA), National Highway Traffic Safety Administration (NHTSA), Office of Highway Safety (OHS), Delaware State Police (DSP), Department of Justice, and Delaware Office of Emergency Medical Services (OEMS). Together, the SHSP coordinating agencies compared statewide fatality crash rates to national crash rates to identify areas with a higher than average occurrence in Delaware and drafted the SHSP. Working groups including representatives from relevant partners meet to discuss implementation plans for specific emphasis areas.

Hazard Elimination Program (HEP) - Thirty spot locations throughout the state are chosen for safety studies as part of the HEP. For each site selected, DelDOT's Traffic Section reviews crash data, performs a field review, and identifies potential safety improvement alternatives. For candidate locations where improvements are in project development, design, or construction, a safety audit is performed to confirm that the proposed improvements will address the identified crash problem. The HEP committee, which includes representatives from DelDOT, DSP, FHWA, MPOs, and the counties and municipalities, meets to reach a consensus on the recommended safety improvements. Traffic control device improvements (i.e., signing, striping, lighting, and traffic signal upgrades) are then designed by DelDOT's Traffic Section and

implemented by DelDOT's maintenance forces and/or on-call contractors. Projects requiring detailed design, public involvement, or resulting in right-of-way or environmental impacts are forwarded to DelDOT's Project Development section for prioritization and inclusion in the Capital Transportation Program (CTP).

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

☒Metropolitan Planning Organizations

☒Governors Highway Safety Office

☒Local Government Association

☒Other: Other-Federal Highway Administration, National Highway Traffic Safety Administration, Office of Highway Safety, Delaware State Police, Department of Justice, Delaware Office of Emergency Medical Services

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-no change

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

During FY 2013 (July 1, 2012 - June 30, 2013), components of Delaware's HSIP included the Strategic Highway Safety Plan (SHSP), the Hazard Elimination Program (HEP), the High Risk Rural Roads Program (HRRRP), the Highway-Rail Grade Crossing Safety Program (HRGX), and the Transparency Report.

Program Methodology

Select the programs that are administered under the HSIP.

- ☐ Median Barrier
- ☐ Intersection
- ☐ Safe Corridor
- ☐ Horizontal Curve
- ☐ Bicycle Safety
- ☐ Rural State Highways
- ☐ Skid Hazard
- ☒ Crash Data
- ☐ Red Light Running Prevention
- ☐ Roadway Departure
- ☐ Low-Cost Spot Improvements
- ☐ Sign Replacement And Improvement
- ☐ Local Safety
- ☒ Pedestrian Safety
- ☐ Right Angle Crash
- ☐ Left Turn Crash
- ☐ Shoulder Improvement
- ☒ Segments
- ☒ Other: Other-Rural Roads

Program: **Crash Data**

Date of Program Methodology: **7/1/2012**

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

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ selection committee

☐ Other

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

☐ Relative Weight in Scoring

☐ Rank of Priority Consideration

- ☐ Ranking based on B/C
- ☐ Available funding
- ☐ Incremental B/C
- ☐ Ranking based on net benefit
- ☐ Cost Effectiveness

Program: **Pedestrian Safety**

Date of Program Methodology: **7/1/2012**

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

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☒ selection committee

☐ Other

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

☐ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☐ Cost Effectiveness

Program: **Segments**

Date of Program Methodology: **7/1/2012**

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-Roadway 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

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☒selection committee

☐Other

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

☐Relative Weight in Scoring

☒Rank of Priority Consideration

☒Ranking based on B/C	3
☒Available funding	2
☐Incremental B/C	
☒Ranking based on net benefit	1
☐Cost Effectiveness	

Program: **Other-Rural Roads**

Date of Program Methodology: **7/1/2012**

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	☐Population	☐Functional classification

crashes only

☐ Other

☒ Lane miles

☐ Other

☐ Roadside features

☐ Other

☒ Other-Roadway 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

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☒ selection committee

☐ Other

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

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☒ Ranking based on B/C	3
☒ Available funding	2
☐ Incremental B/C	
☒ Ranking based on net benefit	1
☐ Cost Effectiveness	

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

While Delaware did not have any systemic safety programs during the reporting period, development of several systemic programs are currently underway, including a roadway departure program.

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-no change; however, systemic programs are under development

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

Please see attachment for the methodology on the HSIP Site Selection Process.

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)	6783600	14 %	5598955.6	63 %
HRRRP (SAFETEA-LU)	277800	1 %	503154.07	6 %
HRRR Special Rule	0	0 %	0	0 %
Penalty Transfer -	2186679.95	5 %	2186679.95	25 %

Section 154				
Penalty Transfer – Section 164	0	0 %	0	0 %
Incentive Grants - Section 163	0	0 %	0	0 %
Incentive Grants (Section 406)	0	0 %	0	0 %
Other Federal-aid Funds (i.e. STP, NHPP)	4400000	9 %	565562.65	6 %
State and Local Funds				
Other TBD1 (Checking with Finance)	272000	1 %	0	0 %
Other National Highway Systems	34181400	71 %	0	0 %
Other Urbanized Areas Surface Transportation Program	16000	0 %	0	0 %
Totals	48117479.95	100%	8854352.27	100%

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

$0.00

How much funding is obligated to local safety projects?

$0.00

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

$2,268,163.00

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

$2,117,767.00

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.

No impediments at this time.

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

None at this time.

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
Pedestrian Safety Campaign	Non-infrastructure		28396	28396	Penalty Transfer - Section 154				State Highway Agency	Making walking and street crossing easier	
CARS Phase V	Non-infrastructure		97403	97403	Penalty Transfer - Section 154					Improving information and decision support systems	
Salary for DUI Checkpoints	Non-infrastructure		9838	9838	Penalty Transfer - Section 154				State Highway Agency	Reducing impaired driving	

FY2012 HSIP - Studies	Non-infrastructure	30 sites	221945	221945	HSIP (Section 148)					various	
FY2013 HSIP - Studies	Non-infrastructure	30 sites	761804	761804	HSIP (Section 148)					various	
2008, Site N - SR 2 at Hazel Avenue	Pedestrians and bicyclists Pedestrian signal - modify existing	1 intersection	11949	11949	HSIP (Section 148)	Urban Principal Arterial - Other	54200	35	State Highway Agency	Making walking and street crossing easier	
2008, Various sites - Signage Equipment	Roadway signs and traffic control		23243	23243	HSIP (Section 148)				State Highway Agency		
2008, Site K - SR 4 at State Street	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	98398	98398	HSIP (Section 148)	Urban Principal Arterial - Other	32700	40	State Highway Agency	Improving the design and operation of highway intersections	

2008, Site K - SR 7 at Telegraph Road	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	1947	1947	HSIP (Section 148)	Urban Principal Arterial - Other	52500	50	State Highway Agency	Improving the design and operation of highway intersections	
2008, Site K - SR 4 at Becker Avenue/Forest Drive	Intersection traffic control Modify traffic signal - replace existing indications (incandescent-to-LED and/or 8-to-12 inch dia.)	1 intersection	111980	111980	HSIP (Section 148)	Urban Principal Arterial - Other	16400	40	State Highway Agency	Improving the design and operation of highway intersections	
2008, Site K - SR 4 at SR 7	Pedestrians and bicyclists Pedestrian signal - install new at intersection	1 intersection	51907	51910	HSIP (Section 148)	Urban Principal Arterial - Other	52500	50	State Highway Agency	Making walking and street crossing easier	
2008, Site K - SR 4 at Lorewood	Intersection traffic control Modify traffic signal - replace existing	1 intersection	4594	4594	HSIP (Section 148)	Urban Principal Arterial -	15500	40	State Highway Agency	Improving the design	

Avenue	indications (incandescent-to-LED and/or 8-to-12 inch dia.)					Other				and operation of highway intersections	
2010, Site Y - US 9 at Race Street	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	106542	106542	HSIP (Section 148)	Urban Principal Arterial - Other	20000	25	State Highway Agency	Improving the design and operation of highway intersections	
2010, Site K - US 40 & Buckley Boulevard	Pedestrians and bicyclists Modify existing crosswalk	1 intersection	116384	116384	HSIP (Section 148)	Urban Principal Arterial - Other	25300	55	State Highway Agency	Making walking and street crossing easier	
2010, Site F - SR 273 at SR 1 Ramps	Intersection traffic control Modify traffic signal - add backplates	1 intersection	79214	79214	HSIP (Section 148)	Urban Principal Arterial - Other	35400	50	State Highway Agency	Improving the design and operation of	

										highway intersections	
2011, Site CC - SR 92 at Shipley Road	Intersection traffic control Modify traffic signal - add backplates	1 intersection	306704	306704	HSIP (Section 148)	Urban Principal Arterial - Other	313000	45	State Highway Agency	Improving the design and operation of highway intersections	
2011, Site T - SR 896 at Old Baltimore Pike	Intersection traffic control Modify traffic signal - add backplates	1 intersection	143189	143189	HSIP (Section 148)	Urban Principal Arterial - Other	47400	55	State Highway Agency	Improving the design and operation of highway intersections	
2011, Site I - Millchop Lane at Peachtree Run	Intersection traffic control Modify control - two-way stop to all-way stop	1 intersection	43699	43699	HSIP (Section 148)	Urban Major Collector	3100	35	State Highway Agency	Improving the design and operation of	

										highway intersections	
2011, Site V - US 40 at Glasgow Ave	Intersection traffic control Modify traffic signal timing - left-turn phasing (permissive to protected-only)	1 intersection	80694	80694	HSIP (Section 148)	Urban Principal Arterial - Other	13600	35	State Highway Agency	Improving the design and operation of highway intersections	
2011, Site N - Philadelphia Pike at Citi Steel	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	102658	102658	HSIP (Section 148)	Urban Minor Arterial	14250	35	State Highway Agency	Improving the design and operation of highway intersections	
2011, Various sites - Signage Equipment	Roadway signs and traffic control		77353	77353	HSIP (Section 148)				State Highway Agency	various	

2011, Site CC - Naaman's Road at Grubb Road	Intersection traffic control Modify traffic signal - add backplates	1 intersection	115724	115724	HSIP (Section 148)	Urban Principal Arterial - Other	31300	45	State Highway Agency	Improving the design and operation of highway intersections	
2011, Various Sites - Pavement Markings	Roadway signs and traffic control		25856	25856	HSIP (Section 148)				State Highway Agency	various	
2011 HRRRP Studies	Non-infrastructure	12 segments	22500	172896	HRRRP (SAFETEA-LU)				State Highway Agency		
Rumble Strip Installation, Statewide	Shoulder treatments Shoulder treatments - other		110025	110025	HRRRP (SAFETEA-LU)				State Highway Agency	Keeping vehicles in the roadway	
Delaware Rumble Strips Brochure	Non-infrastructure	1 brochure	10829	10829	HRRRP (SAFETEA-LU)				State Highway Agency	Keeping vehicles in the roadway	

2012 HRRRP Traffic Control Device Improvements	Roadway signs and traffic control	20 segments	359800	365779	HRRRP (SAFETEA-LU)				State Highway Agency		
2012 HEP Site W - SR 896 at Old Chestnut Hill Road Intersection Improvements		1 intersection	27000	17790782	HSIP (Section 148)	Urban Principal Arterial - Other	42100	35	State Highway Agency		
2009 Site R - Old Baltimore Pike at Salem Church Road	Intersection geometry Auxiliary lanes - add left-turn lane	1 intersection	45000	2355000	HSIP (Section 148)	Urban Minor Arterial	16300	45	State Highway Agency	Improving the design and operation of highway intersections	
2003 HEP Site E - SR	Intersection geometry Auxiliary lanes - add left-	1 intersection	85890	2221731	HSIP (Sectio	Urban Principal	12500	50	State Highway	Improving the	

52 at SR 82	turn lane				n 148)	Arterial - Other			Agency	design and operation of highway intersections	
2003 Site R - Foulk Road at Wilson Road	Intersection geometry Intersection geometrics - miscellaneous/other/unspecified	1 intersection	162904	204114 5	HSIP (Section 148)	Urban Minor Arterial	17400	45	State Highway Agency	Improving the design and operation of highway intersections	
2003 Site DD - SR 273 at Harmony Road Intersection Improvements	Intersection geometry Auxiliary lanes - extend existing left-turn lane	1 intersection	521370	4141300	HSIP (Section 148)	Urban Principal Arterial - Other	48200	45	State Highway Agency	Improving the design and operation of highway intersections	
HSIP SC, US 9 Projects	Intersection geometry Intersection geometrics -	3 intersection	3500000	1364058 6	HSIP (Sectio	Rural Principal	16200	50	State Highway	Improving the	

	miscellaneous/other/unspecified	s			n 148)	Arterial - Other			Agency	design and operation of highway intersections	
2009 Site Z - SR 92 at I-95	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	2 intersections	1525	550606	HSIP (Section 148)	Urban Principal Arterial - Other	21600	50	State Highway Agency	Improving the design and operation of highway intersections	
2011 Site V - US 40 at Glasgow Avenue	Intersection traffic control Modify traffic signal timing - left-turn phasing (permissive to protected-only)	1 intersection	22500	350000	HSIP (Section 148)	Urban Principal Arterial - Other	42000	40	State Highway Agency	Improving the design and operation of highway intersections	
2011 Site N - I-495 at	Intersection traffic control Modify traffic	1 intersection	13500	340000	HSIP (Sectio	Urban Minor	17600	40	State Highway	Improving the	

Philadelphia Pike	signal timing - signal coordination				n 148)	Arterial			Agency	design and operation of highway intersections	
SR 24 at Mount Joy Road AND SR 24 at Bay Farm Road	Intersection geometry Auxiliary lanes - miscellaneous/other/unspecified	2 intersections	150000	6789014	HSIP (Section 148)	Rural Major Collector	18900	50	State Highway Agency	Improving the design and operation of highway intersections	
2010 HEP Site M - US 13, Bacon Avenue to McMullen Avenue	Intersection geometry Auxiliary lanes - extend existing left-turn lane	3 intersections	2699	555227	HSIP (Section 148)	Urban Principal Arterial - Other	57000	50	State Highway Agency	Improving the design and operation of highway intersections	
2008 HEP Site Z -	Intersection geometry Intersection geometrics -	1 intersection	41315	175749 5	HSIP (Sectio	Urban Minor	11500	45	State Highway	Improving the	

South State Street at Sorghum Mill Road	miscellaneous/other/unspecified				n 148)	Arterial			Agency	design and operation of highway intersections	
2012 HEP - Traffic Control Device Improvements	Roadway signs and traffic control	30 corridors	600209	600209	HSIP (Section 148)				State Highway Agency		
FY2014 HSIP - Studies	Non-infrastructure	15 corridors	864411	864411	HSIP (Section 148)				State Highway Agency		
I-495, I-95 to US 13 (Exit 1) High Tension Barrier Design	Roadside Barrier - cable	1 corridor	2922	69148	Penalty Transfer - Section 154	Urban Principal Arterial - Interstate	55000	55	State Highway Agency	Keeping vehicles in the roadway	
SR1, SR896 to US13 - Steel Beam Guardrail	Roadside Barrier- metal	1 corridor	2788	151011	Penalty Transfer - Section	Urban Principal Arterial - Other	80300	55	State Highway Agency	Keeping vehicles in the	

Design					154	Freeways and Expressways				roadway	
Work Zone Training	Work Zone	1 program	93273	93273	Penalty Transfer - Section 154					Designing safer work zones	
2008 HEP Site K - SR 4 at Alban Drive	Intersection traffic control Modify traffic signal - replace existing indications (incandescent-to-LED and/or 8-to-12 inch dia.)	1 intersection	145922	145922	Penalty Transfer - Section 154	Urban Principal Arterial - Other	19200	40	State Highway Agency	Improving the design and operation of highway intersections	
DelDOT Pavement Condition Survey	Non-infrastructure	1 survey	4183	4183	Penalty Transfer - Section 154				State Highway Agency		
2008 HEP Site K - SR 4 at Champlain	Intersection traffic control Modify traffic signal - replace existing indications	1 intersection	133691	133691	Penalty Transfer - Section	Urban Principal Arterial -	15500	40	State Highway Agency	Improving the design and	

Avenue	(incandescent-to-LED and/or 8-to-12 inch dia.)				154	Other				operation of highway intersections	
Crash Related Study and Consulting	Non-infrastructure		5388	5388	Penalty Transfer - Section 154						
2008 Site K - SR 4 at SR 48/Martin Luther King Boulevard	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	5605	5605	Penalty Transfer - Section 154	Urban Principal Arterial - Other	13800	25	State Highway Agency	Improving the design and operation of highway intersections	
2008 Site K - SR 4 at Latimer Drive	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	171786	171786	Penalty Transfer - Section 154	Urban Principal Arterial - Other	16400	25	State Highway Agency	Improving the design and operation of highway intersecti	

										ons	
2008 Site K - SR 4 at Troy Avenue	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	124982	124982	Penalty Transfer - Section 154	Urban Principal Arterial - Other	16400	24	State Highway Agency	Improving the design and operation of highway intersections	
2008 Site K - SR 4 at Fallon Avenue	Intersection traffic control Modify traffic signal - modernization/replacement	1 intersection	114543	114543	Penalty Transfer - Section 154	Urban Principal Arterial - Other	16400	25	State Highway Agency	Improving the design and operation of highway intersections	
Delaware Roundabout Video and FYI Brochure	Non-infrastructure	1 video/brochure	50923	50923	Penalty Transfer - Section 154						
2008 Site K - SR 4 at Broom	Intersection traffic control Modify traffic signal -	1 intersection	194806	194806	Penalty Transfer -	Urban Principal Arterial -	19200	25	State Highway	Improving the design	

Street	modernization/replacement				Section 154	Other			Agency	and operation of highway intersections	
I-495 Tension Cable Barrier	Roadside Barrier - cable	1 corridor	322055	499214	Penalty Transfer - Section 154	Urban Principal Arterial - Interstate	80000	55	State Highway Agency	Keeping vehicles in the roadway	
SR 1 HTCB Design	Roadside Barrier - cable	1 corridor	9056	1003785	Penalty Transfer - Section 154	Urban Principal Arterial - Interstate	80000	55	State Highway Agency	Keeping vehicles in the roadway	
Shortline Pavement Markings	Miscellaneous		87638	87638	Penalty Transfer - Section 154				State Highway Agency	various	
Longline Pavement Markings	Miscellaneous		120826	12826	Penalty Transfer - Section 154				State Highway Agency	various	

SR 299 at Gloucester Boulevard Signal Modification	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	1 intersection	21002	21002	Penalty Transfer - Section 154	Rural Minor Arterial	20100	50	State Highway Agency	Improving the design and operation of highway intersections	
Workzone Safety Campaign	Non-infrastructure	1 campaign	40147	40147	Penalty Transfer - Section 154					Designing safer work zones	

Please note that the HSIP Costs shown are the HSIP funds that were obligated during FY 2013.

Progress in Achieving Safety Performance Targets

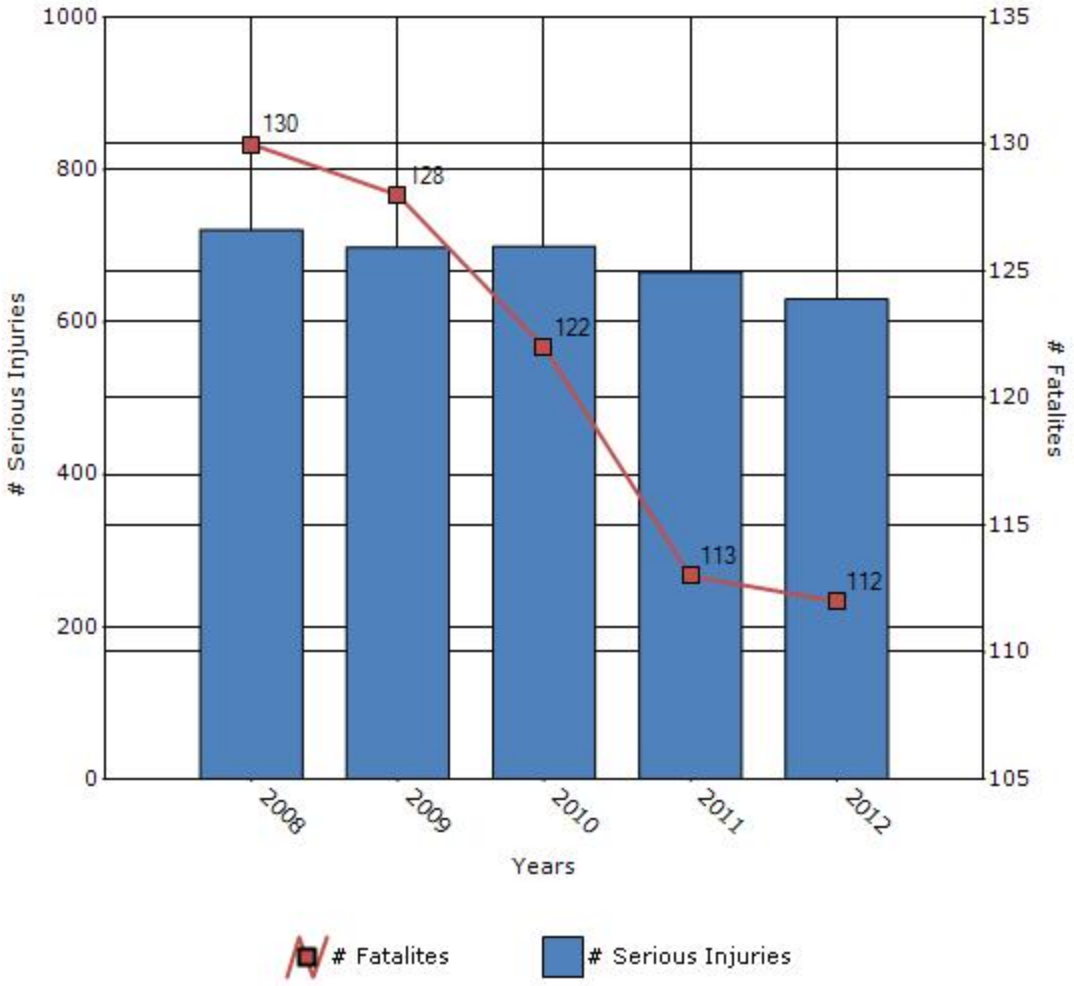
Overview of General Safety Trends

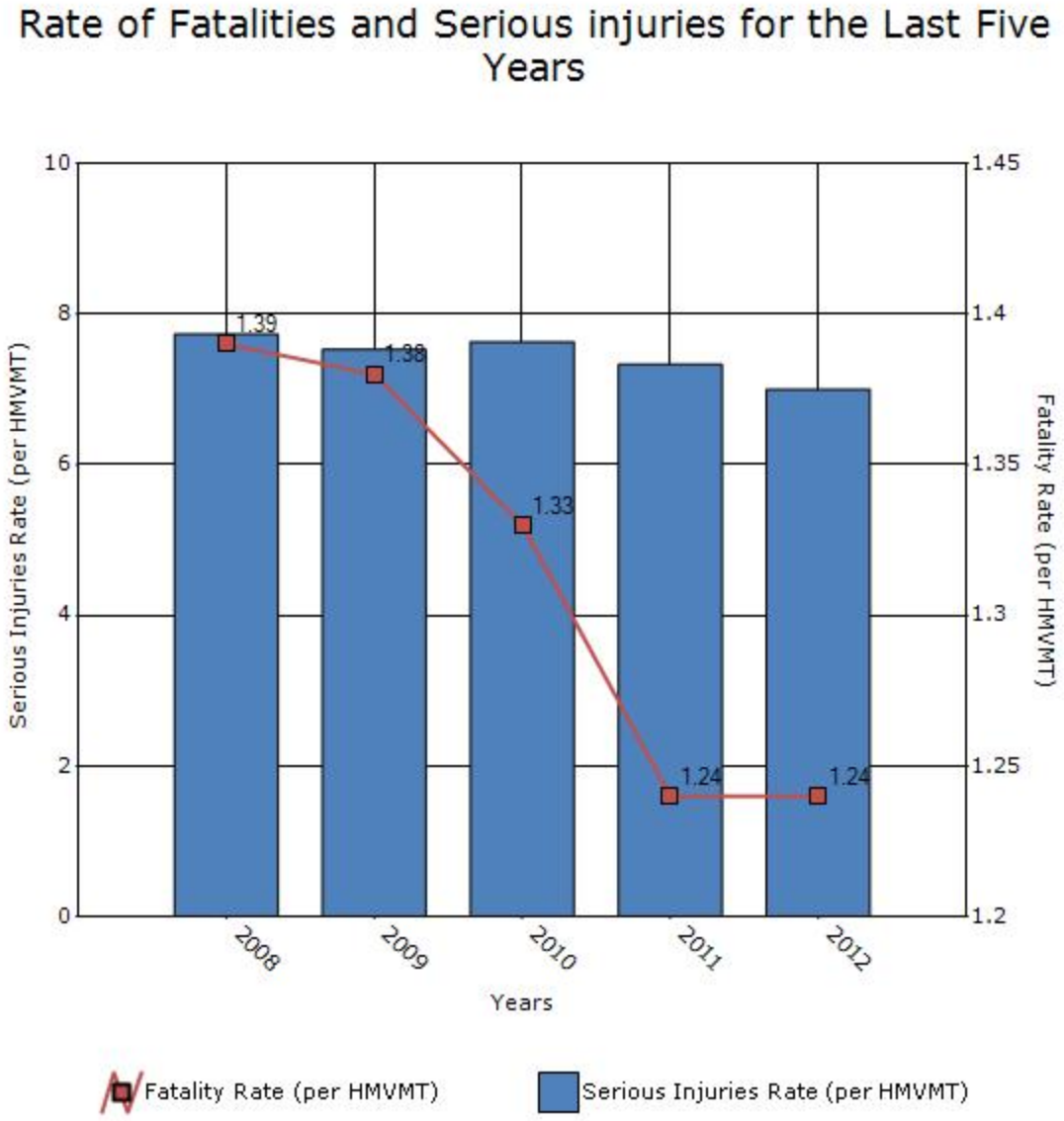
Present data showing the general highway safety trends in the state for the past five years.

Performance Measures*	2008	2009	2010	2011	2012
Number of fatalities	130	128	122	113	112
Number of serious injuries	721	698	699	666	630
Fatality rate (per HMVMT)	1.39	1.38	1.33	1.24	1.24
Serious injury rate (per HMVMT)	7.73	7.53	7.63	7.33	7

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

Number of Fatalities and Serious injuries for the Last Five Years





2004 data is unavailable; therefore, the 2008 rolling average for number of fatalities and serious injuries cover a 4-year time period only.

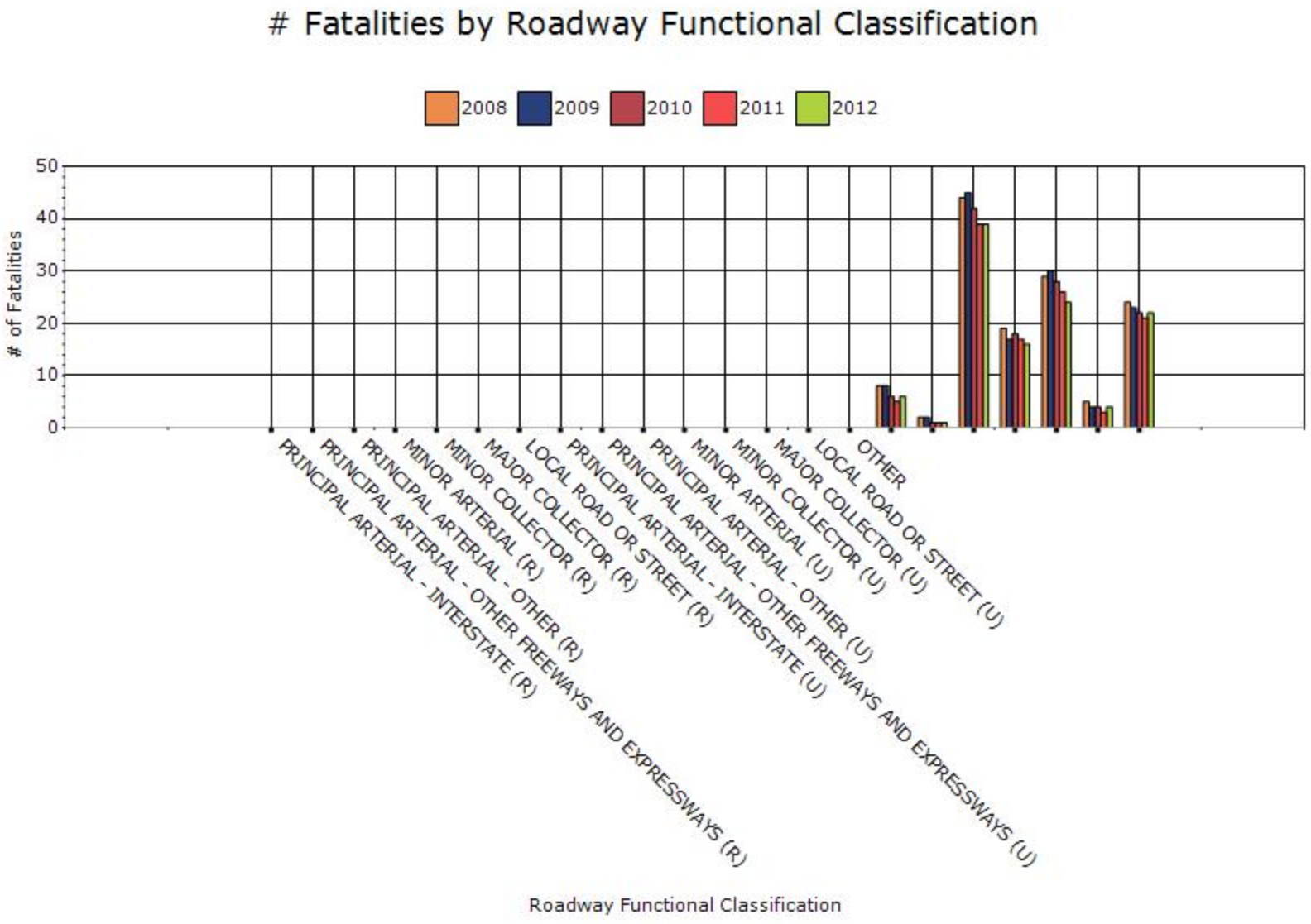
To the maximum extent possible, present performance measure* data by functional classification and ownership.

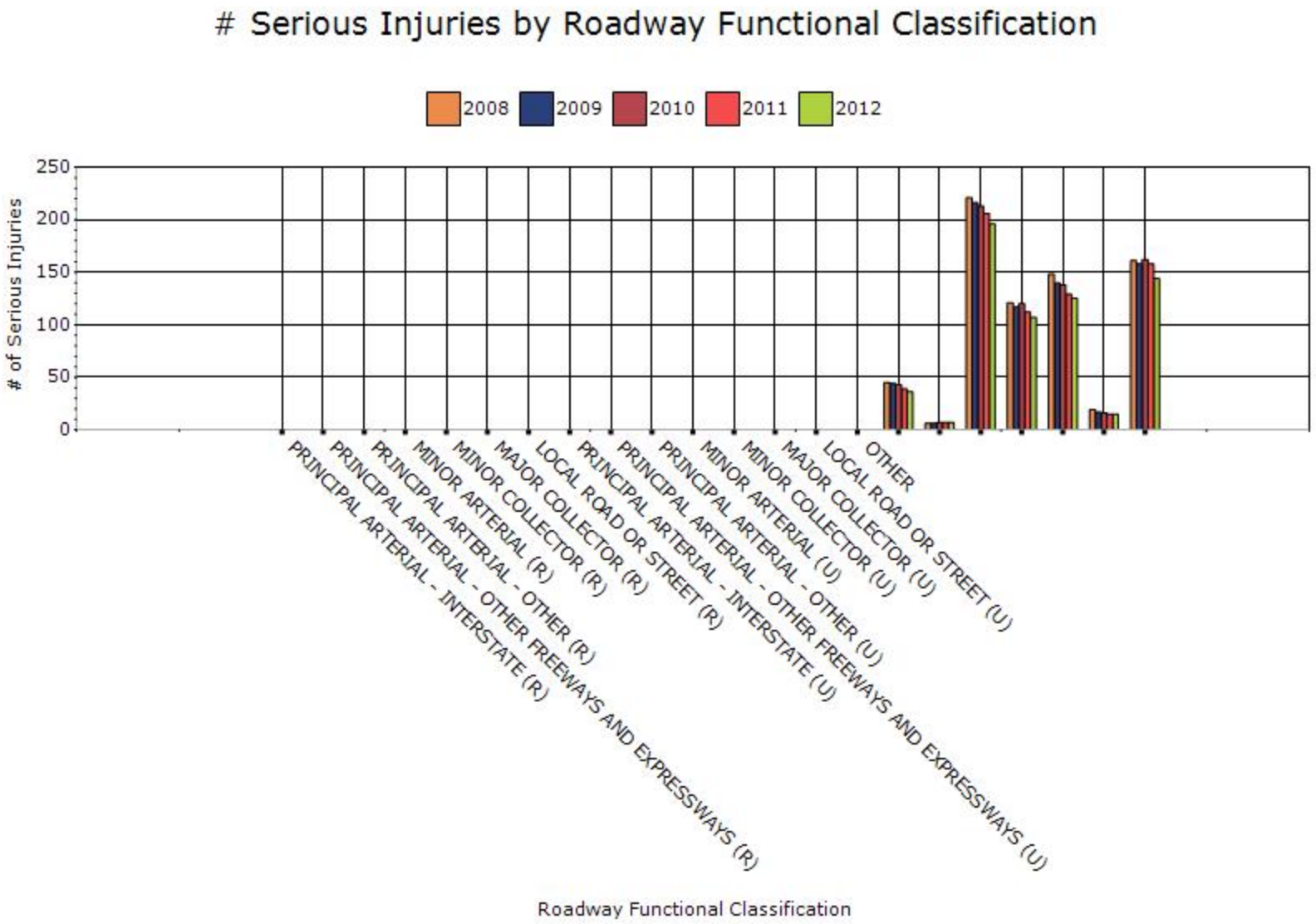
Year - 2012

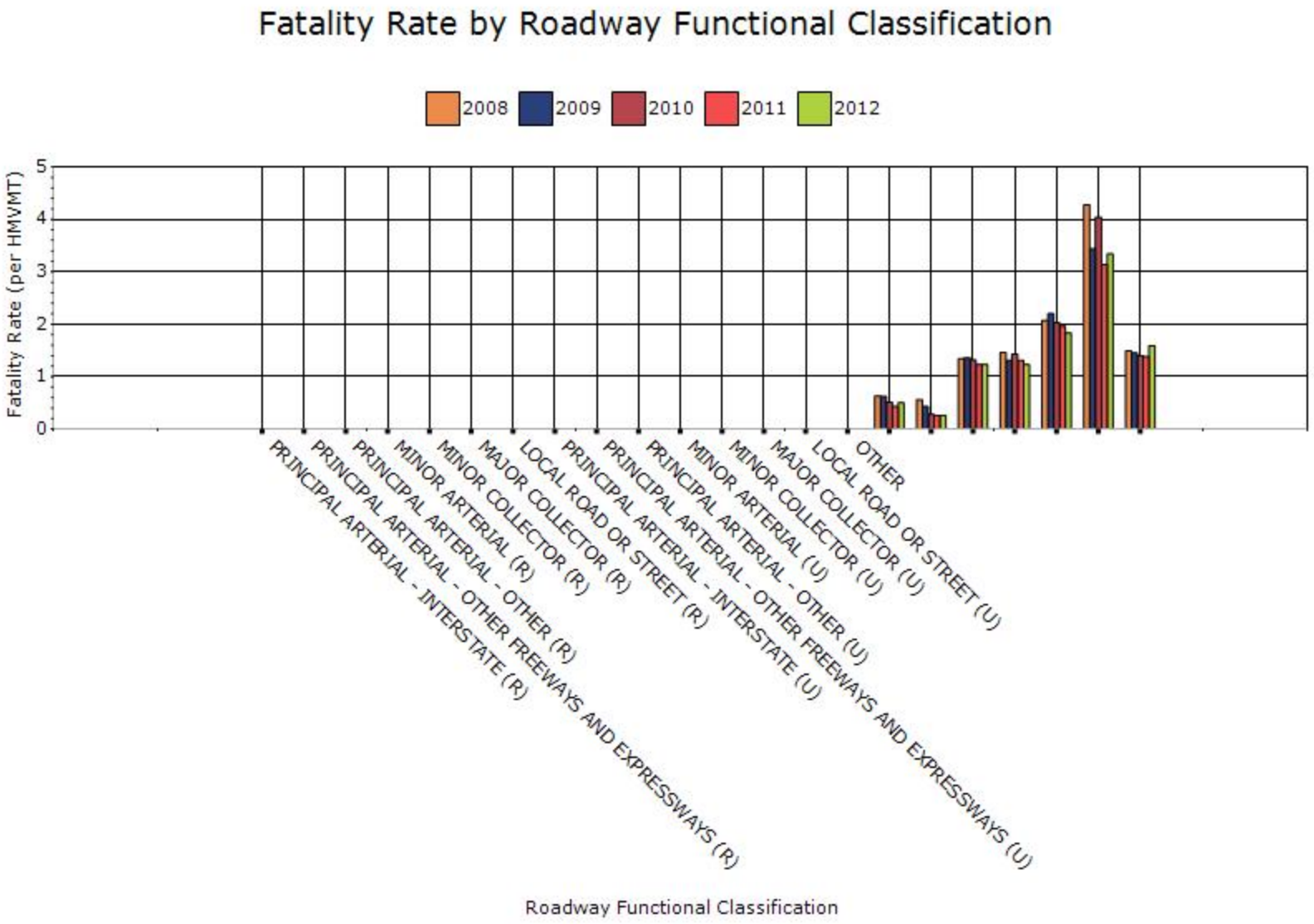
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	0	0	0	0
RURAL MINOR ARTERIAL	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

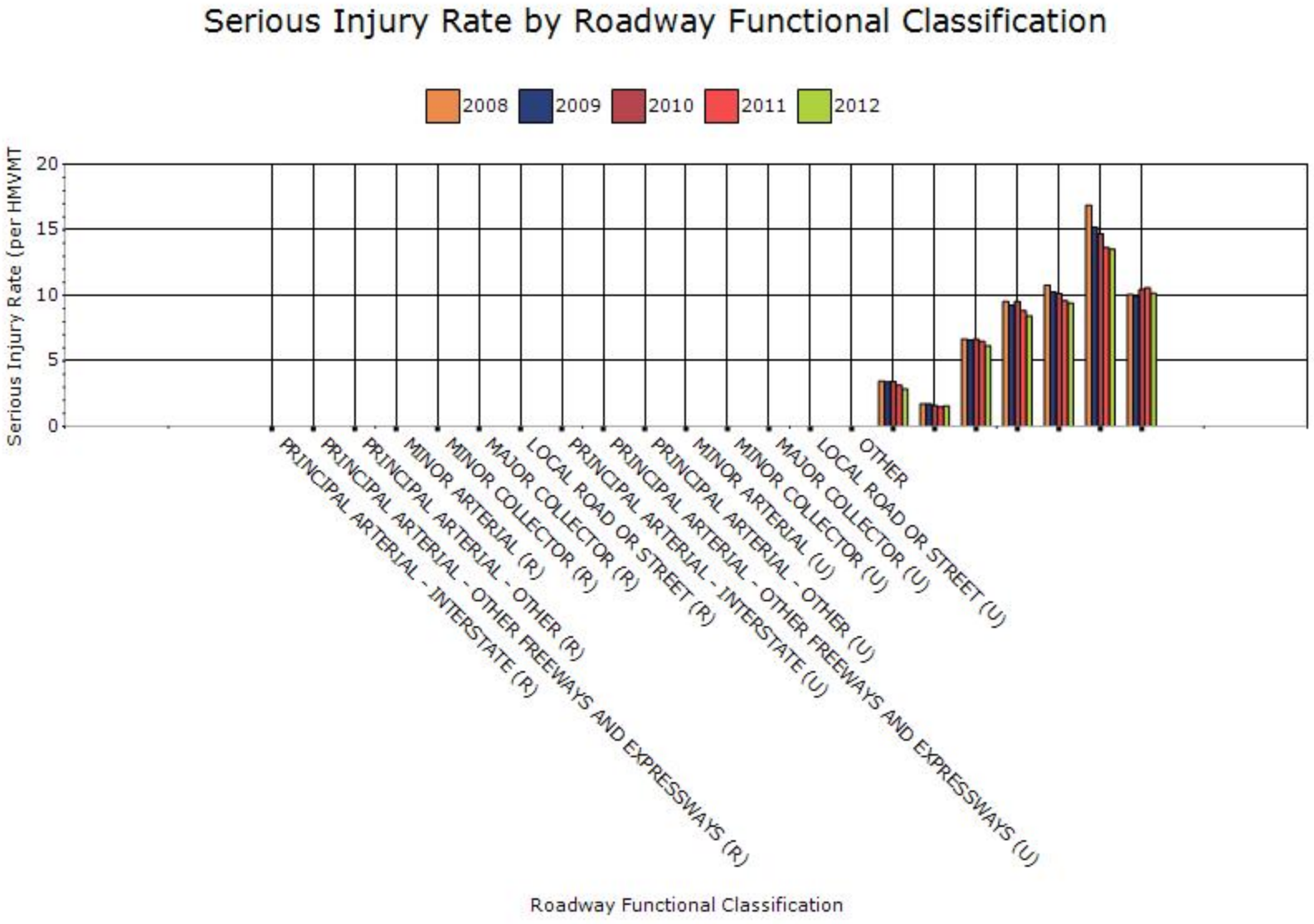
ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	0	0	0	0
URBAN MINOR ARTERIAL	0	0	0	0
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	0	0	0	0
URBAN LOCAL ROAD OR STREET	0	0	0	0
OTHER	0	0	0	0
INTERSTATE	6	36	0.5	2.87
OTHER FREEWAYS AND EXPRESSWAYS	1	7	0.26	1.56
OTHER PRINCIPAL ARTERIAL	39	196	1.23	6.17

MINOR ARTERIAL	16	107	1.23	8.44
MAJOR COLLECTOR	24	125	1.83	9.43
MINOR COLLECTOR	4	15	3.34	13.54
LOCAL ROADS	22	144	1.59	10.16
LOCAL ROADS	22	144	1.59	10.16


Fatalities by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Fatalities
50
40
30
20
10
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification


Serious Injuries by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Serious Injuries
250
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

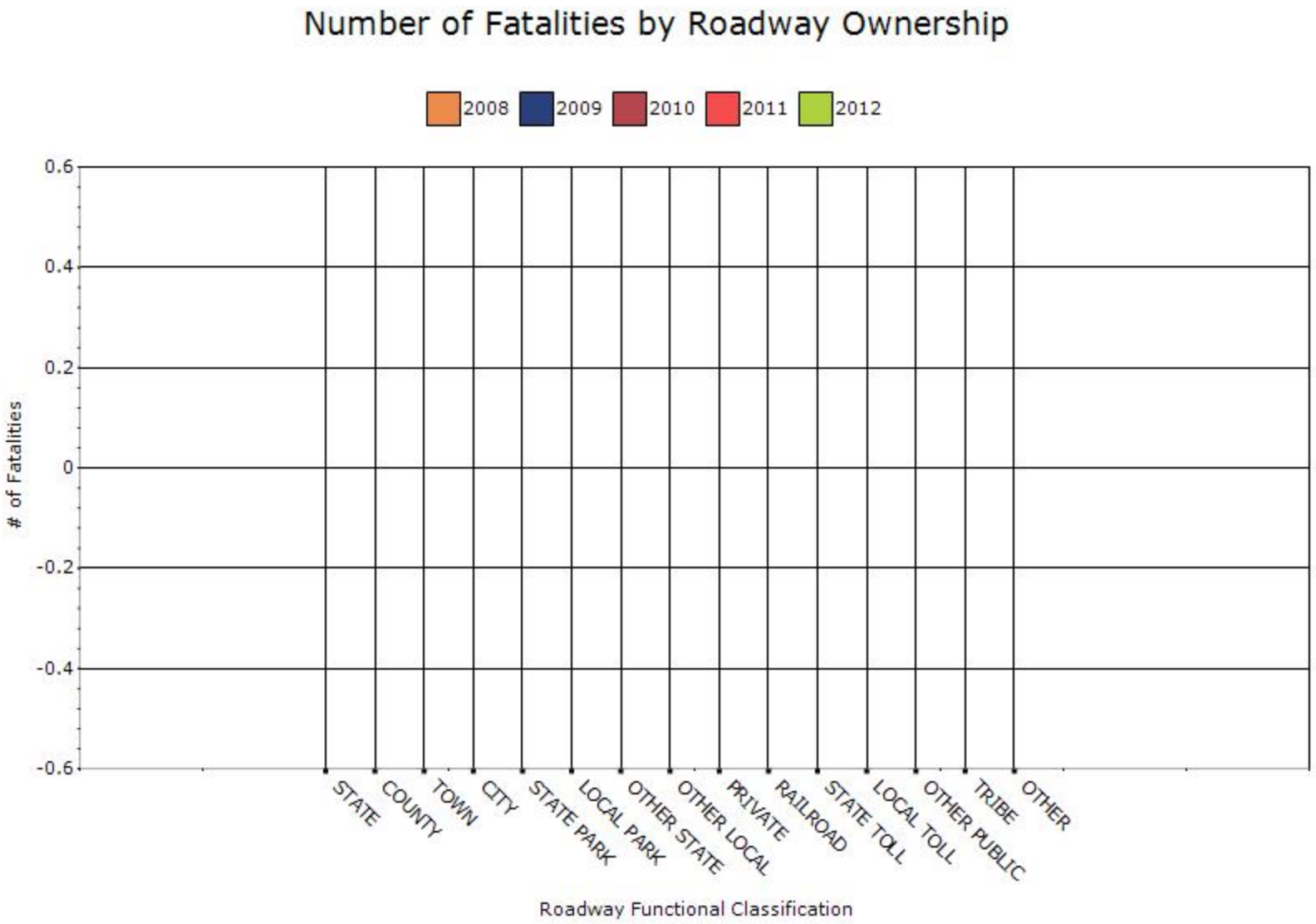

Fatality Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Fatality Rate (per HMVMT)
0
1
2
3
4
5
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL 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

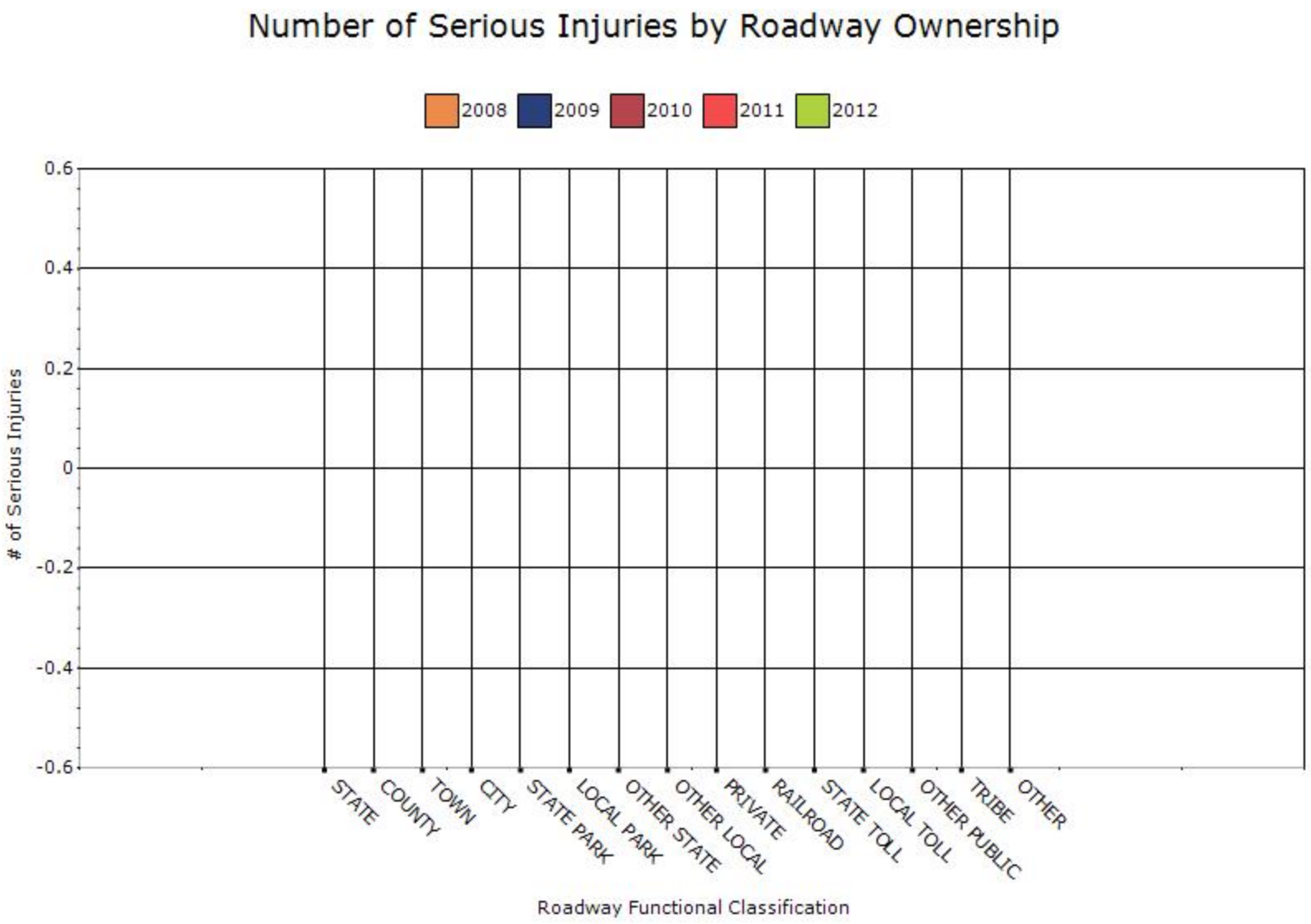

Serious Injury Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Serious Injury Rate (per HMVMT
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

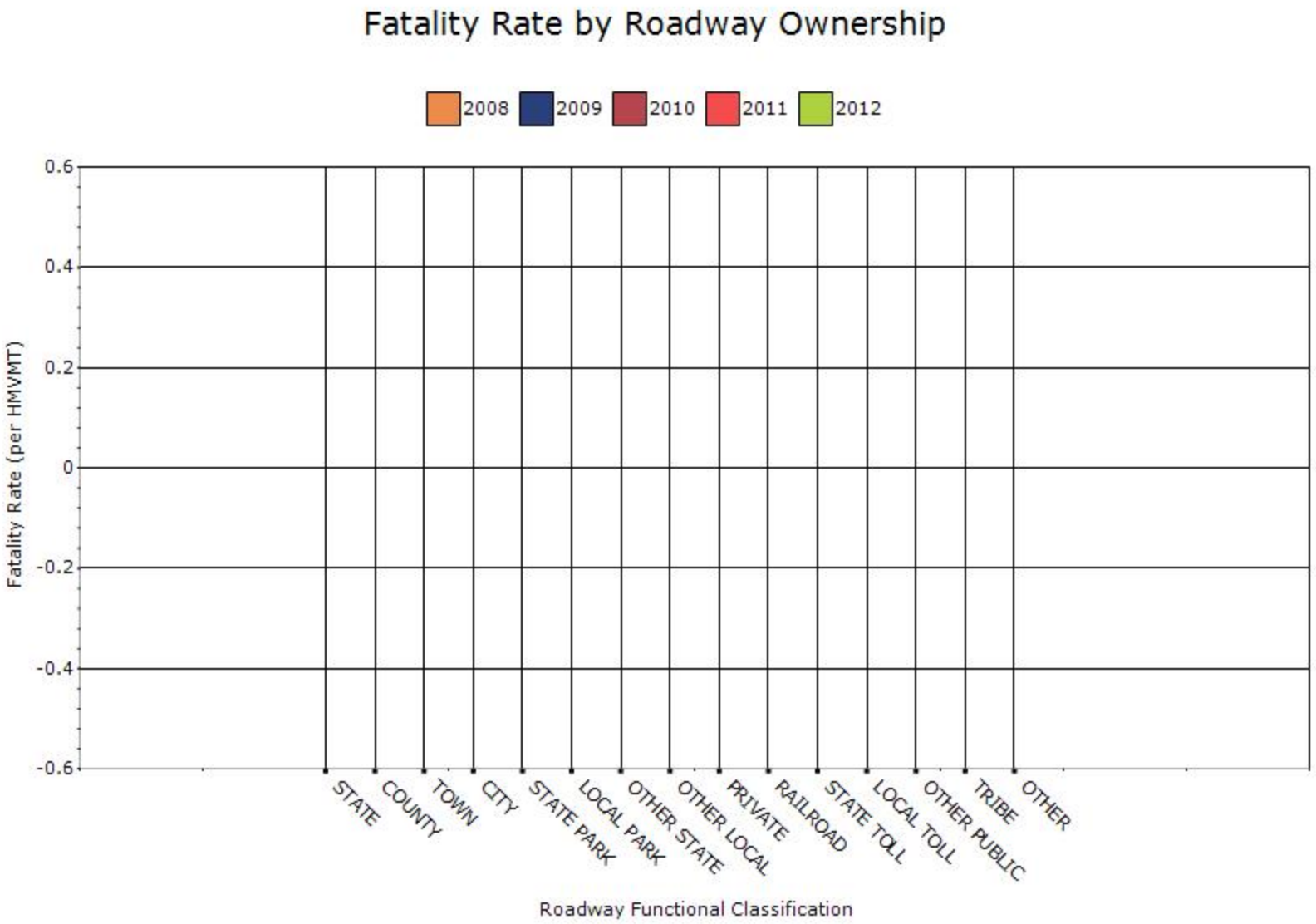
Year - 2012

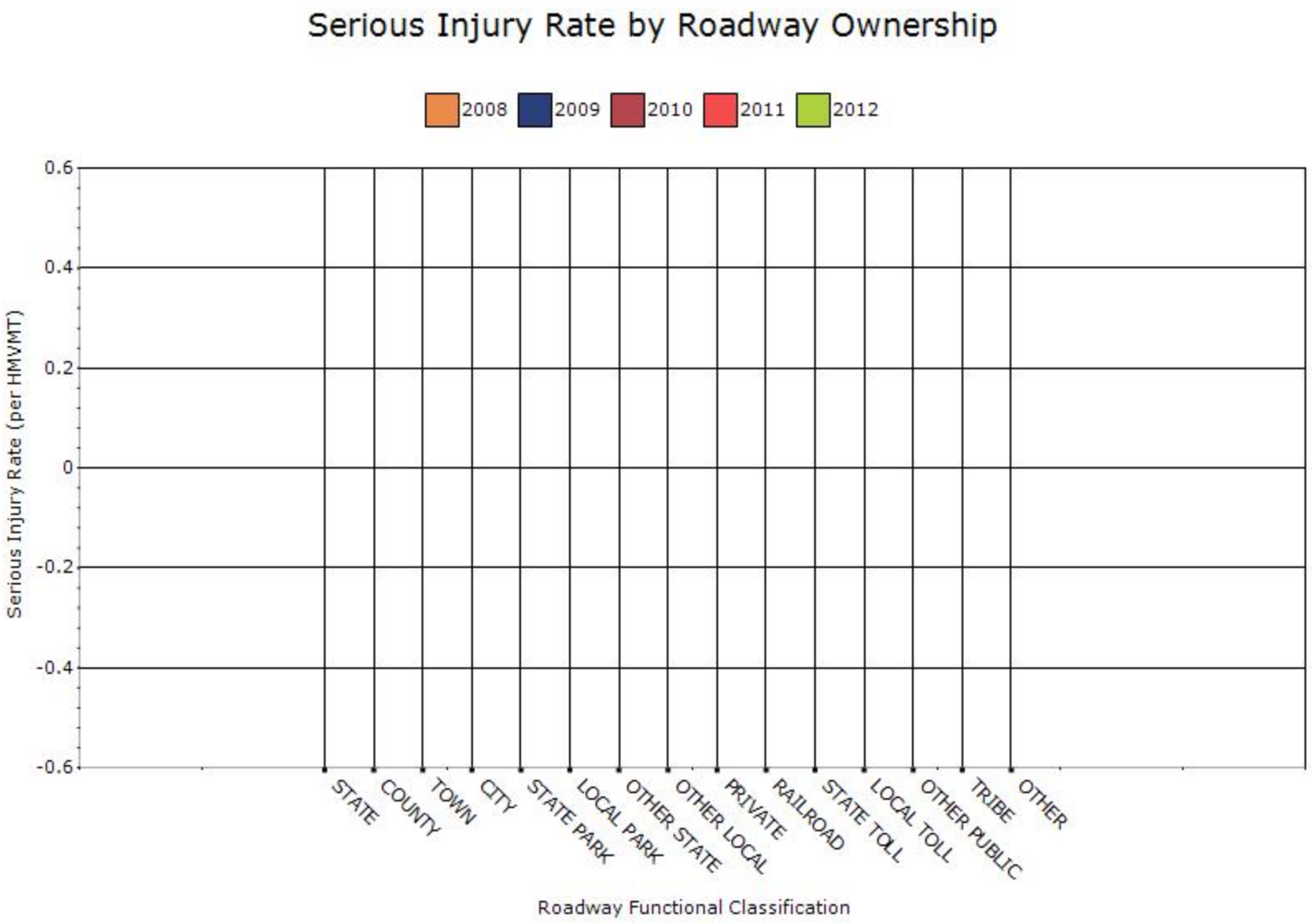
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	0	0	0	0
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	0	0	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY	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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2008
2009
2010
2011
2012
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


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


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

Reporting between urban and rural roadways is unavailable at this time; therefore, state-preferred functional classifications are reported. Additionally, data for roadway ownership is not available for this reporting period.

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

As shown, the number of fatalities (based on 5-year rolling averages) remained relatively the same in 2008 and 2009, declined in 2010, and further declined in 2011 and 2012 (2011 and 2012 remained relatively the same). The number of serious injuries (based on 5-year rolling averages) decreased in 2009 and 2010 compared to 2008, although remained relatively between 2009 and 2010, and further declined in 2011 and 2012. Statewide vehicle miles traveled (VMT) gradually decreased from 2008 to 2012; however remained relatively the same in 2011 and 2012. Fatality and serious injuries per VMT followed similar trends as described above. Similar to statewide trends, fatality and serious injury rates by functional classification declined or remained relatively the same from 2008 to 2012. The raw number of fatalities and serious injuries per year for the State of Delaware are relatively low; therefore, there is greater potential for larger fluctuations in fatality rates and serious injury rates as compared to other states and national rates, even though the raw number of fatalities and serious injuries may only differ by a few on a year-to-year basis.

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)	0.09	0.1	0.1	0.08	0
Serious injury rate (per capita)	0.34	0.33	0.33	0.32	0
Fatality and serious injury rate (per capita)	0.43	0.43	0.43	0.4	0

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

Sample calculation methodology is provided below for fatality and serious injury rates (per capita). Similar calculations were used for individual fatality and serious injury rates. The numbers of fatalities reported are according to *NHTSA's Fatality Analysis Reporting System* (FARS) and the number of serious injuries reported are according to Delaware's Crash Analysis Reporting System (CARS).

2008 Rate: [(# 2008 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2008 Population Figure*) + (# 2007 Fatalities and Serious Injuries of Drivers and Pedestrians

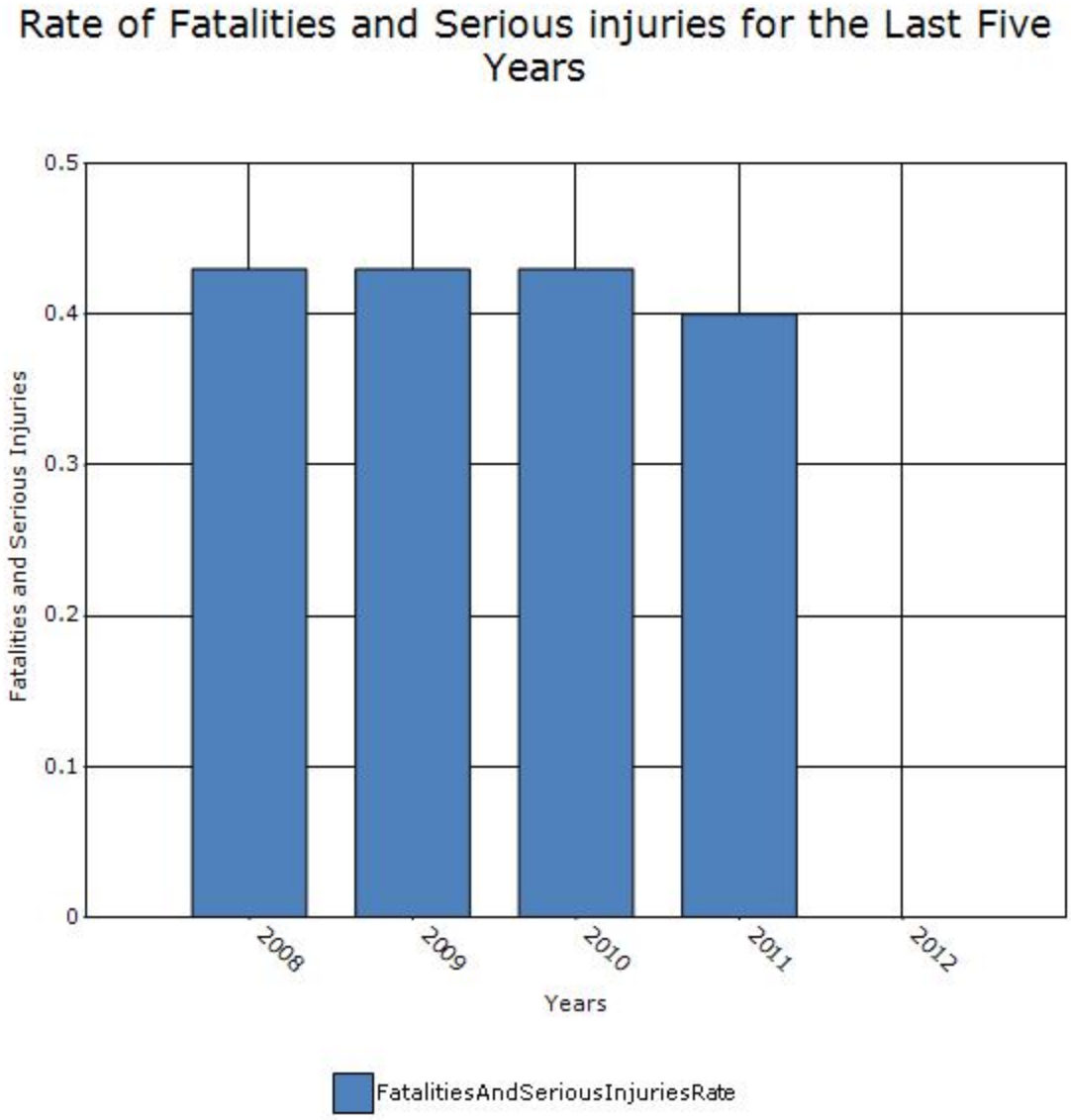
over the age of 65/2007 Population Figure*) + (# 2006 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2006 Population Figure*)]/3

2009 Rate: [(# 2009 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2009 Population Figure*) + (# 2008 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2008 Population Figure*) + (# 2007 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2007 Population Figure*) + (# 2006 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2006 Population Figure*)]/4

2010 Rate (similar calculations used for 2011 and 2012 rates): [(# 2010 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2010 Population Figure*) + (# 2009 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2009 Population Figure*) + (# 2008 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2008 Population Figure*) + (# 2007 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2007 Population Figure*) + (# 2006 Fatalities and Serious Injuries of Drivers and Pedestrians over the age of 65/2006 Population Figure*)]/5

* Number of People 66 Years of Age and Older (per 1,000 Total Population) per *Annual Estimates of Resident Population by Single Year of Age and Sex for the United States, States, and Puerto Rico Commonwealth: April 1, 2010 to July 1, 2012* from the U.S. Census Bureau, Population Division (June 2013 release date) AND *Intercensal Estimates of the Resident Population by Single Year of Age and Sex for States and the United States: April 1, 2000 to July 1, 2010* from the U.S. Census Bureau, Population Division. The number of people 66 years of age and older (per 1,000 total population) are listed below:

2004 - 124
2005 - 124
2006 - 126
2007 - 127
2008 - 130
2009 - 132
2010 - 135
2011 - 137
2012 - 140



Per the MAP-21 legislation for the Older Driver Special Rule, states are directed to report the number of fatalities and serious injuries for drivers and pedestrians over the age of 65 (i.e., 66 years of age and older). Attachment 2 of *FHWA's Older Drivers and Pedestrians Special Rule Interim Guidance* (released 2/13/13) provides population data for older persons 65 years of age and older. Due to this discrepancy, the state has used U.S. Census Bureau population data to determine the number of people over the age of 65 (per 1,000 total population). Additionally, 2004 and 2005 data for older driver/pedestrian serious injuries is not available for this reporting period from Delaware's Crash Analysis Reporting System (CARS). Therefore, 2008 rolling averages incorporate three years of data (2006, 2007, and 2008) and 2009 rolling averages incorporate four years of data (2006, 2007, 2008, and 2009). In accordance with *FHWA's Older Drivers and Pedestrians Special Rule Interim Guidance* (released 2/13/13), the number of older driver/pedestrian fatalities reported are based on *NHTSA's Fatality Analysis Reporting System*

(FARS) data. At the recommendation of FHWA during an ORT webinar, DelDOT has omitted 2012 data for this question.

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-fatality rates have declined over the years

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

☐ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☒ None

☐ Other:

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

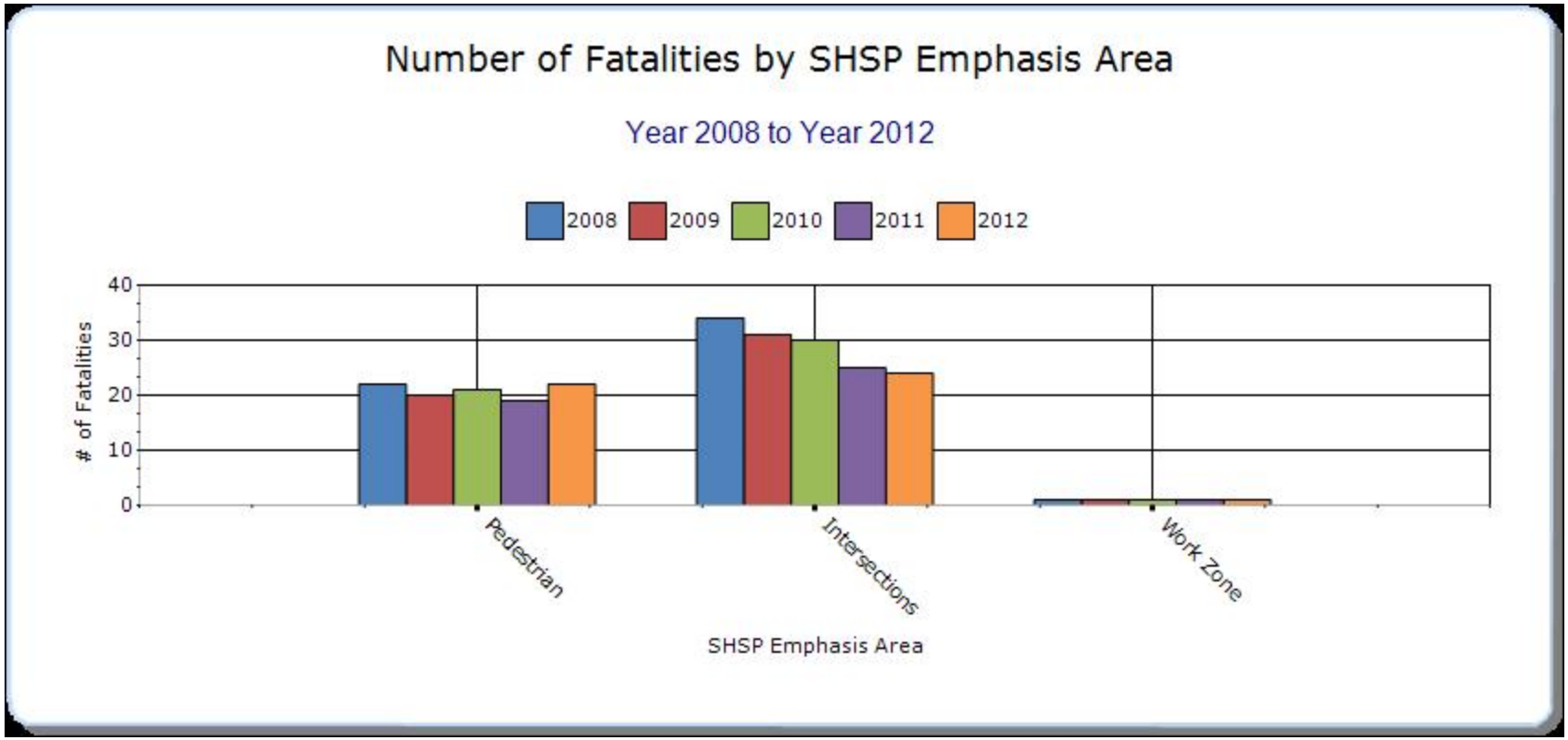
None for this reporting period.

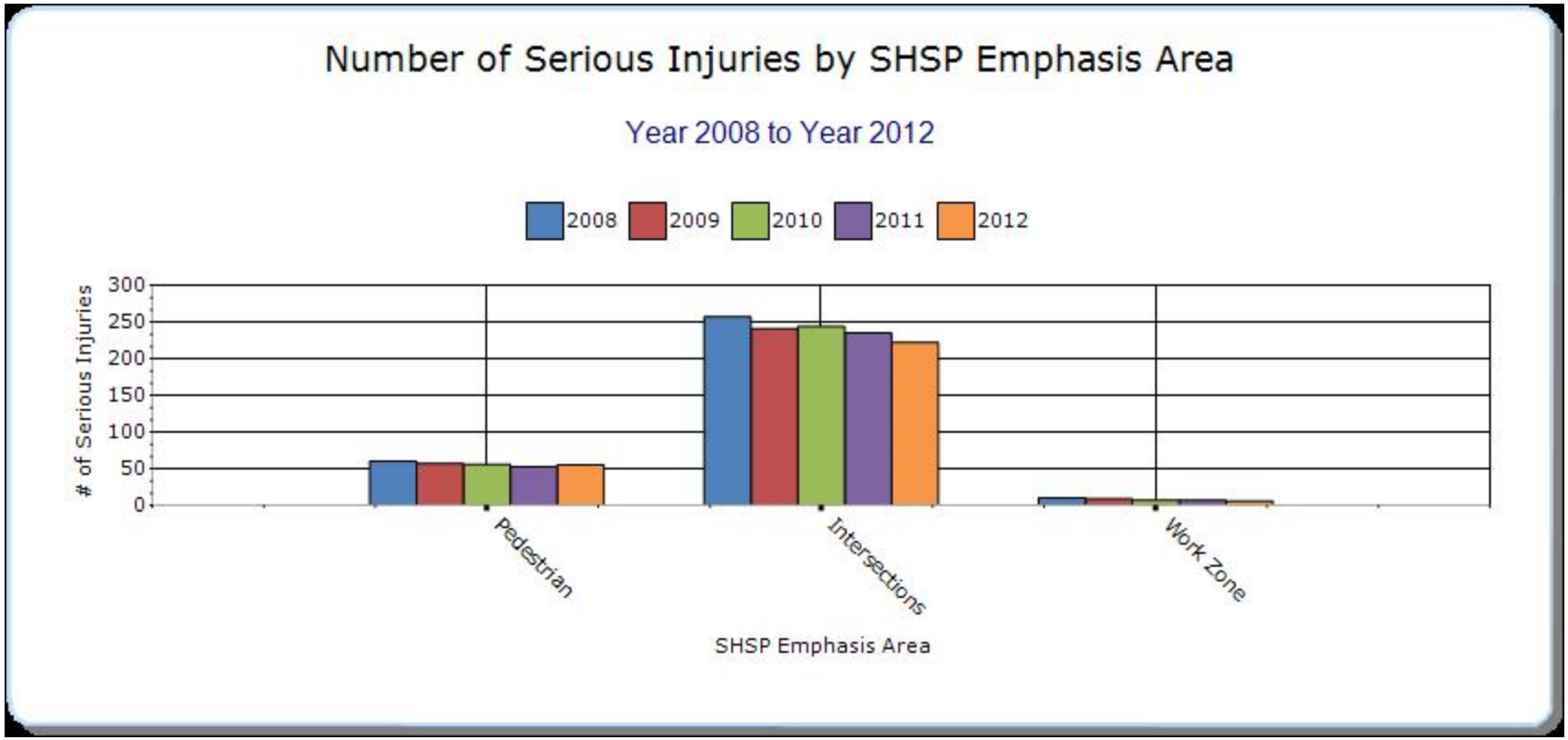
SHSP Emphasis Areas

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

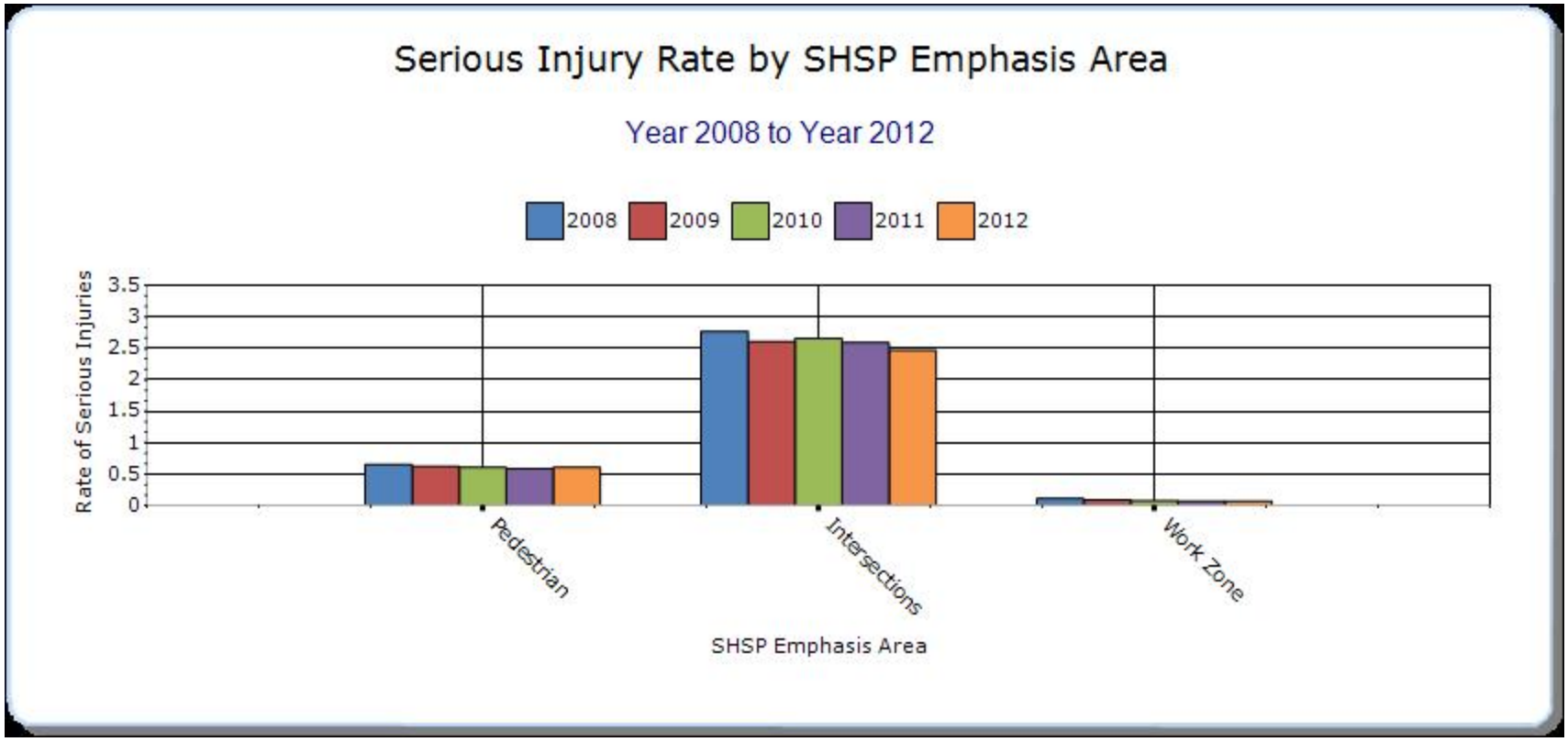
Year - 2012

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
Making walking and street crossing easier	**Vehicle/pedestrian**	**22**	**55**	**0.24**	**0.61**	**0**	**0**	**0**
Improving the design and operation of highway intersections	intersection	24	222	0.27	2.47	0	0	0
Designing safer work zones	work zone	1	6	0.01	0.07	0	0	0
Reducing the Frequency and Severity of Roadway Departure Crashes	Run-off-road	42	142	0.47	1.58	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
Pedestrian
Intersections
Work Zone
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Serious Injuries
300
250
200
150
100
50
0
Pedestrian
Intersections
Work Zone
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Fatalities
0.5
0.4
0.3
0.2
0.1
0
Pedestrian
Intersections
Work Zone
SHSP Emphasis Area



2004 and 2005 crash data for reported emphasis areas is unavailable. Therefore, 2008 rolling averages incorporate three years of data (2006, 2007, and 2008), and 2009 rolling averages incorporate four years of data (2006, 2007, 2008, and 2009). 2010 through 2012 rolling averages are based on 5 years of data.

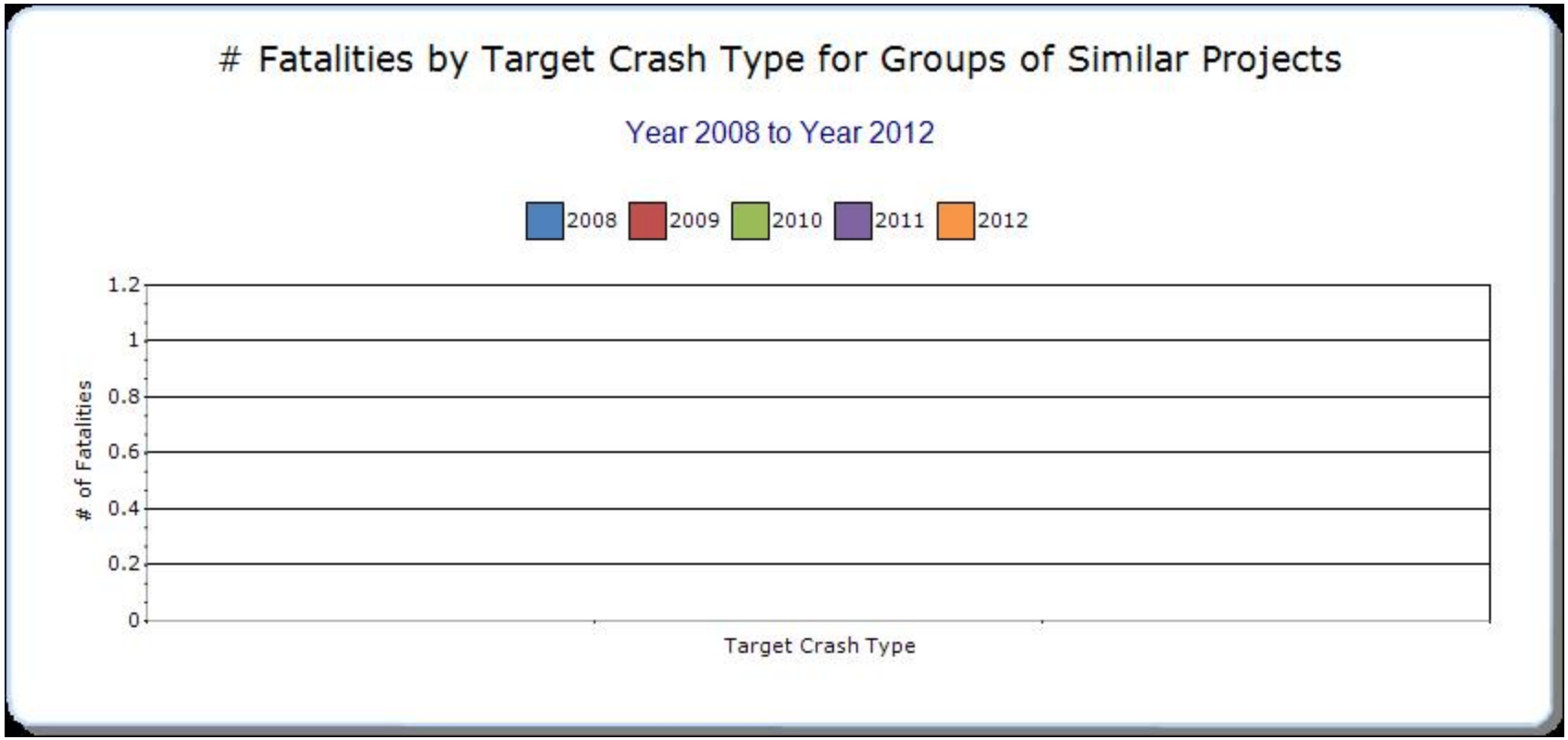
Groups of similar project types

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

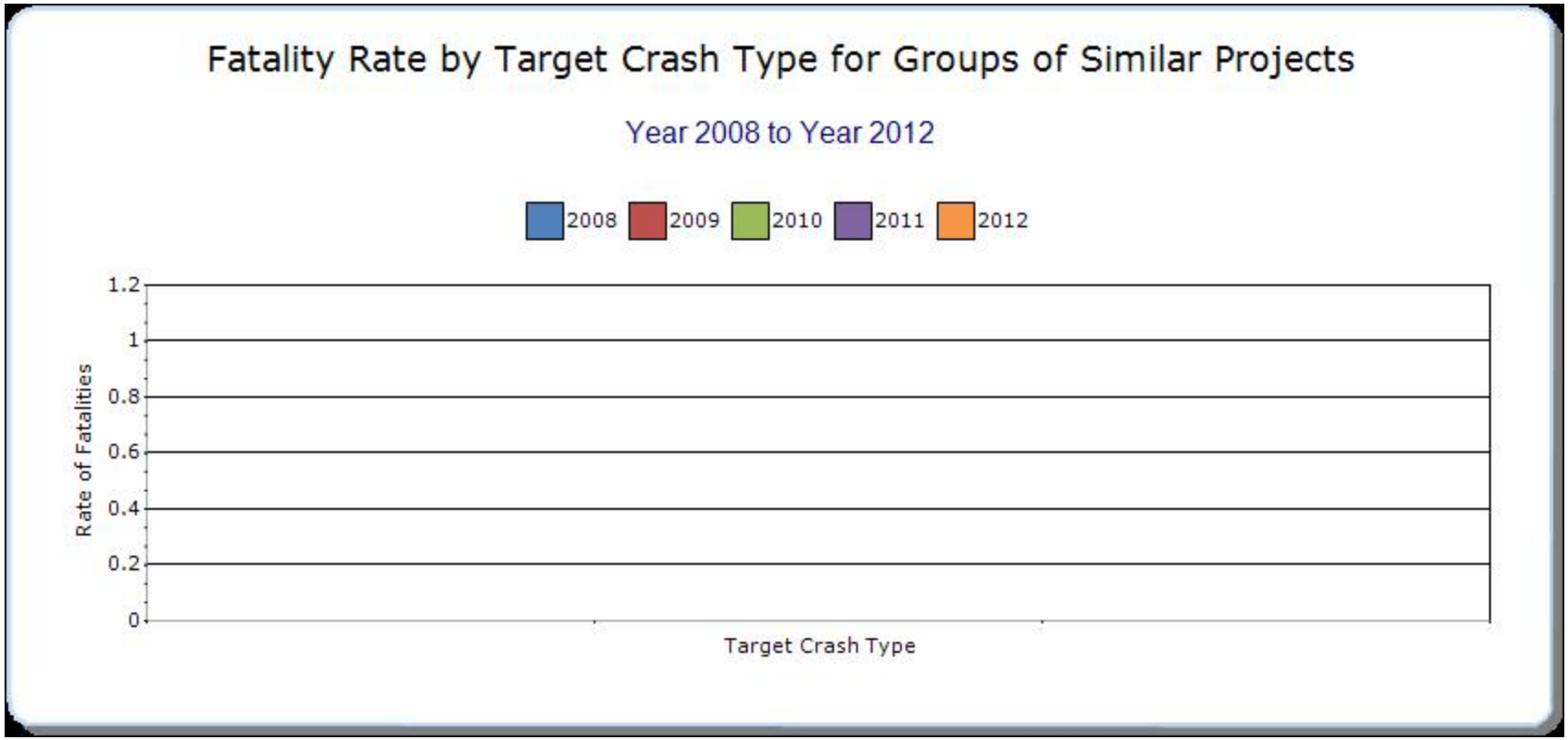
Year - 2012

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
Refer to Question #24 for general safety performance measures for the segment (i.e., the Hazard Elimination Program) subprogram. The distinction between urban and rural crash locations is not available in CARS during this reporting period; therefore, performance measures for the rural roads subprogram are unavailable. Refer		0	0	0	0	0	0	0

to the response to Question 32 for performance on pedestrian safety.								


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
# of Fatalities
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
Target Crash Type


Fatality Rate by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
Target Crash Type

2004 data is unavailable; therefore, the 2008 rolling average for number of fatalities and serious injuries cover a 4-year time period only.

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
Delaware does not have any systemic safety programs to report on during this reporting period. However, systemic programs are under development.		0	0	0	0	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
# of Fatalities
Target Crash Type


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
Target Crash Type


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
Target Crash Type


Serious Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
Target Crash Type

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

No elaboration at this time.

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)
N/A														

Optional Attachments

Sections	Files Attached
Program Structure: Program Methodology	2013 HSIP Annual Report HEP Site Selection.pdf

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.