Highway Safety Improvement Program

Data Driven Decisions

Pennsylvania
Highway Safety Improvement Program
2013 Annual Report

Prepared by: PA

Disclaimer

Protection of Data from Discovery & Admission into Evidence

23 U.S.C. 148(h)(4) states "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data."

23 U.S.C. 409 states "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data."

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Executive Summary

The Highway Safety and Traffic Operations Division of the Pennsylvania Department of Transportation is pleased to present this year's HSIP Annual Report. This document, submitted through the Federal Highway Administration's Online Reporting Tool, covers the period from July 1, 2012 through June 30, 2013, and portions of Federal Fiscal Year 2013.

Pennsylvania continues to see a steady decline in the number of fatalities which occur on the Commonwealth's roadways. The five year average of highway fatalities from 2008 to 2012 was 1,329, which was below the goal of 1,343. This pace of reductions is necessary to meet our goal of reducing fatalities and major injuries by half within two decades.

Several developments are underway within Pennsylvania which will increase our safety efforts. These include the implementation of the Highway Safety Manual and AASHTO's SafetyAnalyst software into our project selection and design practices, the distribution and implementation of the revised Intersection and Roadway Departure Safety Implementation Plans, and site visits to our engineering personnel and planning partners to discuss recent changes to the HSIP program and how we can all work together to maximize the benefit of each safety dollar spent. We are optimistic that these efforts will aid our progress and make the highways of Pennsylvania safer for the traveling public.

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP MAP-21 Reporting Guidance dated February 13, 2013 and consists of four sections: program structure, progress in implementing HSIP projects, progress in achieving safety performance targets, and assessment of the effectiveness of the improvements.

Program Structure

Program Administration

How are Highway Safety Improvement Program funds allocated in a State?

☒ Central

☐ District

☐ Other

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

The program methodology was updated in February 2009 to include local roads as part of the methodology. Highway Safety Improvement Program (HSIP) funding is allocated to planning regions based on lane miles, vehicle miles traveled, fatalities and reportable crashes. HSIP fund distribution is based on the following formula:

25% (lane miles, % of total) +
25% (vehicle miles traveled, % of total) +

25% (highway fatalities, % of total) +
25% (reportable crashes, % of total)

Every even-numbered year, a Statewide High Crash Location List is generated. This list is used as a basis to prioritize locations for safety projects and is the first funding priority for HSIP monies. State road locations are intially generated using cluster reporting capabilities of PennDOT's Crash Data Analysis Retrieval Tool (CDART); local road locations are next added after a GIS-based analysis. Both types are subjected to the same criteria. For the 2012 list, the criteria was 64 fatal or injury crashes within a 5000 foot section over the past 5 years (2007-2011). These lists are then distributed to planning organizations and engineering districts for review and potential projects.

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

☒ Design

☒ Planning

☐ Maintenance

☐ Operations

☒ Governors Highway Safety Office

☒ Other: Other-Engineering Districts, Planning Organizations, Program Center

Briefly describe coordination with internal partners.

PennDOT Engineering Districts utilize a data-driven analysis process to identify eligible projects and collaborate with local Planning Organizations to develop a program of safety infrastructure projects. This process was designed to improve highway safety using data-driving project development methods and to fulfill the requirements of Section 148 of SAFETEA_LU. Each District, in coordination with area planning partners, is required to utilize the following three step selection process in programming Section 148 (HSIP) projects:

1. Select projects that contain locations listed on the Statewide High Crash Locations

(SHCL) priority ranking. Low cost improvements at these locations can be considered.

2. Deployment of systematic implementation of proven low cost countermeasures.

- OR -

A project location listed in the Intersection Safety Implementation Plan (ISIP) or Roadway Departure Safety Implementation Plan (RDIP)

- OR -

A District may program locations identified on the Planning Organization lists. The Planning Organization Lists are developed from the same methodology as the Statewide High Crash Location Lists but with lower crash thresholds to allow for the identification of 25 locations overall in each Planning Organization.

3. Projects not meeting the above criteria may be programmed, but first must be approved by the Deputy Secretary for Highway Administration. Such approval requests must include the following information:

1) General Project Information, including scope, costs and estimated completion dates.

2) District strategy for exceeding its fatality goal, with the consideration of this project.

3) Justification and safety benefit of programming a non-SHCL/Systematic project, related to fatality goals.

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

☒Metropolitan Planning Organizations

☒Governors Highway Safety Office

☐Local Government Association

☒Other: Other-MAST Team - See Question 8 for description

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.

Response: The HSIP Program fully aligns with the 2012 Pennsylvania Strategic Highway Safety Plan. Within this Plan, Infrastructure Improvements are the third of seven "Safety Focus Areas" identified. Key components of this effort are to:

• Reduce Head-On and Cross-Median Crashes

• Improve Intersection Safety

• Reduce Run-Off-Road Crashes

• Reduce the Severity and Frequency of Hit Fixed Object Crashes

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: **Median Barrier**

Date of Program Methodology: **2/1/2009**

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
- ☒ Potential for Improvement based on Crash History 1

Program: **Intersection**

Date of Program Methodology: **9/1/2009**

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

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
- ☒ Potential for Improvement based on Crash History 1

Program: **Horizontal Curve**

Date of Program Methodology: **2/1/2009**

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

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

☒Potential for Improvement based on Crash History 1

Program: Bicycle Safety

Date of Program Methodology: 2/1/2009

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

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

☒Potential for Improvement based on Crash History 1

Program: **Skid Hazard**

Date of Program Methodology: **2/1/2009**

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

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

☒ Potential for Improvement based on Crash History 1

Program: **Roadway Departure**

Date of Program Methodology: **2/1/2009**

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

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

☒ Potential for Improvement based on Crash History 1

Program: **Low-Cost Spot Improvements**

Date of Program Methodology: **2/1/2009**

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

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
- ☒ Potential for Improvement based on Crash History 1

Program: **Local Safety**

Date of Program Methodology: **2/1/2009**

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

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

☒Potential for Improvement based on Crash History 1

Program: **Pedestrian Safety**

Date of Program Methodology: **2/1/2009**

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

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

☒ Potential for Improvement based on Crash History 1

Program: **Left Turn Crash**

Date of Program Methodology: **2/1/2009**

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

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
- ☒ Potential for Improvement based on Crash History 1

Program: **Shoulder Improvement**

Date of Program Methodology: **2/1/2009**

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

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

☒ Potential for Improvement based on Crash History

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

15

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:

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

The methodology used to generate our High Crash Location Lists, which are #1 (Statewide list) and #3 (Planning Organization lists) on the HSIP priority lists, has been updated for the 2012 versions. Where the criteria for inclusion on the list was formerly based on fatal and major injury crashes, the lists are now based upon all injury crashes including fatalities. This change was based on feedback received from the Engineering Districts, who observed that a single high-fatality event could cause a location with no other crash history to have a priority ranking higher than a location with consistent injury crashes. It is anticipated that the change will remove some of the randomness and variability that come from fatal crashes and lead to a more efficient and effective use of highway safety funding.

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)	49773271	74 %	25105075	67 %
HRRRP (SAFETEA-LU)	0	0 %	0	0 %

HRRR Special Rule	0	0 %	0	0 %
Penalty Transfer - Section 154	0	0 %	0	0 %
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)	0	0 %	0	0 %
State and Local Funds	10000000	15 %	10347764	28 %
Other Hazard Elimination (Section 152)	7459971	11 %	2101947	6 %
Totals	67233242	100%	37554786	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?

$0.00

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

$0.00

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

$0.00

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

$0.00

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

A continuing challenge to potential HSIP fund recipients, as discussed in last year's report, is the process has become tougher to ensure that the funds are being properly obligated. The newer process has steps built in that verify that potential projects meet the goals outlined in the state's SHSP. There was also a recent change in policy for the utilization of HSIP funds. As time progresses, districts and planning agencies will become more familiar with the new policy. We are currently planning to visit each of PennDOT's eleven Engineering Districts to meet with those personnel and those from regional Planning Organizations in order to discuss HSIP program and funding priorities. The first of these visits is scheduled to occur at the end of August 2013.

An additional impediment is the distribution of funds to the Planning Organizations by formula without maintaining a centralized control over the monies. While approval to use HSIP funds on a project is retained at a high level, the projects and funding proposals are all generated from the Planning Organizations. It is hoped that the planning HSIP meetings will educate Planning Organization staff about the intent and priorities of the HSIP program and lead to more effective project and funding choices.

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

Every three years, Pennsylvania produces a Strategic Highway Safety Plan (SHSP) that outlines from a very high level which areas need to be focused on in order to reach our highway safety goals. The SHSP also provides strategies and action items for each of these focus areas. Pennsylvania strives toward meeting its fatality goals by working to increase seat belt use, reduce driving under the influence, reduce aggressive driving, and by implementing safety infrastructure improvements under the Highway Safety Improvement Program and Low-Cost Safety Improvement Program.

The following list identifies Pennsylvania's highway Safety Focus Areas. An asterisk (*) denotes the "Vital Seven" SFA, which are designated as high priorities.

Reducing Impaired (DUI) Driving*
Increasing Seat Belt Usage*
Infrastructure Improvements*
- Reducing Head-On and Cross-Median Crashes
- Improving Intersection Safety
- Reducing Run-Off-Road Crashes
- Reducing the Severity and Frequency of Hit Fixed Object Crashes

Reducing Speeding and Aggressive Driving*
Reducing Distracted Driving*
Mature Driver Safety*
Motorcycle Safety*
Teen Driver Safety (Ages 16-20)
Enhancing Safety on Local Roads
Improving Pedestrian Safety
Improving Traffic Records Data
Commercial Vehicle Safety
Improving Emergency/Incident Response Tiem
- Emergency Medical Services

Emergency Incident Management
Improving Bicycle Safety
Enhancing Safety in Work Zones
Reducing Vehicle-Train Crashes

The “Vital Seven” Safety Focus Areas are selected based on the following criteria:
1) Potential for overall fatality reduction towards goal (with execution of improvements)
2) Number of fatalities (based on historic 5-year average)
3) Cost effectiveness (cost/benefit)
4) Ease of strategy implementation within focus area (proven countermeasures)
5) Resources available (funding, time, partners)

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
Peach St. @ I-90 Interchange	Intersection geometry Auxiliary lanes - add left-turn lane	4.16 Miles	4625054.1	14197361	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Halls Run Curve/US 322	Alignment Horizontal and vertical alignment	0.74 Miles	36187.55	4363682	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Run-Off Road Crashes
SR15 Intersect T-365	Intersection geometry Auxiliary lanes - add left-turn lane	3.95 Miles	2991.24	411526.72	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of	Improving Intersection

										highway intersections	Safety
Milford-Bushkill #1	Roadway Pavement surface - miscellaneous	4.11 Miles	231928.9	1662222	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Run-Off Road Crashes
Shelbourne Rd Jug SW	Intersection geometry Intersection geometry - other	0.72 Miles	40792.5	1600000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Route 145 Safety Project	Miscellaneous	2.47 Miles	3087315.12	14856319	HSIP (Section 148)		0	0	State Highway Agency	Reducing head-on and across-median crashes	Reducing Head-On and Cross-Median Crashes
Goshen @ DarbyPaoliRd	Alignment Horizontal curve realignment	0.3 Miles	174215.51	2232577	HSIP (Section 148)		0	0	State Highway	Minimizing the consequences of	Reducing Run-Off Road

									Agency	leaving the road	Crashes
Pinecroft Curves	Alignment Horizontal curve realignment	0.77 Miles	7260.42	450000	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Run-Off Road Crashes
Mushroom Farm Rd. Intersection	Intersection geometry Auxiliary lanes - add left-turn lane	0.57 Miles	262292.68	1900000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 28/US 322 Intersection	Intersection geometry Intersection geometrics - modify skew angle	0.23 Miles	6818.45	67222	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 28 Safety Improvement	Roadway Roadway widening - add lane(s)	2.43 Miles	1049897.8	3110000	HSIP (Sectio		0	0	State Highway	Reducing head-on and	Reducing Head-On and

s	along segment				n 148)				Agency	across-median crashes	Cross-Median Crashes
PA 88/51 Brdge/Safety Imp	Intersection geometry Intersection geometry - other	1.25 Miles	1854.21	578361.18	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Torchlight Intersection	Intersection geometry Intersection geometrics - modify skew angle	0.48 Miles	334450.13	886456	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
US 40: I-70 to PA 18	Roadway Roadway widening - travel lanes	1.81 Miles	271701.24	610000	HSIP (Section 148)		0	0	State Highway Agency	Reducing head-on and across-median crashes	Reducing Head-On and Cross-Median Crashes
SR 519 / SR 1055	Intersection traffic control Modify control -	0.2	370309.	1526111	HSIP (Sectio		0	0	State Highwa	Improving the design	Improving

Intersection	traffic signal to roundabout	Miles	51		n 148)				y Agency	and operation of highway intersectio ns	Intersect ion Safety
Ginger Hill Intersection	Intersection geometry Intersection geometrics - modify skew angle	0.31 Miles	138194. 9	585156	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
PA475 Hustontown Intrsctn	Intersection geometry Intersection geometrics - modify intersection corner radius	0.09 Miles	335338. 56	375000	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
N Pensyl Hollow Rd Intersection	Intersection geometry Intersection geometry - other	0.49 Miles	29748.4 1	584774	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of	Improvin g Intersect ion Safety

										highway intersections	
US522 Gem Curve	Roadway Roadway widening - curve	0.77 Miles	112245.24	400000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
Baltimore Pike Signals	Intersection traffic control Modify traffic signal timing - signal coordination	3.89 Miles	96055.56	270000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Allntwn @ Trxel&Orvilla	Intersection geometry Intersection geometrics - realignment to align offset cross streets	2.01 Miles	2698.17	170000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Roosevelt Ave Ext. Curve	Alignment Horizontal curve realignment	0.91 Miles	430560.49	2277857	HSIP (Section 148)		0	0	State Highway	Keeping vehicles in the	Reducing Run-Off Road

									Agency	roadway	Crashes
PA 519 at PA PA 980 and I-79	Intersection traffic control Intersection traffic control - other	2.14 Miles	21624.46	500000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Route 232, Swamp Road Safety Improvements	Intersection geometry Auxiliary lanes - add left-turn lane	0.67 Miles	408.59	1002000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Kennedy Drive / County Road	Intersection traffic control Intersection traffic control - other	0.05 Miles	41793.08	400000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 309 and	Intersection traffic control Intersection	0.41	37.8	1392000	HSIP (Sectio		0	0	State Highwa	Improving the design	Improving

St. Johns	traffic control - other	Miles			n 148)				y Agency	and operation of highway intersectio ns	Intersect ion Safety
SR 183/4016 (Shaeffers)	Intersection geometry Intersection geometry - other	0.88 Miles	118075. 82	562450	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
SR 183/4030 (Plum Creek)	Intersection geometry Intersection geometrics - modify intersection corner radius	0.36 Miles	399410. 03	730733	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
LehighBroad & Richmond	Intersection traffic control Modify traffic signal - modernization/replacem ent	4.63 Miles	88532.8 7	7420525	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of	Improvin g Intersect ion Safety

										highway intersections	
Preloh Hill Curve	Alignment Horizontal curve realignment	0.52 Miles	386036.91	2597209.43	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
Remove Weave Condition	Interchange design Interchange design - other	0.02 Miles	550264.83	2142789.48	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Improving Intersection Safety
Exit 7 Improvements	Intersection traffic control Intersection traffic control - other	0.61 Miles	158746.82	510000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 309 Rock Fence	Roadside Fencing	1.53 Miles	98063.27	149100	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Severity and Frequency of Hit Fixed

											Object Crashes
SR62/257 Intersection	Intersection geometry Intersection geometrics - modify skew angle	0.33 Miles	231147.37	1352000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Hardies Road Intersection	Intersection geometry Auxiliary lanes - add left-turn lane	0.77 Miles	303188.44	4099360	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 89 - S Curves	Alignment Horizontal curve realignment	0.68 Miles	1565.83	1713320	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 3013 Corridor Improvements	Roadway Roadway widening - add lane(s) along segment	0.96 Miles	1037776.65	1664492	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of	Improving Intersection

										highway intersections	Safety
Allentown Blvd-1	Miscellaneous	11.93 Miles	292.54	668103	HSIP (Section 148)		0	0	State Highway Agency	Reducing head-on and across-median crashes	Reducing Head-On and Cross-Median Crashes
SR 61 CCIP - Sunbury	Miscellaneous	2.86 Miles	819.77	410000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Blaktwn Rd/Irshtwn Rd/208	Intersection geometry Auxiliary lanes - add left-turn lane	1.02 Miles	16927.47	1525000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
234 & 3001 Improvement	Roadway signs and traffic control Roadway	2.44	58612.5	370000	HSIP (Sectio		0	0	State Highwa	Improving the design	Improving

s	signs (including post) - new or updated	Miles	3		n 148)				y Agency	and operation of highway intersectio ns	Intersect ion Safety
PA 27/North St. Connector	Intersection geometry Intersection geometry - other	0.48 Miles	336231. 94	6214999	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
PA 268 / SR 1038 Intersection	Intersection geometry Intersection geometrics - modify skew angle	0.37 Miles	393952. 45	4366200	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
PA 39 to Lebanon Co. Line	Intersection geometry Auxiliary lanes - add left-turn lane	9.13 Miles	2961111 .39	4167766 .63	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of	Improvin g Intersect ion Safety

										highway intersections	
CCIP Palmyra to Cleona	Intersection traffic control Modify traffic signal - modernization/replacement	8.93 Miles	1285553.19	1449490	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 21/Easy Street Int.	Intersection geometry Auxiliary lanes - add left-turn lane	0.18 Miles	303890.52	1186670	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
US 220 Auction Rd Improv	Interchange design Interchange design - other	1.1 Miles	290868.73	4628819.94	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety

S Waterford Improvements	Intersection traffic control Modify control - two-way stop to roundabout	0.21 Miles	180000	830000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
B&C TO STOCKPILE	Roadway Roadway widening - add lane(s) along segment	0.52 Miles	60285.9	1237144	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Curve west of West Milton Phase I	Shoulder treatments Widen shoulder - paved or other	0.71 Miles	1339.14	988348.7	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 183/ 4018 Intersection	Intersection traffic control Intersection traffic control - other	0.35 Miles	217649.17	1147400	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersectio	Improving Intersection Safety

										ns	
SR 100/309 Intersection	Intersection traffic control Intersection traffic control - other	0.38 Miles	658.55	452378.55	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 100-Claussville Int	Intersection geometry Auxiliary lanes - add left-turn lane	0.47 Miles	1470561.75	4478657	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 322 Safety Improvement	Roadway Roadway widening - add lane(s) along segment	1.84 Miles	367853.51	1950964	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Vine and Arch	Intersection traffic control Modify traffic	0.98	99787.6	1224980	HSIP (Sectio		0	0	State Highwa	Improving the design	Improving

St. Signals	signal - modernization/replacement	Miles	8		n 148)				y Agency	and operation of highway intersections	Intersection Safety
222 & Shantz & 863 signal	Intersection traffic control Intersection traffic control - other	0.23 Miles	49244.92	749606	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 33 Med. GR South Sec	Roadside Barrier - other	11.51 Miles	790	931950	HSIP (Section 148)		0	0	State Highway Agency	Reducing head-on and across-median crashes	Reducing Head-On and Cross-Median Crashes
SR 3002 Intersection Impr	Intersection geometry Intersection geometry - other	1.59 Miles	34996.65	1459131	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersectio	Improving Intersection Safety

										ns	
PA 100, Corridor Safety Improvements	Alignment Vertical alignment or elevation change	9.36 Miles	192.91	200000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Henry Avenue Congested Corridor	Pedestrians and bicyclists Pedestrian signal	11.47 Miles	196577.92	1679000	HSIP (Section 148)		0	0	State Highway Agency	Making walking and street crossing easier	Improving Pedestrian Safety
3069/McFarland-SawMillRun	Intersection traffic control Modify traffic signal - modernization/replacement	4.84 Miles	9420.67	10467.67	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Millwood Road Intersection	Intersection geometry Auxiliary lanes - add left-turn lane	0.21 Miles	462421.41	540000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of	Improving Intersection

										highway intersections	Safety
910 Wexford Run Left Turn	Intersection geometry Auxiliary lanes - add left-turn lane	0.24 Miles	311.61	619205	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Beaver Run Curve	Alignment Horizontal curve realignment	0.26 Miles	6678.95	90000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
Allentown Blvd & Lincoln Highway	Intersection traffic control Intersection traffic control - other	4.6 Miles	520.76	4327321.41	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 118 & Idetown Rd.	Intersection geometry Auxiliary lanes - add left-turn lane	0.08 Miles	34797.19	420000	HSIP (Section 148)		0	0	State Highway	Improving the design and operation	Improving Intersection

									Agency	of highway intersections	Safety
Roosevelt Blvd. Phase2	Pedestrians and bicyclists Pedestrian signal - install new at non-intersection location	21.08 Miles	810909.05	2847000	HSIP (Section 148)		0	0	State Highway Agency	Making walking and street crossing easier	Improving Pedestrian Safety
Olney Av:Broad-Rising Sun	Intersection traffic control Modify traffic signal - modernization/replacement	1.61 Miles	335241.49	850000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
AlleghnyAv:Ridge-Aramingo	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	7.33 Miles	529959.04	890000	HSIP (Section 148)		0	0	State Highway Agency	Making walking and street crossing easier	Improving Pedestrian Safety
Erie Av: Broad St. - K St	Intersection traffic control Modify traffic signal - modernization/replacem	2.47 Miles	202248.4	600000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of	Improving Intersection

	ent									highway intersections	Safety
Harris Pnd Rd Inter.	Intersection geometry Intersection geometry - other	0.38 Miles	41645.7	276000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 116 and Oxford Ave	Intersection geometry Auxiliary lanes - add left-turn lane	0.43 Miles	3911.02	200000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
US 11 & Valley St. Intsct	Intersection traffic control Modify traffic signal - modernization/replacement	0.63 Miles	344181.37	1411111	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety

PA 641 & Central Blvd.	Intersection traffic control Modify traffic signal - modernization/replacement	0.81 Miles	2319.25	1394333	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 34 & PA 850 Intersect.	Intersection traffic control Modify traffic signal - modernization/replacement	0.14 Miles	190.46	200000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Belmont Road Intersection	Intersection geometry Intersection geometry - other	0.2 Miles	81333.63	575000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Mountain Rd/ Bluebird Ave	Intersection geometry Auxiliary lanes - add left-turn lane	0.42 Miles	398633.58	1210111	HSIP (Section 148)		0	0	State Highway	Improving the design and	Improving Intersect

									Agency	operation of highway intersections	ion Safety
SR 896 Safety Project	Roadway Roadway widening - travel lanes	5.75 Miles	305316.12	1295000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
ITS Install I-79,279 SR 22	Advanced technology and ITS Dynamic message signs	1.64 Miles	315.36	125000	HSIP (Section 148)		0	0	State Highway Agency	Increasing driver safety awareness	Reducing Speeding and Aggressive Driving
County line to Laddsburg	Roadway Pavement surface - miscellaneous	2.09 Miles	423030.72	2244445	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
US11 & PA997 Intersection	Roadway Roadway widening - travel lanes	2.08 Miles	49368.78	207880.27	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersectio	Improving Intersection Safety

										ns	
SR72 & Jonestown Rd Inter	Intersection traffic control Modify traffic signal - modernization/replacement	0.08 Miles	9340.89	436000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Overlook to Old Pike Road	Miscellaneous	2.41 Miles	1585809.52	5736851	HSIP (Section 148)		0	0	State Highway Agency	Reducing head-on and across-median crashes	Reducing Head-On and Cross-Median Crashes
Picnic Area to Overlook	Miscellaneous	1.12 Miles	1221725.14	6186810.36	HSIP (Section 148)		0	0	State Highway Agency	Reducing head-on and across-median crashes	Reducing Head-On and Cross-Median Crashes
US 119 / PA 310 Intersection	Intersection geometry Auxiliary lanes - add left-turn lane	0.69 Miles	563204.15	1915334	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway	Improving Intersection Safety

										intersections	
Signing, Delineation, Evaluating Superelevation	Roadway Superelevation / cross slope	2.34 Miles	14744.56	405000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
PA26/PA305 Intrsctn Imp	Intersection geometry Intersection geometry - other	0.19 Miles	8295.86	500000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Water Level Rd Int Imp	Roadside Roadside grading	0.25 Miles	182929.09	214000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
51/Ohio State - SR4004	Roadway Pavement surface - miscellaneous	8.42 Miles	294261.51	323438	HSIP (Section 148)		0	0	State Highway	Keeping vehicles in the	Reducing Run-Off Road

									Agency	roadway	Crashes
US15 PA394 to PA 234	Roadside Barrier- metal	10.35 Miles	39373.08	50000	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Run-Off Road Crashes
NC Tree Trimming Proj	Roadside Removal of roadside objects (trees, poles, etc.)	58.7 Miles	234607.73	614649	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Run-Off Road Crashes
PA31 W Somrst Corridr Imp	Roadway Roadway widening - add lane(s) along segment	1.4 Miles	271835.98	685000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR56/SR4028 Intersection	Intersection geometry Intersection geometry - other	0.41 Miles	23865.38	150000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway	Improving Intersection Safety

										intersections	
Montour Street to US 11	Interchange design Acceleration / deceleration / merge lane	1.12 Miles	397897.57	784476	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 1004 Curve Realignment	Alignment Horizontal curve realignment	1.36 Miles	59665.23	150000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
US 6 Center Turn Lane	Roadway Roadway widening - add lane(s) along segment	1.2 Miles	32594.96	100000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 68 Clarion Curve	Alignment Horizontal curve realignment	0.48 Miles	142782.91	2950545	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes

US 30 / Ronks Road Intsct	Roadway Roadway widening - add lane(s) along segment	1.24 Miles	3835.71	543000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 501 / Oregon Pike Intersect	Intersection geometry Intersection geometrics - realignment to align offset cross streets	1.67 Miles	15021.04	100000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
United High School Curve	Alignment Horizontal curve realignment	1.3 Miles	26871.03	377737.51	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
Yellow Crk Park Intersect	Intersection geometry Auxiliary lanes - add left-turn lane	0.9 Miles	89170.16	225000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersectio	Improving Intersection Safety

										ns	
US 322 Intsect Impvts	Non-infrastructure Road safety audits	1.19 Miles	7255.24	75000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 54/642 Int Improvement	Intersection geometry Intersection geometry - other	0.81 Miles	4627.07	100000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
148/Walnut-5th & 5th/Jerome	Intersection traffic control Modify traffic signal - modernization/replacement	2.84 Miles	1034778.79	1122250	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Cooks Store	Intersection geometry Intersection geometrics -	0.38	53690.6	474000	HSIP (Sectio		0	0	State Highwa	Improving the design	Improving

Intersection	realignment to align offset cross streets	Miles	4		n 148)				y Agency	and operation of highway intersectio ns	Intersect ion Safety
US22 Frankstown Intrsctns	Intersection geometry Intersection geometrics - realignment to align offset cross streets	0.64 Miles	95763	870000	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of highway intersectio ns	Improvin g Intersect ion Safety
SR 267 Shoulder/Edg eline	Shoulder treatments Widen shoulder - paved or other	6.05 Miles	1133.31	1570000	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Keeping vehicles in the roadway	Reducin g Run-Off Road Crashes
SR 0739 Shld Widen / ELRS	Shoulder treatments Widen shoulder - paved or other	2.36 Miles	102531. 28	588000	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Keeping vehicles in the roadway	Reducin g Run-Off Road Crashes
SR 73/662 Corridor Safety	Intersection geometry Intersection geometry - other	1.34 Miles	1090.17	56406.8 1	HSIP (Sectio n 148)		0	0	State Highwa y Agency	Improving the design and operation of	Improvin g Intersect ion

										highway intersections	Safety
SR 248/946 Intersctn Impr	Intersection traffic control Modify traffic signal - modernization/replacement	0.14 Miles	20998.56	298000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
PA 145-329-Chestnut Intr	Intersection traffic control Modify traffic signal - modernization/replacement	0.6 Miles	32698.41	279000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
Bridgeville Rd Shoulders	Shoulder treatments Widen shoulder - paved or other	0.84 Miles	2607.43	75000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 66/948 Int Improvement	Intersection geometry Intersection geometrics - modify skew angle	1.39 Miles	41771.06	354230	HSIP (Section 148)		0	0	State Highway	Improving the design and operation	Improving Intersection

									Agency	of highway intersections	Safety
SR322 Walker's Approach	Intersection geometry Intersection geometrics - modify skew angle	1.62 Miles	30318.38	350000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 348 Intersection Imp	Intersection geometry Auxiliary lanes - add left-turn lane	0.24 Miles	50928.12	423000	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
SR 739 Should / Widening	Shoulder treatments Widen shoulder - paved or other	1.86 Miles	1173.46	724000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 29/3003 Sugar Hollow	Intersection geometry Intersection geometrics - miscellaneous/other/uns	0.34 Miles	38871.95	45000	HSIP (Sectio		0	0	State Highway	Improving the design and	Improving Intersect

	pecified				n 148)				Agency	operation of highway intersections	ion Safety
SR 0307 Shoulders / ELRS	Shoulder treatments Widen shoulder - paved or other	8.97 Miles	808054.65	1025000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 11 Shoulders / ELRS	Shoulder treatments Widen shoulder - paved or other	3.1 Miles	105321.71	749000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 11 Shoulder / ELRS	Shoulder treatments Widen shoulder - paved or other	2.59 Miles	1113.53	690000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 11 Shoulder / ELRS	Shoulder treatments Widen shoulder - paved or other	3.11 Miles	1298.08	823000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
Basin Street Safety Improv	Roadway Roadway - other	0.3 Miles	124959.59	168418	HSIP (Section 148)		0	0	City of Municipal Highway	Improving the design and operation of	Improving Intersection

									Agency	highway intersections	Safety
422 Resurf-419-Wernrsvile	Roadway Pavement surface - miscellaneous	6.09 Miles	22638.54	150000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
8 Signal/Braddock-Linden	Intersection traffic control Modify traffic signal - modernization/replacement	1.78 Miles	47140.29	1158250	HSIP (Section 148)		0	0	State Highway Agency	Improving the design and operation of highway intersections	Improving Intersection Safety
LVTS High Friction Surface	Roadway Pavement surface - high friction surface	0.97 Miles	601682.03	682356	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
378 HTCable MedianBarrier	Roadside Barrier - cable	2.8 Miles	81975.48	175000	HSIP (Section 148)		0	0	State Highway Agency	Minimizing the consequences of leaving the road	Reducing Run-Off Road Crashes

2012 HSIP Rumble Strips	Roadway Rumble strips - unspecified or other	12.54 Miles	209311.65	687500	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes
SR 197: Marsh Road Curve	Roadway signs and traffic control Curve-related warning signs and flashers	0.88 Miles	9760.4	100000	HSIP (Section 148)		0	0	State Highway Agency	Keeping vehicles in the roadway	Reducing Run-Off Road Crashes

Progress in Achieving Safety Performance Targets

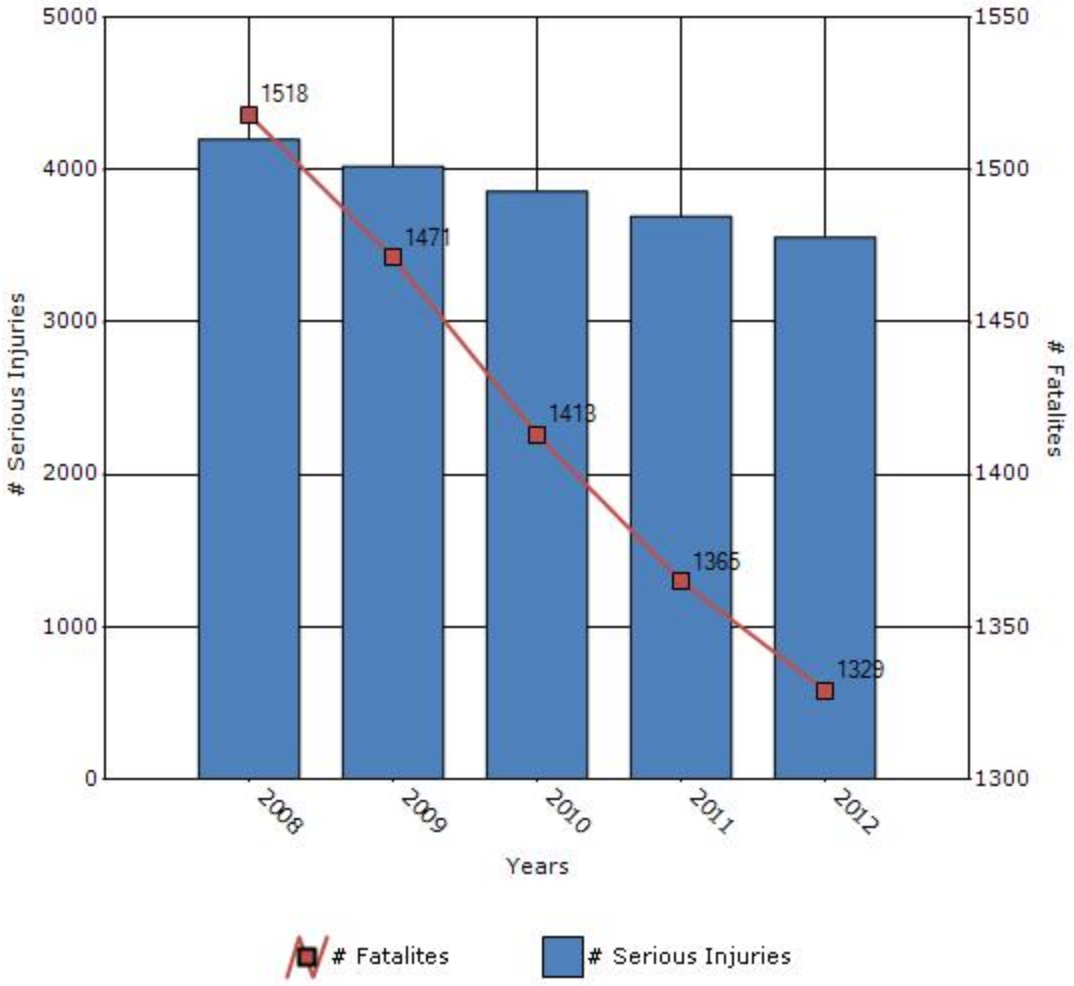
Overview of General Safety Trends

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

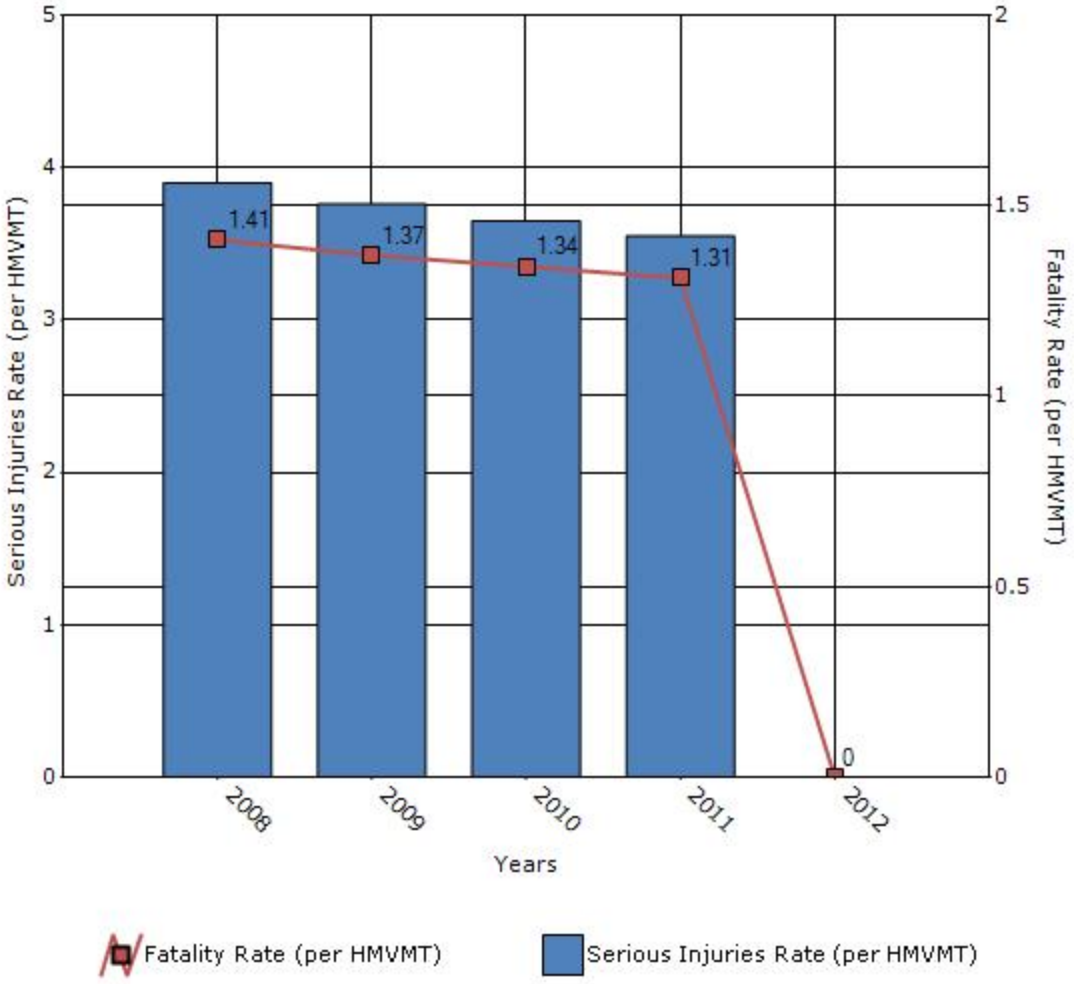
Performance Measures*	2008	2009	2010	2011	2012
Number of fatalities	1518	1471	1413	1365	1329
Number of serious injuries	4199	4022	3858	3693	3556
Fatality rate (per HMVMT)	1.41	1.37	1.34	1.31	0
Serious injury rate (per HMVMT)	3.9	3.76	3.65	3.55	0

*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

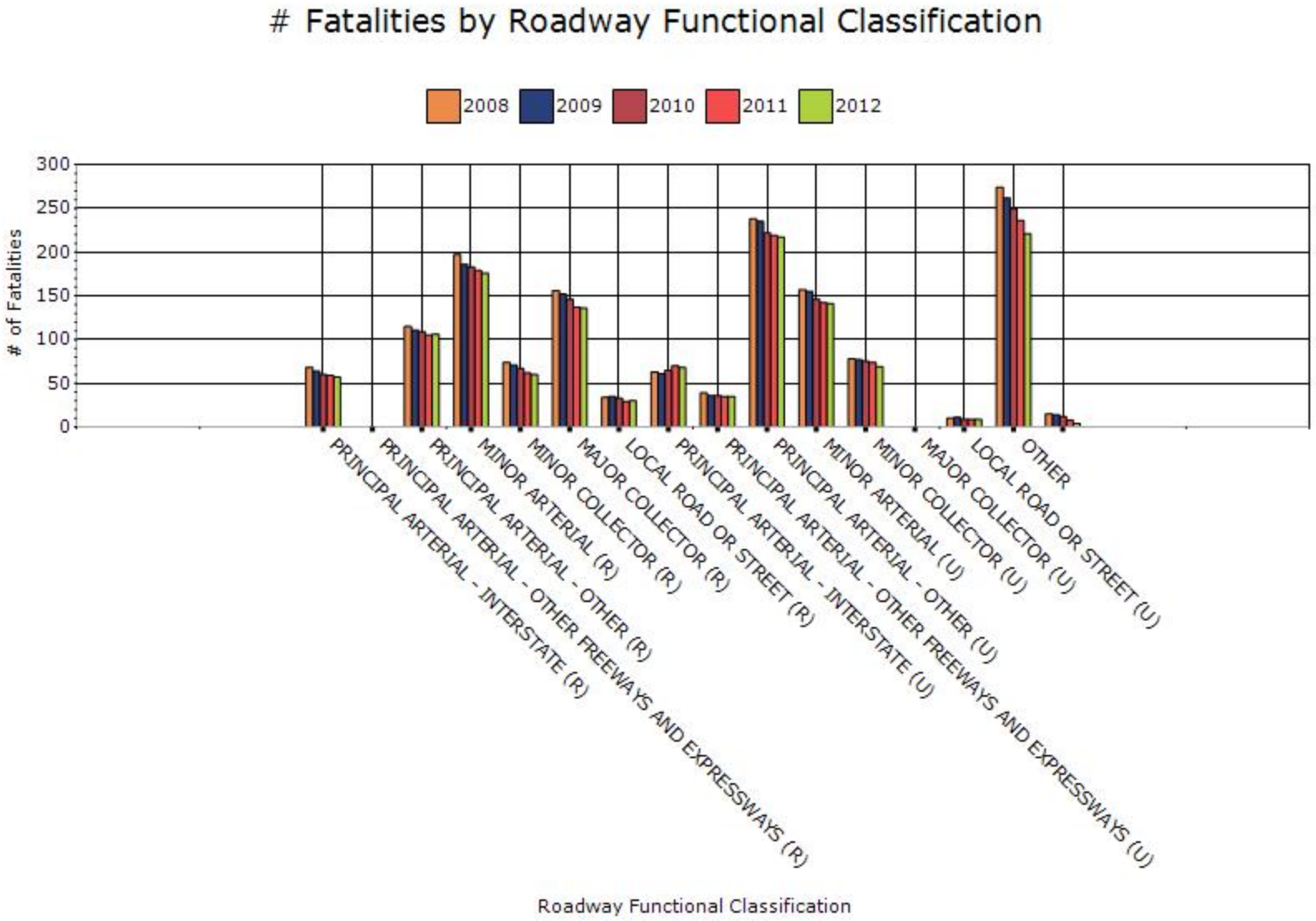


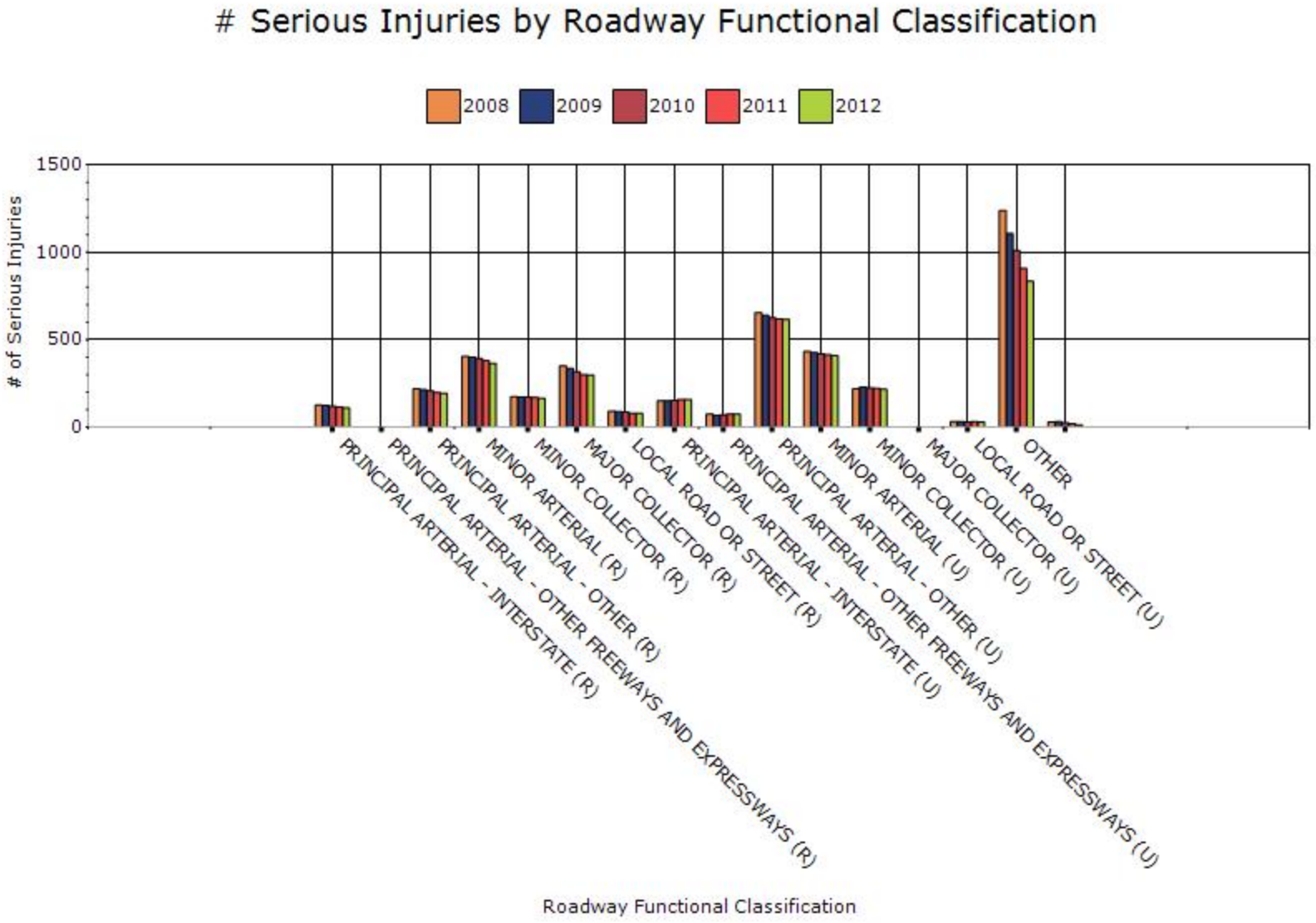
To the maximum extent possible, present performance measure* data by functional classification and ownership.

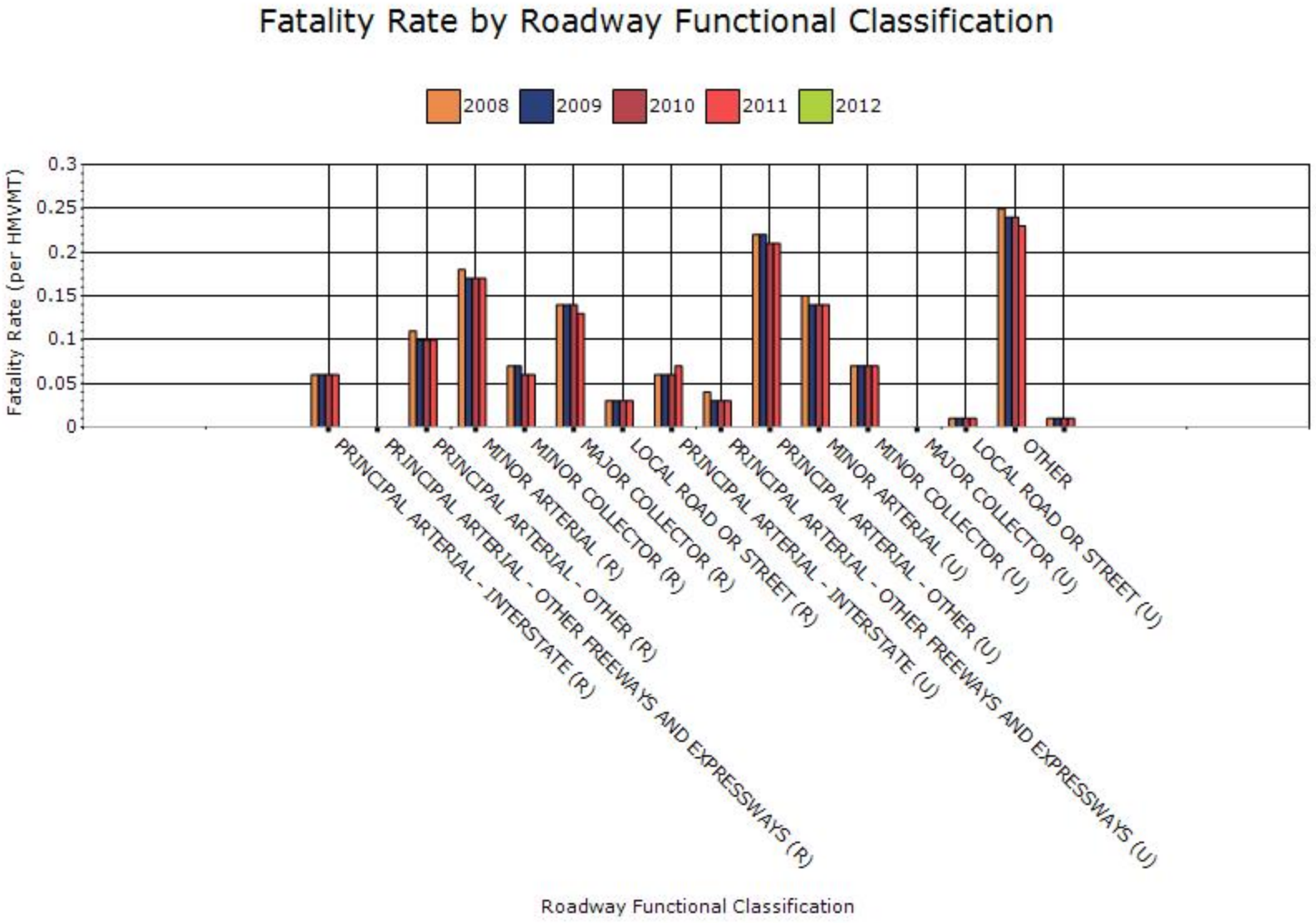
Year - 2012

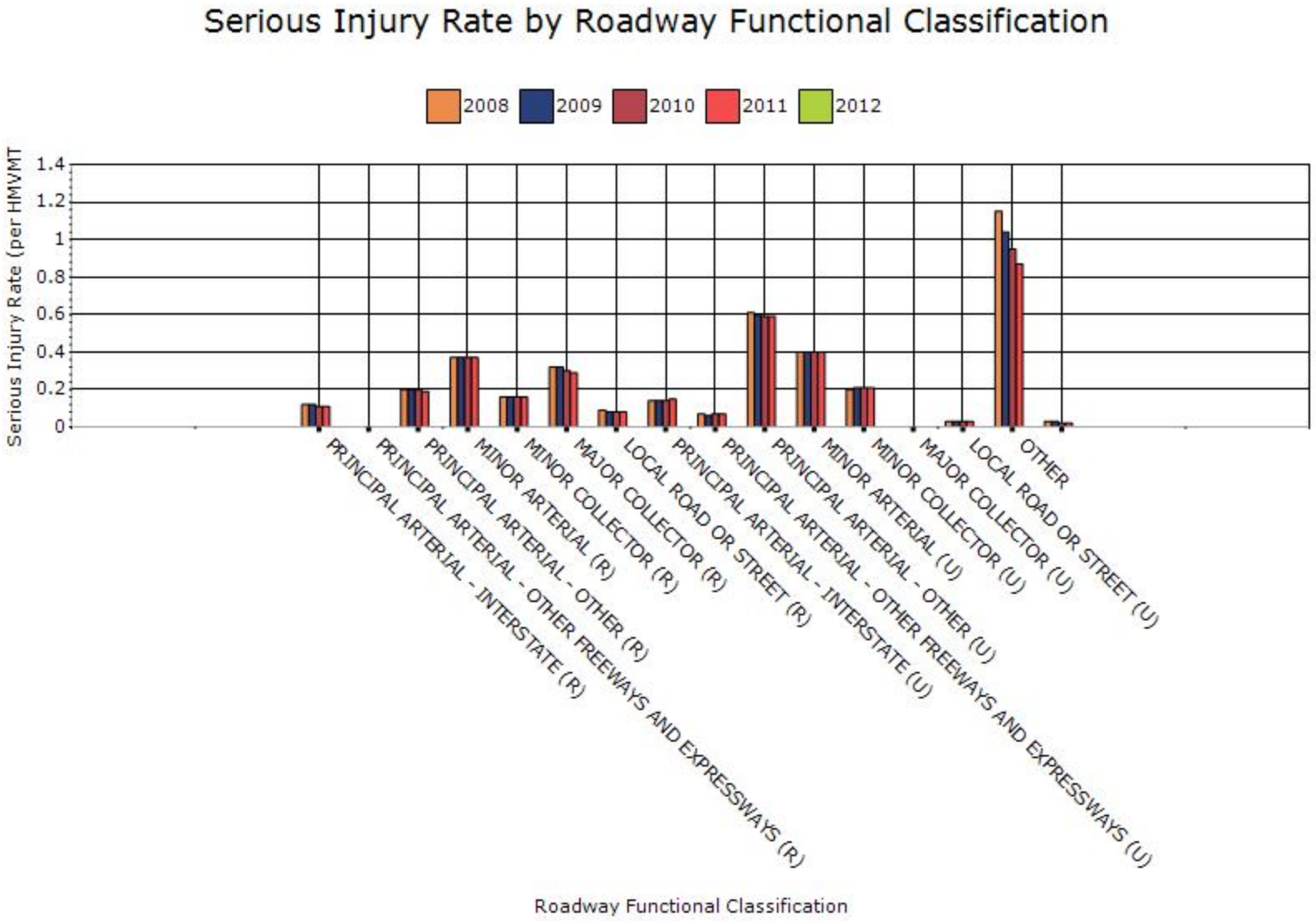
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	57	110	0	0
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	106	193	0	0
RURAL MINOR ARTERIAL	176	365	0	0
RURAL MINOR COLLECTOR	60	164	0	0
RURAL MAJOR COLLECTOR	136	298	0	0
RURAL LOCAL ROAD OR STREET	30	79	0	0
URBAN PRINCIPAL	68	158	0	0

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	35	75	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	217	616	0	0
URBAN MINOR ARTERIAL	141	409	0	0
URBAN MINOR COLLECTOR	69	216	0	0
URBAN MAJOR COLLECTOR	0	0	0	0
URBAN LOCAL ROAD OR STREET	9	30	0	0
OTHER	221	834	0	0
RAMP	4	12	0	0
RAMP	4	12	0	0


Fatalities by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Fatalities
300
250
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification


Serious Injuries by Roadway Functional Classification
2008
2009
2010
2011
2012
1500
1000
500
0
# of Serious Injuries
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

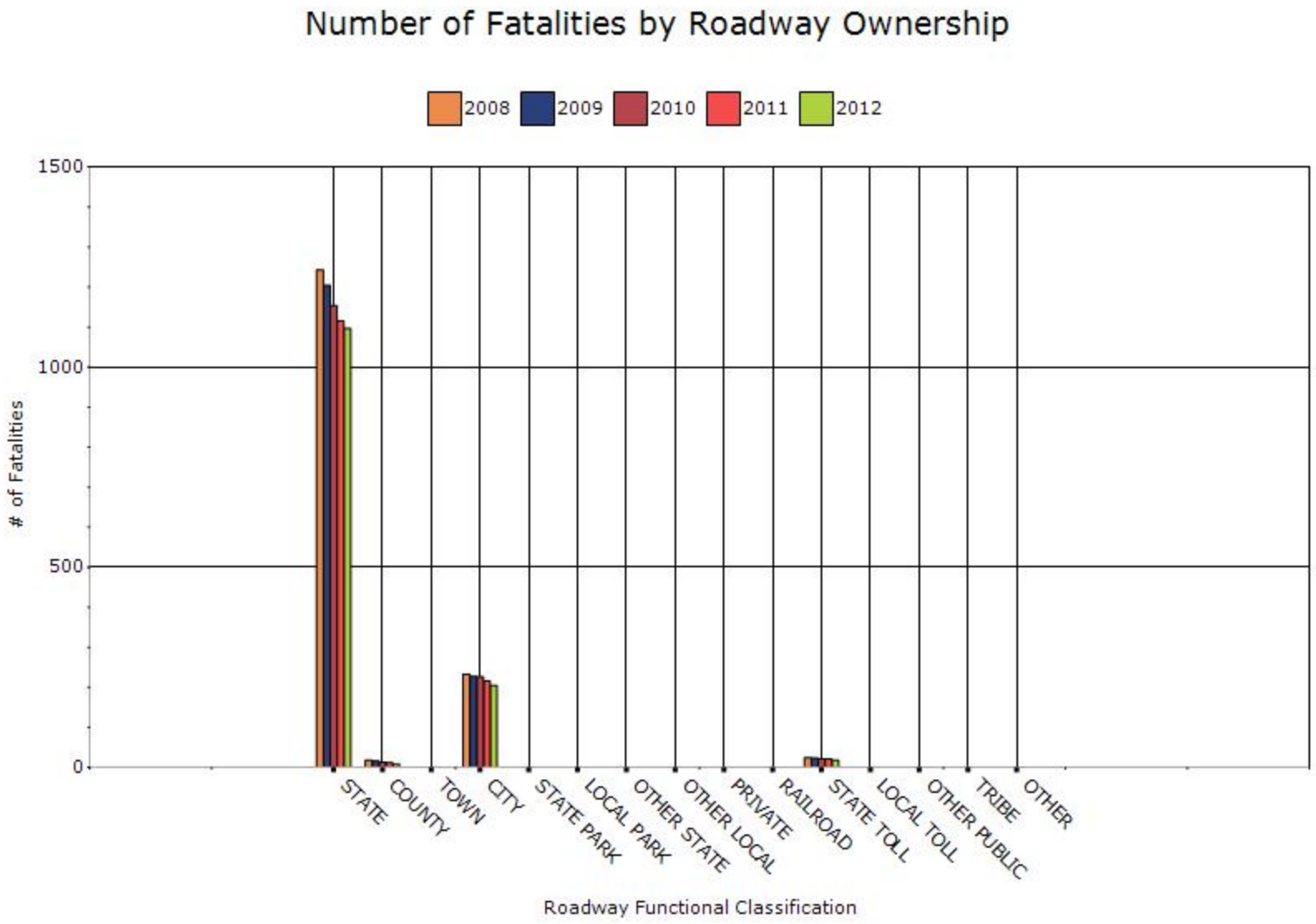

Fatality Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Fatality Rate (per HMVMT)
0.3
0.25
0.2
0.15
0.1
0.05
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

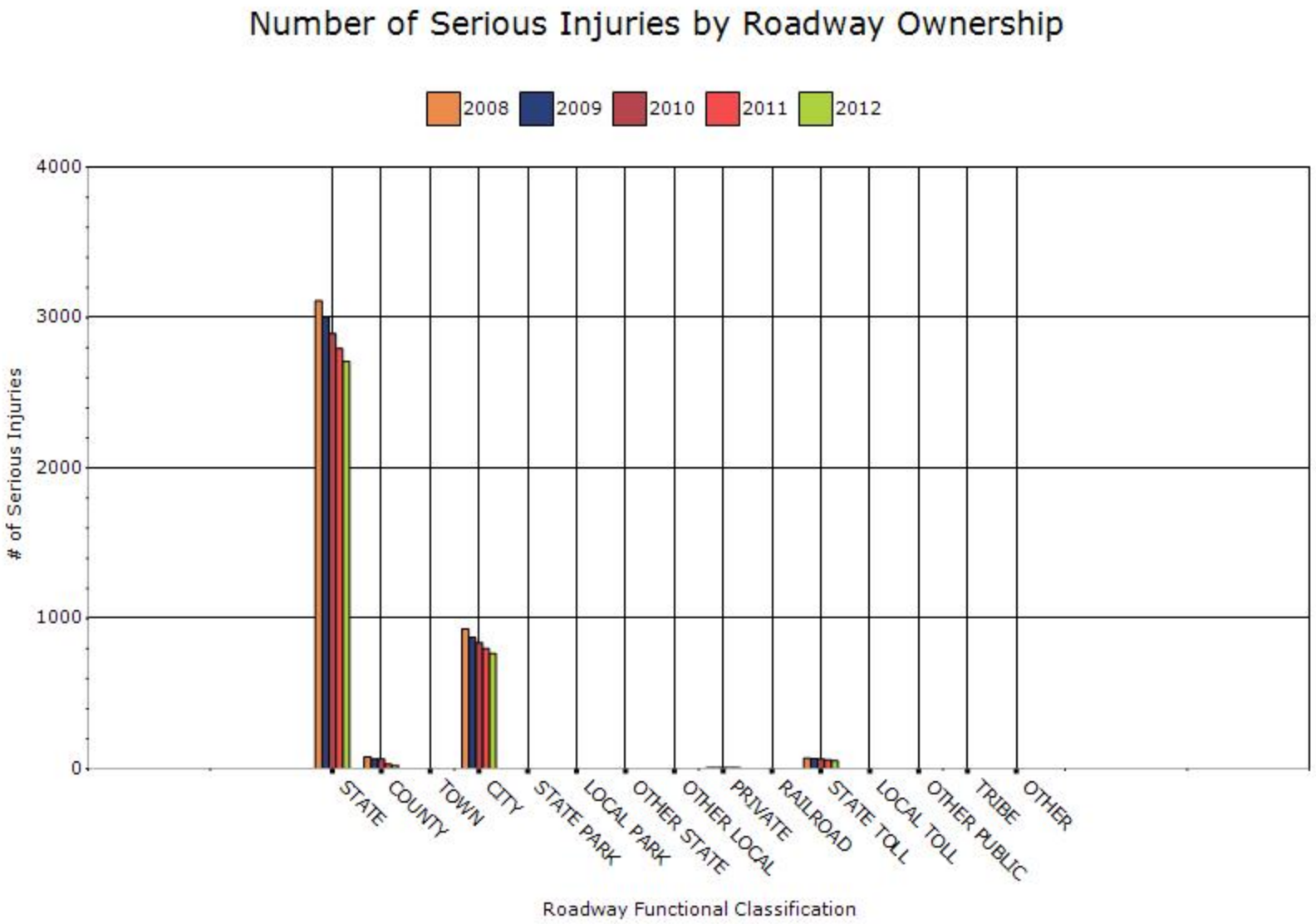

Serious Injury Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Serious Injury Rate (per HMVMT
1.4
1.2
1
0.8
0.6
0.4
0.2
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
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

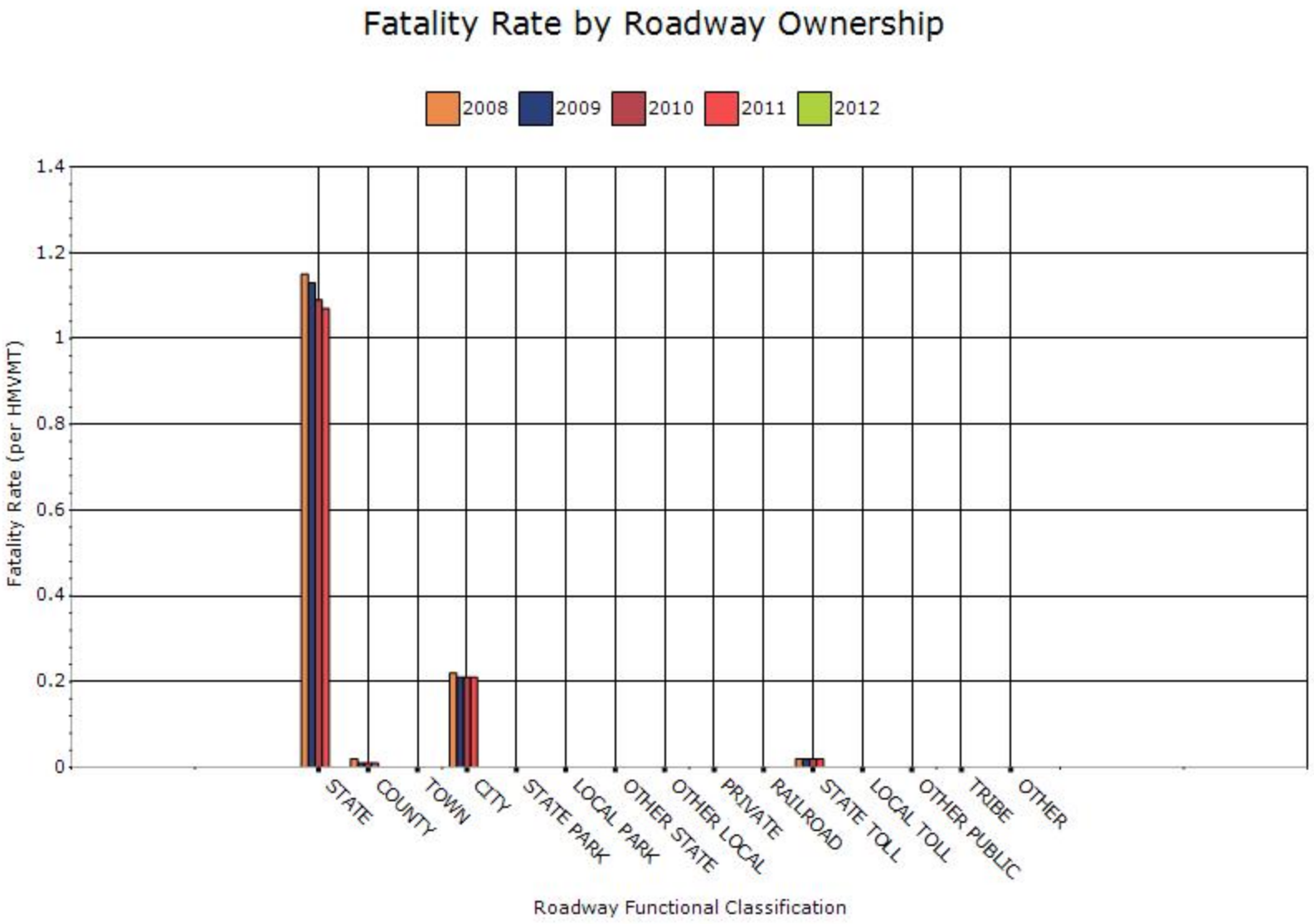
Year - 2012

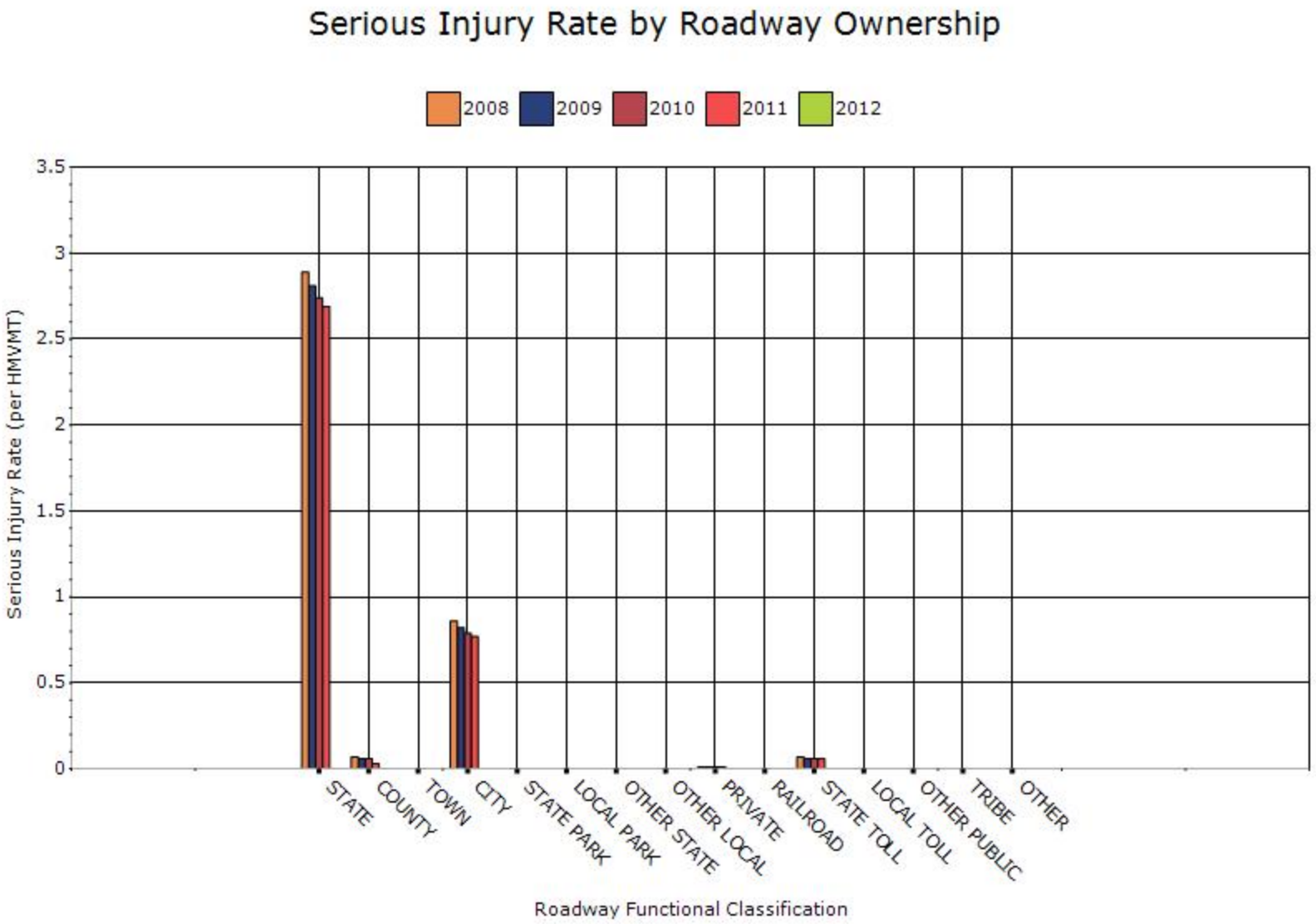
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	1097	2708	0	0
COUNTY HIGHWAY AGENCY	8	22	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	205	767	0	0
STATE PARK, FOREST, OR RESERVATION 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	8	0	0

RAILROAD	0	0	0	0
STATE TOLL AUTHORITY	18	53	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
1500
1000
500
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
4000
3000
2000
1000
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)
1.4
1.2
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)
3.5
3
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.

In 2012, there were 124,032 reportable vehicle crashes in Pennsylvania, which accounted for 1,310 fatalities and 3,455 major injuries. With the exception of one year of fatality increase, the five year average of all three categories has been consistently decreasing over the past ten years.

The total number of fatalities in 2012 is below the five-year (2007-2011) average of 1,329. Annual roadway fatalities in Pennsylvania are decreasing at a rate of thirty-three per year, according to data from 2003 to 2011.

Major injuries in 2012 were lower than the five-year (2007-2011) average of 3,556.

The total number of reportable crashes in 2012 is the third lowest total since 1951 (when 123,088 crashes were reported); the two years of better performance were 2009 and 2010.

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)	1.71	1.68	1.59	1.56	1.54
Serious injury rate (per capita)	3.03	2.89	2.77	2.64	2.57
Fatality and serious injury rate (per capita)	4.74	4.57	4.36	4.2	4.11

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

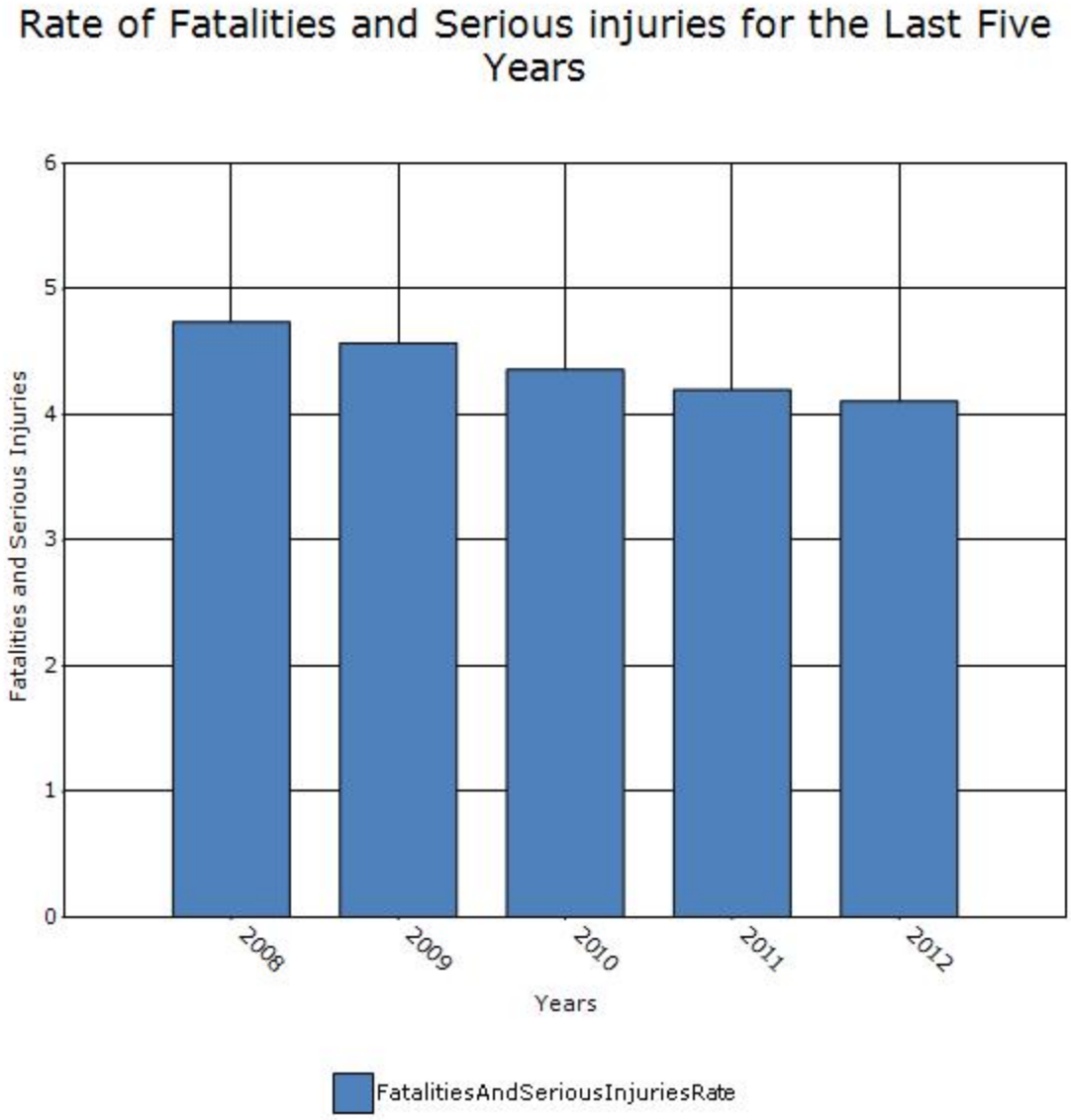
Fatality and Serious Injury (classified as "Major Injury" in Pennsylvania) data for older drivers and pedestrians was collected from the state's crash records systems. Population data was obtained from the US Census Bureau and the proportion of Older Persons per 1,000 population was taken from the FHWA Guidance on this Special Rule. Note that the proportional data was not available from FHWA for all years necessary to calculate five year averages for the 2008-2012 period, and so estimates were made similar to the trends exhibited by the provided data.

Fatality rates were calculated as directed by the FHWA Guidance document:

The number of fatalities of older drivers and pedestrians were summed. This total was divided by the population that year multiplied by the ratio of older persons per 1,000 people. The resulting rate was multiplied by 10,000 to obtain rates between 0 and 10, and thus are expressed as fatality rates per 10,000 population.

A similar methodology was used for the Serious Injuries.

The Fatality and Serious Injury Rate is the sum of the two component pieces. There was a decrease during the two periods (2005-2009 and 2007-2011) to be compared as directed by the Special Rule, though it should be noted there has been a steady decline in the rates otherwise.



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: Other-See Question 31

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

Several changes have been made to the HSIP program in the last reporting period. We have begun to systematically market the FHWA-sponsored Intersection Safety Implementation Plan (ISIP) and Roadway Departure Safety Implementation Plan (RDIP) to PennDOT's Engineering Districts and to Planning Organizations. This is being done in concert with efforts to promote the HSIP program and intelligent use of its funding. Other countermeasures being promoted include high friction surfaces for wet road and curve crashes. These efforts will assist Engineering Districts and Planning Organizations in selecting quality projects and countermeasures which will provide the largest return on safety investment.

On the project side, we have increased our scrutiny of projects applying for HSIP funding as the number of project grandfathered in begin to dwindle. This will ensure that safety funds are being spent wisely.

Finally, we have begun to implement the procedures of the Highway Safety Manual into our project planning. While this enhancement is still in its early stages, it is anticipated that the Manual will promote a more efficient, data-driven use of safety funding.

SHSP Emphasis Areas

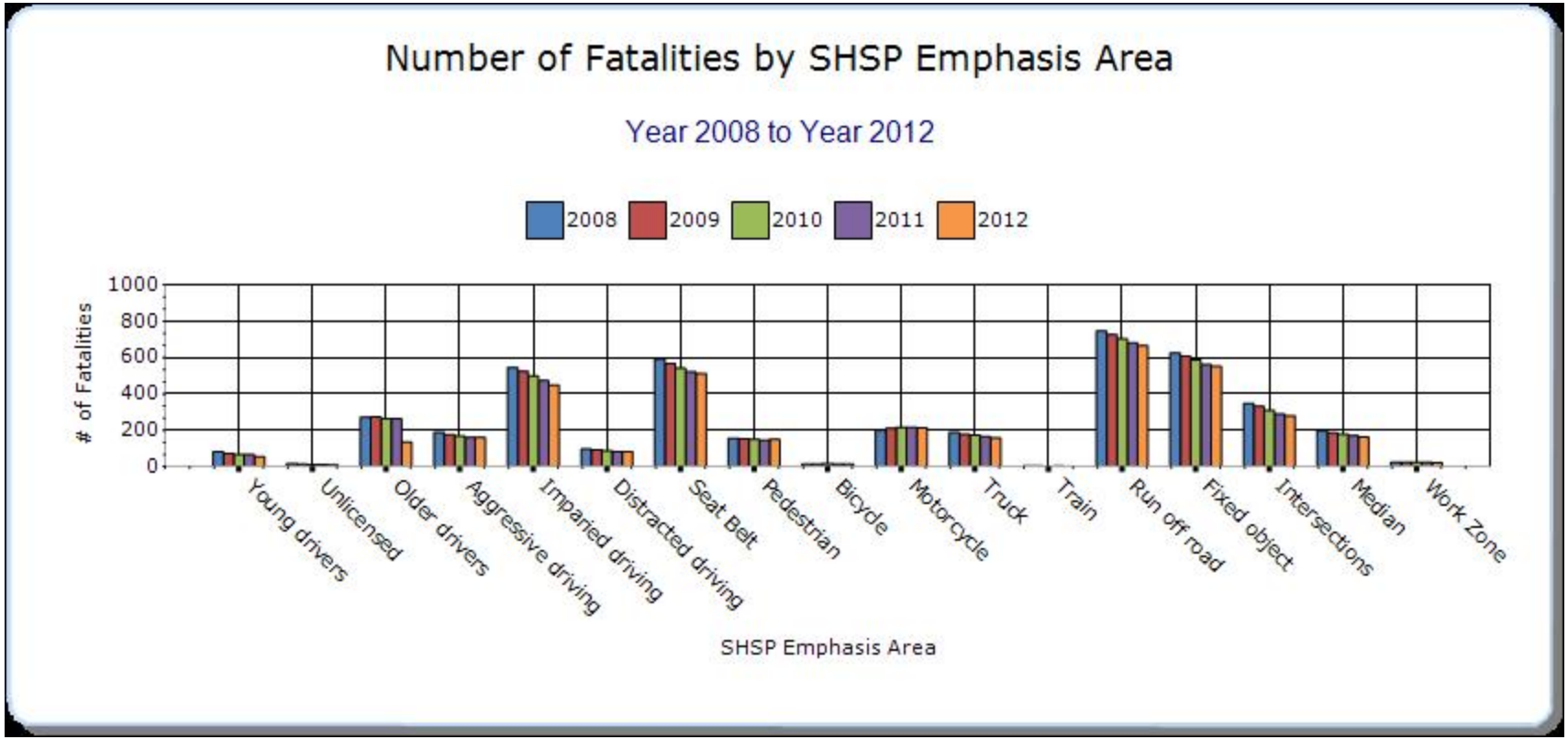
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

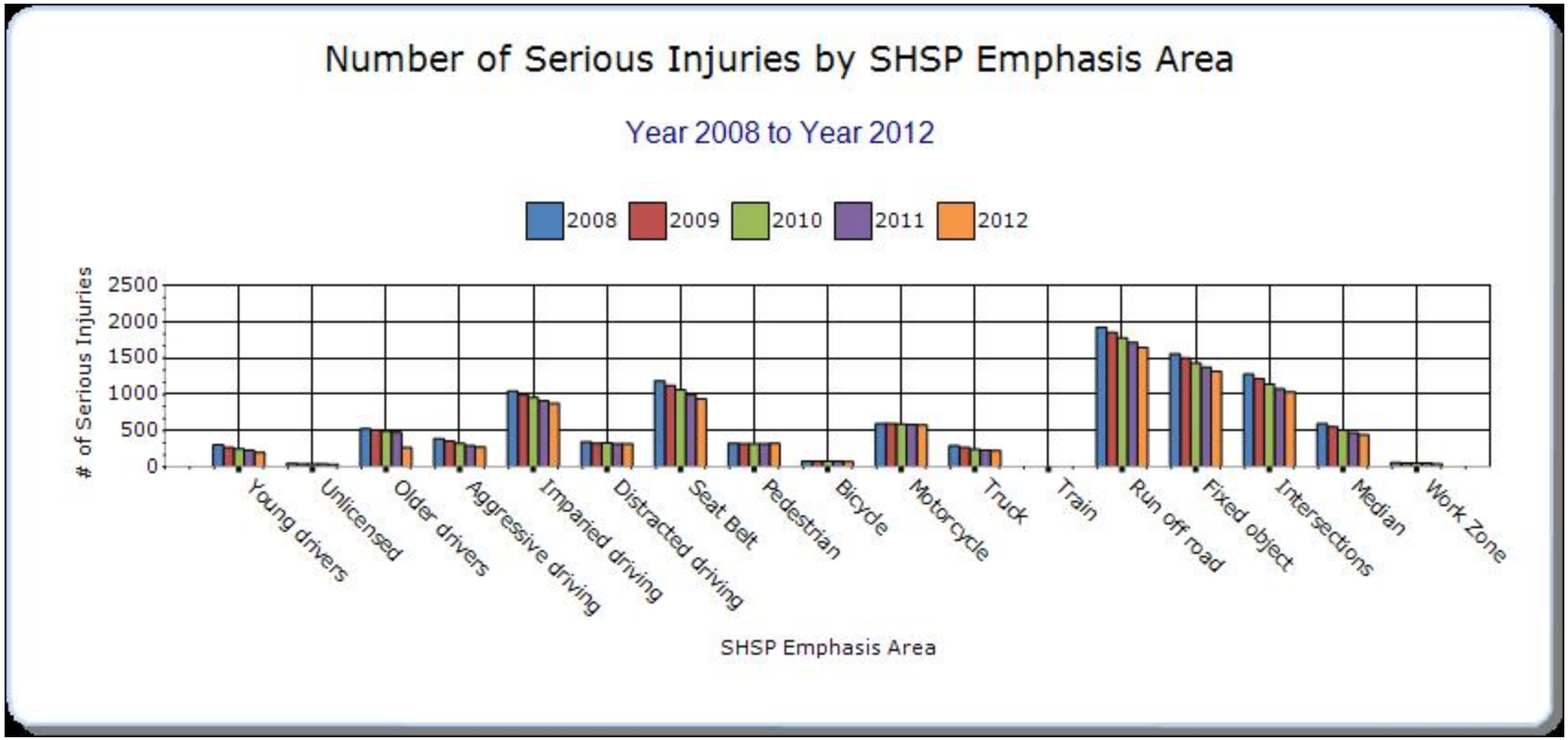
Year - 2012

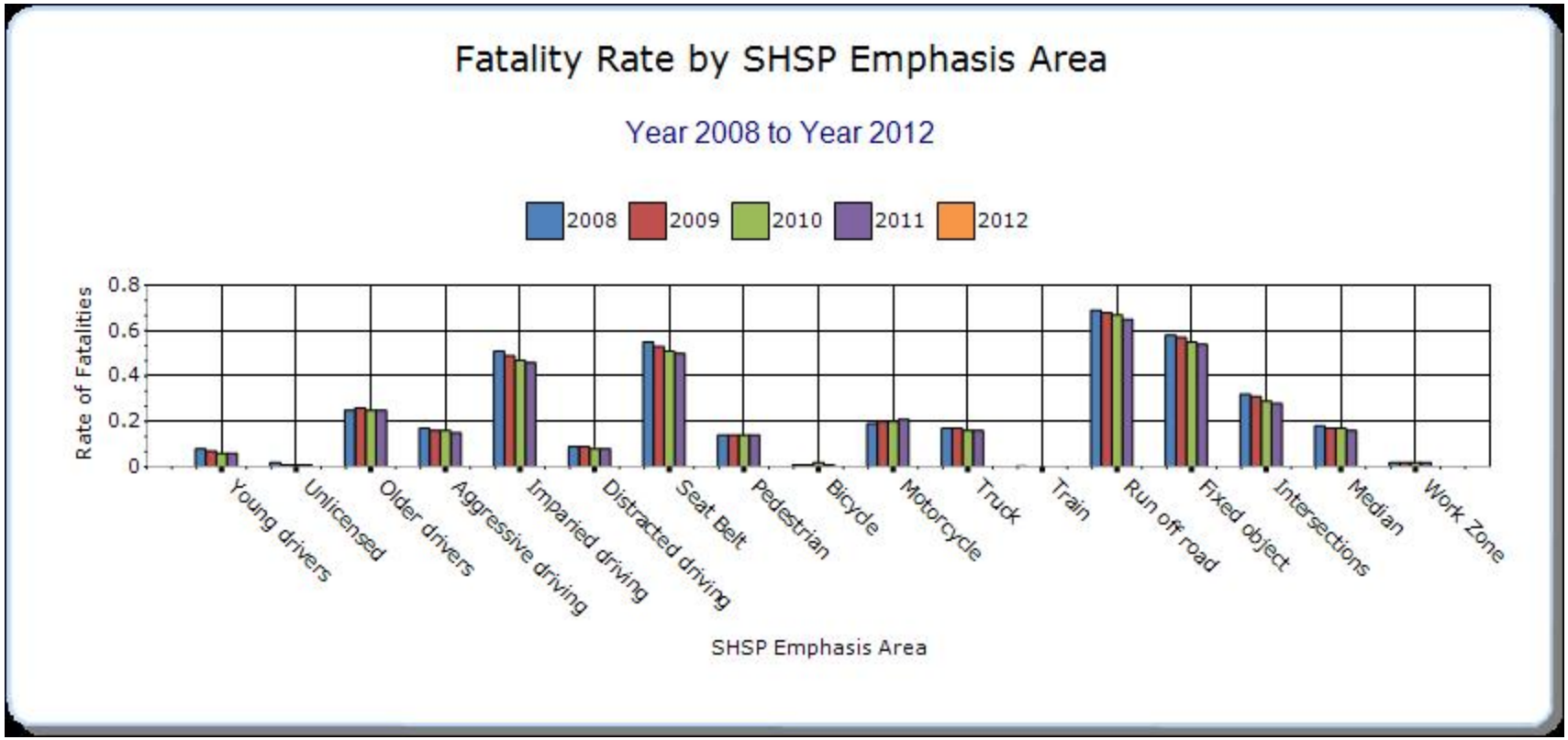
HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Instituting graduated licensing for younger drivers	**Younger Driver Crashes**	**54**	**200**	**0**	**0**	**0**	**0**	**0**
Ensuring drivers are licensed and fully competent	Unlicensed Driver Crashes	8	32	0	0	0	0	0
Sustaining proficiency in older drivers	Older Driver Crashes	135	266	0	0	0	0	0
Curbing aggressive driving	NHTSA Aggressive Driving Crashes	160	272	0	0	0	0	0
Reducing impaired driving	Alcohol-Related Crashes	449	876	0	0	0	0	0
Keeping drivers alert	Distracted/Drowsy Driver Crashes	82	321	0	0	0	0	0
Increasing seat belt use and improving	Unrestrained Crashes	511	938	0	0	0	0	0

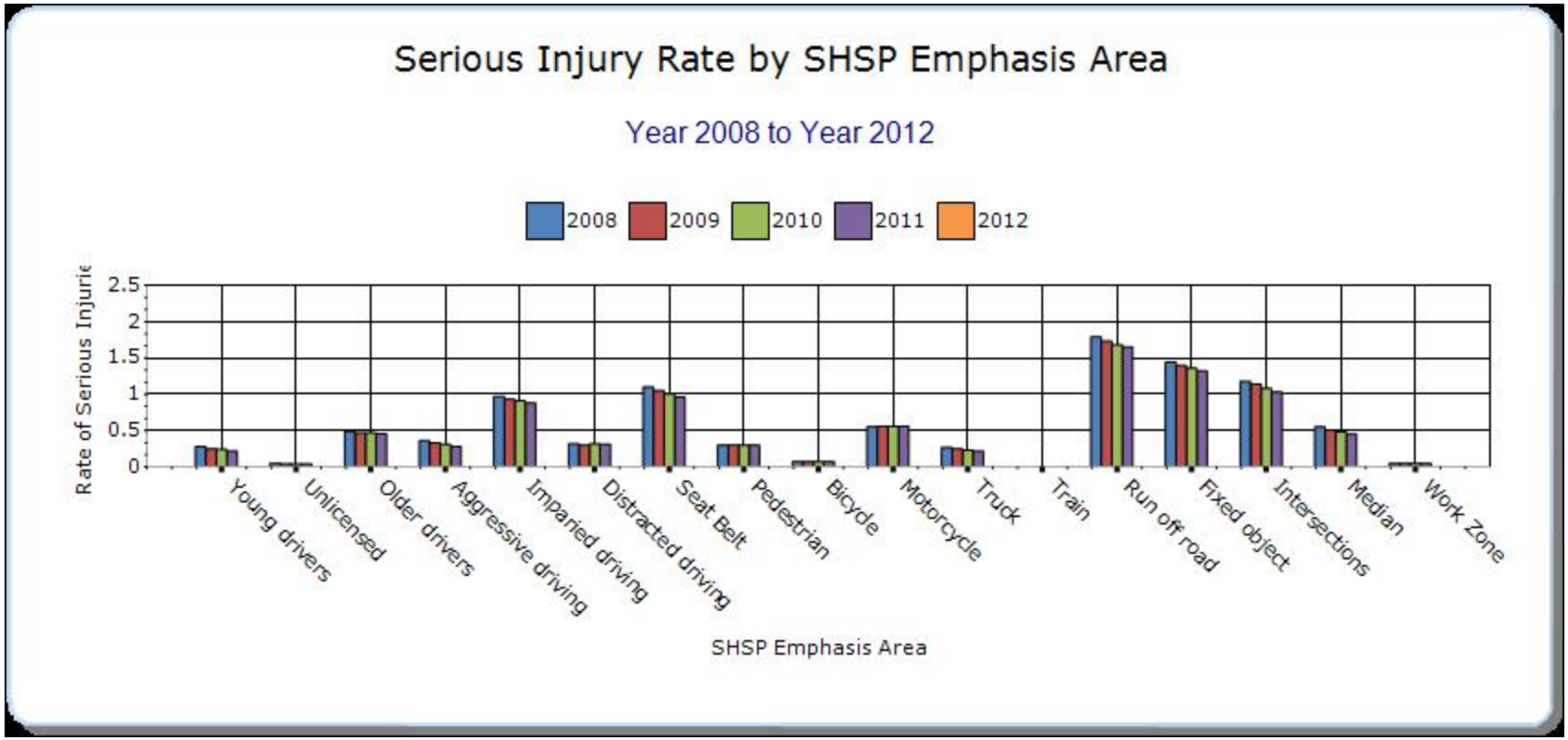
airbag effectiveness								
Making walking and street crossing easier	Vehicle/pedestrian	149	326	0	0	0	0	0
Ensuring safer bicycle travel	Vehicle/bicycle	15	71	0	0	0	0	0
Improving motorcycle safety and increasing motorcycle awareness	Motorcycle Crashes	214	580	0	0	0	0	0
Making truck travel safer	Truck-related	158	224	0	0	0	0	0
Reducing vehicle-train crashes	Vehicle/Train Crashes	2	2	0	0	0	0	0
Keeping vehicles in the roadway	Run-off-road	665	1645	0	0	0	0	0
Minimizing the consequences of leaving the road	Fixed object	551	1315	0	0	0	0	0
Improving the design and operation of highway intersections	Intersection Crashes	280	1034	0	0	0	0	0

Reducing head-on and across-median crashes	Head on	163	444	0	0	0	0	0
Designing safer work zones	Work Zone Crashes	21	44	0	0	0	0	0




Number of Serious Injuries by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Serious Injuries
2500
2000
1500
1000
500
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Impaired driving
Distracted driving
Seat Belt
Pedestrian
Bicycle
Motorcycle
Truck
Train
Run off road
Fixed object
Intersections
Median
Work Zone
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Fatalities
0.8
0.6
0.4
0.2
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Imparied driving
Distracted driving
Seat Belt
Pedestrian
Bicyde
Motorcycle
Truck
Train
Run off road
Fixed object
Intersections
Median
Work Zone
SHSP Emphasis Area

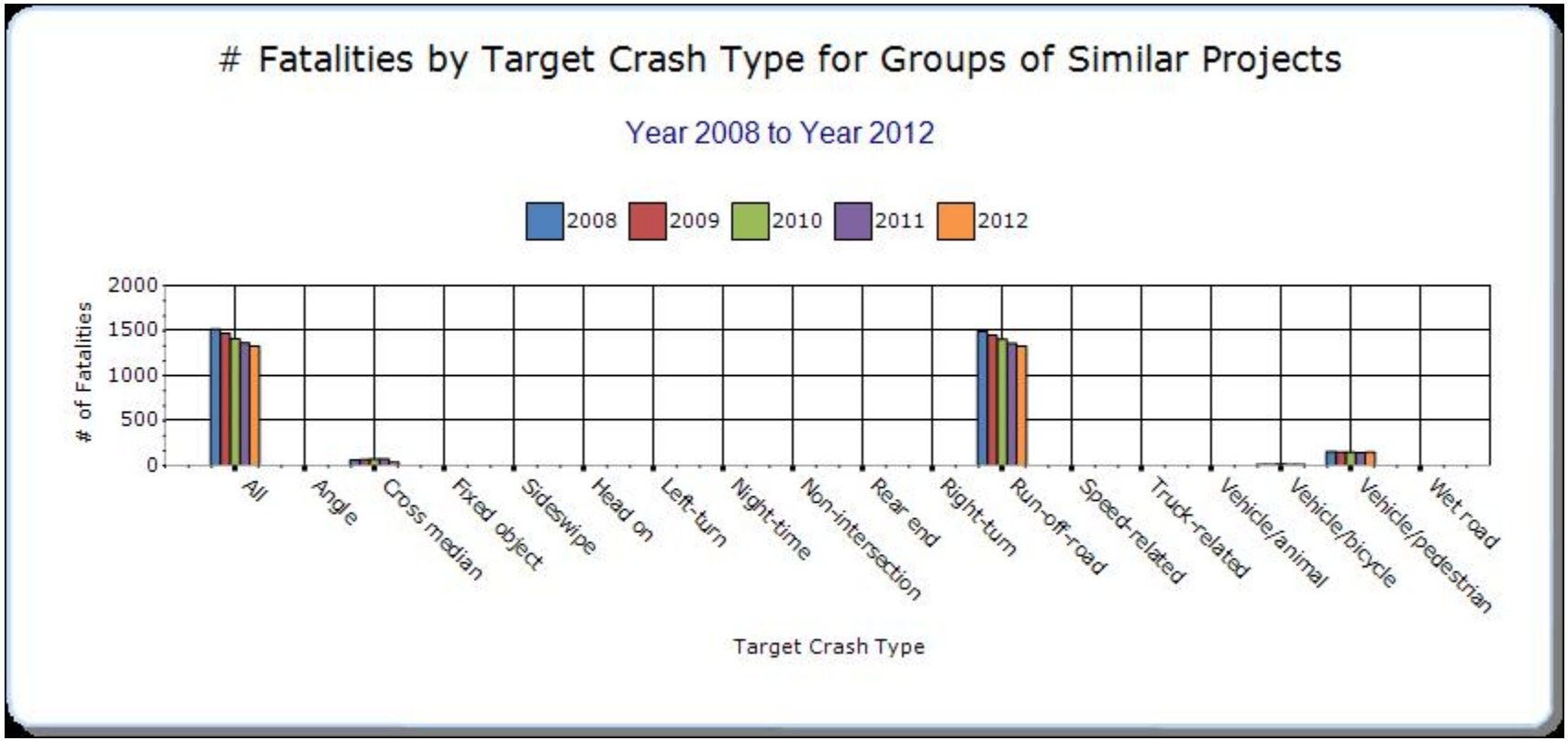

Serious Injury Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
2.5
2
1.5
1
0.5
0
Young drivers
Unlicensed
Older drivers
Aggressive driving
Imparied driving
Distracted driving
Seat Belt
Pedestrian
Bicyde
Motorcycle
Truck
Train
Run off road
Fixed object
Intersections
Median
Work Zone
SHSP Emphasis Area

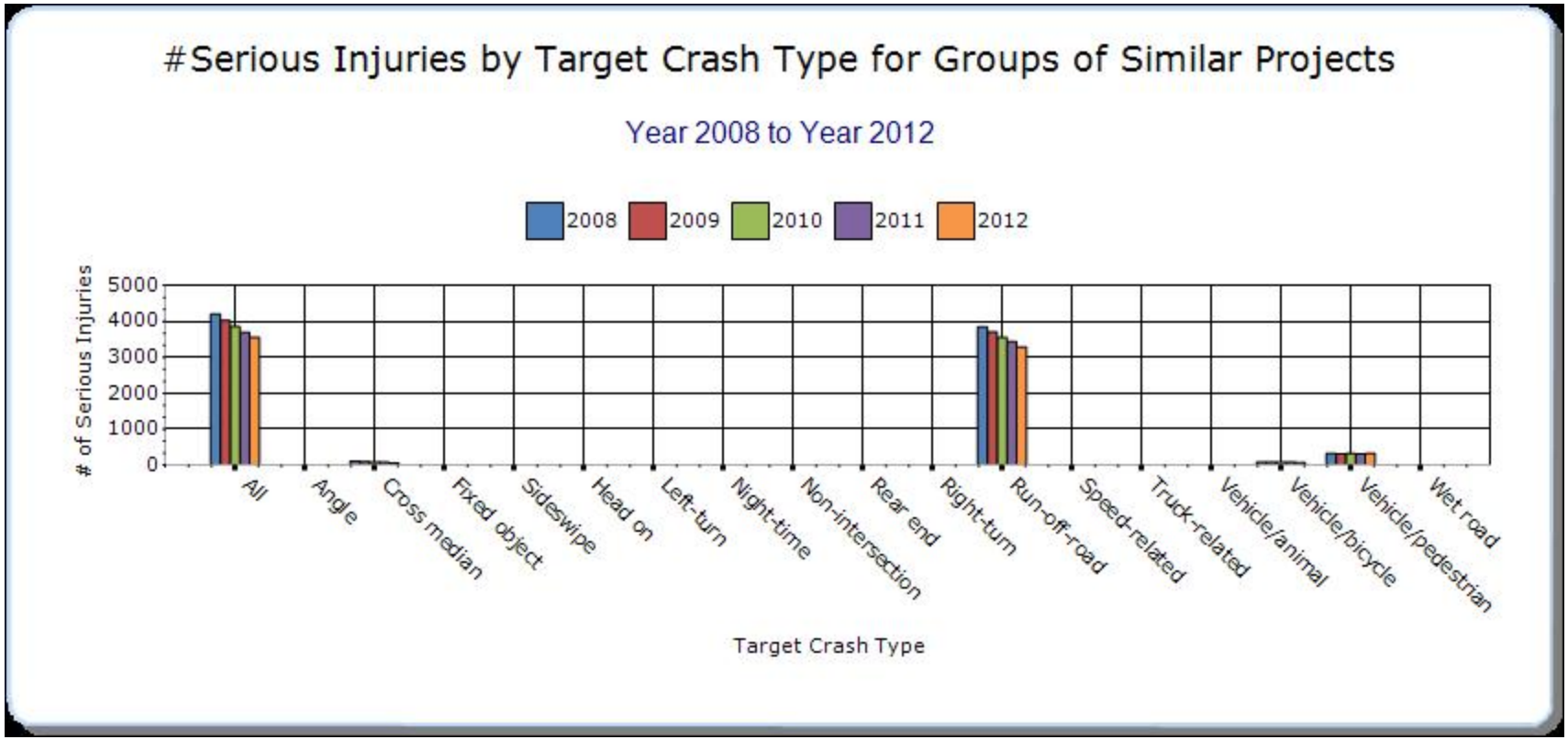
Groups of similar project types

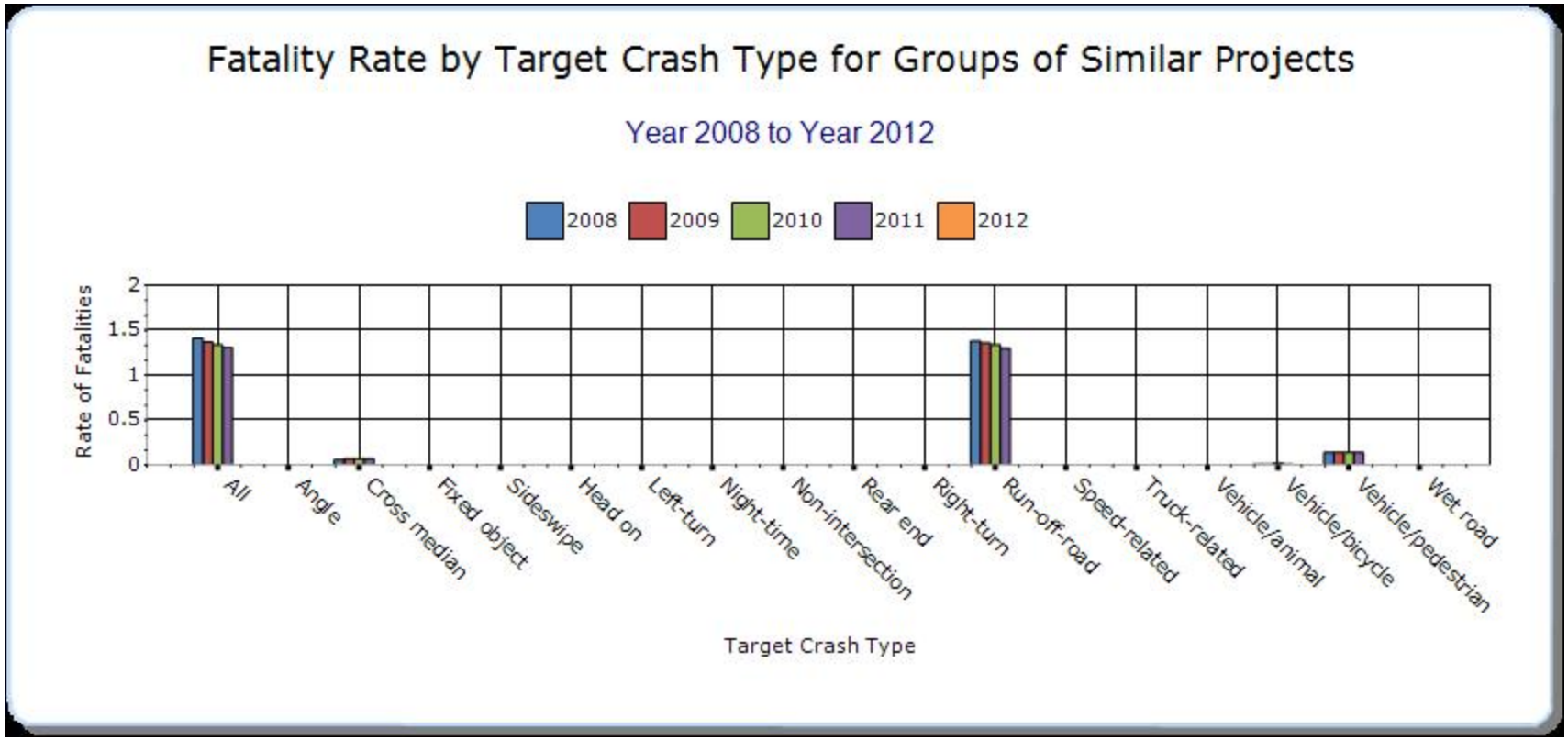
Present the overall effectiveness of groups of similar types of projects.

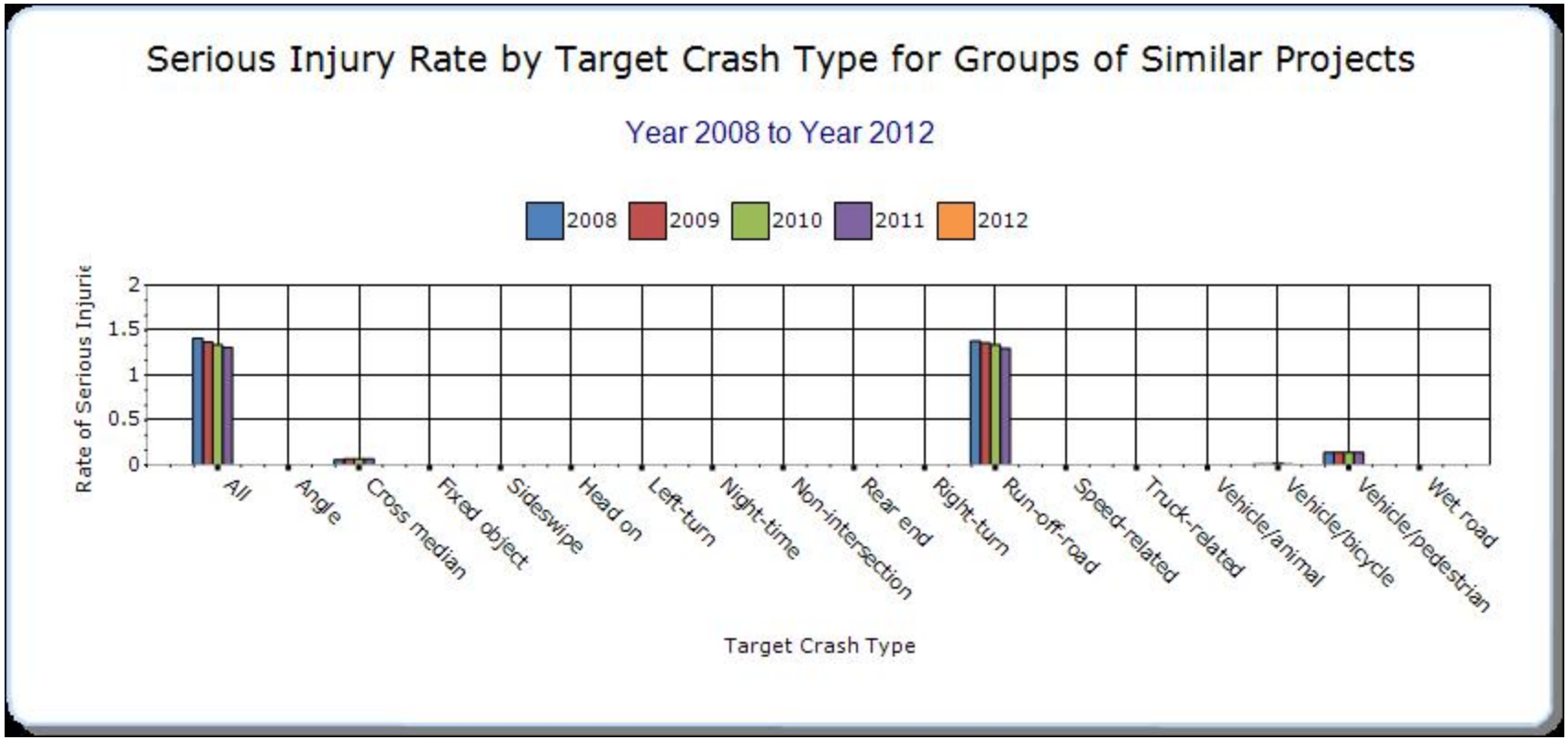
Year - 2012

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
Low-Cost Spot Improvements	**All**	**1329**	**3556**	**0**	**0**	**0**	**0**	**0**
Median Barrier	Cross median	40	63	0	0	0	0	0
Local Safety	Local Road (Only)	214	820	0	0	0	0	0
Bicycle Safety	Vehicle/bicycle	15	71	0	0	0	0	0
Intersection	Intersection Crashes	280	1034	0	0	0	0	0
Roadway Departure	Run-off-road	665	1645	0	0	0	0	0
Horizontal Curve	Curve Driver Error	170	307	0	0	0	0	0
Pedestrian Safety	Vehicle/pedestrian	149	326	0	0	0	0	0
Shoulder Improvement	Run-off-road	665	1645	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
2000
1500
1000
500
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 Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Serious Injuries
5000
4000
3000
2000
1000
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 Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Fatalities
2
1.5
1
0.5
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

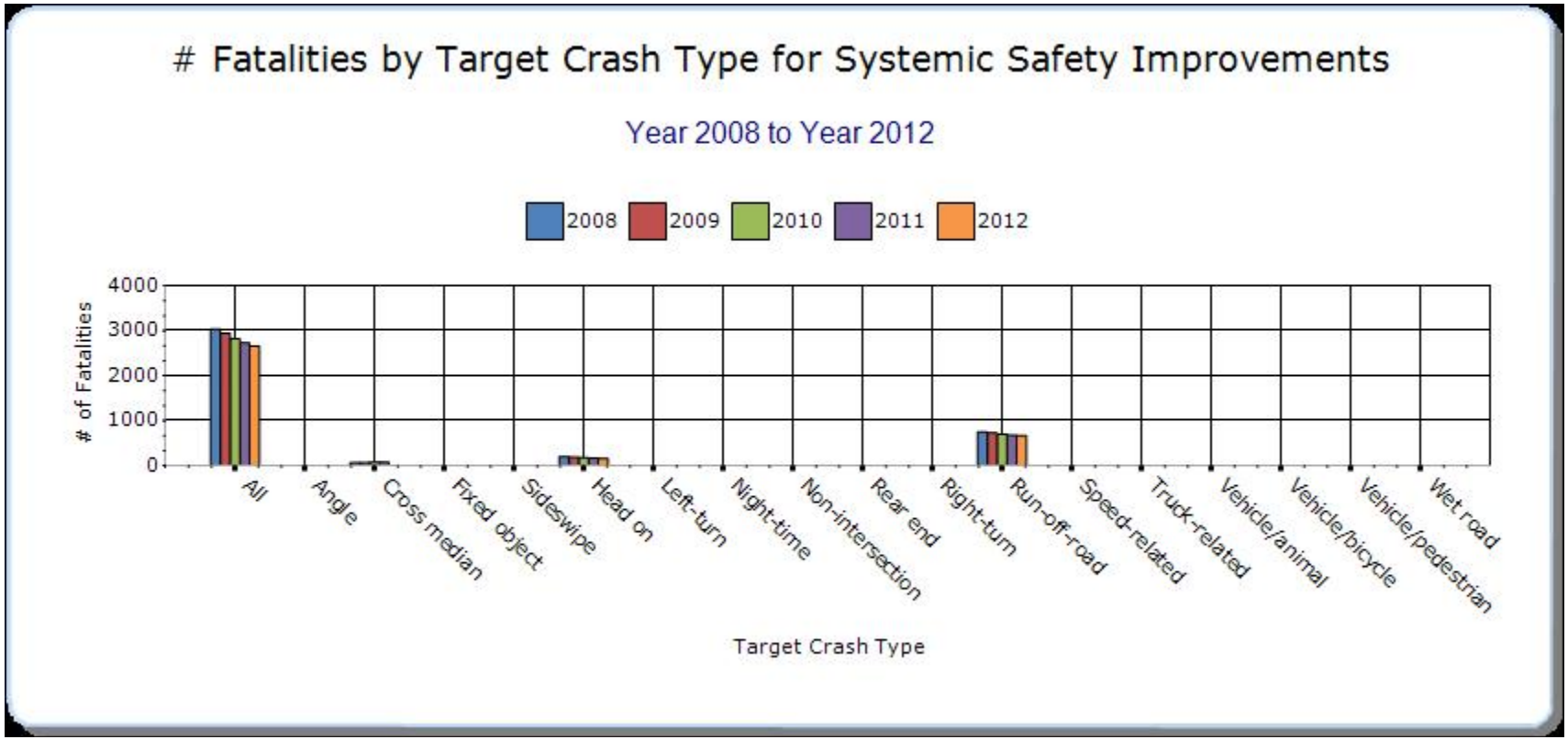

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
2
1.5
1
0.5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

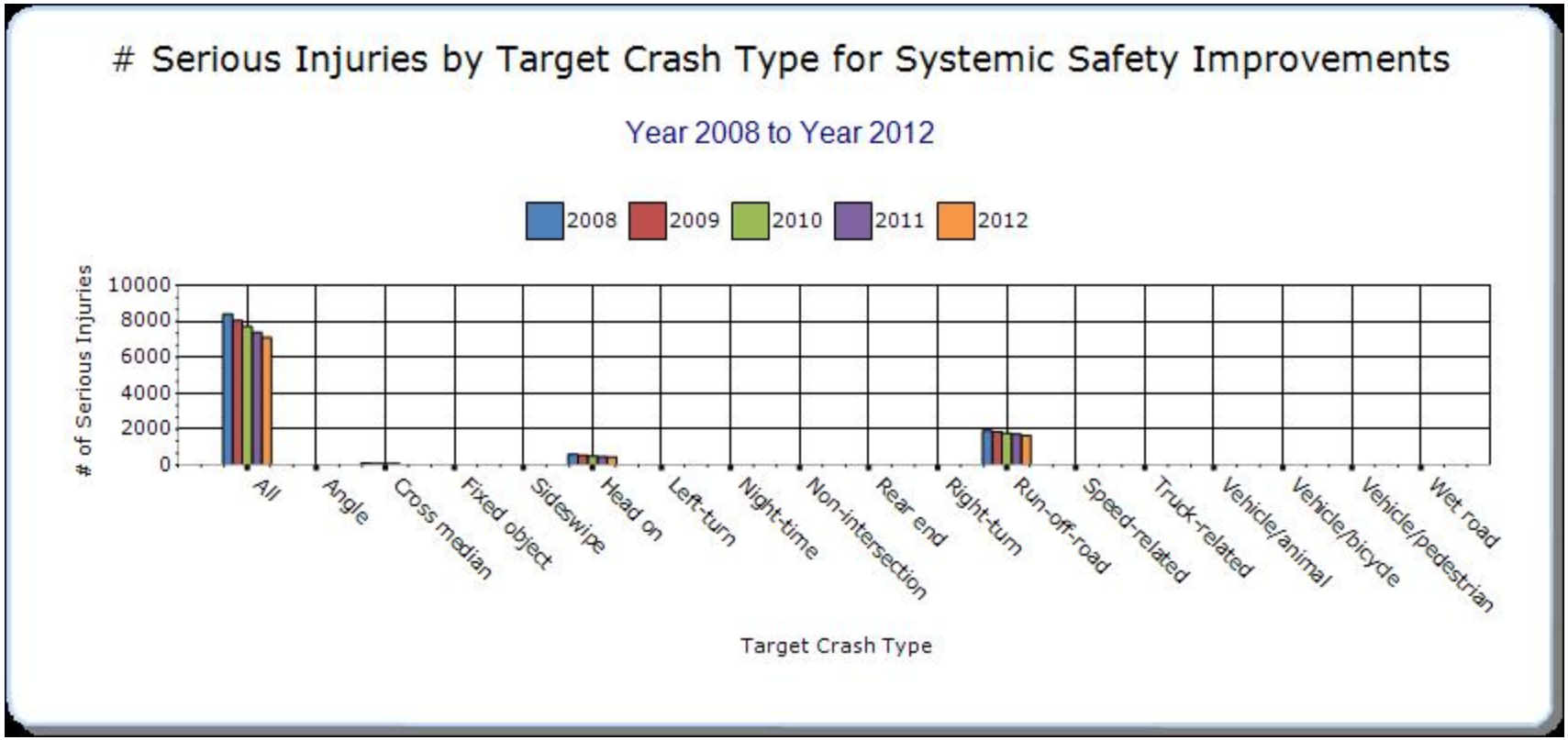
Systemic Treatments

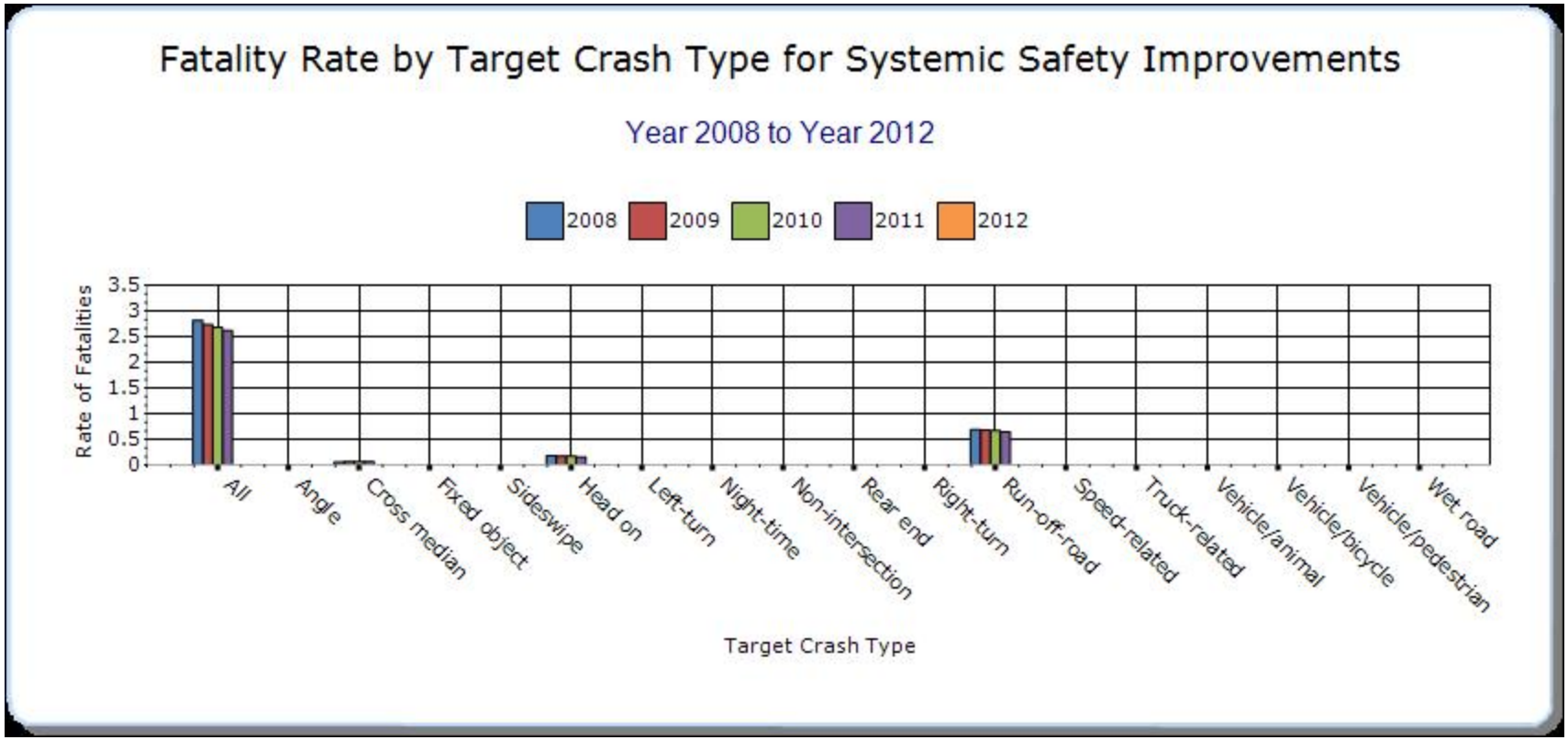
Present the overall effectiveness of systemic treatments..

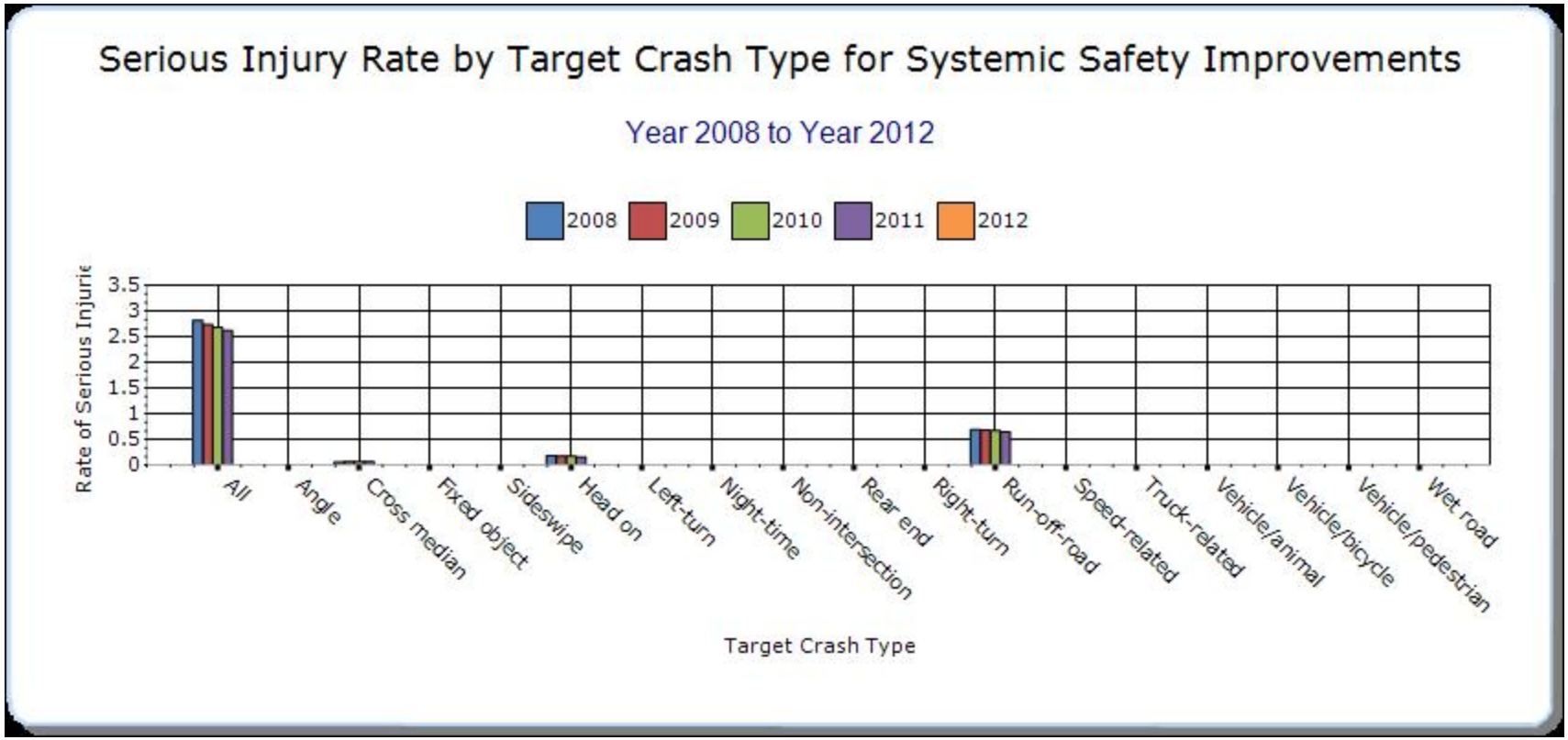
Year - 2012

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
Install/Improve Signing	**All**	**1329**	**3556**	**0**	**0**	**0**	**0**	**0**
Upgrade Guard Rails	Hit Guide Rail Crashes	152	259	0	0	0	0	0
Cable Median Barriers	Cross Median Crashes	40	63	0	0	0	0	0
Add/Upgrade/Modify/Remove Traffic Signal	Intersection Crashes	280	1034	0	0	0	0	0
Pavement/Shoulder Widening	Run-off-road	665	1645	0	0	0	0	0
Rumble Strips	Head on	163	444	0	0	0	0	0
Traffic Control Device Rehabilitation	Intersection Crashes	280	1034	0	0	0	0	0
Install/Improve Pavement Marking and/or Delineation	All	1329	3556	0	0	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# of Fatalities
4000
3000
2000
1000
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
10000
8000
6000
4000
2000
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
3.5
3
2.5
2
1.5
1
0.5
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 Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
3.5
3
2.5
2
1.5
1
0.5
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

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

The five-year average of highway fatalities in Pennsylvania has declined nine out of the last ten years, and that of serious injuries has been consistently falling for the last twelve years. In fact, the single year fatality total for 2012 (1,286) was the third lowest since we began keeping records 80 years ago. While some of these improvements can be attributed to improved vehicle crash performance and greater emphasis on highway safety at all levels, a lot of the improvement has come from Pennsylvania's systematic, data-driven approach to targeting high-improvement-potential locations and utilizing highway safety monies. We are anticipating even greater benefits as we move forward with the implementation of Intersection Safety and Roadway Departure Safety Plans that have been developed for our state by FHWA.

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)
64853 - PA 89 Elgin/Wattsburg		Shoulder treatments	Widen shoulder - paved or other	1	3	13	7	24	0	1	13	14	28	3.56
84077 - SR79 MP 165 to MP 170		Roadway	Pavement surface - miscellaneous	0	0	0	5	5	0	0	2	4	6	-0.01
79399 - NC Center Rumble Strips		Roadway	Rumble strips - center	0	0	0	0	0	0	0	0	0	0	0
79870 - Curve Signing Flashing Device		Roadway signs and traffic control	Curve-related warning signs and flashers	0	0	8	6	14	0	0	1	4	5	-0.74
75038 - Pine and Quenshukeny Safety		Intersection geometry	Intersection geometry - other	1	1	17	14	33	4	0	24	17	45	-14.3
80133 - US 220 "Loon" Safe Proj		Intersection geometry	Intersection geometry - other	0	0	6	2	8	0	0	0	1	1	0.35
80184 - 1007 Flashing Beacon		Roadway signs and	Roadway signs and traffic	0	0	0	0	0	0	0	0	0	0	0

w/PA 54		traffic control	control - other												
80948 - 973/Hoagland Run Icing		Miscellaneous		0	0	1	0	1	0	0	2	3	5	-0.02	
47968 - Well Road Relocation		Alignment	Horizontal curve realignment	0	0	0	0	0	0	0	0	0	0	0	
63707 - Luzern Co Group 4-06-GR1		Roadside	Barrier- metal	0	4	54	0	58	1	6	63	0	70	-3.91	
68137 - SR 309 & Church Road		Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	0	0	0	0	0	0	0	0	0	
70234 - I-81 NB off ramp @ River		Interchange design	Interchange design - other	0	0	16	0	16	0	0	5	2	7	0.77	
80076 80077 - Wrong Way Ramp Initiative		Roadway signs and traffic control	Roadway signs (including post) - new or updated	0	1	3	1	5	0	0	2	1	3	2.29	
80519 - Rumble strips		Roadway	Rumble strips - edge or shoulder	2	1	43	42	88	1	3	46	27	77	7.72	
49045 - Roosevelt Ave Ext. Curve		Alignment	Horizontal curve realignment	0	0	5	2	7	0	0	0	1	1	0.03	
61314 - S.MountainRd/US1		Intersection geometry	Intersection geometry - other	0	0	1	0	1	0	0	0	0	0	0.01	

5 Int Imp														
80684 - SR 851 Safety Improvement		Roadway	Pavement surface - miscellaneous	0	0	9	6	15	0	1	5	0	6	-1.31
84644 - N Beaver St Grade Crossng		Railroad grade crossings	Railroad grade crossings - other	0	0	0	0	0	0	0	1	0	1	-0.05

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.