CONNECTICUT

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2017 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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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.”

Executive Summary

The reporting period for 2017 is from October 1, 2015 to September 30, 2016.

The HSIP is administrated and managed by the Safety Engineering Section located within the Division of Traffic Engineering, Bureau of Engineering and Construction.

This reporting period, CTDOT has obligated more systemic safety improvements in the HSIP program compared to past reporting periods. While CTDOT's traditional site analysis approach, known as the suggested List of Surveillance Study Sites (SLOSSS), results in safety investments at specific locations, the systemic and systematic approach leads to widespread implementation of projects to reduce the potential for fatalities and/or serious injuries, whether or not crashes have occurred at any given site. Because many of CT's fatal and serious injury crashes are spread out across all public roads, the systematic/systemic approach provides an alternate method to identify and implement low-cost safety countermeasures addressing specific risk factors across the entire roadway network. Systemic analysis is a compliment to site-specific analysis, and can be very effective in implementing low-cost safety improvements.

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 Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

Program Structure

Program Administration

Describe the general structure of the HSIP in the State.

CTDOT's Safety Engineering Section, which is located within the Division of Traffic Engineering, Bureau of Engineering and Construction utilizes both the spot improvement approach and the systemic approach to identify, select, implement HSIP projects. The spot improvement approach, known as the Suggested List of Surveillance Study Sites (SLOSSS), results in safety investments at specific locations while the systemic approach leads to widespread implementation of treatments to reduce the potential for fatalities and/or serious injuries, whether or not crashes have occurred at any given site. Since many of CT's fatal and serious injury crashes are spread out across all public roads, the systemic approach provides an alternate method to identify and implement low-cost safety countermeasures addressing specific risk factors across the entire roadway network. As data becomes available, spot improvement projects are evaluated to determine their effectiveness.

Where is HSIP staff located within the State DOT?

Engineering

Enter additional comments here to clarify your response for this question or add supporting information.

The HSIP staff is located within the Division of Traffic Engineering's Safety Engineering Section.

How are HSIP funds allocated in a State?

SHSP Emphasis Area Data

Enter additional comments here to clarify your response for this question or add supporting information.

The HSIP funds are administered and allocated by the central office at CTDOT.

Describe how local and tribal roads are addressed as part of HSIP.

Local Roads are addressed by the Local Road Accident Reduction Program (LRARP). The LRARP provides federal funding for safety-related improvements on the non-state maintained roadways, to address hazardous elements identified at specific locations and along roadway sections. Local road crash data is available at the crash repository at the UCONN. Since traffic volume data for the majority of local roads is not available, an analytical analysis of crashes on non-state maintained roadways to determine project selection has not been possible. Therefore, the Department annually solicits the nine Council of Governments (COGs) in CT for recommended improvements on behalf of their member towns, to address identified hazardous elements. These improvements may address traffic signal enhancements, minor geometric improvements, roadside obstacles, sight line conditions, hazards to pedestrians and poor or unmarked roadways. In the future when more local data is available, the methodology for selection of improvements under the LRARP will be re-evaluated. In recent years, the Department has expanded the LRARP to consider systemic improvement projects designed to address run-off-road fixed-object collisions on local roads. The project costs is capped at $500,000 per location and the local agencies are typically responsible for the non-federal share as well as 100% of the costs for preliminary engineering and rights-of-way. All locations are reviewed and investigated by the Division of Traffic Engineering's Safety Engineering Section and the Division of Highway Design.

Identify which internal partners (e.g., State departments of transportation (DOTs) Bureaus, Divisions) are involved with HSIP planning.

Traffic Engineering/Safety
Design
Maintenance
Operations

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with internal partners.

The Operations' Section within the Department's Division of Traffic Engineering reviews specific locations on the state highway system for possible highway safety improvements. The study locations typically originate from internal databases, such Suggested List of Study Surveillance Sites (SLOSSS), or via appointed and elected officials, town officials, or the public. Depending on the cost and scope of the countermeasure, the CTDOT's Office of Maintenance may be requested to implement low-cost improvements such as traffic signal timing changes, installation of signs and pavement markings. In those situations where the scope of work is beyond the resources of

maintenance, the Operations' Section recommends a project for inclusion in the CTDOT's capital improvement plan. These safety projects are further developed and plans, specifications, and estimates are undertaken by the Department's Division of Highway Design.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Academia/University
Other-Safety Circuit Rider Program

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with external partners.

The Division of Traffic Engineering's Safety Section annually solicits the nine Council of Governments (COGs) in CT for recommended improvements on behalf of their member towns, to address identified hazardous elements on local roads. Due to limited HSIP funding, each COG must prioritize the applications received and forward only two potential projects to CTDOT for consideration. CTDOT evaluates all the projects received and notifies the COG if the project is approved for funding. The COG's inform the member towns accordingly.

The Department's Safety Section works in partnership with the CT's Safety Circuit Rider Program (CT SCR) which provides safety-related information, training, and technical assistance to local agencies. Some of the initiatives include coordination of Road Safety Assessments (RSA's), collection and analysis of traffic volume data, identification of low cost safety improvements, assistance in the development of Local Road Safety Plans, development of a Connecticut Toolbox of Safety Resources, development of a series of Roadway Safety Briefs, and delivery of Local Road Safety Training. The CT SCR program also provides assistance to local agencies in understanding the capabilities of the new CT Crash Data Repository at UCONN and provides accurate information to local practitioners to make informed roadway safety decisions.

Have any program administration practices used to implement the HSIP changed since the last reporting period?

Yes

Describe HSIP program administration practices that have changed since the last reporting period.

The Transportation Safety Research Center at UCONN has assumed the role of transportation safety planning for the agency which was formerly the responsibility of the Department's Bureau of Policy and Planning. UCONN is in the process of developing a new safety management system for the Department. The beta version of the network screening and diagnostic tools are currently being tested.

Are there any other aspects of HSIP Administration on which the State would like to elaborate?

2017 Connecticut Highway Safety Improvement Program
Yes

Describe other aspects of HSIP Administration on which the State would like to elaborate.

Projects can qualify for the Department's HSIP funds and placement on the HSIP Safety Project Plan when they are initiated from the following sources:

-Suggested List of Surveillance Study Sites (SLOSSS)
-Local Road Accident Reduction Program (LRARP)
-Railway-Highway Grade Crossing Program (RHGCP)
-Projects supporting SHSP Emphasis Areas
-Section 402/405 Safety Programs (NHTSA)
-Section 154 (Open Container Requirements)
-High Risk Rural Roads

Program Methodology

Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?

Yes

To upload a copy of the State processes, attach files below.

File Name:
CT's HSIP safety program.pdf

Select the programs that are administered under the HSIP.

Horizontal Curve
Local Safety
Pedestrian Safety
Other-spot improvement (SLOSSS)

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Horizontal Curve
Date of Program Methodology:	7/1/2015

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
All crashes	Volume	Horizontal curvature Functional classification Roadside features

What project identification methodology was used for this program? [Check all that apply]

Probability of specific crash types

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

No

Describe the methodology used to identify local road projects as part of this program.
Horizontal curves projects on local roads are based on risk factors.

How are projects under this program advanced for implementation?

selection committee

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).

Available funding : 100

Enter additional comments here to clarify your response for this question or add supporting information.

Program: Local Safety

Date of Program Methodology: 7/1/2008

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

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What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
Other-As supplied by the applicant		Functional classification

What project identification methodology was used for this program? [Check all that apply]

Crash frequency

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

No

Describe the methodology used to identify local road projects as part of this program.
Submittals by the regional planning organizations. The submittals that meet the program's criteria are funded.

How are projects under this program advanced for implementation?

Other-Submittals are checked for accuracy and if the improvement yields a b/c ratio greater than 1.0, the submittals are forwarded to financial to obtain funding

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

Rank of Priority Consideration

Ranking based on B/C : 50
Available funding : 50

Enter additional comments here to clarify your response for this question or add supporting information.

Program: Pedestrian Safety

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Date of Program Methodology: 9/1/2014

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
All crashes		

What project identification methodology was used for this program? [Check all that apply]

Crash frequency
Probability of specific crash types

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

Describe the methodology used to identify local road projects as part of this program.
Submittals by the regional planning organizations. The submittals that meet the program's criteria are funded.

How are projects under this program advanced for implementation?

selection committee

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

Rank of Priority Consideration

Available funding : 100

Enter additional comments here to clarify your response for this question or add supporting information.

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Program: Other-spot improvement (SLOSSS)

Date of Program Methodology: 1/1/1967

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
All crashes	Volume	

What project identification methodology was used for this program? [Check all that apply]

Critical rate

Are local roads (non-state owned and operated) included or addressed in this program?

No

Are local road projects identified using the same methodology as state roads?

Yes

Describe the methodology used to identify local road projects as part of this program.
Submittals by the regional planning organizations. The submittals that meet the program's criteria are funded.

How are projects under this program advanced for implementation?

selection committee

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

Rank of Priority Consideration

Incremental B/C : 100

Enter additional comments here to clarify your response for this question or add supporting information.

What percentage of HSIP funds address systemic improvements?

78

HSIP funds are used to address which of the following systemic improvements? Please check all that apply.

Rumble Strips
Traffic Control Device Rehabilitation
Install/Improve Signing
Install/Improve Pavement Marking and/or Delineation
Upgrade Guard Rails
Add/Upgrade/Modify/Remove Traffic Signal
Horizontal curve signs

Enter additional comments here to clarify your response for this question or add supporting information.

What process is used to identify potential countermeasures? [Check all that apply]

Engineering Study
Road Safety Assessment
Crash data analysis
SHSP/Local road safety plan
Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State HSIP consider connected vehicles and ITS technologies?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State use the Highway Safety Manual to support HSIP efforts?

Yes

Please describe how the State uses the HSM to support HSIP efforts.

CTDOT, in partnership with the University of Connecticut, is currently updating the agencies safety analysis tools and methods that match the six-step safety management process as described in the HSM. For example,

the CT's network screening module, which is used to identify and rank sites with a higher than expected crash frequency is being updated to allow screening for specific roadway types, crash types, or the presence of a specific traffic control device. Under the diagnosis module, users will soon be able to create collision diagrams using advanced GIS mapping capabilities. These diagrams are critical to the review process and help lead to the identification of contributing factors and crash patterns. Condition diagrams will also be built to provide a visual site overview and can be used in coordination with the collision diagram. CTDOT is also using IHSDM in the safety planning process to evaluate and compare design alternatives.

Have any program methodology practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of the HSIP methodology on which the State would like to elaborate?

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

Enter additional comments here to clarify your response for this question or add supporting information.

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$24,550,424	$27,252,099	111%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$1,324,824	$1,574,824	118.87%
Penalty Funds (23 U.S.C. 154)	$6,235,113	$6,235,113	100%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$2,216,808	$3,074,188	138.68%
State and Local Funds	$1,184,882	$1,418,531	119.72%
Totals	$35,512,051	$39,554,755	111.38%

Enter additional comments here to clarify your response for this question or add supporting information.

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

$6,834,600

How much funding is obligated to local or tribal safety projects?

$6,923,688

Enter additional comments here to clarify your response for this question or add supporting information.

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

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$3,372,266

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

$3,372,266

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?

$0

How much funding was transferred out of the HSIP to other core program areas during the reporting period under 23 U.S.C. 126?

$0

Enter additional comments here to clarify your response for this question or add supporting information.

Discuss impediments to obligating HSIP funds and plans to overcome this challenge in the future.

None.

Does the State want to elaborate on any other aspects of it's progress in implementing HSIP projects?

No

General Listing of Projects

List the projects obligated using HSIP funds for the reporting period.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
0093-0206PL	Non-infrastructure	Data/traffic records			$73766	$73766	Penalty Funds (23 U.S.C. 154)		0		State Highway Agency		Data	data system improvements
0148-0200CN	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$2000000	$2000000	Penalty Funds (23 U.S.C. 154)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0093-0213PL	Non-infrastructure	Data/traffic records			$1540000	$1540000	Penalty Funds (23 U.S.C. 154)		0		State Highway Agency		Data	data system improvements
0093-0214PL	Non-infrastructure	Transportation safety planning			$708000	$708000	Penalty Funds (23 U.S.C. 154)		0		State Highway Agency		transportation safety planning	transportation safety planning
0170-3360PL	Non-infrastructure	Transportation safety planning			$1801800	$2002000	Penalty Funds (23 U.S.C. 154)		0		State Highway Agency		transportation safety planning	transportation safety planning
0017-0182CN	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$111547	$111547	Penalty Funds (23 U.S.C. 154)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0171-0396PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists			$225000	$225000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0171-0401PE	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$52500	$52500	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0412CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	5	Intersections	$116253	$116253	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0170-3380PL	Non-infrastructure	Educational efforts			$945450	$1050500	HSIP (23 U.S.C. 148)		0		State Highway Agency	safety circuit rider program	transportation safety planning	transportation safety planning
0172-0438PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists			$258000	$258000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0017-0182RW+	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$337500	$375000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0034-0345RW	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$63000	$70000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0034-0345RW+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$51300	$57000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0148-0200PE+	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$135000	$150000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
0171-0372PE+	Pedestrians and bicyclists	Pedestrian signal - audible device	125	Intersections	$225000	$225000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0012-0095PE+	Alignment	Horizontal curve realignment	1	Curves	$72000	$80000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	keep vehicles on the roadway
0034-0344CN+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$45073	$50081	HSIP (23 U.S.C. 148)		0		City of Municipal Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0170-3336PE	Roadway	Rumble strips - center	74	Miles	$25000	$25000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0170-3307CN	Intersection traffic control	Systemic improvements - stop-controlled	93	Intersections	$626360	$626360	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Intersections	improve awareness of traffic control devices
0170-3306CN	Intersection traffic control	Systemic improvements - stop-controlled	112	Locations	$734660	$734660	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Intersections	improve awareness of traffic control devices
0151-0317CN+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$35106	$39007	HSIP (23 U.S.C. 148)		0		City of Municipal Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0453CN	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	28	Intersections	$643740	$643740	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0174-0391PE+	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$15000	$15000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0017-0183PE+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Lanes	$112500	$125000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0171-0352CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Locations	$53984	$53984	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0174-0377CN	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$722380	$722380	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0171-0372PE+	Pedestrians and bicyclists	Pedestrian signal - audible device	125	Intersections	$100000	$100000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0174-0394PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	45	Locations	$53000	$53000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0173-0460PE	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$52500	$52500	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0170-3336CN	Roadway	Rumble strips - center	74	Miles	$675700	$675700	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
0173-0470CN	Roadway	Rumble strips - center	43	Miles	$390360	$390360	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0171-0410CN	Roadway	Rumble strips - center	30	Miles	$446840	$446840	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0172-0452CN	Roadway	Rumble strips - center	46	Miles	$536200	$536200	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0132-0132CN	Alignment	Vertical alignment or elevation change	1	Curves	$489870	$544300	HSIP (23 U.S.C. 148)	Urban Minor Collector	0		Town or Township Highway Agency	Spot	Roadway Departure	implement spot location safety countermeasure
0173-0412CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	5	Intersections	$178920	$178920	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0170-3336PE+	Roadway	Rumble strips - center	74	Miles	$12000	$12000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0172-0424CN	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$590500	$590500	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0042-0315CN+	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	2.76	Miles	$241576	$268418	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0012-0095CN+	Alignment	Horizontal curve realignment	1	Curves	$104773	$116415	HSIP (23 U.S.C. 148)	Rural Major Collector	0		State Highway Agency	Spot	Roadway Departure	keep vehicles on the roadway
0174-0391PE	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$30000	$30000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0170-3310CN+	Roadway signs and traffic control	Roadway signs (including post) - new or updated	58	Miles	$23305	$23305	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	traffic incident management	improve clearance of highway incidents
0172-0450PE	Pedestrians and bicyclists	Pedestrian signal - audible device	17	Intersections	$630000	$630000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0173-0468PE	Pedestrians and bicyclists	Pedestrian signal - audible device	17	Intersections	$630000	$630000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0174-0405PE	Pedestrians and bicyclists	Pedestrian signal - audible device	16	Intersections	$630000	$630000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0174-0394CN	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	45	Locations	$654580	$654580	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0173-0442PE+	Roadside	Barrier- metal	9	Miles	$385000	$475968	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0172-0424CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$60807	$60807	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
0173-0412CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	5	Intersections	$55101	$55101	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0455PE+	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$20000	$20000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0438CN	Intersection traffic control	Modify traffic signal - modernization/replacement	3	Intersections	$1718680	$1718680	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0453CN+	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	28	Locations	$10499	$10499	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Pedestrians	improve motorist awareness of crosswalks
0173-0469PE	Roadway signs and traffic control	Roadway signs (including post) - new or updated	195	Locations	$60000	$60000	HSIP (23 U.S.C. 148)		0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0171-0396PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	250	Locations	$75000	$75000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Intersections	improve motorist awareness of crosswalks
0171-0372CN	Pedestrians and bicyclists	Pedestrian signal - audible device	125	Intersections	$4464280	$4464280	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0171-0393PE	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$15000	$15000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0172-0435PE	Pedestrians and bicyclists	Pedestrian signal - audible device	8	Intersections	$60000	$60000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Pedestrians	implement spot location safety countermeasure
0172-0435RW	Pedestrians and bicyclists	Pedestrian signal - audible device	8	Intersections	$75000	$75000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0170-3336PE+	Roadway	Rumble strips - center	74	Miles	$45000	$45000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0170-3350PE	Roadway	Rumble strips - center	18	Miles	$25000	$25000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0171-0378CN	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$451700	$451700	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0017-0182CN	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$800000	$800000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0102-0285RW	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$751500	$835000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0148-0200CN	Alignment	Alignment - other	1	Intersections	$1459038	$1459038	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
0173-0455PE	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$22500	$22500	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0418CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	7	Intersections	$116682	$116682	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0173-0455RW	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$50000	$50000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0009-0098CN	Alignment	Horizontal and vertical alignment	1	Curves	$616500	$685000	HSIP (23 U.S.C. 148)	Rural Major Collector	0		Town or Township Highway Agency	Spot	Roadway Departure	keep vehicles on the roadway
0173-0469CN	Roadway signs and traffic control	Roadway signs (including post) - new or updated	195	Locations	$246576	$246576	HSIP (23 U.S.C. 148)		0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0153-0118CN+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$149296	$165884	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0088-0188CN	Intersection traffic control	Modify control - modifications to roundabout	1	Intersections	$3554010	$3973900	HSIP (23 U.S.C. 148)	Urban Minor Arterial	0		City of Municipal Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0172-0451PE+	Roadway signs and traffic control	Roadway signs (including post) - new or updated	425	Locations	$250000	$250000	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0171-0409PE	Roadway signs and traffic control	Roadway signs (including post) - new or updated	250	Locations	$320000	$320000	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0174-0406PE	Roadway signs and traffic control	Roadway signs (including post) - new or updated	413	Locations	$580000	$580000	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0173-0469CN	Roadway signs and traffic control	Roadway signs (including post) - new or updated	195	Locations	$424824	$424824	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on the roadway
0138-0212PE+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Lanes	$850000	$850000	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0059-0154CN+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Lanes	$7380	$7380	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0102-0346CN	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Lanes	$1937808	$2153120	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure
0092-0681PE	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$279000	$310000	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	implement spot location safety countermeasure

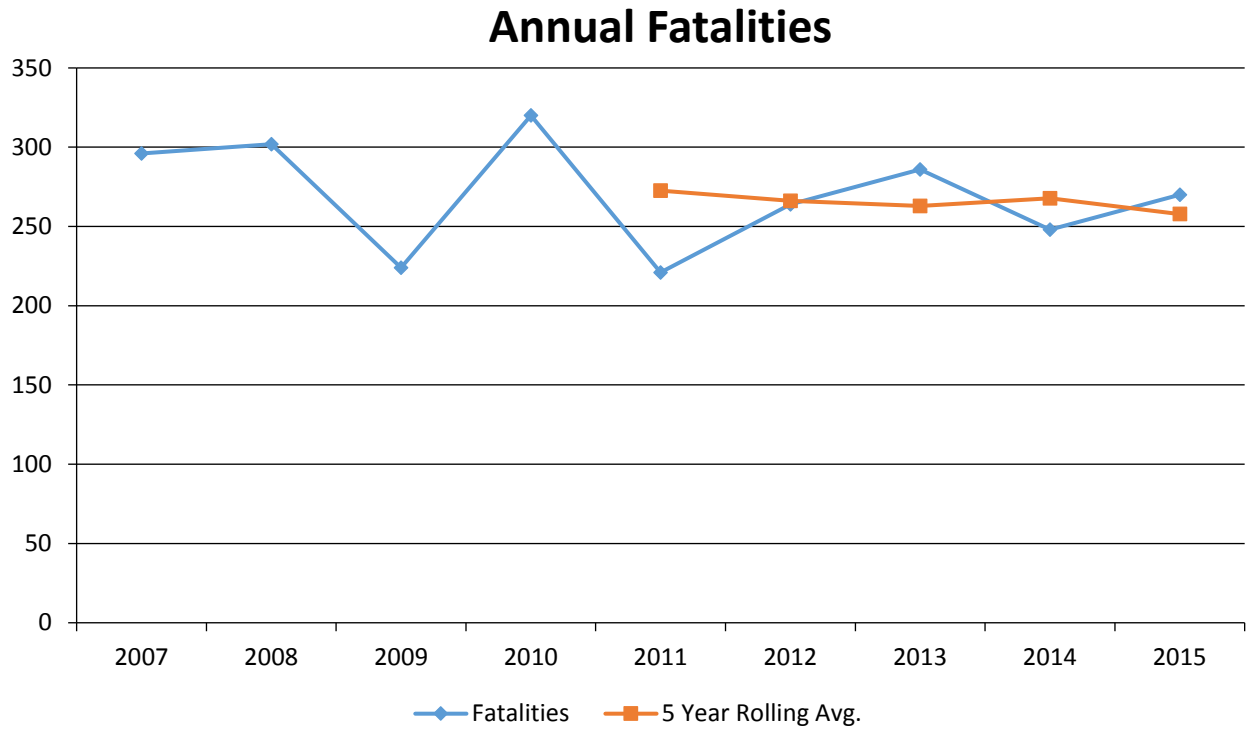
Enter additional comments here to clarify your response for this question or add supporting information.

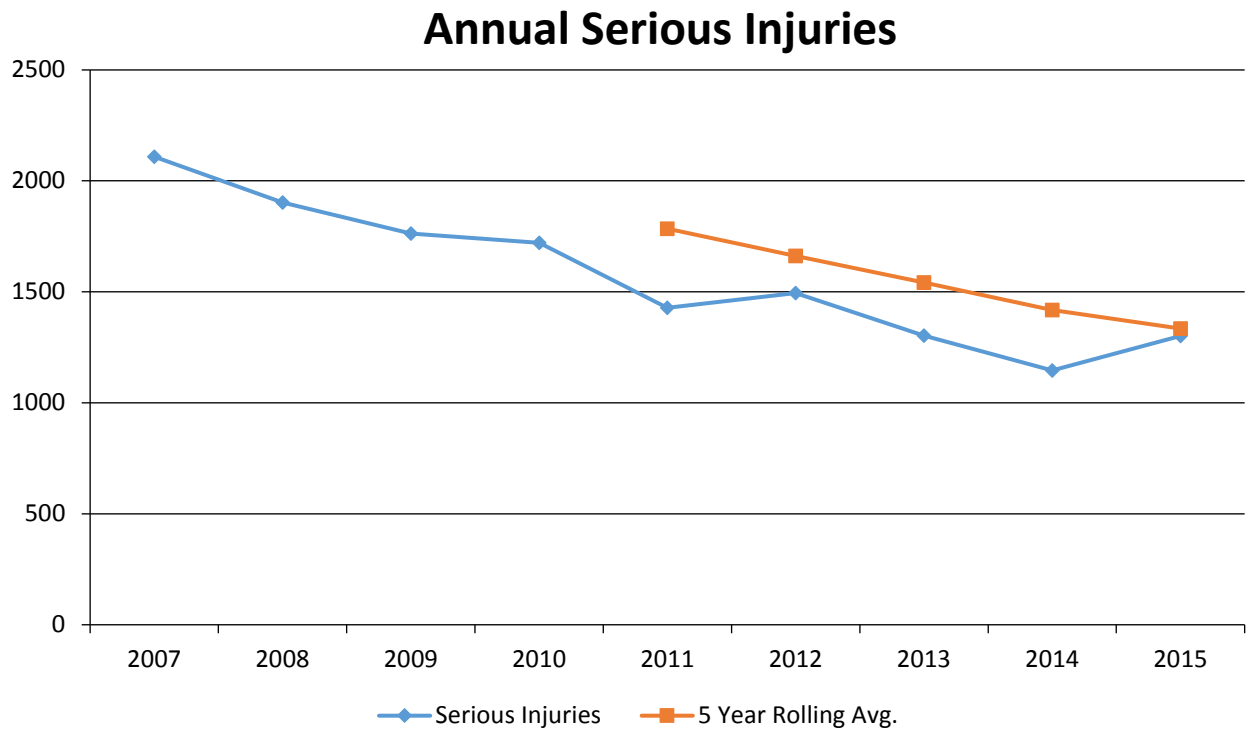
Safety Performance

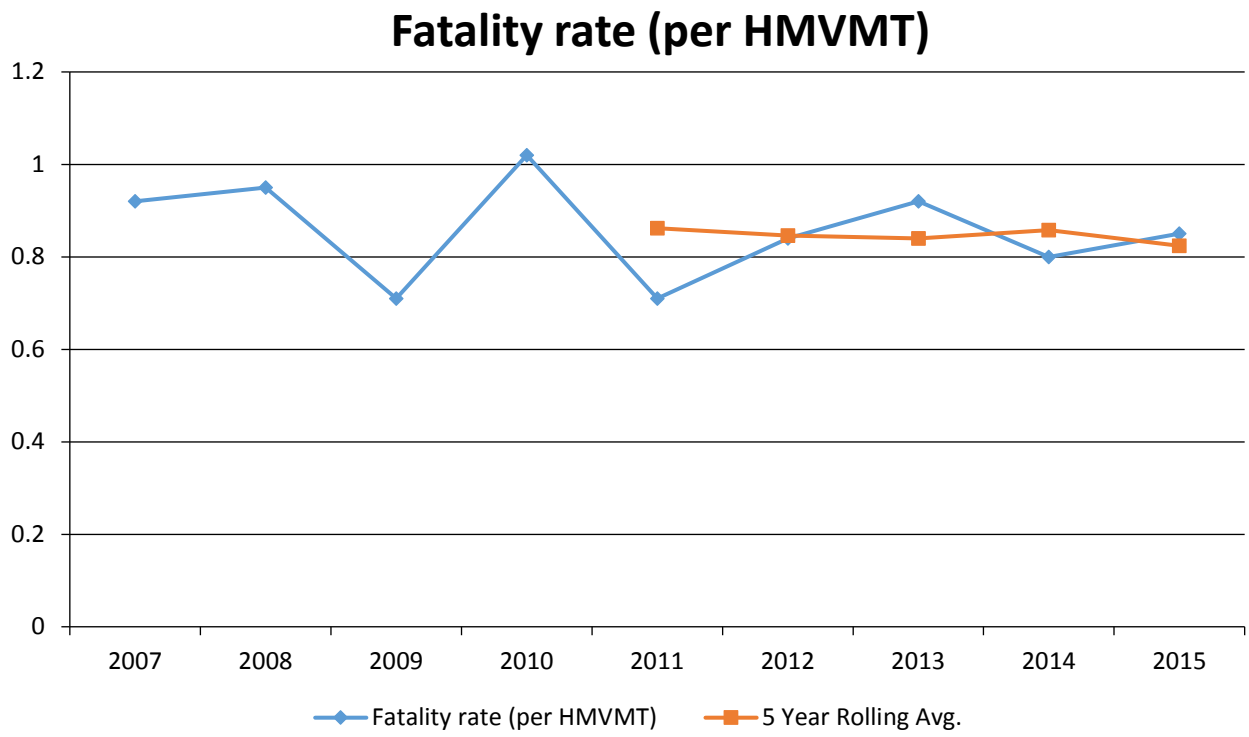
General Highway Safety Trends

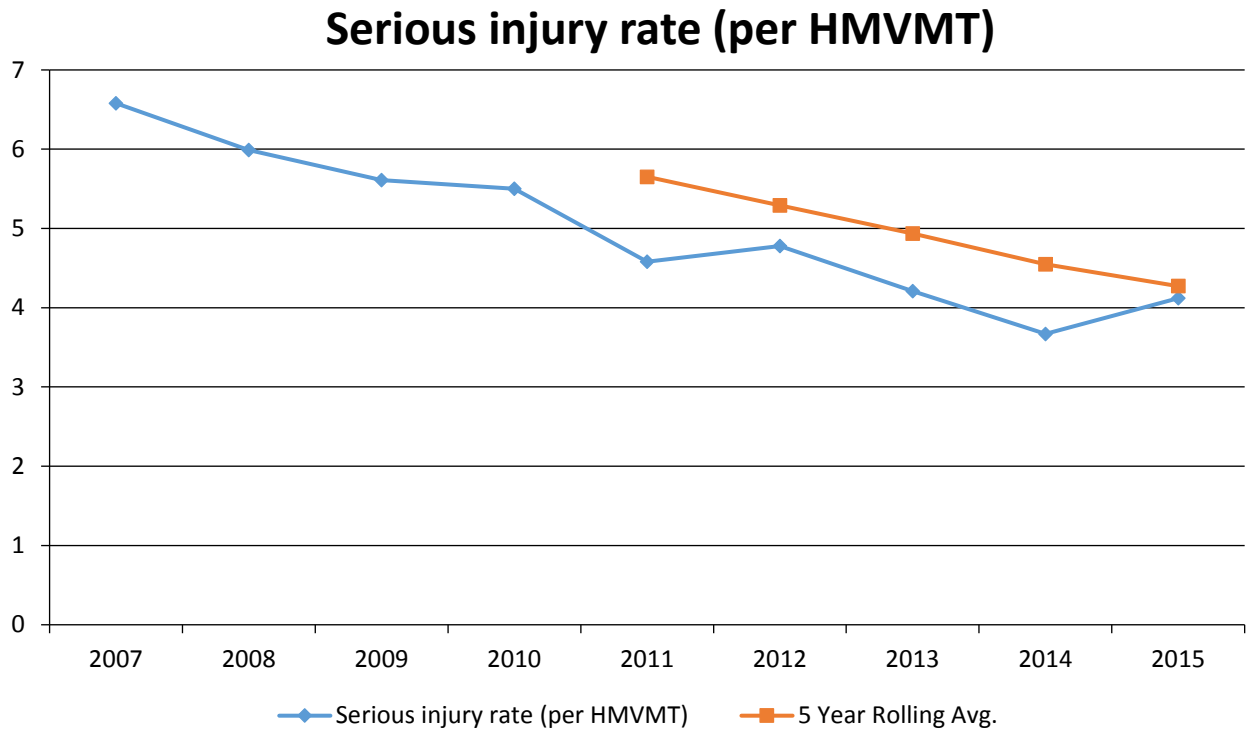
Present data showing the general highway safety trends in the State for the past five years.

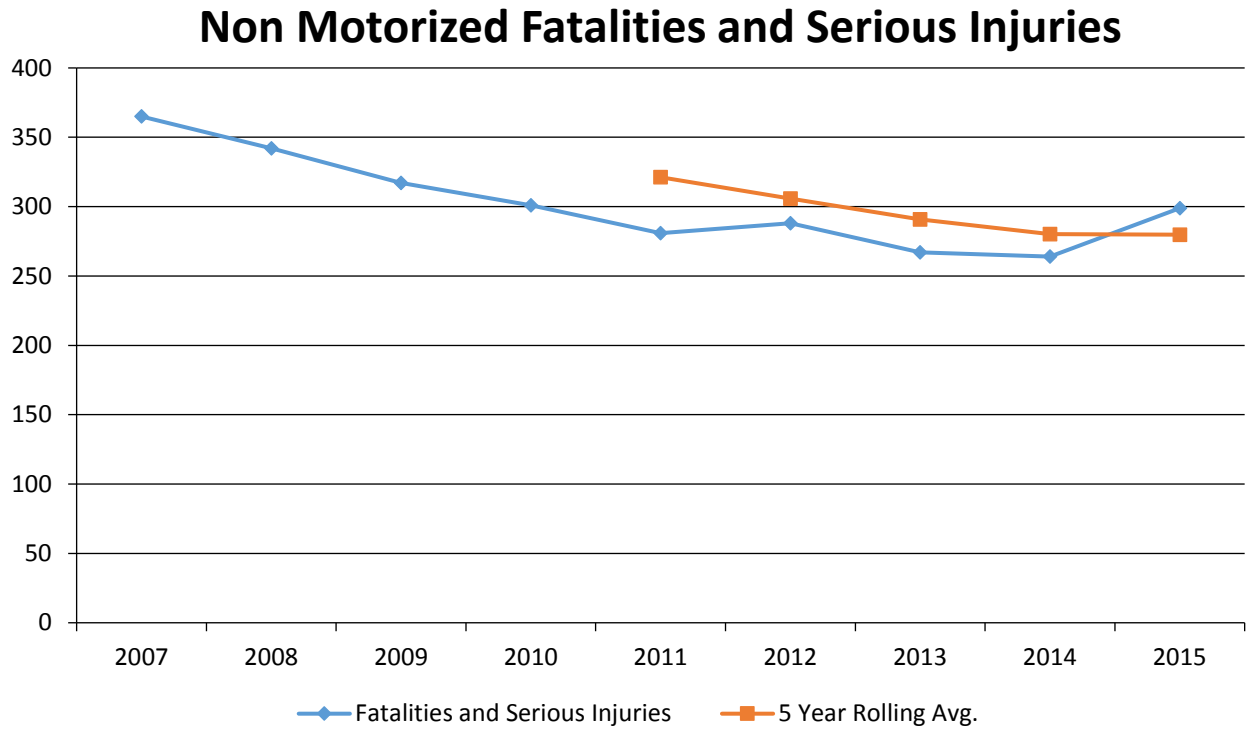
PERFORMANCE MEASURES	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fatalities	296	302	224	320	221	264	286	248	270
Serious Injuries	2,109	1,902	1,763	1,721	1,428	1,494	1,303	1,146	1,302
Fatality rate (per HMVMT)	0.920	0.950	0.710	1.020	0.710	0.840	0.920	0.800	0.850
Serious injury rate (per HMVMT)	6.580	5.990	5.610	5.500	4.580	4.780	4.210	3.670	4.120
Number non-motorized fatalities	37	53	27	53	34	47	40	51	48
Number of non-motorized serious injuries	328	289	290	248	247	241	227	213	251


Annual Fatalities
350
300
250
200
150
100
50
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
2500
2000
1500
1000
500
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.2
1
0.8
0.6
0.4
0.2
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
7
6
5
4
3
2
1
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Enter additional comments here to clarify your response for this question or add supporting information.

The annual performance measure data reported above is identical to the CT's 2017 Highway Safety Plan.

Describe fatality data source.

FARS

Enter additional comments here to clarify your response for this question or add supporting information.

To the maximum extent possible, present this data by functional classification and ownership.

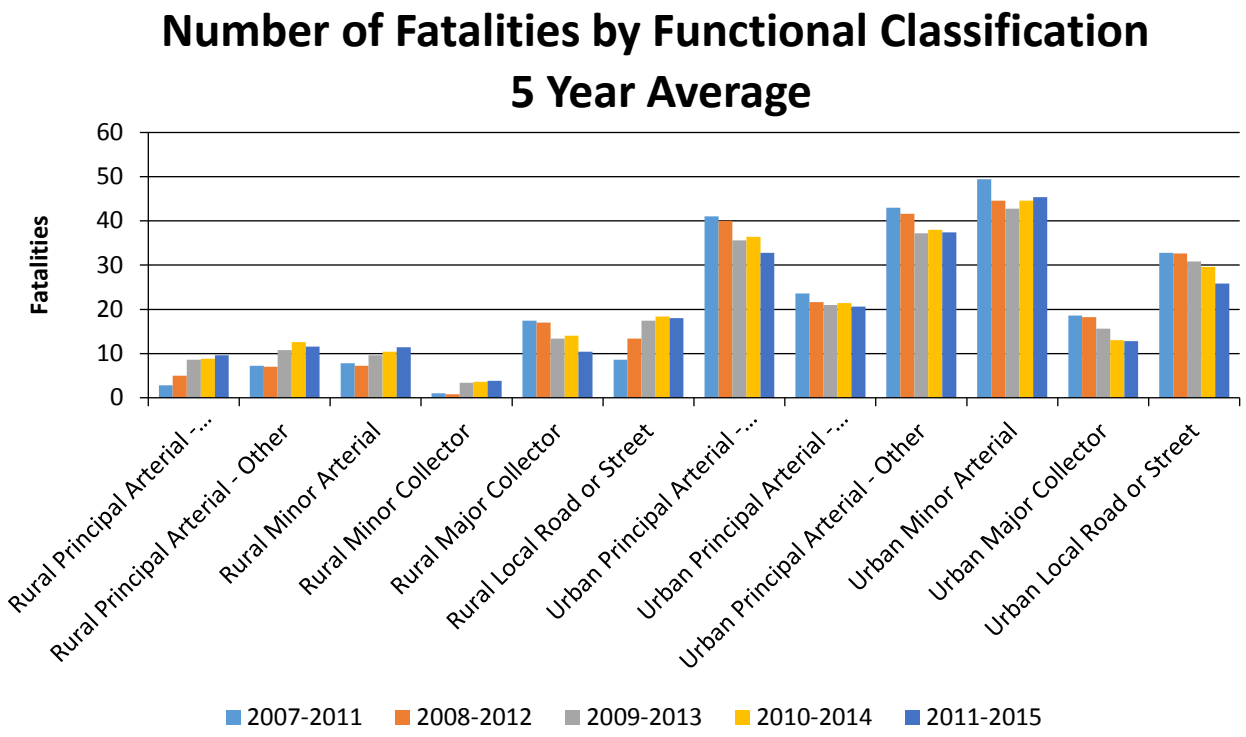
Year 2015

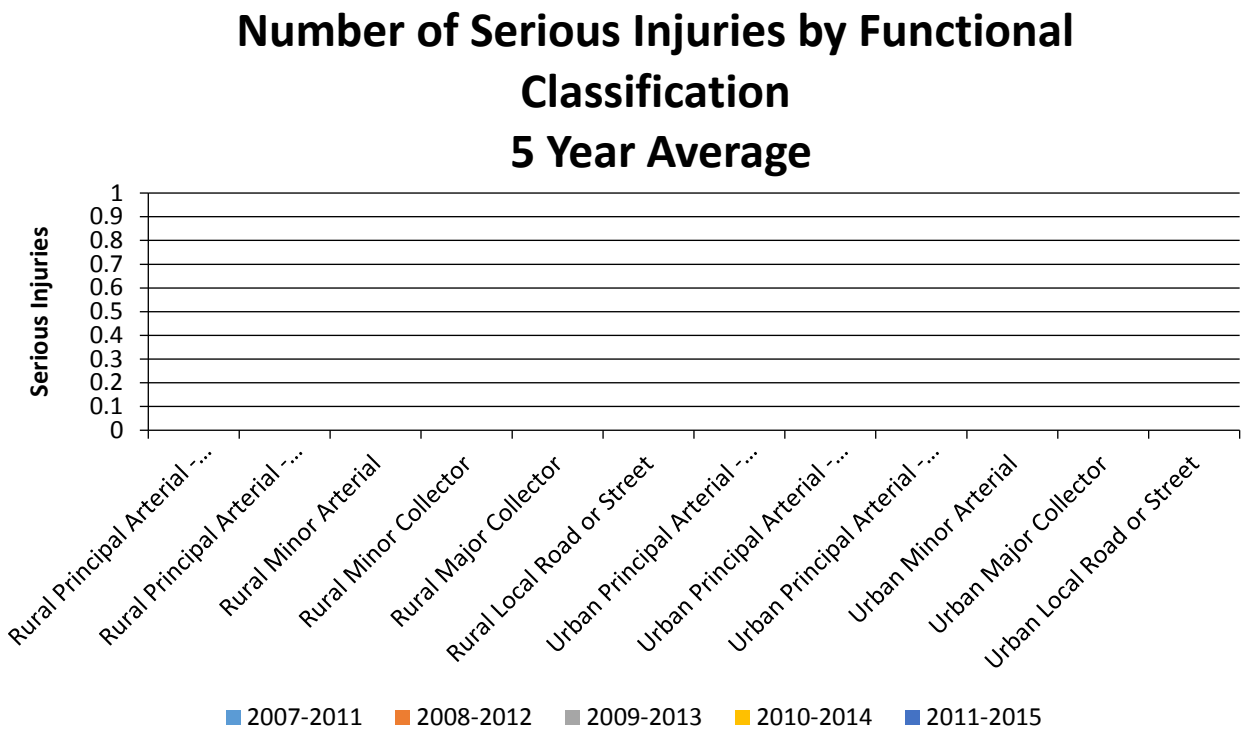
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Interstate	9.6	0	1.54	0
Rural Principal Arterial - Other Freeways and Expressways	1	0	0.34	0
Rural Principal Arterial - Other	11.6	0	2.54	0
Rural Minor Arterial	11.4	0	2.44	0

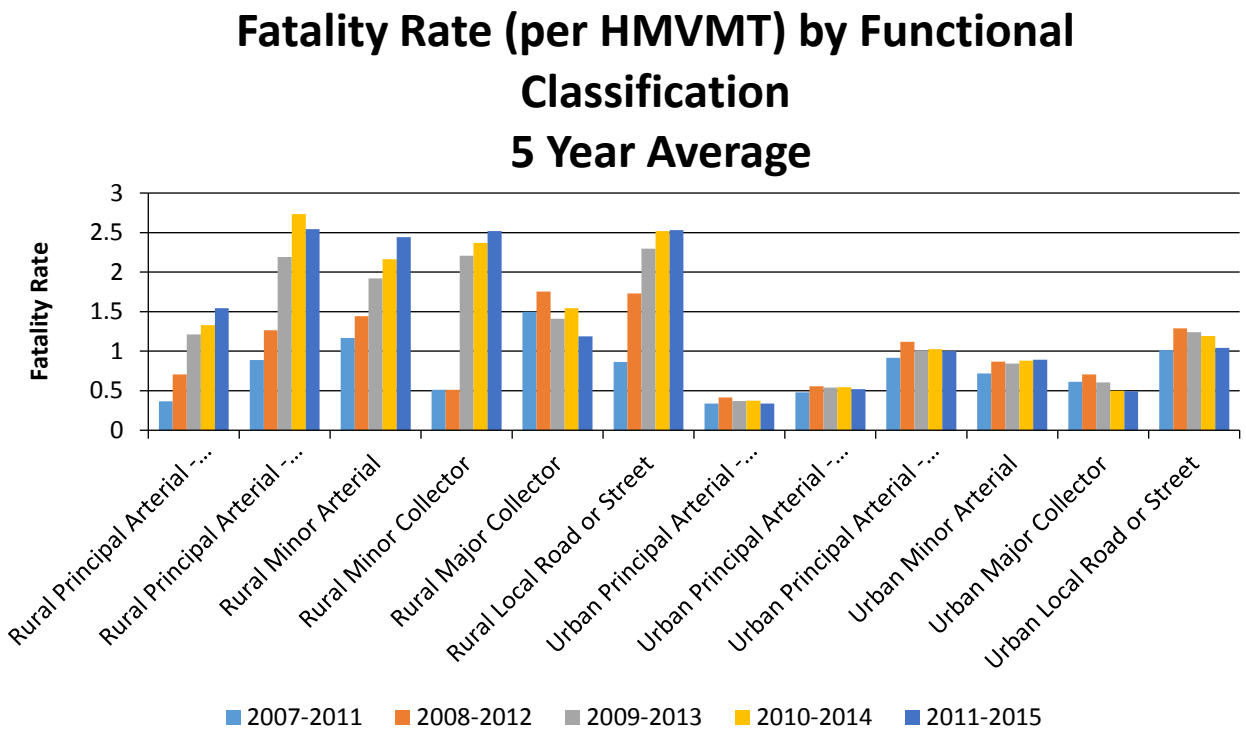
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Collector	3.8	0	2.52	0
Rural Major Collector	10.4	0	1.19	0
Rural Local Road or Street	18	0	2.53	0
Urban Principal Arterial - Interstate	32.8	0	0.34	0
Urban Principal Arterial - Other Freeways and Expressways	20.6	0	0.52	0
Urban Principal Arterial - Other	37.4	0	1	0
Urban Minor Arterial	45.4	0	0.89	0
Urban Minor Collector	0.2	0	0.09	0
Urban Major Collector	12.8	0	0.49	0
Urban Local Road or Street	25.8	0	1.04	0

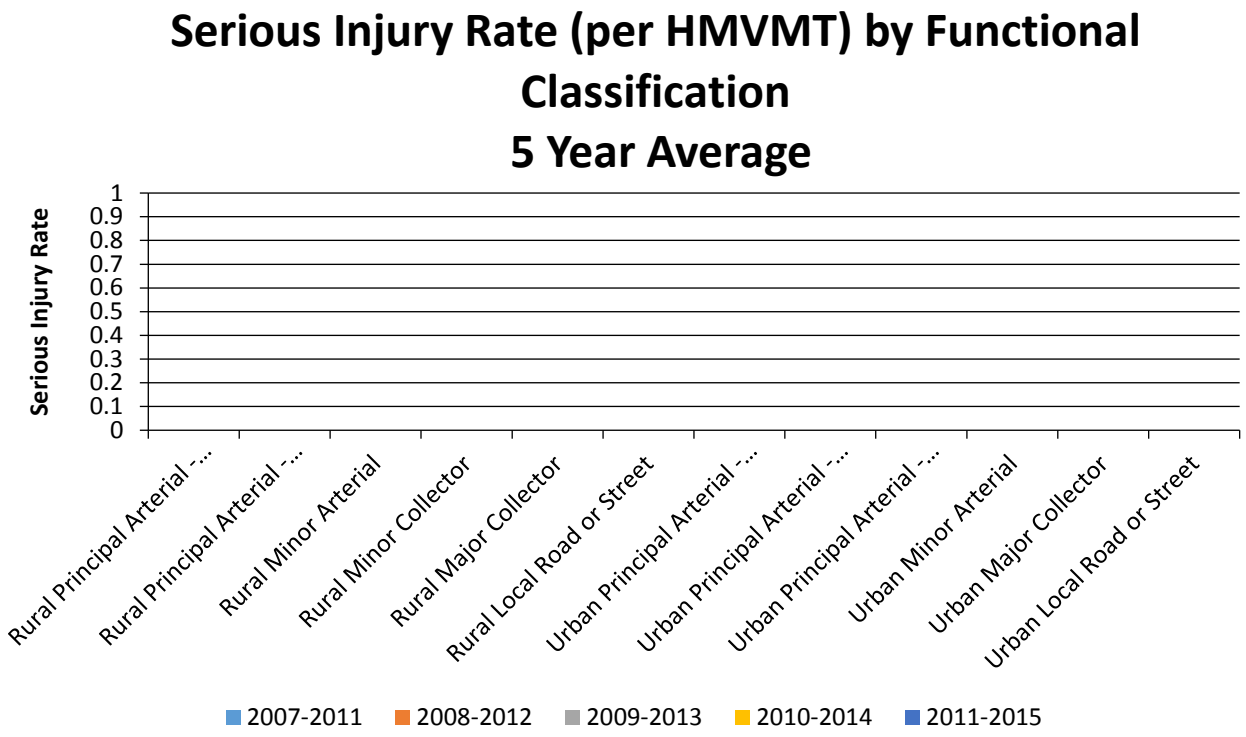
Year 2016

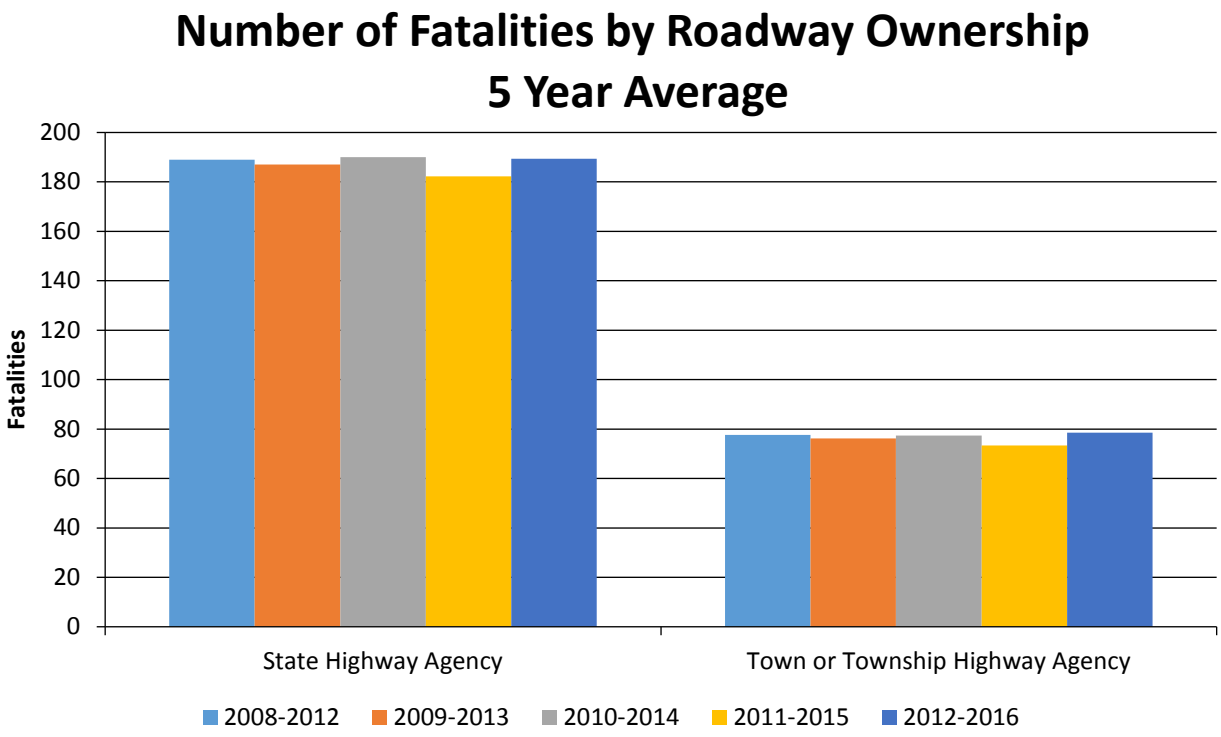
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	189.4	824.2	0	0
County Highway Agency				
Town or Township Highway Agency	78.6	731	0	0
City of Municipal Highway Agency				
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

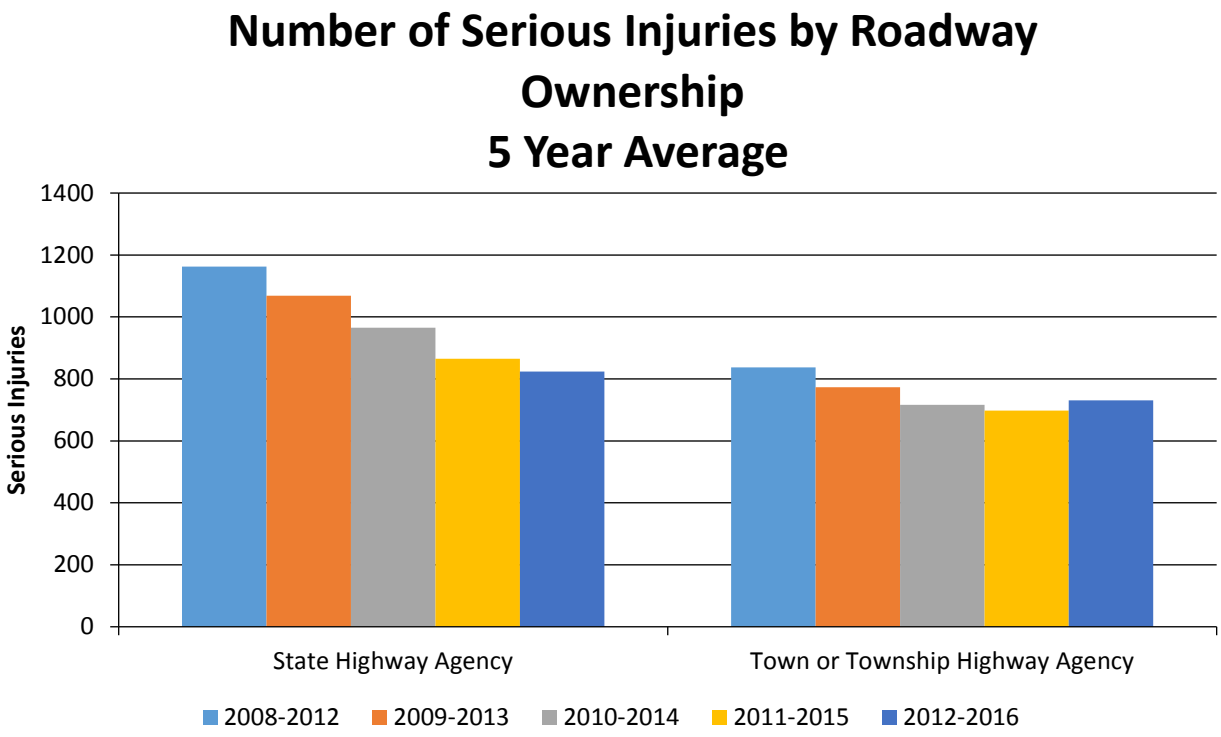

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
60
50
40
30
20
10
0
Rural Principal Arterial -...
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2007-2011
2008-2012
2009-2013
2010-2014
2011-2015

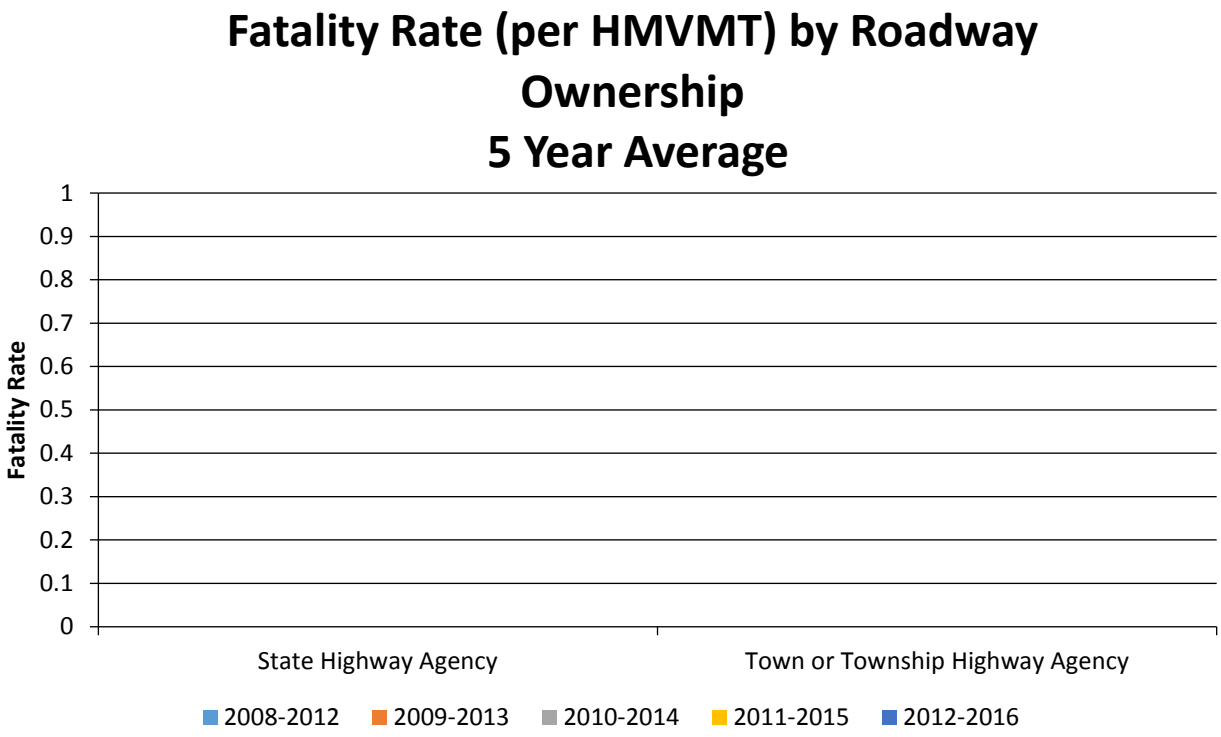

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2007-2011
2008-2012
2009-2013
2010-2014
2011-2015

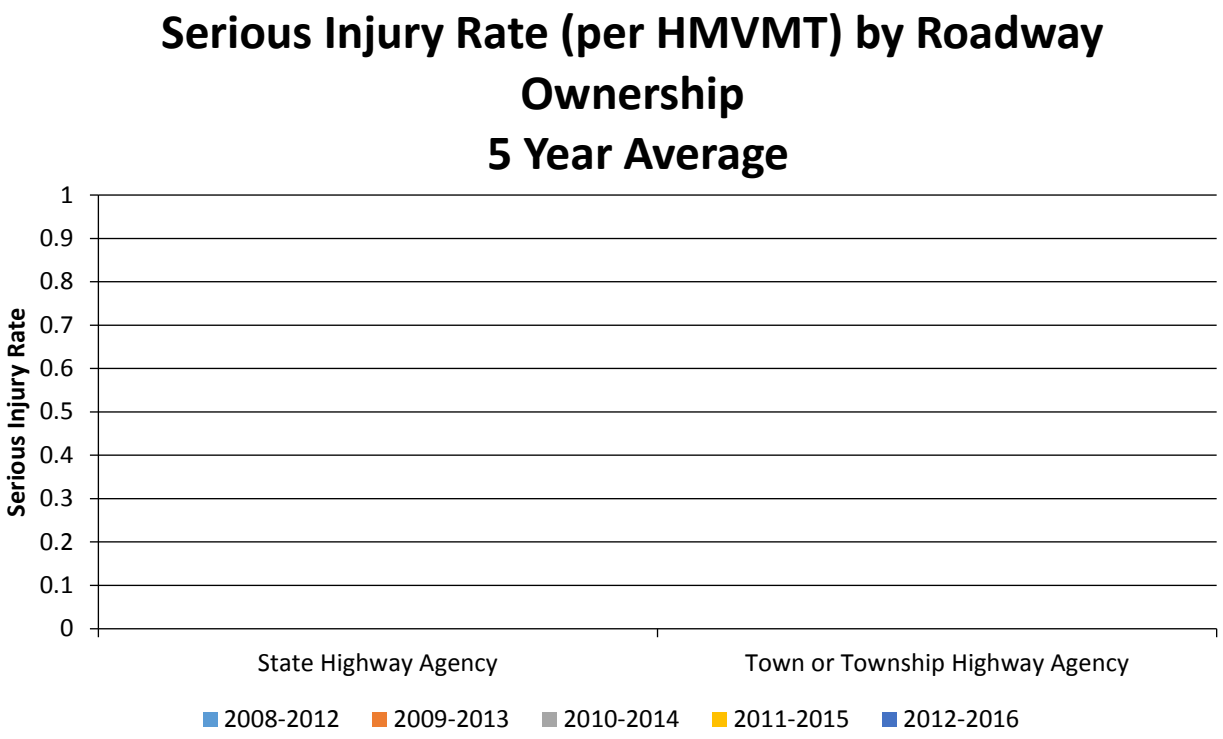

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
3
2.5
2
1.5
1
0.5
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2007-2011
2008-2012
2009-2013
2010-2014
2011-2015


Serious Injury Rate (per HMVMT) by Functional Classification
5 Year Average
Serious Injury Rate
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2007-2011
2008-2012
2009-2013
2010-2014
2011-2015


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
200
180
160
140
120
100
80
60
40
20
0
State Highway Agency
Town or Township Highway Agency
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries by Roadway Ownership
5 Year Average
Serious Injuries
1400
1200
1000
800
600
400
200
0
State Highway Agency
Town or Township Highway Agency
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Fatality Rate (per HMVMT) by Roadway Ownership
5 Year Average
Fatality Rate
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
State Highway Agency
Town or Township Highway Agency
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016



Enter additional comments here to clarify your response for this question or add supporting information.

CTDOT crash repository does not have the capability to extract crashes by functional classification therefore no such data is available for serious injury crashes or fatality crashes.

FARS data was used to determine functional classification of fatal crashes.

Are there any other aspects of the general highway safety trends on which the State would like to elaborate?

No

Safety Performance Targets

Safety Performance Targets

Calendar Year 2018 Targets *

Number of Fatalities	257.0

Describe the basis for established target, including how it supports SHSP goals.

•While fatality figures have fluctuated during the five year reporting period, the five year moving average and trend has continued to decrease for the 2011-2015 baseline period. •Although the five year moving average decreased during the 2011-2015 baseline period, preliminary 2016 data show the fatality total of 311 and the five year moving average of 275 to represent an increase in the five year moving average. •2017 data show current fatality trends to keep pace with 2016 for the year to date. •For this reason, the fatality trend is expected to increase during the following calendar year. After reviewing the 2017-2021 SHSP goals, CTDOT chose to maintain the current five year moving average.

Number of Serious Injuries 1571.0

Describe the basis for established target, including how it supports SHSP goals.

•While Serious (A) Injuries have fluctuated during the five year reporting period, the five year moving average and trend has continued to decrease for the 2011-2015 baseline period. •Although the five year moving average decreased during the 2011-2015 baseline period, preliminary 2016 data show the Serious (A) Injury total of 1,692 and the five year moving average of 1,575 to represent an increase in the five year moving average. •Serious Injury totals have increased for consecutive years, for this reason, the Serious (A) Injury trend is expected to increase during the following calendar year. After reviewing the 2017-2021 SHSP goals and emphasis area strategies, CTDOT chose to maintain the current five year moving average.

Fatality Rate 0.823

Describe the basis for established target, including how it supports SHSP goals.

•The five year moving average decreased from .859 (2007-2011) to .823 during the 2011-2015 baseline period. •Although the five year moving average decreased during the 2011-2015 baseline period, preliminary 2016 data show the fatality total of 311 and the five year moving average of 269 to represent an increase in the five year moving average. •2017 data show current fatality trends to keep pace with 2016 for the year to date. •Although 2016 VMT data was not available at the time of publishing (projected VMT was used in the 2016 figure in this graph), •Based on the anticipated increase in fatalities in 2016 and 2017 the Fatality rate per 100M VMT trend is expected to increase during the following calendar year. After reviewing the 2017-2021 SHSP goals and emphasis area strategies, CTDOT chose to maintain the current five year moving average.

Serious Injury Rate 5.033

Describe the basis for established target, including how it supports SHSP goals.

•While Serious (A) Injuries have fluctuated during the five year reporting period, the five year moving average and trend has continued to decrease for the 2011-2015 baseline period. •Although the five year moving average decreased during the 2011-2015 baseline period, preliminary 2016 data show the Serious (A) Injury per 100M VMT total of 4.830 and the five year moving average of 5.033 to represent an increase

in the five year moving average. •Although 2016 VMT data was not available at the time of publishing projected VMT was used in the 2016 figure in this graph. •Serious Injury totals have increased for consecutive years, for this reason, the Serious (A) Injury per 100M VMT trend is expected to increase during the planning period. After reviewing the 2017-2021 SHSP goals and emphasis area strategies, CTDOT chose to maintain the current five year moving average.

Total Number of Non-Motorized Fatalities and Serious Injuries	280.0

Describe the basis for established target, including how it supports SHSP goals.

•Although Pedestrian and Bicyclist Fatalities and Serious Injuries have maintained a fairly steady level over the reporting period, there has been an increase in this measure during the last two years. Preliminary 2016 and 2017 data show this increase to be maintained during the current year. •Though 2016 VMT data was not available at the time of goal setting for the 2018 planning period, this trend is expected to continue and possibly increase. For this reason, the fatality and serious injury trends are expected to increase during the planning period and maintaining the current number of pedestrian bicyclists killed and seriously injured was chosen. After reviewing the 2017-2021 SHSP goals and emphasis area strategies, CTDOT chose to maintain the current number of pedestrian and bicyclists killed and seriously injured.

Enter additional comments here to clarify your response for this question or add supporting information.

Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.

The Department has quarterly Regional Planning Organization meetings, and on several occasions, CTDOT and FHWA have made presentations on safety target setting with the MPO's. Numerous stakeholders attended the February 22, 2017 state safety target coordination workshop held in CT. Meetings were held with the Department's Office of Highway Safety to ensure that the three safety performance targets in common to both the HSIP and HSP were identical.

Does the State want to report additional optional targets?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Applicability of Special Rules

Does the HRRR special rule apply to the State for this reporting period?

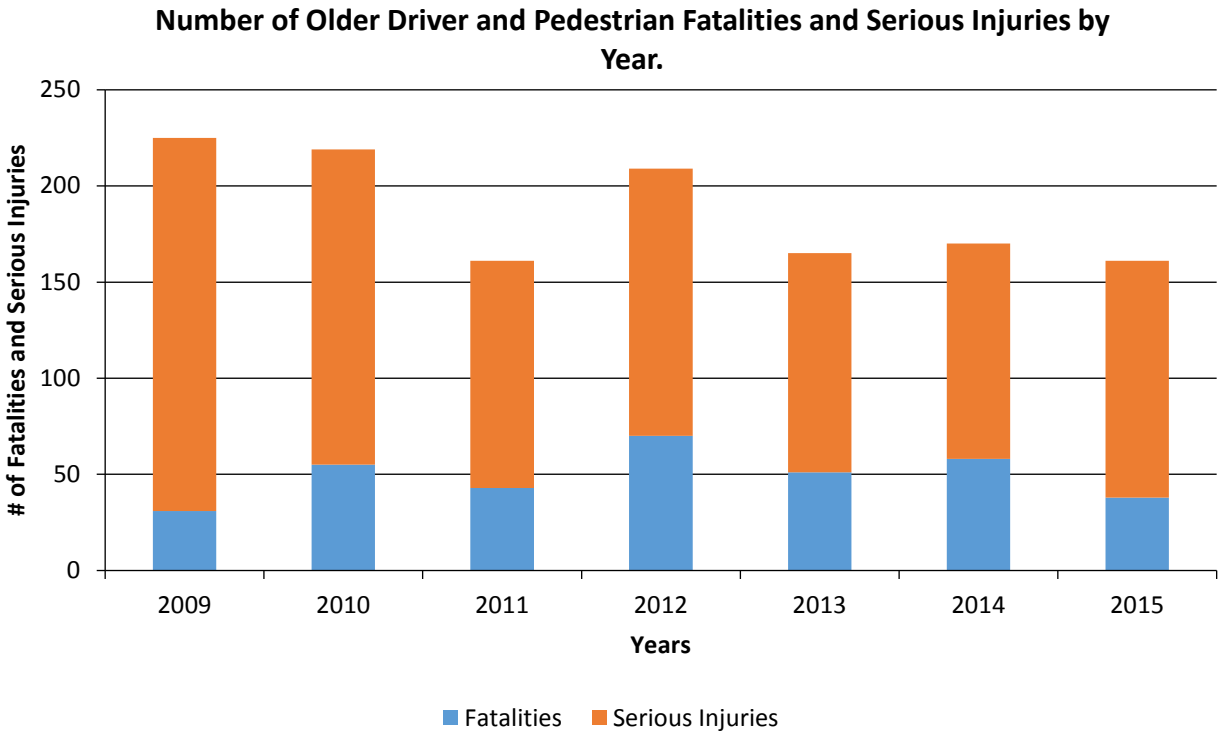
Yes

Enter additional comments here to clarify your response for this question or add supporting information.

CT's apportionment during the reporting period was $1,502,890 and all the funds were obligated. The HRRR projects are listed under question 29.

Provide the number of older driver and pedestrian fatalities and serious injuries for the past seven years.

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015
Number of Older Driver and Pedestrian Fatalities	31	55	43	70	51	58	38
Number of Older Driver and Pedestrian Serious Injuries	194	164	118	139	114	112	123



Enter additional comments here to clarify your response for this question or add supporting information.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries

Enter additional comments here to clarify your response for this question or add supporting information.

Based on the measures of effectiveness selected previously, describe the results of the State's program level evaluations.

Since the number of fatalities and serious injuries has increased over the last year, it is difficult to evaluate the State's HSIP program. CT finalized its new SHSP in July 2017 and it is anticipated that many of the infrastructure related strategies will be implemented resulting in fewer fatalities and serious injuries.

What other indicators of success does the State use to demonstrate effectiveness and success of the Highway Safety Improvement Program?

More systemic programs
Increased awareness of safety and data-driven process
Increased focus on local road safety
HSIP Obligations

Enter additional comments here to clarify your response for this question or add supporting information.

Are there any significant programmatic changes that have occurred since the last reporting period?

No

Effectiveness of Groupings or Similar Types of Improvements

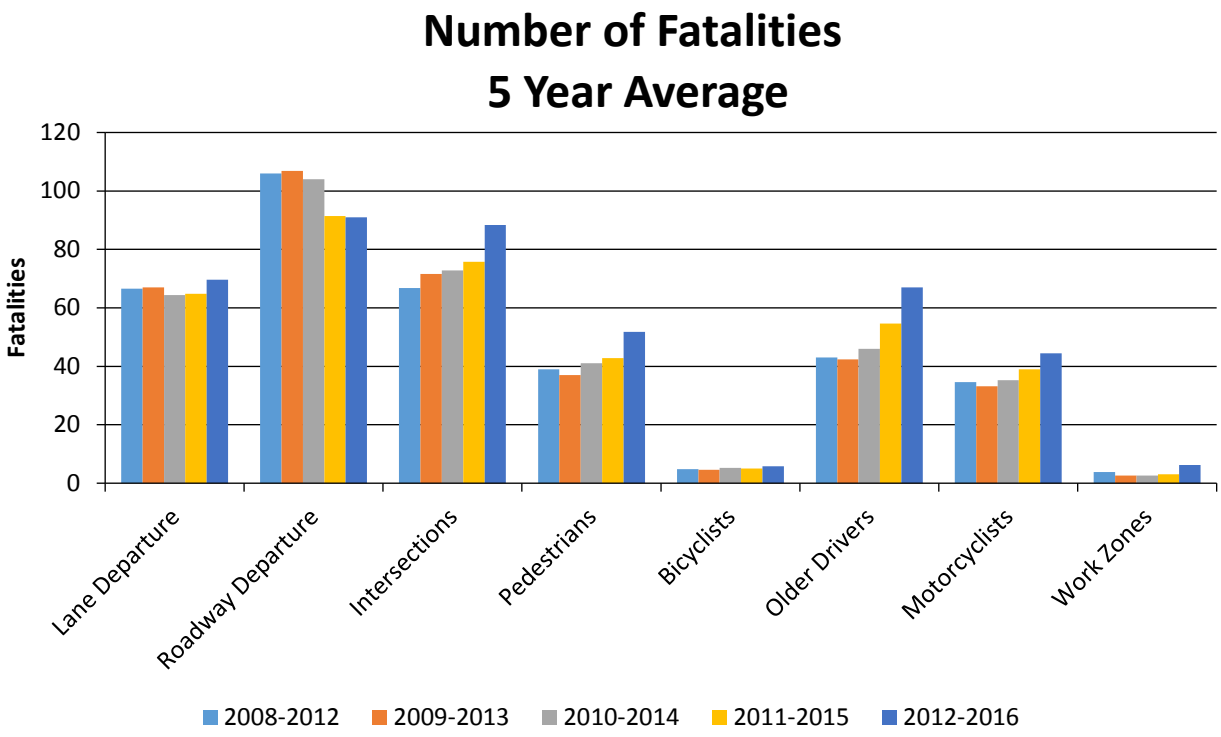
Present and describe trends in SHSP emphasis area performance measures.

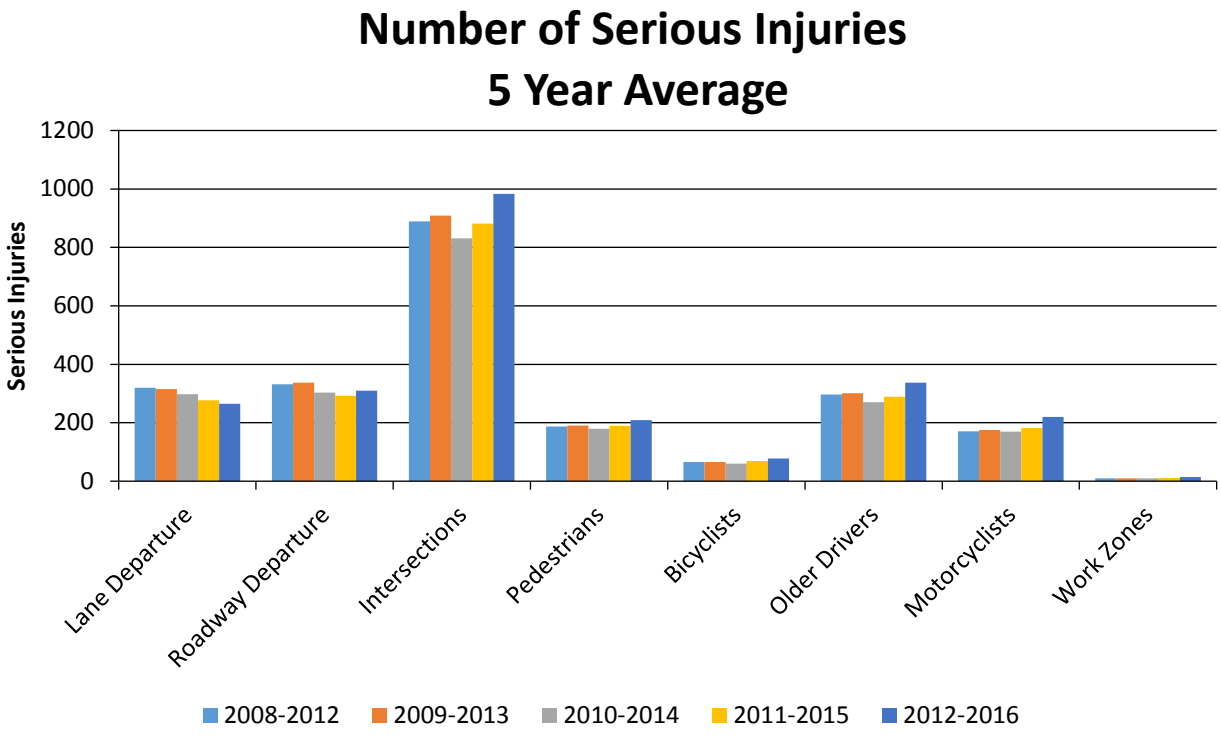
Year 2016

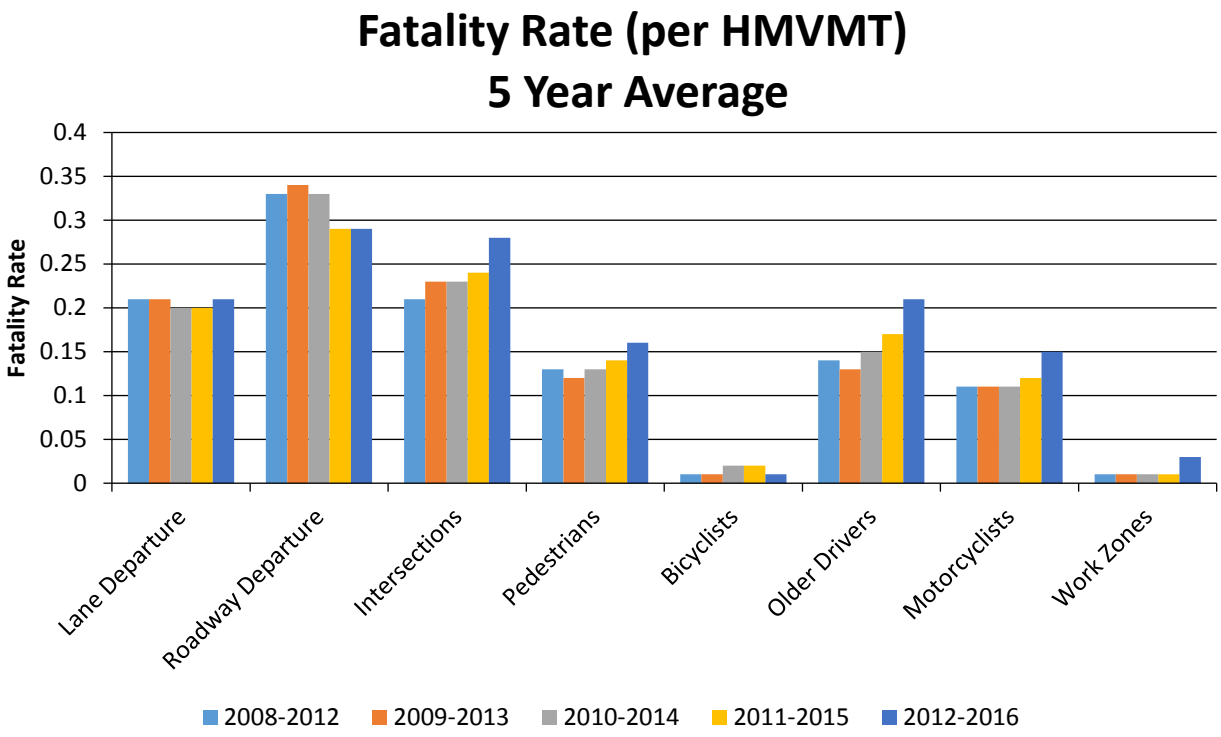
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Lane Departure		69.6	264.8	0.21	0.83			

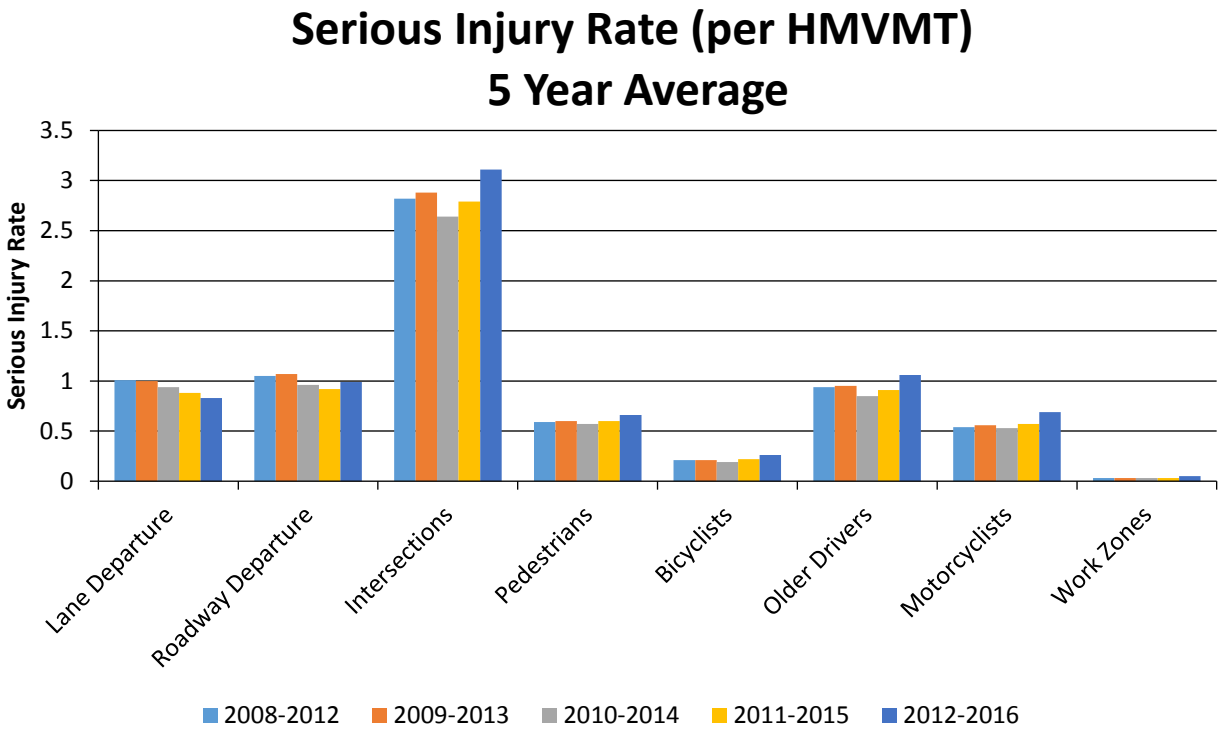
2017 Connecticut Highway Safety Improvement Program

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Roadway Departure		91	309.8	0.29	0.99			
Intersections		88.4	983.6	0.28	3.11			
Pedestrians		51.8	209.2	0.16	0.66			
Bicyclists		5.8	77.8	0.01	0.26			
Older Drivers		67	337	0.21	1.06			
Motorcyclists		44.4	219.8	0.15	0.69			
Work Zones		6.2	14.2	0.03	0.05			


Number of Fatalities
5 Year Average
Fatalities
120
100
80
60
40
20
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries
5 Year Average
Serious Injuries
1200
1000
800
600
400
200
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016





Enter additional comments here to clarify your response for this question or add supporting information.

Has the State completed any countermeasure effectiveness evaluations during the reporting period?

2017 Connecticut Highway Safety Improvement Program

No

Enter additional comments here to clarify your response for this question or add supporting information.

Project Effectiveness

Provide the following information for previously implemented projects that the State evaluated this reporting period.

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL INJURY BEFORE	ALL INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
nothing to report														

Enter additional comments here to clarify your response for this question or add supporting information.

No evaluations were conducted during the review period.

Are there any other aspects of the overall HSIP effectiveness on which the State would like to elaborate?

No

Compliance Assessment

What date was the State's current SHSP approved by the Governor or designated State representative?

05/18/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2021

When does the State anticipate completing it's next SHSP update?

2022

Enter additional comments here to clarify your response for this question or add supporting information.

Provide the current status (percent complete) of MIRE fundamental data elements collection efforts using the table below.

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					80	99	60	90
Route Number (8)	100	100								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100	100								
Rural/Urban Designation (20)	100	100					100	99		
Surface Type (23)	100	100					80	99		
Begin Point Segment Descriptor (10)	100	100					80	99	60	90
End Point Segment Descriptor (11)	100	100					80	99	60	90
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								
Functional Class (19)	100	100					100	99	100	90
Median Type (54)	68	50								

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					80	99		
Average Annual Daily Traffic (79)	100	100					80	99		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					100	99	100	90
INTERSECTION										
Unique Junction Identifier (120)			0.75	0						
Location Identifier for Road 1 Crossing Point (122)			100	100						
Location Identifier for Road 2 Crossing Point (123)			100	100						
Intersection/Junction Geometry (126)			0.75	0						
Intersection/Junction Traffic Control (131)			0.75	0						
AADT for Each Intersecting Road (79)			100	100						
AADT Year (80)			100	100						
Unique Approach Identifier (139)			0.75	0.75						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					0	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
Ramp Length (187)					100	100				
Roadway Type at Beginning of Ramp Terminal (195)					100	100				

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Roadway Type at End Ramp Terminal (199)					100	100				
Interchange Type (182)					0	0				
Ramp AADT (191)					100	100				
Year of Ramp AADT (192)					100	100				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	**98.22**	**97.22**	**50.38**	**50.09**	**81.82**	**81.82**	**86.67**	**99.00**	**76.00**	**90.00**

Enter additional comments here to clarify your response for this question or add supporting information.

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

See the attached "TRCC Traffic Records Strategic Plan 2017-2018" (pages 187-191) which summarizes the State's actions and completion dates to have complete access to the MIRE fundamental data elements on all public roads.

Provide the suspected serious injury identifier, definition and attributes used by the State for both the crash report form and the crash database using the table below. Please also indicate whether or not these elements are compliant with the MMUCC 4th edition criteria for data element P5. Injury Status, suspected serious injury.

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Report Form	Suspected Serious Injury (A)	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	Suspected Serious Injury (A)	Yes	As any injury other than fatal that results in one or more of the following:	Yes	Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood;Broken or distorted extremity (arm or leg); Crush injuries; Suspected skull, chest or abdominal injury other than bruises or minor lacerations;Significant burns (second and third degree burns over 10% or more of the body);Unconsciousness when taken from the crash scene;Paralysis	Yes
Crash Database	Suspected Serious Injury (A)	Yes	N/A	Yes	N/A	Yes
Crash Database Data Dictionary	Suspected Serious Injury (A)	Yes	As any injury other than fatal that results in one or more of the following:	Yes	A suspected serious injury is any injury other than fatal which results in one or more of the following:Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood;Broken or distorted extremity (arm or leg);Crush injuries; Suspected skull, chest or abdominal injury other than bruises or	Yes

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
					minor lacerations;Significant burns (second and third degree burns over 10% or more of the body);Unconsciousness when taken from the crash scene;Paralysis	

Enter additional comments here to clarify your response for this question or add supporting information.

Did the State conduct an HSIP program assessment during the reporting period?
No

When does the State plan to complete it’s next HSIP program assessment.

2019

Enter additional comments here to clarify your response for this question or add supporting information.

May 2019

Optional Attachments

Program Structure:

CT's HSIP safety program.pdf

Project Implementation:

Safety Performance:

Workshop Summary Report Connecticut SUBMITTED.pdf
Evaluation:

Compliance Assessment:

trcc_traffic_records_strategic_plan 2017-2018.pdf

Glossary

5 year rolling average	means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).
Emphasis area	means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.
Highway safety improvement project	means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.
HMVMT	means hundred million vehicle miles traveled.
Non-infrastructure projects	are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.
Older driver special rule	applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.
Performance measure	means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.
Programmed funds	mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.
Roadway Functional Classification	means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.
Strategic Highway Safety Plan (SHSP)	means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.
Systematic	refers to an approach where an agency deploys countermeasures at all locations across a system.
Systemic safety improvement	means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.
Transfer	means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.