CONNECTICUT

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2018 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 2018 is from October 1, 2016 to September 30, 2017.

Connecticut's (5 year rolling average) fatalities and fatal crash rates have increased in 2016. Both (5 year rolling average) serious injuries and the serious injury crash rate have seen little change in 2016.

Connecticut uses HSIP resources to incorporate safety improvements across a broad range of maintenance, safety and non-infrastructure projects. Innovative methodologies developed and used by CTDOT will continue to identify more locations, on a statewide scale, with the greatest potential for crash reduction. Applications of new Highway Safety Manual concepts and systemic approaches are also being integrated into the HSIP program. The SHSP implementation plan will target goals and devise strategies in each emphasis area to see where improvements can made in order to support the vision of moving towards zero deaths. In the next fiscal year, CTDOT hopes to solicit a greater number of off system (non-state highway) locations with high potential for crash reduction with the help of local agencies partners and stakeholders.

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 reevaluated. 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.

The Transportation Safety Research Center at UCONN is developing new tools for CTDOT which will assist with HSIP planning activities.

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 still being tested and refined.

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

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)

2018 Connecticut Highway Safety Improvement Program
-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
Roadway Departure
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	Traffic	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).

Rank of Priority Consideration

Available funding : 100

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

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

Program: Pedestrian Safety

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

Program: Roadway Departure

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	Traffic	Horizontal curvature

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?

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

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

What percentage of HSIP funds address systemic improvements?

27

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

Rumble Strips
Upgrade Guard Rails
Horizontal curve signs

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

The percentage reported in last year's report should have been 20% not 78%.

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)
Stakeholder input

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.

October 1, 2016 to September 30, 2017

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$27,540,690	$29,760,226	108.06%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$1,895,035	$1,895,035	100%
Penalty Funds (23 U.S.C. 154)	$6,894,086	$6,894,086	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)	$0	$0	0%
State and Local Funds	$0	$0	0%
Totals	$36,329,811	$38,549,347	106.11%

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?

19%

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

19%

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?

29%

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

29%

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**
0138-0212CN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$438369	$438369	Penalty Funds (23 U.S.C. 154)	Urban Principal Arterial (UPA) - Other	0		State Highway Agency	Spot	Intersections	reduce conflicts
0170-3449PL	Non-infrastructure	Data/traffic records	1	records	$180000	$180000	Penalty Funds (23 U.S.C. 154)	other	0		other	other	Data	records
0172-0456CN	Roadway signs and traffic control	Roadway signs (including post) - new or updated	642	Locations	$516950	$516950	Penalty Funds (23 U.S.C. 154)	Rural Minor Arterial	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0170-3448PL	Non-infrastructure	Data/traffic records	1	records	$380000	$380000	Penalty Funds (23 U.S.C. 154)	other	0		other	other	Data	records
0093-0213PL	Non-infrastructure	Transportation safety planning	1	plan	$1540000	$1540000	Penalty Funds (23 U.S.C. 154)	other	0		other	other	Data	records
0093-0214PL	Non-infrastructure	Transportation safety planning	1	plan	$743000	$743000	Penalty Funds (23 U.S.C. 154)	other	0		other	other	Data	records
0138-0212CN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$1093767	$1093767	Penalty Funds (23 U.S.C. 154)	Urban Principal Arterial (UPA) - Other	22,750	30	State Highway Agency	Spot	Intersections	reduce conflicts
0170-3360PL	Non-infrastructure	Transportation safety planning	1	plan	$1801800	$2002000	Penalty Funds (23 U.S.C. 154)	varies	0		other	other	Data	records
0172-0438PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	1040	Locations	$86000	$86000	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Pedestrians	reduce conflicts
0170-3420PL	Non-infrastructure	Transportation safety planning	2	plan	$360000	$400000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	other	Data	records
0173-0442RW	Roadside	Barrier- metal	36.39	Miles	$50000	$50000	HSIP (23 U.S.C. 148)	Rural Major Collector	0		State Highway Agency	Spot	Roadway Departure	keep vehicles on road
0173-0481PE	Roadway	Rumble strips - center	0	Miles	$30000	$30000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0171-0426PE	Roadway	Rumble strips - center	0	Miles	$30000	$30000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0174-0415PE	Roadway	Rumble strips - center	34.31	Miles	$30000	$30000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0172-0463PE	Roadway	Rumble strips - center	0	Miles	$30000	$30000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0063-0696CN	Intersection traffic control	Intersection traffic control - other	1	Intersections	$1461690	$1624100	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	26,250	30	Town or Township Highway Agency	Spot	Intersections	reduce conflicts
0173-0469CN+	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	195	Locations	$60938	$60938	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road

													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**
0102-0354CN+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Locations	$455616	$506240	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	0		State Highway Agency	Spot	Intersections	reduce conflicts
0173-0469CN+	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	195	Locations	$2681	$8043	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0034-0345RW+	Roadway	Roadway - other	1	Locations	$110700	$123000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	0		State Highway Agency	Spot	Intersections	keep vehicles on road
0171-0396CN	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	660	Locations	$369440	$369440	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Pedestrians	reduce conflicts
0017-0182CN	Roadway	Roadway widening - add lane(s) along segment	1.42	Miles	$5000000	$5000000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Interstate	26,800	40	State Highway Agency	Spot	Intersections	reduce conflicts
0170-3432PL	Non-infrastructure	Transportation safety planning	1	plan	$450000	$500000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	other	Data	records
0173-0485PE	Roadway signs and traffic control	Roadway signs (including post) - new or updated	750	Locations	$1044000	$1044000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0174-0399PE	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$45000	$45000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0174-0399RW	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$50000	$50000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0174-0417PE	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	1500	Locations	$1950000	$1950000	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0170-3350CN	Roadway	Rumble strips - center	18	Miles	$178500	$178500	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0172-0459CN	Roadway	Rumble strips - center	67	Miles	$389640	$389640	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0173-0477CN	Roadway	Rumble strips - center	27.41	Miles	$338820	$338820	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0174-0412CN	Roadway	Rumble strips - center	50.96	Miles	$385400	$385400	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0171-0409PE	Roadway signs and traffic control	Roadway signs (including post) - new or updated	246	Locations	$80000	$80000	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0172-0438CN	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	1040	Locations	$665300	$665300	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Pedestrians	reduce conflicts
0172-0451CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	411	Locations	$962355	$962355	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0034-0305PE+	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$135000	$150000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	17,450	35	State Highway Agency	Spot	Intersections	reduce conflicts

2018 Connecticut Highway Safety Improvement Program

													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
0171-0434PE	Intersection traffic control	Intersection traffic control - other	5	Intersections	$206000	$206000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0174-0419PE	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	1	Intersections	$41000	$41000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	20,200	25	State Highway Agency	Spot	Intersections	reduce conflicts
0079-0238CN	Intersection geometry	Intersection geometrics - realignment to align offset cross streets	1	Intersections	$513990	$571100	HSIP (23 U.S.C. 148)	Urban Minor Arterial	0		Town or Township Highway Agency	Spot	Intersections	reduce conflicts
0084-0108PE+	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$30000	$30000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	11,750	40	State Highway Agency	Spot	Intersections	reduce conflicts
0173-0487PE	Intersection traffic control	Intersection traffic control - other	2	Intersections	$83000	$83000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0172-0443RW	Intersection traffic control	Modify traffic signal - modernization/replacement	7	Intersections	$65000	$65000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0172-0443PE	Intersection traffic control	Modify traffic signal - modernization/replacement	7	Intersections	$70000	$70000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0173-0460PE	Intersection traffic control	Intersection traffic control - other	1	Intersections	$22500	$22500	HSIP (23 U.S.C. 148)	Urban Minor Arterial	19,300	30	State Highway Agency	Spot	Intersections	reduce conflicts
0170-3306CN+	Intersection traffic control	Systemic improvements - stop-controlled	109	Intersections	$89582	$89582	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Intersections	reduce conflicts
0106-0126RW	Intersection traffic control	Intersection traffic control - other	1	Intersections	$45000	$50000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	35,500	45	State Highway Agency	Spot	Intersections	reduce conflicts
0106-0126PE	Intersection traffic control	Intersection traffic control - other	1	Intersections	$225000	$250000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	35,500	45	State Highway Agency	Spot	Intersections	reduce conflicts
0170-3453PL	Non-infrastructure	Transportation safety planning		plan	$450000	$500000	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	other	other	other
0172-0402CN+	Intersection traffic control	Intersection traffic control - other	3	Intersections	$88471	$88471	HSIP (23 U.S.C. 148)	Urban Minor Arterial	0		State Highway Agency	Spot	Intersections	reduce conflicts
0009-0098CN+	Alignment	Horizontal and vertical alignment	1	Intersections	$146700	$163000	HSIP (23 U.S.C. 148)	Rural Major Collector	6,400	25	Town or Township Highway Agency	Spot	Intersections	reduce conflicts
0138-0211CN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$438970	$438970	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	21,200	30	State Highway Agency	Spot	Intersections	reduce conflicts
0138-0212CN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$367944	$367944	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	22,750	30	State Highway Agency	Spot	Intersections	reduce conflicts
0170-3455OTH	Non-infrastructure	Non-infrastructure - other		safety patrol	$2673000	$2970000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	safety patrol	other
0174-0415CN	Roadway	Rumble strips - center	34.31	Miles	$489860	$489860	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	Roadway Departure	keep vehicles on road

													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**
0170-3455OTH	Non-infrastructure	Non-infrastructure - other		safety patrol	$1410300	$1567000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Systemic	safety patrol	other
0171-0401PE	Intersection traffic control	Intersection traffic control - other	1	Intersections	$22500	$22500	HSIP (23 U.S.C. 148)	Urban Major Collector	18,600	35	State Highway Agency	Spot	Intersections	reduce conflicts
0171-0401RW	Intersection traffic control	Intersection traffic control - other	1	Intersections	$25000	$25000	HSIP (23 U.S.C. 148)	Urban Major Collector	18,600	35	State Highway Agency	Spot	Intersections	reduce conflicts
0138-0211CN+	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$191631	$191631	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	21,200	30	State Highway Agency	Spot	Intersections	reduce conflicts
0138-0212CN+	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$17457	$17457	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	22,750	30	State Highway Agency	Spot	Intersections	reduce conflicts
0174-0391CN	Intersection traffic control	Intersection traffic control - other	2	Intersections	$536320	$536320	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0034-0345CN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$996642	$1107380	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	14,300	35	State Highway Agency	Spot	Intersections	reduce conflicts
0034-0324RW+	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$101901	$113223	HSIP (23 U.S.C. 148)	Urban Minor Arterial	23,450	25	State Highway Agency	Spot	Intersections	reduce conflicts
0171-0393CN	Intersection traffic control	Intersection traffic control - other	1	Intersections	$438500	$438500	HSIP (23 U.S.C. 148)	Urban Minor Collector	36,400	45	State Highway Agency	Spot	Intersections	reduce conflicts
0063-0696CN+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$50778	$56420	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	26,250	30	Town or Township Highway Agency	Spot	Intersections	reduce conflicts
0170-3480PL	Non-infrastructure	Transportation safety planning	1	report	$180000	$200000	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Pedestrians	reduce conflicts
0084-0108PE+	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$33000	$33000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	11,750	40	State Highway Agency	Spot	Intersections	reduce conflicts
0171-0409CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	246	Locations	$605231	$605231	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0172-0451CN+	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	411	Locations	$244383	$244383	HSIP (23 U.S.C. 148)	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0172-0435CN	Intersection traffic control	Intersection traffic control - other	8	Intersections	$1879915	$1921260	HSIP (23 U.S.C. 148)	varies	0		State Highway Agency	Spot	Intersections	reduce conflicts
0172-0456CN	Roadway signs and traffic control	Roadway signs (including post) - new or updated	642	Locations	$1502890	$1502890	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Arterial	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0172-0451CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	411	Locations	$232145	$232145	HRRR Special Rule (23 U.S.C. 148(g)(1))	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road
0171-0409CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	246	Locations	$160000	$160000	HRRR Special Rule (23 U.S.C. 148(g)(1))	varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	keep vehicles on road

2018 Connecticut Highway Safety Improvement Program

													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
0102-0346CN+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$203127	$225697	HSIP (23 U.S.C. 148)	Urban Minor Arterial	19,750	30	State Highway Agency	Spot	Intersections	reduce conflicts
0144-0196PE	Intersection traffic control	Intersection traffic control - other	1	Intersections	$225000	$250000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	19,750	35	State Highway Agency	Spot	Intersections	reduce conflicts
0063-0593CN+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$18451	$18451	HSIP (23 U.S.C. 148)	Urban Minor Arterial	11,600	30	Town or Township Highway Agency	Spot	Intersections	reduce conflicts
0138-0211CN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$503570	$503570	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	21,200	30	State Highway Agency	Spot	Intersections	reduce conflicts
0092-0681PE+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$90000	$100000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	32,000	35	State Highway Agency	Spot	Intersections	reduce conflicts

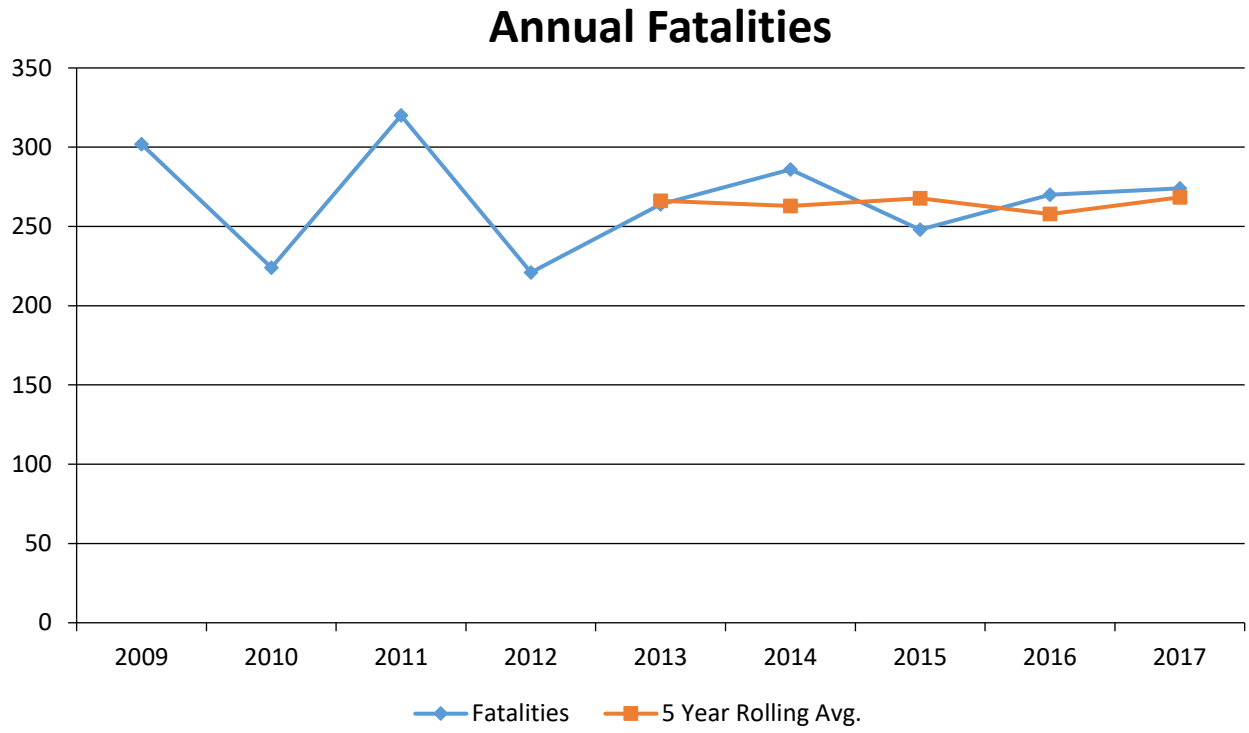
Enter additional comments here to clarify your response for this question or add supporting information.

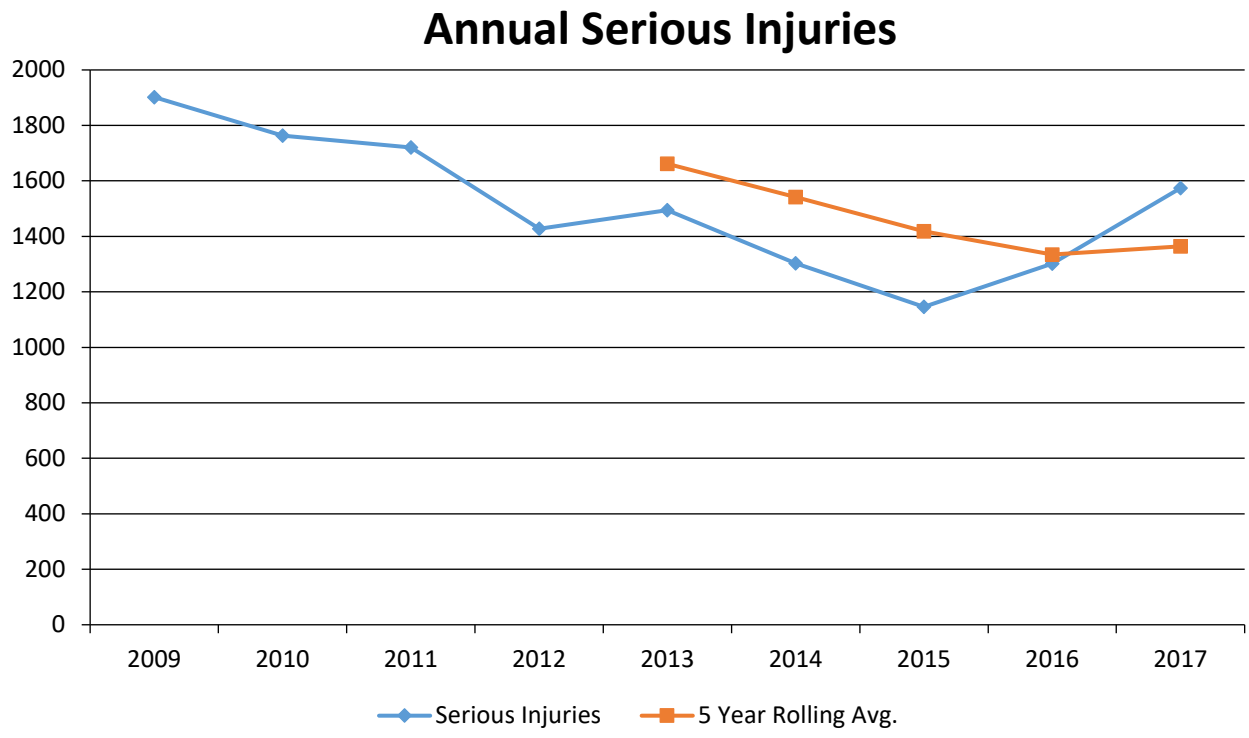
Safety Performance

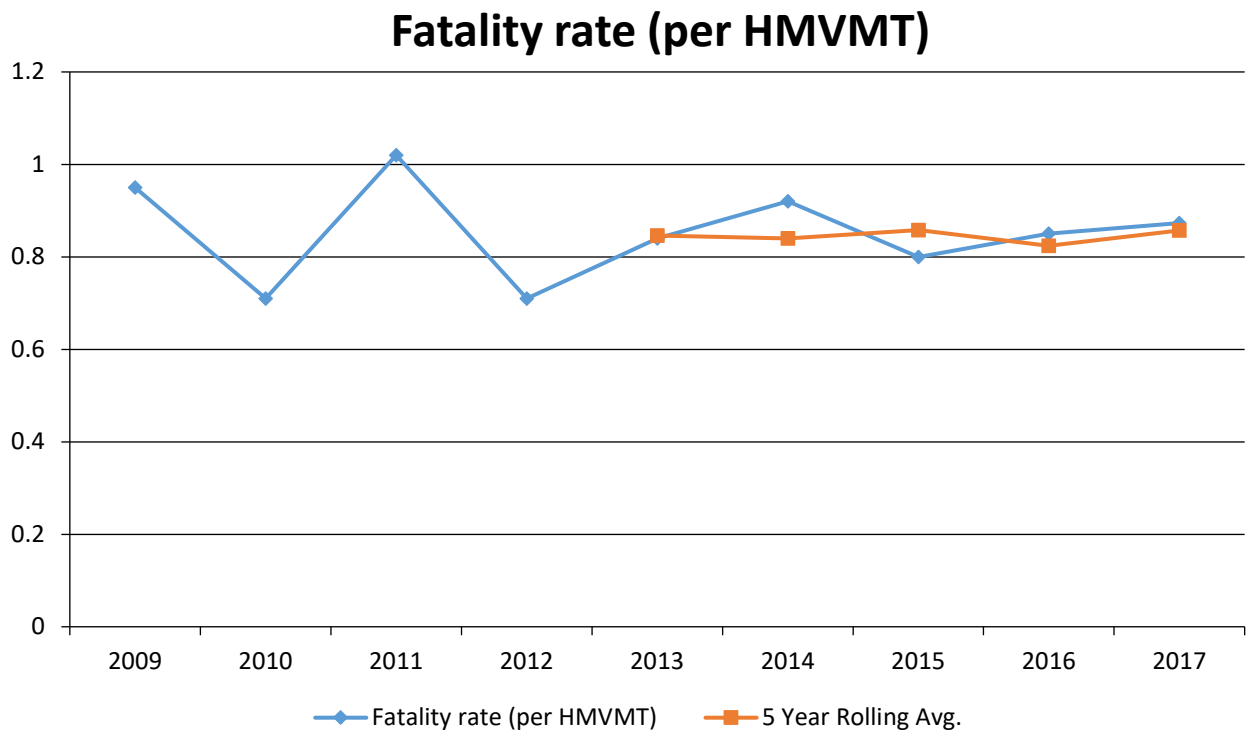
General Highway Safety Trends

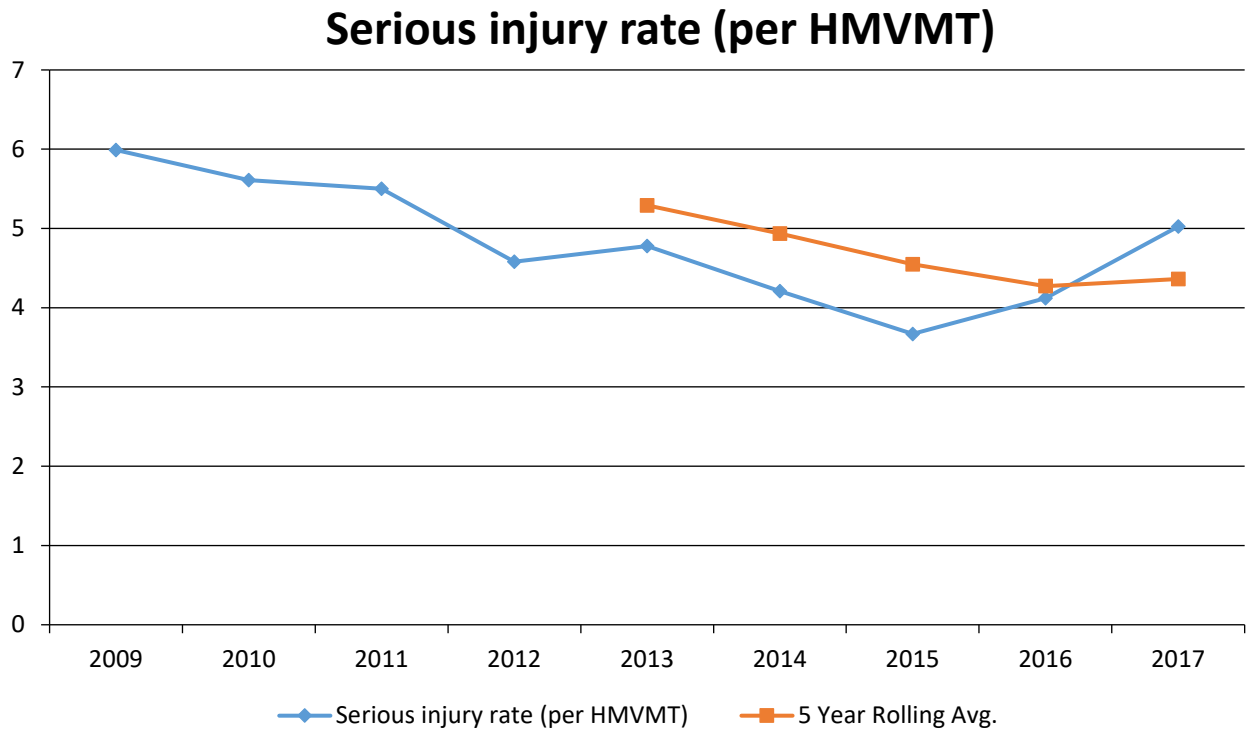
Present data showing the general highway safety trends in the State for the past five years.

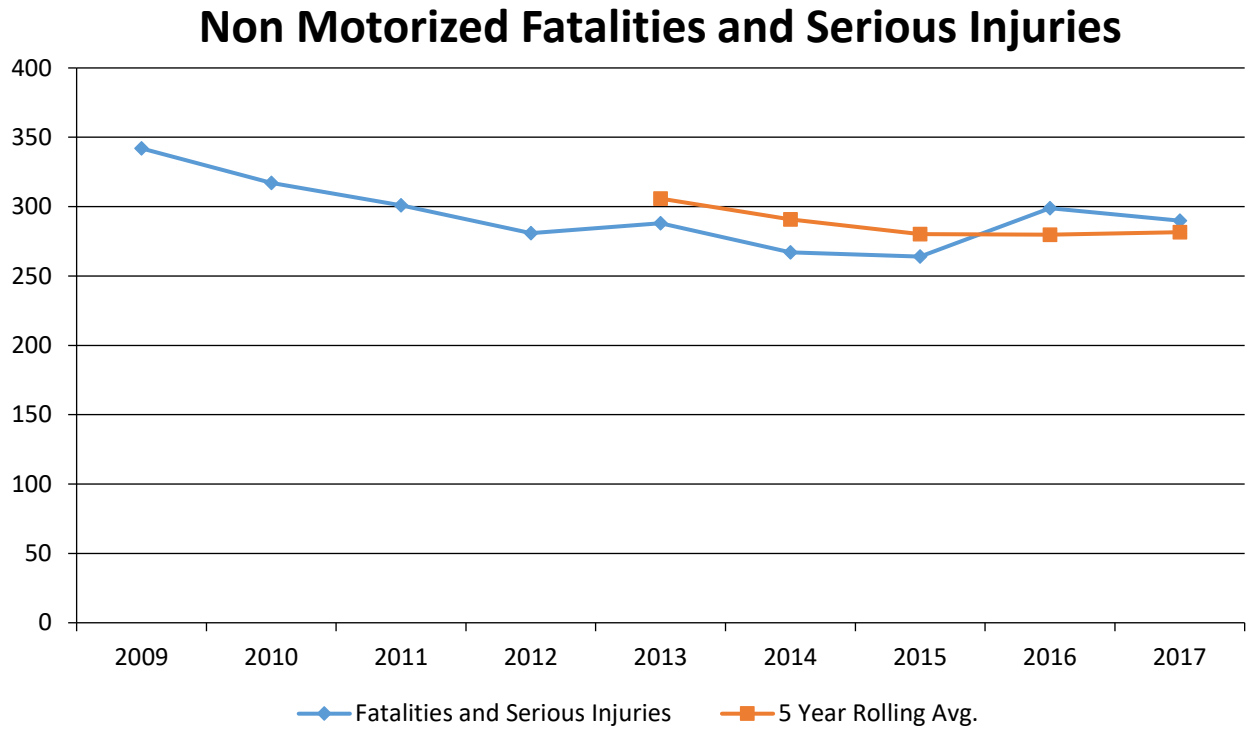
PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	302	224	320	221	264	286	248	270	274
Serious Injuries	1,902	1,763	1,721	1,428	1,494	1,303	1,146	1,302	1,574
Fatality rate (per HMVMT)	0.950	0.710	1.020	0.710	0.840	0.920	0.800	0.850	0.873
Serious injury rate (per HMVMT)	5.990	5.610	5.500	4.580	4.780	4.210	3.670	4.120	5.024
Number non-motorized fatalities	53	27	53	34	47	40	51	48	49
Number of non-motorized serious injuries	289	290	248	247	241	227	213	251	241


Annual Fatalities
350
300
250
200
150
100
50
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
2000
1800
1600
1400
1200
1000
800
600
400
200
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.2
1
0.8
0.6
0.4
0.2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
7
6
5
4
3
2
1
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



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

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.

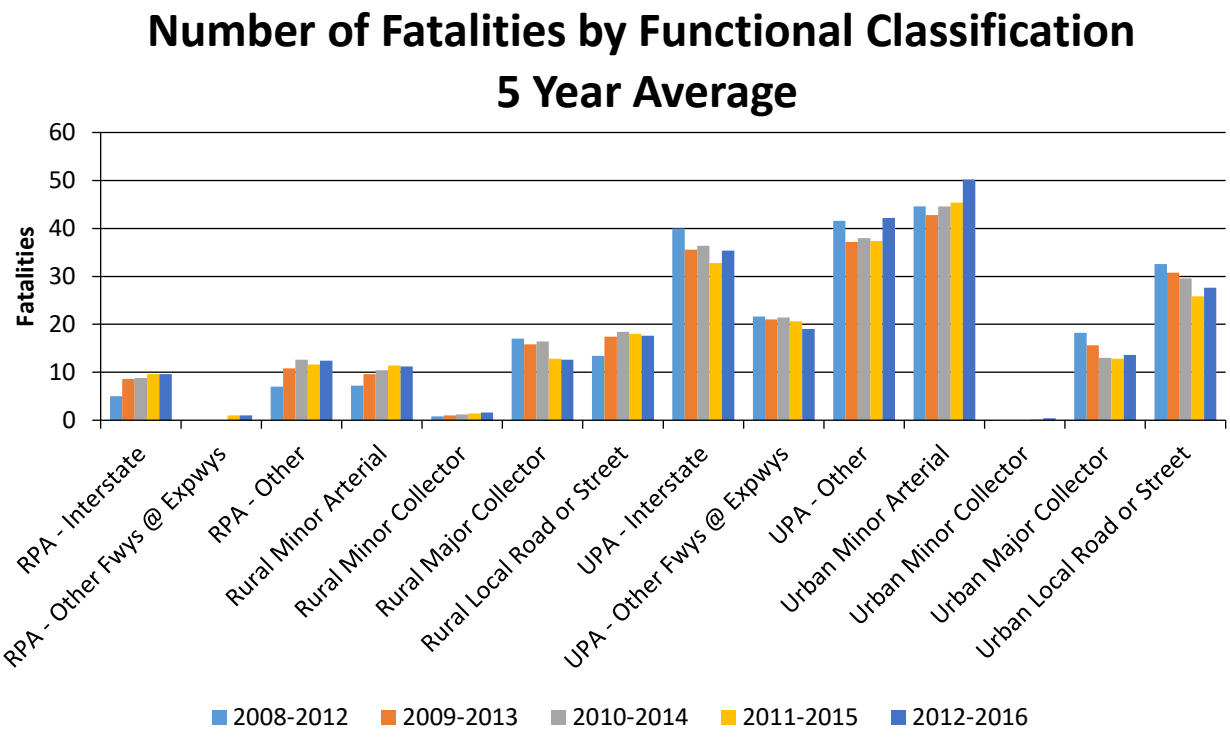
Year 2016

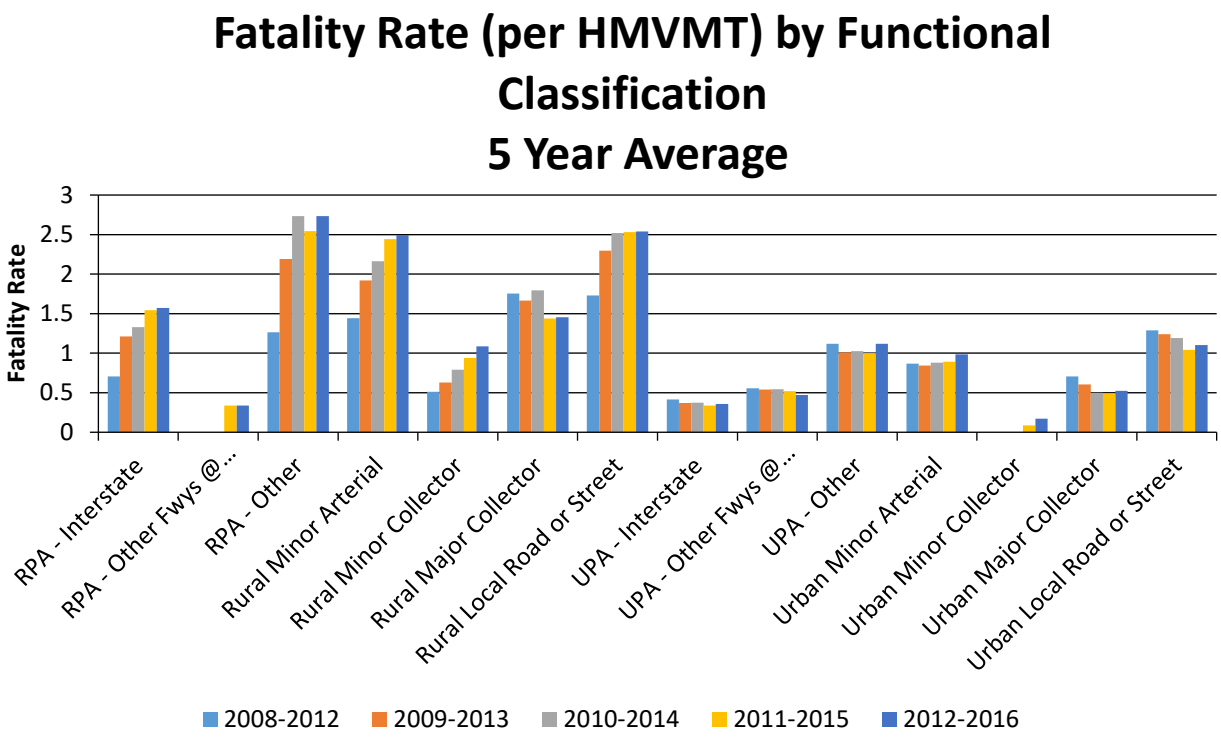
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	9.6		1.57	
Rural Principal Arterial (RPA) - Other Freeways and Expressways	1		0.34	
Rural Principal Arterial (RPA) - Other	12.4		2.73	
Rural Minor Arterial	11.2		2.49	
Rural Minor Collector	1.6		1.09	

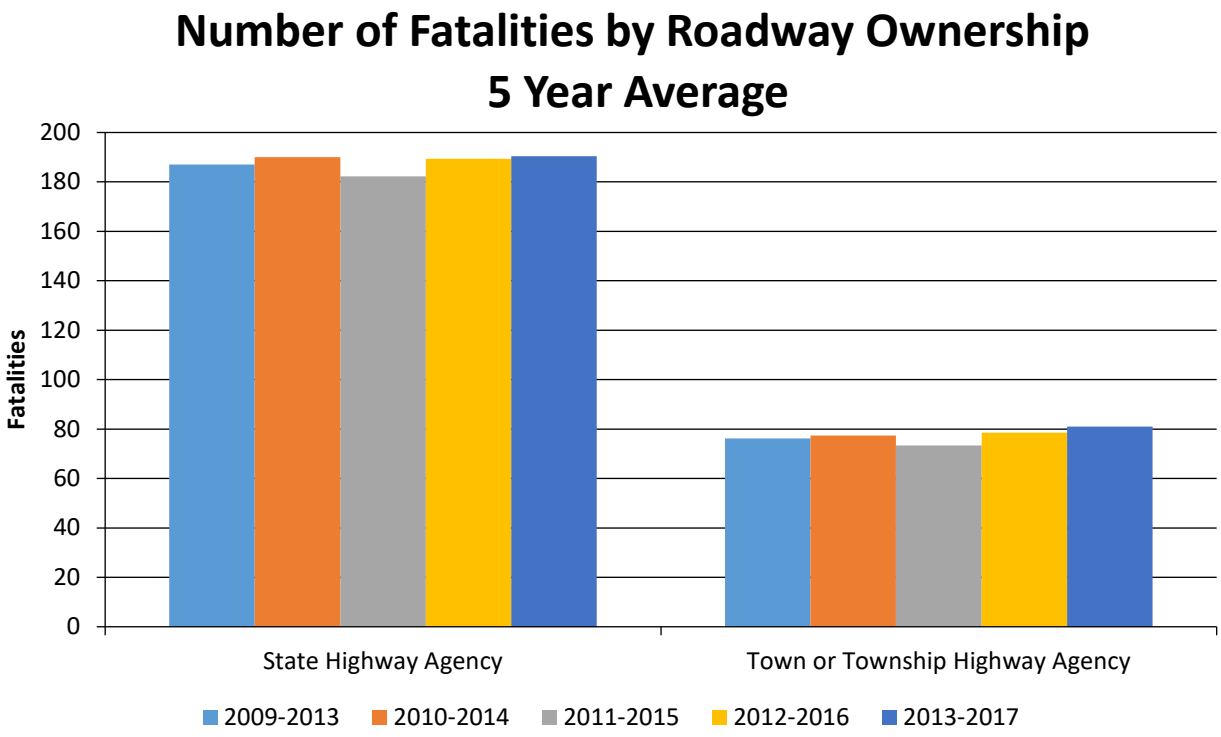
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Major Collector	12.6		1.46	
Rural Local Road or Street	17.6		2.54	
Urban Principal Arterial (UPA) - Interstate	35.4		0.36	
Urban Principal Arterial (UPA) - Other Freeways and Expressways	19		0.47	
Urban Principal Arterial (UPA) - Other	42.2		1.12	
Urban Minor Arterial	50.2		0.99	
Urban Minor Collector	0.4		0.17	
Urban Major Collector	13.6		0.52	
Urban Local Road or Street	27.6		1.1	

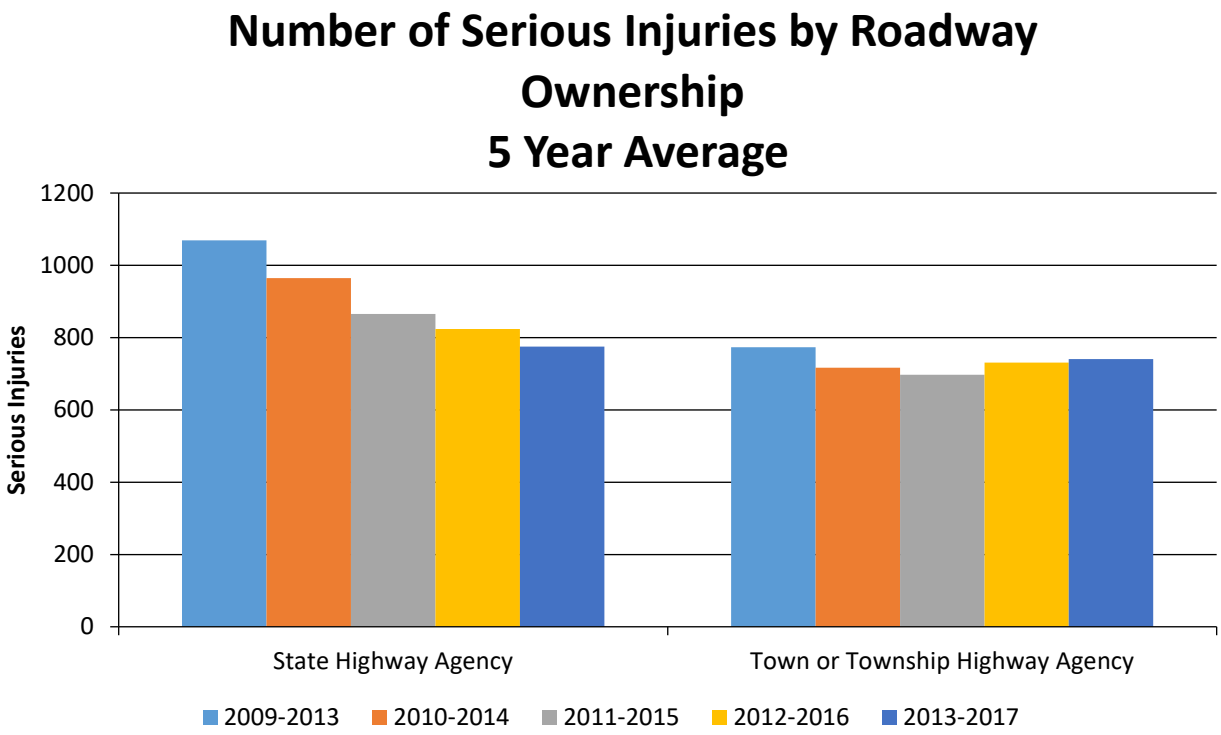
Year 2017

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	190.4	775.4		
County Highway Agency				
Town or Township Highway Agency	81	740.8		
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
RPA - Interstate
RPA - Other Fwys @ Expwys
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @ Expwys
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
3
2.5
2
1.5
1
0.5
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @...
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


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
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017



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

FARS is the source for the number of fatalities based on functional class. The source of data for HMVMT is FHWA Table VM-2. Table VM-2 was not available for 2016 when data was entered into the OLT so 2015 data was used instead.

The state's crash file still does not have serious injury crash data broken down by functional class so those columns are blank.

The state's crash file is the data source for the number of fatalities and serious injuries on state highway and local roads for 2017.

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 2019 Targets *
Number of Fatalities	274.0

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

Annual fatality figures have fluctuated during the five year reporting period, but the 5 year moving average has been flat or increasing. The projected 5 year trend line based on a regression analysis is relatively flat for the next 2 years. Based on the projected trend line, the number of fatalities is expected to remain flat or slightly increase during the planning period.

Number of Serious Injuries 1574.0

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

While the serious injuries have fluctuated year to year, the 5 year moving average has been trending down with the except of the last two years which have been flat. The projected 5 year trend line based on a regression analysis is slightly decreasing for the next 2 years. However the most recent 3 years of data (2015-2017) suggest the number of serious injuries is no longer decreasing. Based on the projected trend line and the most recent 3 years of data, the number of serious injuries is expected to be flat during the planning period.

Fatality Rate 0.873

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

While the annual fatality rate (per HMVMT) has fluctuated year to year, the moving 5 year average has been flat or slightly increasing. The projected 5 year trend line based on a regression analysis is relatively flat for the next 2 years. Based on the projected trend line, the fatality rate is expected to remain flat or slightly increase during the planning period.

Serious Injury Rate 5.024

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

While the serious injury rate (per HMVMT) has fluctuated year to year, the moving 5 year average has been trending down but flat over the last 3 years. The projected 5 year trend line based on a regression analysis is slightly decreasing for the next 2 years. However the most recent 3 years of data (2015-2017)suggest the number of serious injuries is no longer decreasing but instead might be flattening out. Based on the projected trend line and the most recent 3 years of data, the serious injury rate is expected to be flat during the planning period.

Total Number of Non-Motorized Fatalities and Serious Injuries 290.0

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

While non-motorized fatalities and serious injuries fluctuated year to year, the moving 5 year average has increased during the 2 years. The projected 5 year trend line based on a regression analysis is flat for the next 2 years. However the most recent 3 years of

data (2015-2017)suggest the number of non-motorized fatalities and serious injuries is increasing. Based on the projected trend line, the number of non-motorized fatalities and serious injuries is expected to remain the same or decrease slightly during the planning period.

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

The targets for each of the safety performance measures support the overall goal in CT's latest SHSP of reducing fatalities and serious injuries on all public roads 15 percent by 2021. The SHSP is living document and the strategies can be updated if CT is not meeting the stated goals.

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

On June 19, 2018, CTDOT hosted a meeting with all the MPOs to discuss the safety performance targets required by FHWA and NHTSA.

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?

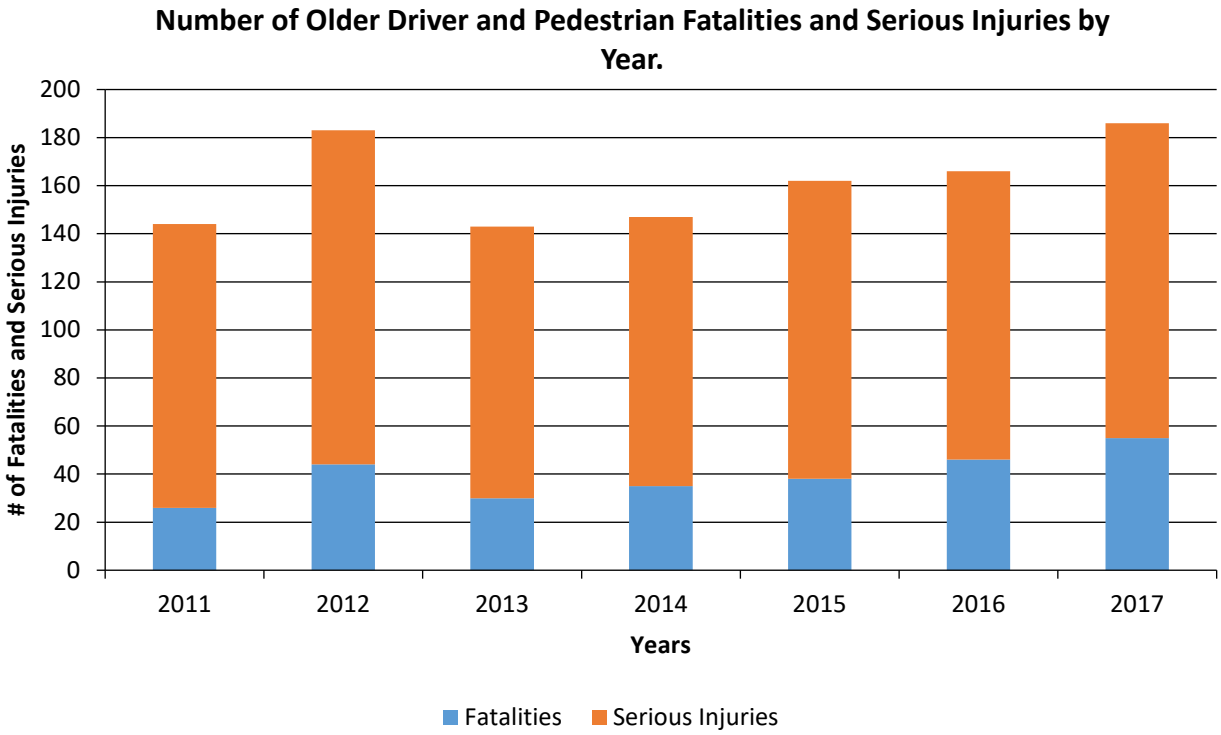
Yes

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 were 172-451, 172-456, 171-409. See Q29 (Project Listing) for additional details.

Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017
Number of Older Driver and Pedestrian Fatalities	26	44	30	35	38	46	55
Number of Older Driver and Pedestrian Serious Injuries	118	139	113	112	124	120	131



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

Data source for the number of older drivers and pedestrian fatalities is FARS with the exception of 2017 data which is from the UCONN crash data repository.

Data source for the number of older drivers and pedestrian serious injuries in the UCONN crash data repository.

it should be noted that the data for years 2011-2016 was updated and many of the values are different from last years HSIP report. The number of older drivers and pedestrian fatalities were verified by another data source (UCONN crash data repository and it is unclear why the numbers are different.

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 slightly increased over the last year, it is difficult to evaluate the State's HSIP program. CT finalized its 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

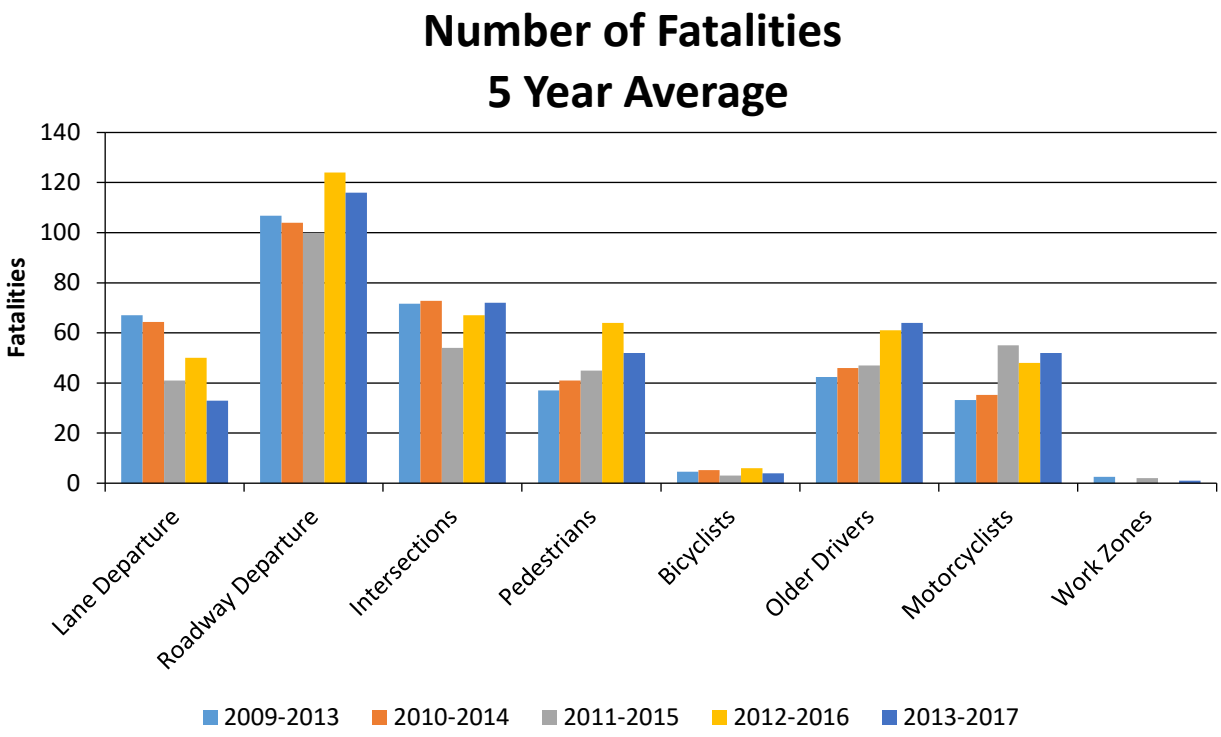
Effectiveness of Groupings or Similar Types of Improvements

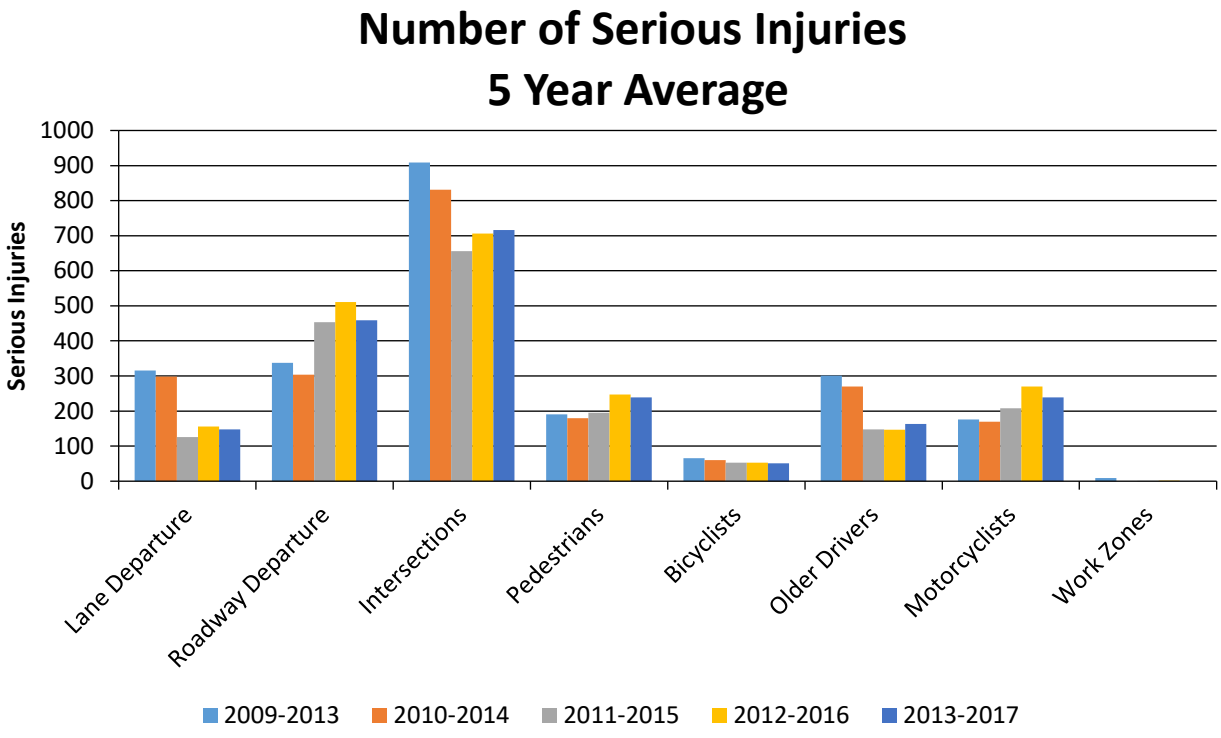
Present and describe trends in SHSP emphasis area performance measures.

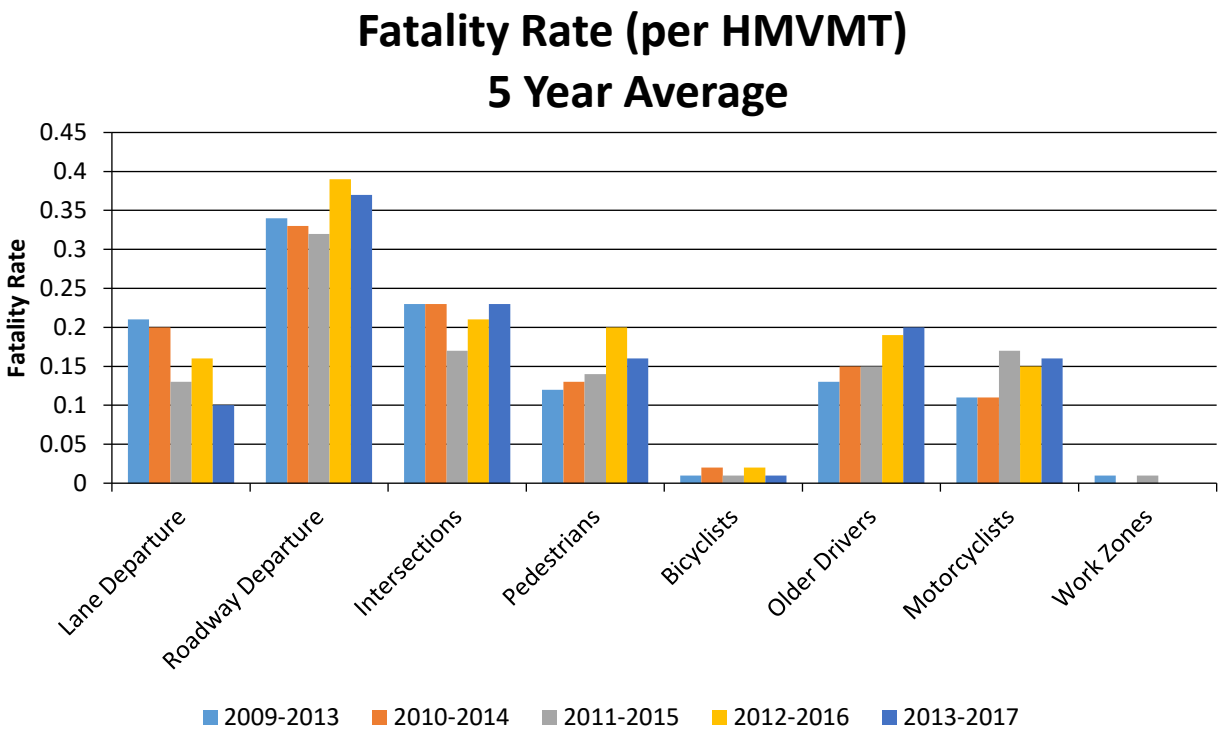
Year 2017

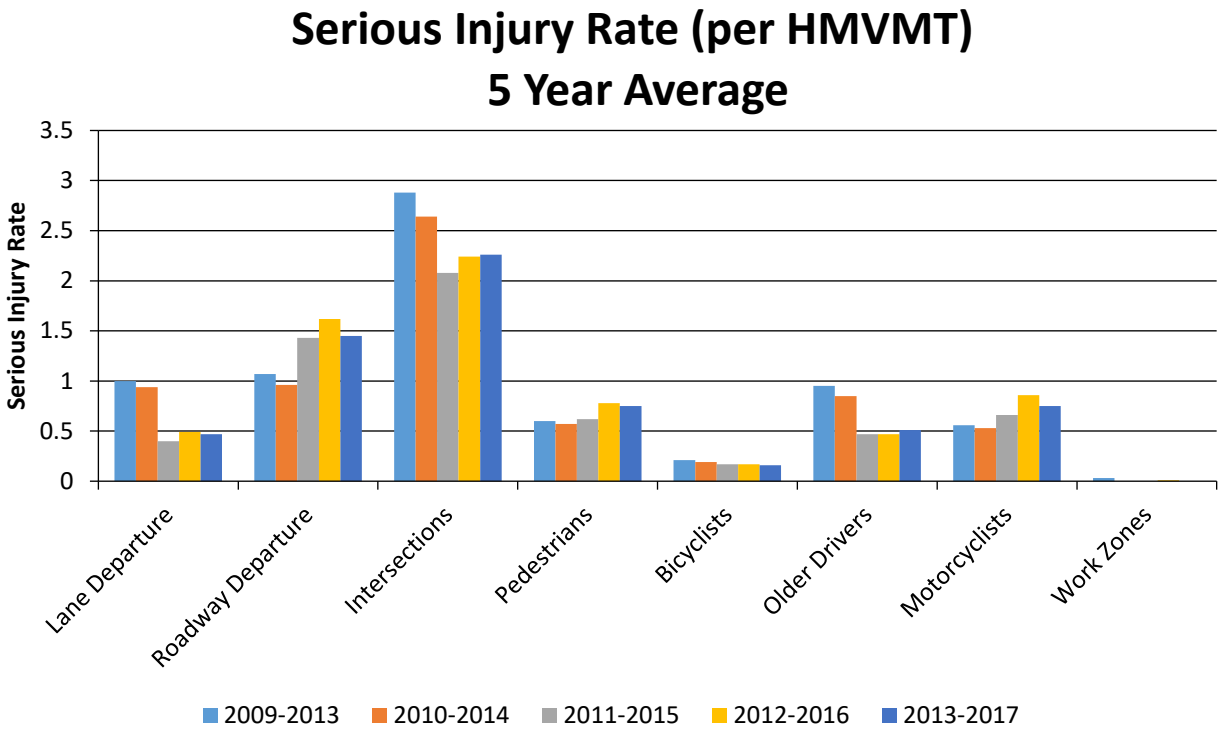
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure	All	33	148	0.1	0.47

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)
Roadway Departure	All	116	459	0.37	1.45
Intersections	All	72	716	0.23	2.26
Pedestrians	All	52	239	0.16	0.75
Bicyclists	All	4	51	0.01	0.16
Older Drivers	All	64	163	0.2	0.51
Motorcyclists	All	52	239	0.16	0.75
Work Zones	All	1	0	0	0


Number of Fatalities
5 Year Average
Fatalities
140
120
100
80
60
40
20
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries
5 Year Average
Serious Injuries
1000
900
800
700
600
500
400
300
200
100
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017





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

Annual data from 2015 and 2016 was updated from last years report to address an input error.

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

2018 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 OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
0														

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

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					81	99		
Begin Point Segment Descriptor (10)	100	100					81	99	61	90
End Point Segment Descriptor (11)	100	100					81	99	61	90
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								
Functional Class (19)	100	100					100	99	100	90
Median Type (54)	70	50								
Access Control (22)	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
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)			14.25	2						
Location Identifier for Road 1 Crossing Point (122)			100	100						
Location Identifier for Road 2 Crossing Point (123)			100	100						
Intersection/Junction Geometry (126)			14.25	2						
Intersection/Junction Traffic Control (131)			14.25	2						
AADT for Each Intersecting Road (79)			100	100						
AADT Year (80)			100	100						
Unique Approach Identifier (139)			14.25	2						
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				
Roadway Type at End Ramp Terminal (199)					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
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):	**98.33**	**97.22**	**57.13**	**51.00**	**81.82**	**81.82**	**87.00**	**99.00**	**76.40**	**90.00**

*Based on Functional Classification

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

CTDOT has recently made progress related to collection and integration of MIRE data specific to intersections since 9/30/17. We will report progress on next year's report.

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 "State of Connecticut Strategic Plan for Traffic Records 2018-2019" (pages 132-144)

http://www.ct.gov/dot/lib/dot/documents/dtransportation_safety/traffic_records/trcc_traffic_records_strategic_plan.pdf

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	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 *
					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	

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.

Optional Attachments

Program Structure:

CT's HSIP safety program.pdf

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

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.