

CONNECTICUT

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2023 ANNUAL REPORT



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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. 407 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 2023 is from October 1, 2021 to September 30, 2022. Connecticut's (5-year rolling average) fatalities and fatal crash rates have increased in calendar years 2019 and 2020, then dipped in 2021 and increased again in 2022. Both (5-year rolling average) serious injuries and the serious injury crash rate have been decreasing slowly in recent years. 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 (both on State and local roads), 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 will target goals and devise strategies in each emphasis area to see where improvements can be made in order to support the vision of moving Toward Zero Deaths.

Since CT did not meets its 2021 safety performance targets, an HSIP Implementation Plan was prepared and submitted to the Division Office on June 30, 2023. CTDOT took this opportunity to re-evaluate its HSIP investments and identify gaps and deficiencies to ensure that projects identified, prioritized, and programmed have the best potential for reducing fatality and serious injury crashes. This should also aid CT in meeting its safety performance targets in subsequent years.

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 systemic approaches to identify, select, and implement HSIP projects. The spot improvement approach, known as High Frequency Crash Locations (HFCL), results in safety investments at specific locations. The systemic approaches lead to widespread implementation of treatments to reduce the potential for fatalities and/or serious injuries, regardless of if crashes occurred at a 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, before/after studies will be used to determine the effectiveness of the spot and systemic improvement projects.

Where is HSIP staff located within the State DOT?

Other-Traffic Engineering

How are HSIP funds allocated in a State?

SHSP Emphasis Area Data

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

Local Roads are addressed by the Local Road Safety Program (LRSP). The LRSP provides federal funding for safety-related improvements on the non-State-maintained roadways, to address hazardous elements identified at locations and along roadway sections. To address all public road requirements, Regional Transportation Safety Plans (RTSP) have been prepared for each of the nine regional councils of government (COG), the latest plans of which will be updated in the near future. The RTSPs identify key safety issues for all public roads. The plans utilized are similar to Connecticut's Strategic Highway Safety Plan (SHSP), but focused instead on the local and regional level needs of the individual communities and region. Since RTSPs include all public roads, communities have been made aware of potential or emerging safety issues on locally owned and maintained roadways and recommendations on how to address them. A program is being developed for the 9 RTSPs to apply for HSIP projects not on the State system. Project sponsors will be encouraged to examine a full range of options starting with low-cost spot and systemic treatments such as signs and pavement markings, to mid-range solutions such as traffic signals, turning lanes or roadway realignment. The applications will be reviewed and evaluated based on factors such as crash analysis, regional or local priority, and benefit/cost analysis. Additional program details will made available at a later date. Local road projects are

also included in the HSIP Implementation Plan for FFY2023 and for FFY2024. Selected projects are based on comprehensive data, SHSP Emphasis Areas, and input from the COGs.

Tribal roads open to public travel are located in Southeastern CT and are not included in the RTSPs. The Tribal Nations have been invited to participate in the transportation safety planning process under the SHSP on numerous occasions but have not yet been involved. In the past, the Bureau of Indian Affairs has contacted the Department to conduct RSAs on Tribal roads and CTDOT has willingly participated. It is acknowledged that tribal roads qualify for HSIP funding. Contact information for CT's State and Federal transportation officials are available under the Transportation Safety for Tribal Governments website.

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

- Districts/Regions
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

Describe coordination with internal partners.

The Safety Engineering Section within the Department's Division of Traffic Engineering conducts network screening on the state system to determine those intersections and segments that have the greatest potential for injury reduction. The lists are forwarded to the Operations Section within Traffic Engineering which reviews locations for possible highway safety improvements and the Highway Division's Project Development Unit (PDU). All of the units coordinate and collaborate with each other as necessary. The study locations typically originate from internal databases, such as High Frequency Crash Location (HFCL) lists using UConn's CRSMS web-based tool, or via appointed and elected officials, town officials, or the public. Depending on the cost and scope of the countermeasure, CTDOT's Office of Maintenance may be requested to implement low-cost improvements such as traffic signal timing changes, as well as installation of signs and pavement markings. In those situations where the scope of work is beyond the resources of the DOT's Division 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 taken on by the Department's Division of Highway Design.

Identify which external partners are involved with HSIP planning.

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

Describe coordination with external partners.

Regional Transportation Safety Plans (RTSP) have been prepared for all nine Councils of Government (COG) in CT, with updates coming to each RTSP in the near future. A program is being developed for the COGs to solicit member towns for candidate HSIP projects. Updates to the RTSPs still need a work plan and budget, as we are in the beginning states of determining a scope to then discuss with COGs. However, we work with the COGS for input on the HSIP Implementation Plan, where they provide strategies as well as project ideas. CTDOT plans to evaluate all the projects received and will notify the COG if the project is selected for funding. The COGs then inform the member towns accordingly. In addition, CTDOT participates in quarterly COG

meetings to share the latest safety information and answer any questions, as well as present on the annual safety performance measures.

The Department's Traffic Safety Engineering group works in partnership with 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), 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 the University of Connecticut (UCONN) and provides accurate information to local practitioners to make informed roadway safety decisions. Additionally, there are now two SCRs, whereas there was only one in the past, which should help with aiding towns quicker. The SCRs have also provided equipment, such as "Your Speed" signs to municipalities, along with training, at no cost to the towns.

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:

- High Frequency Crash Locations (HFCL)
- Local Road Safety Program (LRSP)
- Railway-Highway Grade Crossing Program (RHGCP)
- Projects supporting SHSP Emphasis Areas
- High Risk Rural Roads (HRRR)
- Regional Transportation Safety Plans (RTSPs)
- HSIP Implementation Plan

Program Methodology

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

Yes

See attached file. Guide is in the process of being updated to reflect change in personnel as well as additions/revisions in the Federal IIJA Legislation.

Select the programs that are administered under the HSIP.

- Horizontal Curve
- HRRR
- Intersection
- Local Safety
- Pedestrian Safety
- Roadway Departure
- Vulnerable Road Users
- Wrong Way Driving
- Other-spot improvements (HFCL)

VRU checkbox has been checked, but keeps deselecting when saving the page...not sure if there's a fix for this.

Program: Horizontal Curve

Date of Program Methodology:7/1/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

All crashes

Traffic

- Horizontal curvature
 - Functional classification
- Roadside features

What project identification methodology was used for this program?

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?

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 as well as input from the municipality.

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: HRRR

Date of Program Methodology:7/1/2023

What is the justification for this program?

Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

 Fatal and serious injury crashes only

Traffic

- Functional classification
- Roadside features

What project identification methodology was used for this program?

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

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: Intersection

Date of Program Methodology:9/1/2020

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

- Fatal and serious injury crashes only
- TrafficVolume

- Functional classification
- Roadside features

What project identification methodology was used for this program?

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

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?

Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

Other-As supplied by the applicant

Functional classification

What project identification methodology was used for this program?

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?

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?

Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

All crashes

What project identification methodology was used for this program?

- 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

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?

· Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

All crashes
 Traffic
 Horizontal curvature

What project identification methodology was used for this program?

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

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: Vulnerable Road Users

Date of Program Methodology:7/1/2023

What is the justification for this program?

· Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

- Fatal and serious injury crashes only
- TrafficPopulation

- Functional classification
- Roadside features

What project identification methodology was used for this program?

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

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: Wrong Way Driving

Date of Program Methodology:7/1/2019

What is the justification for this program?

FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

All crashes

Traffic

- Functional classification
- Roadside features
- Other-Interchange Geometry

What project identification methodology was used for this program?

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

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 improvements (HFCL)

Date of Program Methodology:7/1/2018

What is the justification for this program?

Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

 Fatal and serious injury crashes only
 Traffic

What project identification methodology was used for this program?

- Crash frequency
- Probability of specific crash types

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?

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

Cost Effectiveness:1.0

What percentage of HSIP funds address systemic improvements?

45

HSIP funds are used to address which of the following systemic improvements?

- Add/Upgrade/Modify/Remove Traffic Signal
- High friction surface treatment
- · Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Rumble Strips
- Wrong way driving treatments

What process is used to identify potential countermeasures?

- Crash data analysis
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Stakeholder input
- Other-CT Roadway Safety Management System

Does the State HSIP consider connected vehicles and ITS technologies?

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 UCONN, is currently updating the agency's safety analysis tools and methods to match the six-step safety management process as described in the HSM. CT's Roadway Safety Management System (CRSMS) has a network screening module which is used to identify and rank sites with a higher than predicted crash frequency for specific roadway types, crash types, or the presence of a specific traffic control device. In the diagnosis module, users can create collision diagrams and crash trees as well as conduct a test of proportions. Condition diagrams are also available to provide a visual site overview and can be used in coordination with the collision diagram. The CRSMS is constantly being updated and has just added a

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Vulnerable Road Users (VRU) Safety Analysis tool. CTDOT is also using IHSDM in the safety planning process to evaluate and compare design alternatives.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$26,833,677	\$33,050,836	123.17%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$328,200	\$328,200	100%
VRU Safety Special Rule (23 U.S.C. 148(g)(3))	\$3,979,922	\$6,096,302	153.18%
Penalty Funds (23 U.S.C. 154)	\$7,901,584	\$8,711,308	110.25%
Penalty Funds (23 U.S.C. 164)	\$0	\$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$1,444,241	\$1,552,878	107.52%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$0	\$0	0%
Totals	\$40,487,624	\$49,739,524	122.85%

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

\$3,629,464

How much funding is obligated to local or tribal safety projects? \$4,627,634

How much funding is programmed to non-infrastructure safety projects? \$12,692,964

How much funding is obligated to non-infrastructure safety projects? \$12,917,964

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? \$16,000,000

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

None.

General Listing of Projects

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

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT SPEE	D OWNERSHIP	METHOD FOR SITE SELECTION		SHSP STRATEGY
0015-0335	Roadway	Roadway widening - travel lanes	1	Locations	\$24570	\$27300	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0049-0111	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$70200	\$78000	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0050-0224	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1	Locations	\$210000	\$210000	Penalty Funds (23 U.S.C. 154)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0063-0720	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$50000	\$234222	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0076-0224	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$300000	\$476223	HSIP (23 U.S.C. 148)	Urban	Minor Collector	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0076-0224	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$117442	\$130481	HSIP (23 U.S.C. 148)	Urban	Minor Collector	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0076-0224	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$1286012	\$1286012	HSIP (23 U.S.C. 148)	Urban	Minor Collector	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0079-0238	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$32220	\$35800	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0092-0681	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$108000	\$120000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0093-0241	Miscellaneous	Data analysis	1	Plan	\$2243716	\$2243716	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Not Applicable	Not Applicable	Safety Plan	Records
0093-0242	Miscellaneous	Transportation safety planning	1	Plan	\$870820	\$870820	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Not Applicable	Not Applicable	Safety Plan	Records

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0099-0114	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$252430	\$252430	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0099-0114	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$944967	\$1049963	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0099-0114	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$339963	\$377737	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0099-0115	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$48273	\$53637	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0099-0115	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$957261	\$957261	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0099-0115	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$539427	\$539427	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0285	Intersection traffic control	Modify traffic signal – modernization/replacement	2	Intersections	\$139397	\$154886	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0364	Intersection traffic control	Modify traffic signal – modernization/replacement	7	Intersections	\$50000	\$110430	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0134-0152	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$60000	\$156550	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Local Road or Street	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0139-0103	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$591200	\$656889	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0151-0338	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$50000	\$172827	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0156-0183	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	\$50000	\$50000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	City or Municipal Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3490	Intersection traffic control	Modify traffic signal – modernization/replacement	8	Intersections	\$49500	\$55000	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3490	Intersection traffic control	Modify traffic signal – modernization/replacement	8	Intersections	\$500000	\$1043644	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3490	Intersection traffic control	Modify traffic signal – modernization/replacement	8	Intersections	\$81000	\$90000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3490	Intersection traffic control	Modify traffic signal – modernization/replacement	8	Intersections	\$526252	\$584724	Penalty Funds (23 U.S.C. 154)	Urban	Minor Arterial	0	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3565	Miscellaneous	Data analysis	1	Data Reporting	\$1500000	\$1500000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Not Applicable	Not Applicable	Safety Plan	Records
0170-3565	Miscellaneous	Data analysis	1	Data Reporting	\$77572	\$77572	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Not Applicable	Not Applicable	Safety Plan	Records
0170-3565	Miscellaneous	Data analysis	1	Data Reporting	\$175000	\$175000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Not Applicable	Not Applicable	Safety Plan	Records
0170-3566	Speed management	Speed management - other	238	Signs	\$328200	\$328200	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Multiple/Varies	0	Town or Township Highway Agency	Systemic	Safety Patrol	Other
0170-3595	Roadway	Rumble strips – center	1	Screening and Outreach	\$50000	\$50000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Lane Departure	Reduce Conflicts
0170-3597	Roadway	Rumble strips – center	79	Miles	\$14851	\$14851	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Lane Departure	Reduce Conflicts

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0170-3621	Miscellaneous	Transportation safety planning	1	HISP Implementation Plan	\$125000	\$125000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	N/A	0		Not Applicable	Not Applicable	Safety Plan	Records
0170-3624	Miscellaneous	Data analysis	1	Data Reporting	\$450476	\$450476	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	N/A	0		Not Applicable	Not Applicable	Safety Plan	Records
0170-3628	Miscellaneous	Miscellaneous - other	1	Highway Operations Trucks	\$4331862	\$4813180	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Safety Patrol	Other
0170-3630	Speed management	Speed management - other	238	Signs	\$650000	\$650000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Safety Program	Speed Management
0170-3631	Miscellaneous	Miscellaneous - other	1	Safety Circuit Rider	\$504000	\$784000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Not Applicable	Safety Program	Safety Circuit Rider
0170-3632	Intersection traffic control	Modify control – Modern Roundabout	1	Roundabout Screening	\$765000	\$850000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0171-0440	Roadway signs and traffic control		5669	Signs	\$92327	\$92327	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0440	Roadway signs and traffic control		5669	Signs	\$2119890	\$2119890	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0454	Pedestrians and bicyclists	Modify existing crosswalk	11	Crosswalks	\$26731	\$29701	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Improve Visibility
0171-0454	Pedestrians and bicyclists	Modify existing crosswalk	11	Locations	\$27000	\$30000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Improve Visibility
0171-0454	Pedestrians and bicyclists	Modify existing crosswalk	11	Locations	\$273746	\$304162	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Improve Visibility
0171-0462	Intersection traffic control	Systemic improvements – signal-controlled	34	Intersections	\$682500	\$682500	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0171-0463	Intersection traffic control	Systemic improvements – signal-controlled	41	Intersections	\$699000	\$699000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts

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0171-0469	Roadway	Pavement surface – high friction surface	17	Curves	\$649393	\$721548	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0469	Roadway	Pavement surface – high friction surface	17	Curves	\$115096	\$127884	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0469	Roadway	Pavement surface – high friction surface	17	Curves	\$1636312	\$1636312	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0473	Pedestrians and bicyclists	Pedestrian signal - other	14	Locations	\$38000	\$38000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0171-0473	Pedestrians and bicyclists	Pedestrian signal - other	14	Locations	\$50000	\$50000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0171-0473	Pedestrians and bicyclists	Pedestrian signal - other	14	Locations	\$78145	\$78145	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0171-0488	Roadway signs and traffic control	Roadway signs and traffic control - other	221	Intersections	\$275000	\$275000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Town or Township Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0489	Roadway	Pavement surface – high friction surface	14	Curves	\$157500	\$175000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0172-0450	Pedestrians and bicyclists	Pedestrian signal - other	17	Intersections	\$396271	\$396271	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Intersections	Pedestrian Improvements
0172-0477	Roadway signs and traffic control		6800	Signs	\$50000	\$50000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0172-0484	Intersection traffic control	Systemic improvements – signal-controlled	36	Intersections	\$375608	\$375608	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Intersections	Reduce Conflicts
0172-0484	Intersection traffic control	Systemic improvements – signal-controlled	36	Intersections	\$2609460	\$2609460	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Intersections	Reduce Conflicts

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0172-0485	Intersection traffic control	Systemic improvements – signal-controlled	39	Intersections	\$698320	\$698320	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0172-0485	Intersection traffic control	Systemic improvements – signal-controlled	39	Intersections	\$1000000	\$1000000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0172-0485	Intersection traffic control	Systemic improvements – signal-controlled	39	Intersections	\$2874280	\$2874280	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0172-0495	Pedestrians and bicyclists	Modify existing crosswalk	28	Locations	\$67500	\$75000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0172-0495	Pedestrians and bicyclists	Modify existing crosswalk	28	Locations	\$1453284	\$1614760	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0172-0495	Pedestrians and bicyclists	Modify existing crosswalk	28	Locations	\$84252	\$93613	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0172-0495	Pedestrians and bicyclists	Modify existing crosswalk	28	Locations	\$65446	\$72718	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0172-0506	Roadway	Pavement surface – high friction surface	17	Curves	\$786694	\$874104	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0172-0506	Roadway	Pavement surface – high friction surface	17	Curves	\$1995900	\$1995900	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0172-0507	Pedestrians and bicyclists	Modify existing crosswalk	38	Locations	\$35000	\$35000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0172-0509	Intersection traffic control	Modify traffic signal – modernization/replacement	24	Locations	\$45000	\$45000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Pedestrian Improvements
0172-0521	Roadway signs and traffic control	Roadway signs and traffic control - other	55	Intersections	\$80000	\$80000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0173-0460	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Locations	\$55742	\$55742	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0485	Roadway signs and traffic control	Curve-related warning signs and flashers	7294	Signs	\$271303	\$271303	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0173-0500	Intersection traffic control	Systemic improvements – signal-controlled	29	Intersections	\$575000	\$575000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0173-0500	Intersection traffic control	Systemic improvements – signal-controlled	29	Intersections	\$50000	\$404842	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0173-0501	Intersection traffic control	Systemic improvements – signal-controlled	37	Intersections	\$560000	\$560000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0173-0501	Intersection traffic control	Systemic improvements – signal-controlled	37	Intersections	\$50000	\$485166	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Reduce Conflicts
0173-0507	Pedestrians and bicyclists	Modify existing crosswalk	14	Locations	\$482886	\$536540	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0173-0507	Pedestrians and bicyclists	Modify existing crosswalk	14	Locations	\$167657	\$186285	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0173-0507	Pedestrians and bicyclists	Modify existing crosswalk	14	Locations	\$27000	\$30000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0173-0518	Roadway	Pavement surface – high friction surface	13	Curves	\$67500	\$75000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0173-0518	Roadway	Pavement surface – high friction surface	13	Curves	\$50000	\$287822	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0173-0518	Roadway	Pavement surface – high friction surface	13	Curves	\$99217	\$110241	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0173-0521	Pedestrians and bicyclists	Pedestrian signal - other	61	Intersections	\$127000	\$127000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Pedestrian Improvements

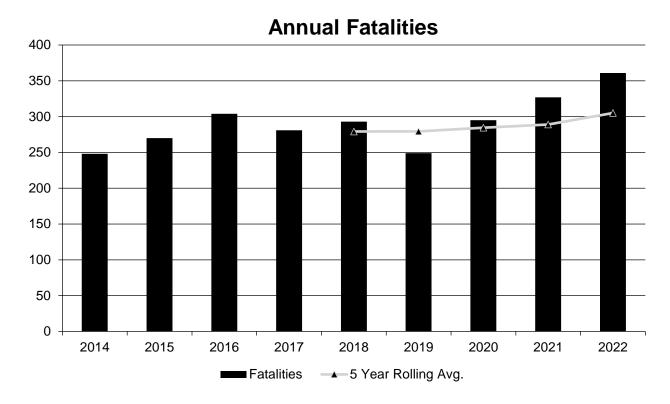
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0173-0528	Roadway signs and traffic control	Roadway signs and traffic control - other	371	Intersections	\$460000	\$460000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Local Road or Street	0	Town or Township Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0174-0405	Intersection traffic control	Modify traffic signal – modernization/replacement	15	Locations	\$678689	\$678689	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Intersections	Pedestrian Improvements
0174-0435	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Locations	\$425000	\$425000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Intersections	Reduce Conflicts
0174-0438	Pedestrians and bicyclists	Modify existing crosswalk	30	Locations	\$1138014	\$1264460	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0174-0438	Pedestrians and bicyclists	Modify existing crosswalk	30	Locations	\$36000	\$40000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0174-0438	Pedestrians and bicyclists	Modify existing crosswalk	30	Locations	\$365362	\$405958	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0174-0449	Roadway signs and traffic control	Roadway signs and traffic control - other	137	Intersections	\$95000	\$95000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Intersections	Reduce Conflicts
0174-0450	Roadway	Pavement surface – high friction surface	14	Curves	\$67500	\$75000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0174-0450	Roadway	Pavement surface – high friction surface	14	Curves	\$50000	\$397540	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0174-0450	Roadway	Pavement surface – high friction surface	14	Curves	\$208958	\$232175	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0174-0461		Roadway signs and traffic control - other	138	Intersections	\$175000	\$175000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0	Town or Township Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road

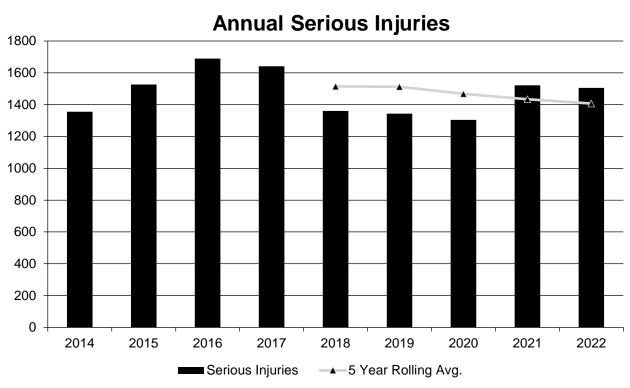
Safety Performance

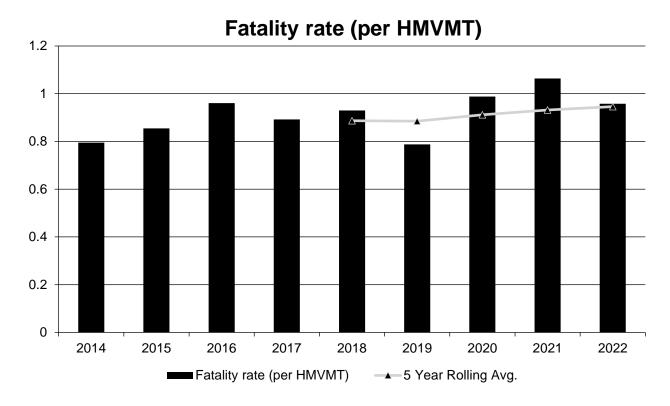
General Highway Safety Trends

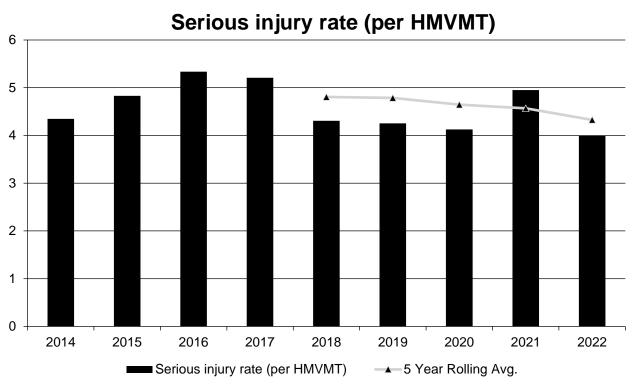
Present data showing the general highway safety trends in the State for the past five years.

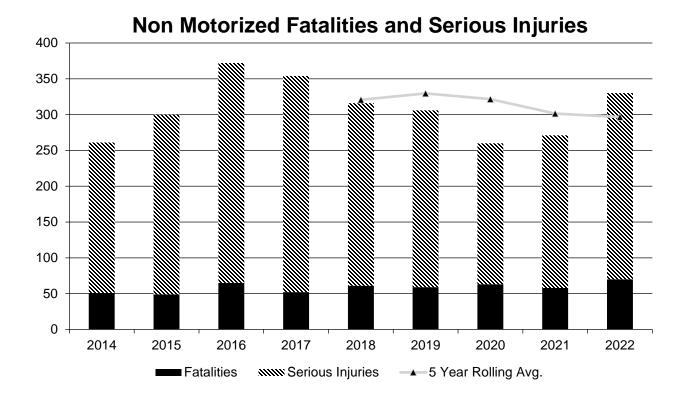
PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fatalities	248	270	304	281	293	249	295	327	361
Serious Injuries	1,356	1,526	1,689	1,641	1,361	1,344	1,304	1,521	1,505
Fatality rate (per HMVMT)	0.795	0.855	0.961	0.892	0.930	0.788	0.988	1.064	0.958
Serious injury rate (per HMVMT)	4.348	4.830	5.338	5.210	4.308	4.253	4.127	4.951	3.992
Number non-motorized fatalities	51	49	65	52	61	59	63	58	70
Number of non- motorized serious injuries	210	251	307	302	255	247	197	213	260











Describe fatality data source.

FARS

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

Year 2020

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	1.8		0.37	
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other				
Rural Minor Arterial				
Rural Minor Collector				
Rural Major Collector				

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 Local Road or Street				
Urban Principal Arterial (UPA) - Interstate	43.2		0.44	
Urban Principal Arterial (UPA) - Other Freeways and Expressways	24.4		0.58	
Urban Principal Arterial (UPA) - Other	58.6		1.54	
Urban Minor Arterial	81.8		1.58	
Urban Minor Collector				
Urban Major Collector	37.8		1.45	
Urban Local Road or Street	30.8		1.22	

Year 2018

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	196.4	479.4		
County Highway Agency				
Town or Township Highway Agency	83	747.2		
City or 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				

2021 FARS data is not yet available. The table will be updated once that information becomes available, typically around the first week of September.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2024 Targets *

Number of Fatalities:270.0

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

CTDOT is choosing to maintain a 2024 fatality target of **270.0**. The selection is based on careful consideration of the following:

CTDOT has chosen to set an aggressive target that will move the state back toward fatality levels experienced in 2014-2015 and 2019 before the impact of the COVID-19 pandemic.

Prior to the COVID-19 pandemic, there had been a decreasing trend in the number of fatalities for the past couple of years with safety related infrastructure projects as well as enforcement and educational campaigns. CTDOT recognizes that 2020 -2022 were unusual years with the COVID-19 pandemic which resulted in higher-than-expected traffic fatalities. This was an unexpected consequence observed in several states in the country.

Number of Serious Injuries:1300.0

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

CTDOT is choosing to maintain a 2024 target of **1300.0** serious injuries. The selection is based on careful consideration of the following:

The two trendlines in the graph suggest the actual value may fall between 1359-1395.

CTDOT wants to set an aggressive target that will move the state back toward serious injury levels experienced in 2020 and lower. At the beginning of the COVID-19 pandemic in 2020 the number of fatalities increased but the number of serious injuries decreased.

Fatality Rate: 0.850

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

CTDOT is choosing to maintain an aggressive target of **0.850** in 2024. The selection is based on careful consideration of the following:

The two trendlines in the graph suggest the actual value may be between 1.020 and 1.170. These trends are higher due to the continuing impact of the COVID-19 pandemic on the number of fatalities and the VMT.

CTDOT wants to set an aggressive target that will move the state back toward fatality rate levels experienced in 2014-2015 and 2019 time periods before the impact of the COVID-19 pandemic.

CTDOT recognizes that 2020 -2022 were unusual years with the COVID-19 pandemic when Connecticut saw an increase in traffic fatalities even though the traffic volume dropped. This resulted in higher fatality rate in 2020 and the increase in fatalities has continued into 2021 and 2022 which will likely push the fatality rate even higher.

In 2021, in the aftermath of the COVID-19 pandemic, Connecticut's fatality rate increased to 1.028. Early estimates from NHTSA suggest a national fatality rate of 1.37 in 2021 which is 33 percent higher than Connecticut. Connecticut is choosing to strive for a lower rate by setting a target at 0.850 for 2024. The goal is to return to pre-COVID-19 pandemic levels.

Serious Injury Rate: 4.300

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

CTDOT is choosing to maintain a 2024 target of **4.300** serious injuries/100 million VMT. The selection is based on careful consideration of the following:

The two trendlines in the graph suggest the actual value may fall between 4.551-4.866, but CTDOT wants to set an aggressive target that will move the state back toward fatality rate levels experienced in 2018 and lower.

CTDOT recognizes that 2020 and 2021 were unusual years with the COVID-19 pandemic. There was a decrease in the number of serious injuries likely due to a reduction in traffic volume in 2020, whereas 2021 saw an increase in the number of serious injuries. In 2022, preliminary data suggest serious injuries once again began the downward trend.

Total Number of Non-Motorized Fatalities and Serious Injuries:280.0

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

CTDOT is choosing to maintain a 2024 target of **280.0** non-motorist fatalities and serious injuries. The selection is based on careful consideration of the following:

<u>High Priority for Pedestrian Safety</u>. The safety of pedestrians became a concern in Connecticut when pedestrian fatalities increased significantly in 2014. While it was part of a larger national trend, it raised concern in heavily urbanized areas, where walking and bicycling are more common. These forms of active transportation are also increasingly popular forms of physical exercise. CTDOT adopted pedestrian safety as a high priority and has a program to improve safety. Several safety-related infrastructure projects were undertaken from 2015-2023 to improve the conspicuity of traffic control devices for non-motorized road users including, but not limited to, marked crosswalk enhancements, pedestrian facility upgrades, and pedestrian signing. Connecticut remains committed to these goals.

<u>Aggressive Target</u>. The CTDOT wants to set an aggressive target that will move the state back toward fatality rate levels experienced in 2014 and lower.

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

Internal coordination between the Highway Safety Office (HSO) and Traffic Engineering began in the Spring of 2022. The HSO's contractor prepared initial targets for each of the safety performance targets for discussion. Once the draft targets were approved at the staff level, they were forwarded to CTDOT management for discussion and approval. After the targets were approved, CTDOT hosted a meeting with the MPOs to discuss the safety performance targets. During the meeting, there was a presentation and discussion on Federal reporting requirements, deadlines, and an assessment on past and current trends.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2022 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	270.0	305.0
Number of Serious Injuries	1300.0	1407.0
Fatality Rate	0.850	0.946
Serious Injury Rate	4.300	4.326
Non-Motorized Fatalities and Serious Injuries	280.0	296.6

Number of Fatalities:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Number of Serious Injuries:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Fatality Rate:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Serious Injury Rate (per HMVMT):

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Number of Non-Motorized Fatalities and Serious Injuries:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Applicability of Special Rules

Does the VRU Safety Special Rule apply to the State for this reporting period? Yes

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

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	2016	2017	2018	2019	2020	2021	2022
Number of Older Driver and Pedestrian Fatalities	50	53	40	53	42	38	57
Number of Older Driver and Pedestrian Serious Injuries	120	132	117	137	138	135	146

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

• Change in fatalities and serious injuries

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

During the COVID pandemic, traffic volume decreased by almost 50%. As a result, there was an increase in speeding and aggressive driving behavior which has continued as the traffic volumes have begun to return to pre-pandemic levels. Overall driver behavior has continued to remain aggressive. As a result of the last few years of volume fluctuation, it is difficult to evaluate the State's HSIP program. The safety effectiveness evaluation module within the CT Roadway Safety Management System (CRSMS) will allow users to evaluate individual project(s).

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

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

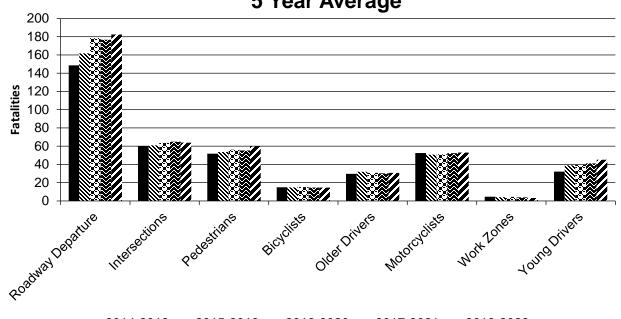
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

Year 2022

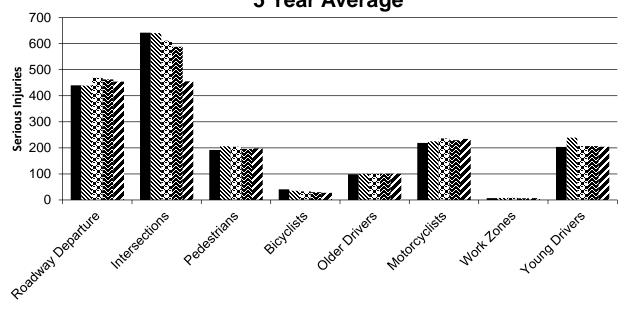
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure		182.6	453.8	0.56	1.39
Intersections		64	455	0.2	1.73
Pedestrians		59.8	197.4	0.18	0.6
Bicyclists		14.6	27.4	0.01	0.08
Older Drivers		30.8	101.2	0.09	0.31
Motorcyclists		53	234.4	0.16	0.71
Work Zones		3.2	7	0.01	0.02
Young Drivers		45.2	204.2	0.14	0.62

Number of Fatalities 5 Year Average



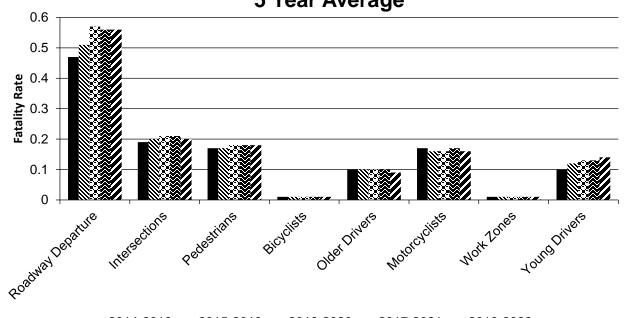
■2014-2018 ×2015-2019 ×2016-2020 ×2017-2021 <a>2018-2022

Number of Serious Injuries 5 Year Average



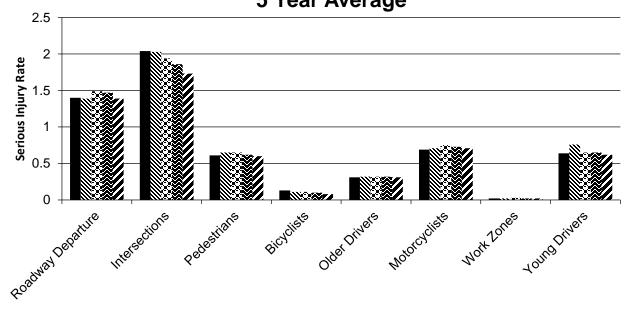
■2014-2018 ×2015-2019 ×2016-2020 ×2017-2021 ×2018-2022





■2014-2018 ×2015-2019 ×2016-2020 ×2017-2021 <a>2018-2022

Serious Injury Rate (per HMVMT) 5 Year Average



■2014-2018 ×2015-2019 ×2016-2020 ×2017-2021 ×2018-2022

Project Effectiveness

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

Compliance Assessment

What date was the State's current SHSP approved by the Governor or designated State representative? 05/01/2022

What are the years being covered by the current SHSP?

From: 2022 To: 2026

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

2026

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

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

ROAD TYPE		NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED R	LOCAL PAVED ROADS		UNPAVED ROADS	
	NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
ROADWAY SEGMENT	Segment Identifier (12) [12]	100	100					90	99	65	99	
	Route Number (8) [8]	100	100									
	Route/Street Name (9) [9]	100	100									
	Federal Aid/Route Type (21) [21]	100	100									
	Rural/Urban Designation (20) [20]	100	100					99	99			
	Surface Type (23) [24]	100	100					90	99			
	Begin Point Segment Descriptor (10) [10]	100	100					90	99	65	99	
	End Point Segment Descriptor (11) [11]	100	100					90	99	65	99	
	Segment Length (13) [13]	100	100									
	Direction of Inventory (18) [18]	100	100									
	Functional Class (19) [19]	100	100					99	99	100	90	

ROAD TYPE	*MIRE NAME (MIRE	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	95	50								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					99	99		
	Average Annual Daily Traffic (79) [81]	100	100					99	99		
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					99	99	99	90
INTERSECTION	Unique Junction Identifier (120) [110]			100	100						
	Location Identifier for Road 1 Crossing Point (122) [112]			100	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			100	100						
	Intersection/Junction Geometry (126) [116]			100	100						
	Intersection/Junction Traffic Control (131) [131]			100	100						
	AADT for Each Intersecting Road (79) [81]			100	100						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]			100	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					100	100				
	Location Identifier for Roadway at					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	
	NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					100	100				
	Roadway Type at End Ramp Terminal (199) [189]					100	100				
	Interchange Type (182) [172]					100	100				
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					100	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Perce	nt Complete):	99.72	97.22	100.00	100.00	100.00	100.00	95.00	99.00	78.80	95.40

^{*}Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

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.

Refer to CTDOT's Traffic Records Strategic Plan dated August 1, 2023.

https://portal.ct.gov/-/media/DOT/documents/dhighwaysafety/TRCC/CT_FY24_405c-Traffic-Records-Strategic-Plan.pdf

Section 4.2 Roadway System (page 33) contains information on MIRE Fundamental Data Elements.

Optional Attachments

CT HSIP guide.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.