Protection of Data from Discovery & Admission into Evidence

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

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”
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The reporting period for 2013 is October 1, 2011 to September 30, 2012.

ConnDOT has obligated more systematic improvements in the HSIP program this reporting period as compared to previous years. While ConnDOT’s traditional site analysis approach known as the Suggested List of Surveillance Study Sites (SLOSSS), results in safety investments at specific locations, the systemic approach leads to widespread implementation of projects to reduce the potential for severe crashes, whether or not crashes have occurred at any given site. Because many of CT’s fatal and severe injury crashes are spread out, the systematic approach provides an alternative method to identify and implement low-cost safety countermeasures addressing specific risk factors across the transportation network. Systematic analysis is a complement to site-specific analysis, and can be very effective in implementing low-cost safety countermeasures. As Connecticut prepares to update its SHSP to be compliant with MAP-21 requirements, it is likely that additional emphasis will be placed on systematic improvements.
Introduction

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

Program Structure

Program Administration

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

- Central
- District
- Other

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

Local Roads are addressed by the Local Road Accident Reduction Program (LRARP). The LRARP provides federal funding for safety-related improvements not on the state-numbered highway system, to address hazardous elements identified at specific locations and along roadway sections. The Crash Data and Analysis Office commenced coding all local road accidents effective with 2007 accidents and complete local road accident information is now available.
through June 2011. Property damage only crashes from July 2011 forward has not been coded in order to help reduce the backlog of crash records for the entire State. 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 Regional Planning Organizations (RPO) for recommended improvements on behalf of their member towns, to address identified hazardous elements. These improvements may include signal enhancements, minor geometric improvements, roadside obstacles, sight line conditions, hazards to pedestrians and poor or unmarked roadways. In the future when more local road data is available, the methodology for selection of improvements under the LRARP will be reevaluated. In the interim, the Department has expanded the Local Road Program in order to consider system-wide improvement projects designed to address run-off-road fixed-object collisions on local roads. The project cost eligible for federal participation is currently capped at $500,000 per location. All locations are reviewed and investigated by the Division of Traffic Engineering and the Division of Highway Design.

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

☐ Design
☒ Planning
☐ Maintenance
☐ Operations
☒ Governors Highway Safety Office
☒ Other: Other-Traffic Engineering

Briefly describe coordination with internal partners.

Responsibility for carrying out the administration of the HSIP within the Department is assigned to the Division of Traffic Engineering and the Bureau of Policy and Planning-Crash Data and Analysis Section. The Department actively collects and compiles crash data with the intent of
addressing problematic conditions that are identified. Identification and surveillance of locations displaying higher than expected accident rates on the state highway system are accomplished primarily through a computerized surveillance system utilizing traffic record files maintained by the Bureau of Policy and Planning. Those files consist of (1) a crash record file, (2) an average daily traffic file, (3) an inventory of certain roadway characteristics. The inventory file identifies locations as being either rural or urban, as either a section of highway, section of expressway, intersection with another state highway, intersection with a town road (or signalized drive) or expressway interchange and further by number of lanes and control of access. Some groups having few locations are merged with similar groups. The Bureau of Policy and Planning runs a computer program utilizing the three files described above. The results are lists of locations that appear to have an unusually high crash rate. These lists are referred to as SLOSSS lists (Suggested List of Surveillance Study Sites). In that computer program, average crash rates and number of crashes are computed for the various groups of locations described in the preceding paragraph. Based upon those average values, a threshold of abnormally high numbers and rates is developed for each location. Locations equaling or exceeding the threshold are reviewed. The thresholds are changed occasionally based upon prior experience with these lists. The process described above is not intended to be the sole determinant in identifying locations having problematic characteristics. Many locations with crash rates not abnormally high will demonstrate crash type or severity patterns symptomatic of the problematic characteristic for a particular location. An example would be a pattern of run-off-the-road crashes at a curve. Some other locations may have design characteristics similar to a design characteristic determined to be problematic (e.g., rigid sign posts, poor sight line). These may also be considered for safety improvement.

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

☐ Metropolitan Planning Organizations
☐ Governors Highway Safety Office
☐ Local Government Association
☐ Other:
Identify any program administration practices used to implement the HSIP that have changed since the last reporting period.

☐ Multi-disciplinary HSIP steering committee

☒ Other: Other-The Department has begun investigating low cost systematic proven safety countermeasures to enhance the HSIP program

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

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

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

Program Methodology
Select the programs that are administered under the HSIP.

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

Program: Local Safety

Date of Program Methodology: 10/1/2008

What data types were used in the program methodology?

<table>
<thead>
<tr>
<th>Crashes</th>
<th>Exposure</th>
<th>Roadway</th>
</tr>
</thead>
<tbody>
<tr>
<td>All crashes</td>
<td>Traffic</td>
<td>Median width</td>
</tr>
<tr>
<td>Fatal crashes only</td>
<td>Volume</td>
<td>Horizontal curvature</td>
</tr>
<tr>
<td>Fatal and serious injury crashes only</td>
<td>Population</td>
<td>Functional classification</td>
</tr>
<tr>
<td>Other-As supplied by the applicant</td>
<td>Lane miles</td>
<td>Roadside features</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

What project identification methodology was used for this program?

- Crash frequency
- Expected crash frequency with EB adjustment
- Equivalent property damage only (EPDO Crash frequency)
- EPDO crash frequency with EB adjustment
- Relative severity index
- Crash rate
☐ Critical rate
☐ Level of service of safety (LOSS)
☐ Excess expected crash frequency using SPF s
☐ Excess expected crash frequency with the EB adjustment
☐ Excess expected crash frequency using method of moments
☐ Probability of specific crash types
☐ Excess proportions of specific crash types
☐ Other

Are local roads (non-state owned and operated) included or addressed in this program?
☐ Yes
☐ No
If yes, are local road projects identified using the same methodology as state roads?
☐ Yes
☐ No
If no, describe the methodology used to identify local road projects as part of this program.

Submittals by the regional planning agencies

How are highway safety improvement projects advanced for implementation?
☐ Competitive application process
☒ selection committee
☐ Other

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

Rank of Priority Consideration

- Ranking based on B/C 50
- Available funding 50
- Incremental B/C
- Ranking based on net benefit
- Cost Effectiveness

Local Road Accident Reduction Program methodology is attached.

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

28

Highway safety improvement program funds are used to address which of the following systemic improvements?

- Cable Median Barriers
- Rumble Strips
- Traffic Control Device Rehabilitation
- Pavement/Shoulder Widening
- Install/Improve Signing
- Install/Improve Pavement Marking and/or Delineation
- Upgrade Guard Rails
- Clear Zone Improvements
- Safety Edge
- Install/Improve Lighting
- Add/Upgrade/Modify/Remove Traffic Signal
- Other
What process is used to identify potential countermeasures?

- [x] Engineering Study
- [ ] Road Safety Assessment
- [ ] Other:

Identify any program methodology practices used to implement the HSIP that have changed since the last reporting period.

- [ ] Highway Safety Manual
- [ ] Road Safety audits
- [x] Systemic Approach
- [ ] Other:

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

Project 170-3055 is a low-cost systematic approach to reduce the number of fatal and severe injuries on rural major collector state-maintained roadways that exceed the accident severity rate. Recent research based on data collected from Connecticut and Washington (Publication
No. FHWA-HRT-10-019) indicates that improved curve delineation has the potential to reduce crashes and crash severity on rural roads particularly at sharp horizontal curves where the radius is less than 492 feet (11.65 degrees). The research for Connecticut indicated significant crash reductions; 25 percent reduction for injury & fatal accidents and over 34 percent reduction in lane departure accidents (dark conditions). Further, an economic analysis revealed that improving curve delineation with signing improvements is a very cost-effective treatment with the benefit-cost ratio exceeding 8:1. The Department is implementing a project to systematically sign horizontal curves located on just those rural major collector roadways where the actual accident rate for fatal and severe injuries exceeds the average rate for this roadway classification. Based on the anticipated success of this project, other systematic improvement projects are being explored.

### Progress in Implementing Projects

**Funds Programmed**

Reporting period for Highway Safety Improvement Program funding.

- [ ] Calendar Year
- [ ] State Fiscal Year
- [x] Federal Fiscal Year

Reporting period for 2013 is October 1, 2011 to September 30, 2012.

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

<table>
<thead>
<tr>
<th>Funding Category</th>
<th>Programmed*</th>
<th>Obligated</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSIP (Section 148)</td>
<td>6285050</td>
<td>9468982</td>
</tr>
<tr>
<td>HRRRP (SAFETEA-LU)</td>
<td>796320</td>
<td>796320</td>
</tr>
<tr>
<td>HRRR Special Rule</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How much funding is programmed to local (non-state owned and maintained) safety projects?

$644,850.00

How much funding is obligated to local safety projects?

$733,332.00

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

$146,050.00

How much funding is obligated to non-infrastructure safety projects?
2013 Connecticut Highway Safety Improvement Program

$296,050.00

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

$0.00

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

$0.00

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

There are numerous needs and deficiencies in CT and the HSIP is just one of ConnDOT's priorities. Measures are being taken to provide additional resources moving forward and the Department hopes to increase the HSIP obligation rate in future years.

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

CT's Strategic Highway Safety Plan (SHSP) was updated in May 2013 and a new SHSP is being developed to meet the requirements of MAP-21.
## General Listing of Projects
List each highway safety improvement project obligated during the reporting period.

<table>
<thead>
<tr>
<th>Project</th>
<th>Improvement Category</th>
<th>Output</th>
<th>HSIP Cost</th>
<th>Total Cost</th>
<th>Funding Category</th>
<th>Functional Classification</th>
<th>AADT</th>
<th>Speed</th>
<th>Roadway Ownership</th>
<th>Relationship to SHSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0042-0315PE (Rte 44 between Rte 5 and Mary St)</td>
<td>Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists</td>
<td>1 Number</td>
<td>145800</td>
<td>162000</td>
<td>HSIP (Section 148)</td>
<td>Urban Principal Arterial - Other</td>
<td>1</td>
<td></td>
<td>State Highway Agency</td>
<td>Making walking and street crossing easier</td>
</tr>
<tr>
<td>0057-0116CN (Stone Hill Rd at Roode Rd)</td>
<td>Alignment Vertical alignment or elevation change</td>
<td>1 Number</td>
<td>312120</td>
<td>346800</td>
<td>HSIP (Section 148)</td>
<td>Rural Local Road or Street</td>
<td></td>
<td></td>
<td>Town or Township Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
</tr>
<tr>
<td>0076-0215CN (I-84/I-291/I-384 Frontage)</td>
<td>Roadway signs and traffic control Roadway signs</td>
<td>150 Number</td>
<td>87500</td>
<td>87500</td>
<td>Penalty Transfer - Section 154</td>
<td>Urban Principal Arterial - Other Freeways and</td>
<td></td>
<td></td>
<td>State Highway Agency</td>
<td>Enhancing emergency medical capabilities to increase</td>
</tr>
<tr>
<td>Roads</td>
<td>(including post) - new or updated</td>
<td>Expressways</td>
<td>survivability</td>
<td></td>
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</tr>
<tr>
<td>0084-0108PE (Rte 110 @ Rte 111)</td>
<td>Intersection traffic control Modify control - modification to roundabout</td>
<td>1 Numbers</td>
<td>450000</td>
<td>450000</td>
<td>HSIP (Section 148)</td>
<td>Urban Minor Arterial</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Intersection Improvement</td>
<td></td>
</tr>
<tr>
<td>0094-0245CN (Bank St @ Howard St &amp; Blinman St)</td>
<td>Intersection traffic control Intersection traffic control - other</td>
<td>1 Numbers</td>
<td>332730</td>
<td>410600</td>
<td>HSIP (Section 148)</td>
<td>Urban Local Road or Street</td>
<td>Town or Township Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
</tr>
<tr>
<td>0120-0086CN (Rte 82 @ Rte 85)</td>
<td>Intersection traffic control Modify control - traffic signal to roundabout</td>
<td>1 Numbers</td>
<td>5319320</td>
<td>5319320</td>
<td>Penalty Transfer - Section 154</td>
<td>Rural Principal Arterial - Other</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
</tr>
<tr>
<td>Project Number</td>
<td>Project Description</td>
<td>Number</td>
<td>Unit</td>
<td>Program</td>
<td>Category</td>
<td>State Highway Agency</td>
<td>Improvement</td>
<td>Spot Safety Improvement</td>
<td></td>
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</tr>
<tr>
<td>0148-0202RW (Rte 68 @ Rte 150)</td>
<td>Intersection geometry Auxiliary lanes - add auxiliary through lane</td>
<td>1</td>
<td>Number</td>
<td>HSIP (Section 148)</td>
<td>Urban Principal Arterial - Other</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0170-3055CN (Statewide HRRR Curve Signing Project)</td>
<td>Roadway signs and traffic control Roadway signs (including post) - new or updated</td>
<td>150</td>
<td>Number</td>
<td>HRRRP (SAFETY A-LU)</td>
<td>Rural Major Collector</td>
<td>State Highway Agency</td>
<td>Keeping vehicles in the roadway</td>
<td>Roadway Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0170-3077PE (Statewide Design of SLOSSS Traffic Signals)</td>
<td>Intersection traffic control Intersection traffic control - other</td>
<td>16</td>
<td>Number</td>
<td>HSIP (Section 148)</td>
<td>Various locations statewide</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0170-3067PL (NHTSA-Fatality Accident)</td>
<td>Non-infrastructure</td>
<td>98350</td>
<td>98350</td>
<td>Penalty Transfer - Section 154</td>
<td>various locations statewide</td>
<td>State &amp; local roads</td>
<td>Creating more effective processes and safety</td>
<td>Traffic Records and Information Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting System</td>
<td>Non-infrastructure</td>
<td>47700</td>
<td>47700</td>
<td>Penalty Transfer - Section 154</td>
<td>statewide</td>
<td>State and local roads</td>
<td>Creating more effective processes and safety management systems</td>
<td>Traffic Records and Information Systems</td>
<td></td>
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<tr>
<td>0170-3167PL (UConn Crash Records Pilot Program--OCR &amp; data entry)</td>
<td>Intersection control</td>
<td>379260</td>
<td>379260</td>
<td>HSIP (Section 148)</td>
<td>Various locations in District 1</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0171-0352CN (District 1 SLOSSS Traffic Signals)</td>
<td>Intersection control - other</td>
<td>558860</td>
<td>558860</td>
<td>HSIP (Section 148)</td>
<td>Various locations in District 2</td>
<td>State Highway Agency</td>
<td>Minimizing the consequences of leaving the road</td>
<td>Spot Safety Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0172-0383CN (Upgrade guiderail in District 2)</td>
<td>Roadside Barrier-metal</td>
<td>1777980</td>
<td>1777980</td>
<td>HSIP (Section 148)</td>
<td>Various locations in District 2</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Signals</td>
<td>traffic control - other</td>
<td></td>
<td></td>
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<tr>
<td>0173-0412RW (District 3 SLOSSS Traffic Signals)</td>
<td>Intersection traffic control</td>
<td>1</td>
<td>Number 50000</td>
<td>50000</td>
<td>HSIP (Section 148)</td>
<td>Various locations in District 3</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
</tr>
<tr>
<td>0174-0355CN (District 4 SLOSSS Traffic Signals)</td>
<td>Intersection traffic control</td>
<td>3</td>
<td>Number 801800</td>
<td>801800</td>
<td>HSIP (Section 148)</td>
<td>Various locations in District 4</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td></td>
</tr>
<tr>
<td>0012-0095PE (Project Mod) SR 533 @ Box Mountain Rd</td>
<td>Alignment Horizontal curve realignment</td>
<td>1</td>
<td>Number 180000</td>
<td>200000</td>
<td>HSIP (Section 148)</td>
<td>Urban Minor Arterial</td>
<td>State Highway Agency</td>
<td>Keeping vehicles in the roadway</td>
<td>Roadway Departure</td>
<td></td>
</tr>
<tr>
<td>0015-0240CN (Proj Mod)</td>
<td>Intersection traffic control</td>
<td>1</td>
<td>Number 3698</td>
<td>3698</td>
<td>HSIP (Section</td>
<td>Urban Minor</td>
<td>City of Municipal Highway</td>
<td>Improving the design and</td>
<td>Spot Safety Improvement</td>
<td></td>
</tr>
<tr>
<td>Project Number</td>
<td>Agency</td>
<td>Description</td>
<td>Location</td>
<td>Numbers/Section</td>
<td>Improvement Type</td>
<td></td>
<td></td>
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<tr>
<td>0018-0126CN</td>
<td>Town or Township Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td>1000-1000</td>
<td>5204 5782</td>
<td></td>
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<tr>
<td></td>
<td>Town or Township Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td>1000-1000</td>
<td>11198 12442</td>
<td></td>
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</tr>
<tr>
<td>0042-0297CN</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td>1000-1000</td>
<td>28012 28012</td>
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<tr>
<td>0047-0116CN</td>
<td>State Highway</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
<td>1000-1000</td>
<td>184495 184495</td>
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</tr>
<tr>
<td>Project Number</td>
<td>Description</td>
<td>Agency</td>
<td>Operation of Highway Intersections</td>
<td></td>
<td></td>
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<tr>
<td>Rte 74 @ 5 corners</td>
<td>Modify control - all-way stop to roundabout</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
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<td>0047-0116RW (Proj Mod) Rte 74 @ 5 corners</td>
<td>Intersection traffic control Modify control - all-way stop to roundabout</td>
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<td>Spot Safety Improvement</td>
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<tr>
<td>0076-201CN (Proj Mod) Broad St @ Middle Turnpike West</td>
<td>Intersection geometry Auxiliary lanes - add left-turn lane</td>
<td>Town or Township Highway Agency</td>
<td>Spot Safety Improvement</td>
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<td></td>
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<tr>
<td>0076-206PE (Proj Mod) West Middle Turnpike @ Adams St</td>
<td>Intersection geometry Auxiliary lanes - add left-turn lane</td>
<td>Town or Township Highway Agency</td>
<td>Spot Safety Improvement</td>
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<tr>
<td>0076-0215CN</td>
<td>Roadway signs and</td>
<td>State Highway</td>
<td>Enhancing emergency</td>
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19
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Description</th>
<th>Traffic Control</th>
<th>Traffic Control Code</th>
<th>HSIP Section</th>
<th>Arterial Type</th>
<th>Agency</th>
<th>Action</th>
<th>Improvement Area</th>
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<tbody>
<tr>
<td>(Proj Mod) I-84/I-291/I-384 Frontage Roads</td>
<td>traffic control Roadway signs and traffic control - other</td>
<td>s</td>
<td>- Section 154</td>
<td>Arterial - Other Freeways and Expressways</td>
<td>Agency</td>
<td>medical capabilities to increase survivability</td>
<td>nt</td>
<td></td>
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<tr>
<td>087-0141PE (Proj Mod) Rubber Ave @ Andrew Ave</td>
<td>Intersection traffic control Intersection traffic control - other</td>
<td>1 Numbers</td>
<td>4186 4651</td>
<td>HSIP (Section 148)</td>
<td>Urban Minor Arterial</td>
<td>Town or Township Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
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<tr>
<td>0087-0144CN (Proj Mod) Maple St @ Firehouse Rd</td>
<td>Intersection traffic control Intersection traffic control - other</td>
<td>1 Numbers</td>
<td>43921 48801</td>
<td>HSIP (Section 148)</td>
<td>Urban Minor Arterial</td>
<td>Town or Township Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
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<tr>
<td>0093-0191PL (Proj Mod) Durational Accident Record</td>
<td>Non-infrastructure</td>
<td>150000 150000</td>
<td>Penalty Transfer - Section 154</td>
<td>Statewide</td>
<td>State and Town roads</td>
<td>Creating more effective processes and safety management</td>
<td>Traffic Records and Informational Systems</td>
<td></td>
</tr>
<tr>
<td>Coders</td>
<td>Description</td>
<td>Numbers</td>
<td>HSIP (Section)</td>
<td>Type</td>
<td>Improvement</td>
<td></td>
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<tr>
<td>0098-0103PE (Proj Mod) Rte 139 vicinity of Marbar St and Valley Rd</td>
<td>Alignment Horizontal curve realignment</td>
<td>252000 280000</td>
<td>HSIP (Section 148)</td>
<td>Urban Minor Arterial</td>
<td>Improving the design and operation of highway intersections</td>
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<tr>
<td>0120-0086PE (Proj Mod) Rte 82 @ Rte 85</td>
<td>Intersection traffic control Modify control - traffic signal to roundabout</td>
<td>205000 205000</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Other</td>
<td>Improving the design and operation of highway intersections</td>
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<tr>
<td>0120-0086CN (Proj Mod) Rte 82 @ Rte 85</td>
<td>Intersection traffic control Modify control - traffic signal to roundabout</td>
<td>518181 518181</td>
<td>Penalty Transfer - Section 154</td>
<td>Rural Principal Arterial - Other</td>
<td>Improving the design and operation of highway intersections</td>
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<tr>
<td>0120-0087CN</td>
<td>Miscellaneou</td>
<td>92474 115592</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial</td>
<td>Improving the design and operation of highway intersections</td>
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</table>

2013 Connecticut Highway Safety Improvement Program
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Description</th>
<th>Improvement Type</th>
<th>1 Number</th>
<th>2 Number</th>
<th>Agency</th>
<th>Improvement Description</th>
<th>Improvement Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0144-0188PE</td>
<td>Intersection geometry Auxiliary lanes - add left-turn lane</td>
<td>HSIP (Section 148)</td>
<td>350000</td>
<td>350000</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
</tr>
<tr>
<td>0146-0169CN</td>
<td>Access management Change in access - close or restrict existing access</td>
<td>HSIP (Section 148)</td>
<td>46085</td>
<td>51205</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
</tr>
<tr>
<td>0148-0202PE</td>
<td>Intersection geometry Auxiliary lanes - add</td>
<td>HSIP (Section 148)</td>
<td>300000</td>
<td>300000</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Object</td>
<td>Units</td>
<td>Code</td>
<td>Facility</td>
<td>Work Type</td>
<td>Location</td>
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<tr>
<td>Rte 150</td>
<td>auxiliary through lane</td>
<td>Intersection geometry Auxiliar lanes - add left-turn lane</td>
<td>1</td>
<td>424059</td>
<td>State Highway Agency</td>
<td>Improving the design and operation of highway intersections</td>
<td>Spot Safety Improvement</td>
</tr>
<tr>
<td>0166-0099CN (Proj Mod) Rte 69 @ Woodtick Rd</td>
<td>Intersection geometry Auxiliar lanes - add left-turn lane</td>
<td>471177</td>
<td>Urban Principal Arterial - Other</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>0172-0383PE (Proj Mod) Upgrade guiderail in District 2</td>
<td>Roadside Barrier-metal</td>
<td>Miles</td>
<td>100000</td>
<td>State Highway Agency</td>
<td>Minimizing the consequences of leaving the road</td>
<td>Roadway Departure</td>
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<tr>
<td>0173-0375CN (Proj Mod) District 3 SLOSSS Traffic Signals</td>
<td>Intersection traffic control - other</td>
<td>189144</td>
<td>Various locations in District 3</td>
<td></td>
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<tr>
<td>0174-0403CN (Proj Mod) District 3 SLOSSS Traffic</td>
<td>Intersection traffic control - other</td>
<td>54081</td>
<td>Various locations in District 3</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

23
<table>
<thead>
<tr>
<th>Signals</th>
<th>other</th>
<th>intersections</th>
</tr>
</thead>
<tbody>
<tr>
<td>0174-0317CN (Proj Mod) Upgrade guiderail in District 4</td>
<td>Roadside Barrier-metal</td>
<td>5 Miles</td>
</tr>
<tr>
<td>0174-0347CN (Proj Mod) District 4 SLOSSS Traffic Signals</td>
<td>Intersection traffic control</td>
<td>2 Number s</td>
</tr>
<tr>
<td>0170-2855PE (Proj Mod) Statewide Design of SLOSSS Traffic Signals</td>
<td>Intersection traffic control</td>
<td>24 Number s</td>
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</tbody>
</table>
Progress in Achieving Safety Performance Targets

Overview of General Safety Trends

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

<table>
<thead>
<tr>
<th>Performance Measures*</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fatalities</td>
<td>295</td>
<td>296</td>
<td>282</td>
<td>290</td>
<td>272</td>
</tr>
<tr>
<td>Number of serious injuries</td>
<td>2572</td>
<td>2488</td>
<td>2384</td>
<td>2307</td>
<td>2159</td>
</tr>
<tr>
<td>Fatality rate (per HMVMT)</td>
<td>0.93</td>
<td>0.93</td>
<td>0.89</td>
<td>0.92</td>
<td>0.86</td>
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<tr>
<td>Serious injury rate (per HMVMT)</td>
<td>8.2</td>
<td>7.93</td>
<td>7.6</td>
<td>7.36</td>
<td>6.88</td>
</tr>
</tbody>
</table>

*Performance measure data is presented using a five-year rolling average.
Number of Fatalities and Serious injuries for the Last Five Years

![Graph showing the number of fatalities and serious injuries from 2006 to 2011. The number of fatalities and serious injuries both decrease over the years. The graph includes data for each year from 2006 to 2011.]
The data source is FARS and all the data provided is a 5-year moving average. Serious injury data for 2012 is not available.
To the maximum extent possible, present performance measure* data by functional classification and ownership.

**Year - 2012**

<table>
<thead>
<tr>
<th>Function Classification</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL PRINCIPAL ARTERIAL - INTERSTATE</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL PRINCIPAL ARTERIAL - OTHER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL MINOR ARTERIAL</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL MINOR COLLECTOR</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL MAJOR COLLECTOR</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL LOCAL ROAD OR STREET</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>URBAN PRINCIPAL</td>
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</table>
### 2013 Connecticut Highway Safety Improvement Program

<table>
<thead>
<tr>
<th>Category</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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</thead>
<tbody>
<tr>
<td>URBAN PRINCIPAL ARTERIAL - OTHER FREeways AND EXPRESSWAYS</td>
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<td>0</td>
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<tr>
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<tr>
<td>OTHER</td>
<td>0</td>
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</tbody>
</table>
# Fatalities by Roadway Functional Classification

# Serious Injuries by Roadway Functional Classification

![Graph showing the number of serious injuries by roadway functional classification for different years: 2008, 2009, 2010, 2011, and 2012. The x-axis represents different types of roadways, and the y-axis represents the number of serious injuries.](image)

Roadway Functional Classification:
- Local Road or Street (U)
- Principal Arterial - Other Freeways and Expressways (R)
- Principal Arterial - Interstate (R)
- Principal Arterial - Other (R)
- Major Collector (U)
- Minor Collector (U)
- Minor Arterial (U)
- Major Arterial (U)
- Principal Arterial - Other Freeways and Expressways (U)

Legend:
- Orange: 2008
- Blue: 2009
- Red: 2010
- Pink: 2011
- Green: 2012
Serious Injury Rate by Roadway Functional Classification

Roadway Functional Classification
### Year - 2012

<table>
<thead>
<tr>
<th>Roadway Ownership</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE HIGHWAY AGENCY</td>
<td>147</td>
<td>982</td>
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<tr>
<td>COUNTY HIGHWAY AGENCY</td>
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<td>0</td>
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<tr>
<td>TOWN OR TOWNSHIP HIGHWAY AGENCY</td>
<td>72</td>
<td>766</td>
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<td>CITY OF MUNICIPAL HIGHWAY AGENCY</td>
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</tr>
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<td>STATE PARK, FOREST, OR RESERVATION AGENCY</td>
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<td>0</td>
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<tr>
<td>LOCAL PARK, FOREST OR RESERVATION AGENCY</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>OTHER STATE AGENCY</td>
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<td>0</td>
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<tr>
<td>OTHER LOCAL AGENCY</td>
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<td>0</td>
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<tr>
<td>PRIVATE (OTHER THAN RAILROAD)</td>
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<td>Category</td>
<td>RAILROAD</td>
<td>STATE TOLL AUTHORITY</td>
<td>LOCAL TOLL AUTHORITY</td>
<td>OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)</td>
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</tbody>
</table>
Number of Fatalities by Roadway Ownership

Roadway Functional Classification

# of Fatalities

- 2008
- 2009
- 2010
- 2011
- 2012
Number of Serious Injuries by Roadway Ownership

Roadway Functional Classification

# of Serious Injuries

- 2008
- 2009
- 2010
- 2011
- 2012
The source of the data for functional classification is FARS (2012 data is not available). FARS does not have data on the number of serious injuries. CT's crash file does not include functional classification, therefore, data on number of serious injuries, fatality rate and serious injury rate (per HMVMT) is not available.

The file only distinguishes between State-owned and Town-owned roadways.

The source of the data for roadway ownership is from the State's crash file. Data is not available to compute fatality and serious Injury Rate (per HMVMT) based on roadway ownership.

For those fields where data is available, the data is annual NOT rolling averages.
Describe any other aspects of the general highway safety trends on which you would like to elaborate.

See attached report prepared by the Department's Highway Safety Office.

**Application of Special Rules**

Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

<table>
<thead>
<tr>
<th>Older Driver</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Measures</td>
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<tr>
<td>Fatality rate (per capita)</td>
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<td>0.22</td>
<td>0.23</td>
<td>0.21</td>
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<tr>
<td>Serious injury rate (per capita)</td>
<td>0</td>
<td>0.86</td>
<td>0.85</td>
<td>0.85</td>
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<tr>
<td>Fatality and serious injury rate (per capita)</td>
<td>0</td>
<td>1.56</td>
<td>1.54</td>
<td>1.42</td>
<td>0</td>
</tr>
</tbody>
</table>

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

See attachment. CT data not available for 2012.

Data is for age 65 and older.
Does the older driver special rule apply to your state?

No
Assessment of the Effectiveness of the Improvements (Program Evaluation)

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program?

- None
- Benefit/cost
- Policy change
- Other: Other-Downward trend of the number of fatalities in CT
What significant programmatic changes have occurred since the last reporting period?

☑ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☐ None

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

None.
SHSP Emphasis Areas
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

**Year - 2012**

<table>
<thead>
<tr>
<th>HSIP-related SHSP Emphasis Areas</th>
<th>Target Crash Type</th>
<th>Number of Fatalities</th>
<th>Number of Serious Injuries</th>
<th>Fatality Rate (per HMVMT)</th>
<th>Serious Injury Rate (per HMVMT)</th>
<th>Other-1</th>
<th>Other-2</th>
<th>Other-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making walking and street crossing easier</td>
<td>All</td>
<td>33</td>
<td>148</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ensuring safer bicycle travel</td>
<td>All</td>
<td>3</td>
<td>61</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Designing safer work zones</td>
<td>All</td>
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<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>
Number of Fatalities by SHSP Emphasis Area

Year 2008 to Year 2012

- 2008
- 2009
- 2010
- 2011
- 2012

# of Fatalities

- Pedestrian
- Bicycle
- Work-Zone

SHSP Emphasis Area

2013 Connecticut Highway Safety Improvement Program
Number of Serious Injuries by SHSP Emphasis Area

Year 2008 to Year 2012

SHSP Emphasis Area

Pedestrian
Bicycle
Work Zone

# of Serious Injuries

2008 2009 2010 2011 2012
Fatality Rate by SHSP Emphasis Area

Year 2008 to Year 2012

SHSP Emphasis Area

Pedestrian  Bicycle  Work Zone
The source of the data is FARS and the data provided is annual. Fatality and serious injury rate data is not available.
Groups of similar project types
Present the overall effectiveness of groups of similar types of projects.

**Year - 2012**

<table>
<thead>
<tr>
<th>HSIP Sub-program Types</th>
<th>Target Crash Type</th>
<th>Number of Fatalities</th>
<th>Number of Serious Injuries</th>
<th>Fatality Rate (per HMVMT)</th>
<th>Serious Injury Rate (per HMVMT)</th>
<th>Other-1</th>
<th>Other-2</th>
<th>Other-3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
# Fatalities by Target Crash Type for Groups of Similar Projects

Year 2008 to Year 2012

Target Crash Type

- Air
- Angle
- Cross median
- Fixed object
- Sideswipe
- Head on
- Left turn
- Night-time
- Non-intersection
- Rear end
- Right turn
- Run-off-road
- Speed-related
- Truck-related
- Vehicle/animal
- Vehicle/bicycle
- Wet road
# Serious Injuries by Target Crash Type for Groups of Similar Projects

Year 2008 to Year 2012

Target Crash Type

- Air
- Angle
- Cross-median
- Fixed object
- Sideswipe
- Head on
- Left-turn
- Night-time
- Non-intersection
- Rear-end
- Right-turn
- Run-off-road
- Speed-related
- Truck-related
- Vehicle/animal
- Vehicle/bicycle
- Vehicle/pedestrian

# of Serious Injuries

- 2008
- 2009
- 2010
- 2011
- 2012
Fatality Rate by Target Crash Type for Groups of Similar Projects

Year 2008 to Year 2012


Rate of Fatalities

Target Crash Type

- Air, Angle, Cross-median, Fixed Object, Sideswipe, Head-on, Left-turn, Night-time, Non-intersection, Rear-end, Right-turn, Run-off-road, Speed-related, Vehicle/animal, Vehicle/bicycle, Vehicle/wet-road
ConnDOT's crash database has limitations and data is not available to answer this question.
Systemic Treatments
Present the overall effectiveness of systemic treatments..

**Year - 2012**

<table>
<thead>
<tr>
<th>Systemic improvement</th>
<th>Target Crash Type</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
<th>Other-1</th>
<th>Other-2</th>
<th>Other-3</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>
# Fatalities by Target Crash Type for Systemic Safety Improvements

Year 2008 to Year 2012

Target Crash Type

- Air
- Angle
- Cross-median
- Fixed Object
- Sideswipe
- Head-on
- Left-turn
- Night-time
- Non-intersection
- Rear-end
- Right-turn
- Run-off-road
- Speed-related
- Truck-related
- Vehicle/animal
- Vehicle/bicycle
- Vehicle/wet-road

- # of Fatalities: -0.6 to 0.6
# Serious Injuries by Target Crash Type for Systemic Safety Improvements

Year 2008 to Year 2012

![Graph showing serious injuries by target crash type for Systemic Safety Improvements from 2008 to 2012. The graph includes various crash types such as Air, Angle, Fixed Object, Sideswipe, Head-on, Left-turn, Night-time, Non-intersection, Rear-end, Right-turn, Run-off-road, Speed-related, Truck-related, Vehicle/Animal, Vehicle/Bicycle, Wet-road, with data points for each year, 2008 to 2012.](image-url)
Fatality Rate by Target Crash Type for Systemic Safety Improvements

Year 2008 to Year 2012

Target Crash Type

Rate of Fatalities

-0.6 -0.4 -0.2 0 0.2 0.4 0.6
ConnDOT's crash database has limitations and data is not available to answer this question.
Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

The Department has recently established a performance measures working group for safety. The primary task of the working group will be to generate ConnDOT comments on upcoming MAP-21 rulemaking for safety performance measures and targets.
Provide project evaluation data for completed projects (optional).

<table>
<thead>
<tr>
<th>Location</th>
<th>Functional Class</th>
<th>Improvement Category</th>
<th>Improvement Type</th>
<th>Bef-Fatal</th>
<th>Bef-Serious Injury</th>
<th>Bef-Other Injury</th>
<th>Bef-PDO</th>
<th>Bef-Total</th>
<th>Aft-Fatal</th>
<th>Aft-Serious Injury</th>
<th>Aft-Other Injury</th>
<th>Aft-PDO</th>
<th>Aft-Total</th>
<th>Evaluation Results (Benefit/Cost Ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>none at this time</td>
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</table>
## Optional Attachments

<table>
<thead>
<tr>
<th>Sections</th>
<th>Files Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Structure: Program Administration</strong></td>
<td></td>
</tr>
<tr>
<td>Assessment of the Effectiveness of the Improvements: Overview of General Highway Safety Trends</td>
<td>Local Roads Accident Reduction Program - Revised - 2013.doc</td>
</tr>
<tr>
<td>Assessment of the Effectiveness of the Improvements: Description of Overall Effectiveness</td>
<td>NHTSA Highway Safety Plan 2013.pdf</td>
</tr>
<tr>
<td></td>
<td>Map 21 Section 146 special rule for older drivers annual safety report(1).xlsx</td>
</tr>
</tbody>
</table>
5 year rolling average means the average of five individual, consecutive annual points of data (e.g., annual fatality rate).

Emphasis area means a highway safety priority in a State’s SHSP, identified through a data-driven, collaborative process.

Highway safety improvement project means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

HMVMT means hundred million vehicle miles traveled.

Non-infrastructure projects are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

Older driver special rule applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

Performance measure means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

Programmed funds mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

Roadway Functional Classification means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

Strategic Highway Safety Plan (SHSP) means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systemic safety improvement means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

Transfer means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.