OHIO

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2017 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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Protection of Data from Discovery Admission into Evidence

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

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

Executive Summary

Traffic deaths and serious injuries across Ohio are rising as the statewide economy continues to improve. In 2016, Ohio had 1,133 traffic deaths and 9,207 serious injuries, representing a 2% and 1.5% increase respectively compared to 2015. While deaths rose across all crash categories, last year Ohio saw significant increases in deaths involving Speed, Motorcycle riders, and Pedestrians. Work Zone related deaths remained high in 2016 when comparing 2014 and 2015.

Ohio's safest year in history was 2013 when the state dropped below 1,000 traffic deaths for the first time since it began collecting records in 1935. However, traffic deaths rose 2% in 2014, 10% in 2015 and 2% in 2016. Although the top common factors in these crashes have long been roadway departure, speed, alcohol, seatbelts and young drivers, over the past three years the state has seen a rise in the number of deaths involving pedestrians, bicycles, older and distracted drivers.

To respond to these trends, Ohio's Strategic Highway Safety Plan Steering Committee has moved from quarterly to bi-monthly meetings, and now communicates via email on a bi-weekly basis to share crash trend information and discuss strategies and investments. The committee includes members from 15 key safety organizations operating at the local, state and federal level including: Ohio County Engineers Association; Ohio Association of Regional Councils; Ohio Department of Public Safety; Federal Highway Administration; Ohio State Highway Patrol; Federal Motor Carrier Administration; and Ohio Department of Health. **These organizations then feed the information to a network of hundreds of other stakeholders who are getting more actively involved in the SHSP.**

Below is a summary of the state's enhanced and coordinated efforts to address the increase in crashes statewide.

Ohio Launches Action Teams to Address Emerging Crash Trends

Active Transportation Team

In 2015, Ohio convened a statewide Active Transportation Team to examine pedestrian and bicycle safety issues. The committee included about 40 representatives from major bicycle advocacy groups, the Ohio departments of Health and Aging, and local transportation and planning agencies. The team recently completed a statewide Active Transportation Plan that identifies projects, initiatives and investments the state can make to prevent crashes and improve bicycle and pedestrian safety. The Ohio Department of Transportation has pledged $2 million to get the plan off the ground.

Some of its projects include: investing in statewide data collection to quantify the amount of bicycle and pedestrian travel and better pinpoint where travel is occurring so the state can target investments; leading professional development rides so public officials, community and transportation planners, and engineers can get first-hand experience of what it's like to bicycle on public roads; launching "Your Move Ohio," a statewide campaign to educate the public on the rules of the road and encourage more Ohioans to walk, bike and bus safely. We are combining state and federal funds to move these initiatives forward.

Older Road User Action Team

The SHSP Steering Committee also convened an Older Road User Action Team in the fall of 2016, which is in the process of making recommendations. The draft plan identifies several critical strategies moving forward, including: reviewing national licensing standards and best practices; strengthening the assessment process to

evaluate a driver's ability to drive safely; and increasing the knowledge of medical providers, law enforcement and licensing personnel on the recognition, assessment, and reporting of older at-risk drivers.

Distracted Driver Task Force
Ohio is planning to form an executive level Distracted Driving Task Force in the fall that will work with stakeholders to review data, develop strategies and recommend an implementation plan for Ohio.

Increased Public and Stakeholder Engagement

Freeway and Portable Message Signs
Since 2015, Ohio has been using its Freeway and Portable Message Signs to post safety messages and the number of traffic deaths on Ohio roads. The state leverages the message boards with a bi-weekly email to SHSP stakeholders that encourages organizations to use and share the same coordinated message.

ODOT posts messages every other week, and the messages are synced to the communication calendar published by the National Highway Traffic Safety Administration. Messages are selected, and sometimes developed, by a committee from ODOT, the Ohio Department of Public Safety, Federal Highway Administration and Ohio State Highway Patrol.

In September, Ohio will launch a website to support this effort, which will allow the public to develop and submit safety messages that support SHSP emphasis areas. The winners will be selected by the statewide committee and publicized to further incentivize the effort and spread information.

Regional TZD Network Meetings
In October 2016, Ohio launched a series of quarterly TZD (Toward Zero Death) Network Meetings in different regions of the state. These meetings are an opportunity to build relationships between various disciplines; network with partners; foster professional development by featuring nationally recognized speakers on a variety of traffic safety topics; and recognize outstanding work by traffic safety professionals and coalitions. About 120 people attended the first event, which featured research on the dangers of distracted driving presented by Dr. Paul Atchley, a professor of psychology with the University of Kansas.

At each meeting, the SHSP Steering Committee gives an award to recognize a team of outstanding traffic safety professionals who are collaborating on strategies to prevent traffic deaths and serious injuries in their region of the state.

A new round of TZD meetings are being planned for this fall featuring Elin Schold Davis of the American Occupational Therapy Association. She is a nationally recognized speaker on driving, senior mobility and long-term care.

Continuing Education for Ohio Road Users
This fall, Ohio will be requesting proposals to develop a web-based online education tool accessible from desktops, tablets and mobile devices. The purpose of the tool is to educate Ohio drivers, pedestrians, and bicycle and motorcycle riders about traffic safety and the laws associated with using public roads. Driver error is a factor in more than 90% of all traffic crashes nationwide. Yet driver education typically occurs one time - when drivers or riders apply for their initial license.

The application will include short videos and/or animations, and interactive questions that educate, then quiz, road users on their knowledge. It will also include methods to drive users to the website through social, print and video campaigns, as well as through partnerships with other organizations.

2017 Ohio Highway Safety Improvement Program

Increased Local Government Engagement

In October 2016, Ohio held its first ever Transportation Safety Planning Peer Exchange with over 60 people from 12 ODOT District Offices and 23 Metropolitan and Rural Regional Planning Organizations. It was an opportunity to discuss current safety practices and identify opportunities to engage more local governments in conducting safety analysis, planning and implementing improvements.

As a result of the peer exchange, Ohio formed a working group in July tasked with developing a process to provide more safety analysis assistance to local governments. Many MPOs and RTPOs publish prioritize safety lists, however, too few local governments use this analysis to conduct reviews, make recommendations and apply for funding. This collaborative project seeks to close that gap.

ODOT Continues to Integrate the HSM into Project Development

ODOT is revising the project development, design exception and resurfacing accident analysis processes to incorporate HSM principles and practices. The goal is to encourage ODOT staff and local partners to consider safety improvements in all project planning from minor resurfacing to major new projects.

To advance this goal, ODOT has created Safety Integrated Project Maps (SIP) for each county. These maps identify Priority Safety Locations, where safety improvements should be considered when programming a project that overlaps one or more of these areas. (Note: The maps include all local and state roads except for low volume municipal roads.)

Locations are prioritized in red and blue. Red has a high priority and may qualify for Safety funding to make improvements. Blue has a lower priority, and districts are encouraged to explore low-cost safety improvements with their own forces and funds.

If a project qualifies for safety funds, an ODOT district office may request funding up to $500,000 by submitting an abbreviated safety application. These applications can be submitted and reviewed anytime throughout the year. Requests under $500,000 will be reviewed by ODOT Safety Staff to weigh the relative benefits of the safety improvement versus the cost. Requests in excess of $500,000 may be required to follow the bi-annual safety funding application process. This determination will be made by the Safety Program Manager on a case-by-case basis.

Abbreviated Safety Application Process

ODOT has expanded the use of its abbreviated safety application process beyond the SIP Maps to allow ODOT districts, MPOs, RTPOs and local governments to request HSIP funding throughout the year, instead of waiting for April 30 and September 30, which are the traditional application deadlines. A request must be deemed safety-related, non-complex and less than $500,000. If it meets the criteria, various members of ODOT's safety application review team will review the request and make recommendations for funding. Projects are tracked via a database that has been developed internally.

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.

ODOT has established the Highway Safety Improvement Program to create a process which emphasizes safety of the traveling public by analyzing the crash statistics on Ohio's state and local highway system. The Department utilizes AASHTOWare Safety Analyst to identify intersections and highway sections with the potential for safety improvement. Each of the 12 District Safety Review Teams (DSRT) reviews these prioritized locations as part of a Safety Annual Work Plan (SAWP) and accepts the plan. In addition, the Districts perform safety studies to determine the causes of crashes at locations. The DSRT strives to identify crash patterns and recommend countermeasures to reduce the severity and long-term average frequency of crashes.

Safety projects are not limited to the state highway system. Proposed local projects on public roads are also evaluated and prioritized to improve safety as outlined in the application and selection process. These projects are reviewed and approved by the DSRT.

Upon recommendation from the District Safety Review Teams, eligible projects are submitted to ODOT Central Office for funding consideration, and evaluated and prioritized based on uniform and objective criteria. Projects which contribute most to improving safety and reducing the severity and long-term average frequency of crashes are considered for funding and further development. Twice a year, a listing of all newly approved safety projects is produced.

The Highway Safety Improvement Program historically receives approximately $100 million annually of combined Federal and State funding. The actual level of funding designated for the program is determined by the Funds Management Committee and the Director, and is contingent on available state and federal revenues. The funding is used to implement countermeasures at identified crash locations on Ohio's roadways to ensure safety is the primary consideration in the design, development, and operation of this program.

Where is HSIP staff located within the State DOT?

Planning

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

How are HSIP funds allocated in a State?

Central Office via Statewide Competitive Application Process
Other-Direct Sub-Allocation to CEAO

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

Direct Sub-Allocation to CEAO

Each year, ODOT provides $12 million dollars of HSIP funding to the County Engineer's Association of Ohio to select and fund safety projects.

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

Local governments can qualify for funding and technical assistance to address SHSP emphasis areas and prioritized safety locations through the HSIP programs administered by ODOT ($102M annually) and the County Engineers Association ($12M annually).

ODOT uses the SHSP as a basis for developing its HSIP. ODOT has one of the largest programs in the country, dedicating about $102 million annually for engineering improvements at high-crash and severe-crash locations across the state. We also dedicate a portion of the funding for low-cost, systematic and systemic safety improvements that prevent roadway departure and intersection crashes identified in the SHSP.

This funding can be used by ODOT District Offices or local governments to improve safety on any public roadway. While the majority of HSIP investments focus on engineering improvements, ODOT uses a portion of the state funding to supplement education (zerodeaths.ohio.gov) and enforcement programs that encourage safer driving (Federal HSIP funding is no longer available for education).

To qualify for funding, local governments identify and study high-crash or serious injury crash locations within their own jurisdiction. To determine the best countermeasures for these locations, local governments typically conduct an engineering analysis that includes a review of existing roadway conditions and crash reports. This analysis will help identify common crash patterns and determine the best strategies to reduce crashes.

Projects sponsors are encouraged to examine a full range of options from short-term, low-cost strategies, such as new signs, pavement markings and drainage improvements to mid-cost, mid-term strategies such as new traffic signals, turn lanes and realignments.

Local governments may pay for these improvements through their annual budget or they can seek money each spring (April 30) and fall (September 30) through ODOT's Highway Safety Improvement Program. A multi-discipline committee at ODOT headquarters reviews all applications and supporting safety studies. The committee can approve a proposal, select a different safety strategy or request further study before allocating money. ODOT spends approximately $90 million dollars in safety funds annually through this program.

ODOT also provides an additional $12 million, separate from $102 million, annually to the County Engineers Association of Ohio (CEAO) to make safety improvements on county-maintained roads. This funding can be used to make spot and systemic improvements tied to the SHSP. Applications are accepted once a year and scored using criteria developed in conjunction with ODOT.

The CEAO subdivides the $12 million in to several smaller funding categories. Each county is permitted to program eligible construction projects up to $5 million overall for spot safety improvements. In addition to spot safety improvements, CEAO provides up to $300,000 per county for each guardrail project, $150,000 per county for each pavement marking project, $75,000 per county for each raised pavement marker project, and $15,000 per county for curve signage upgrade projects.

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As a result of the peer exchange, Ohio formed a working group in July 2017 tasked with developing a process to provide more safety analysis assistance to local governments. Many MPOs and RTPOs publish prioritize safety lists, however, too few local governments use this analysis to conduct reviews, make recommendations and apply for funding. This collaborative project seeks to close that gap. The group has already begun to develop a process for helping local governments conduct more safety studies, RSAs and systemic safety analyses. It's our hope that through these enhanced services, we can get more local governments focused on making safety improvements and applying for HSIP funds to assist in that effort when warranted.

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

Design
Planning
Maintenance
Operations
Districts/Regions
Local Aid Programs Office/Division
Other-Local Technical Assistance Program (LTAP)

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

Describe coordination with internal partners.

ODOT's Office of Program Management accepts applications - accompanied by safety studies - from ODOT District Offices and local governments twice a year. Applications must be submitted through the District Offices, which have a multi-disciplinary committee that reviews and approves them for Central Office consideration. Projects are then reviewed and selected for funding by the Safety Review Committee in Central Office, which includes expertise in safety, planning, geometric design, and traffic operations.

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Priority is given to any project that improves safety at a roadway location with high frequency, severity and rate of crashes. Projects are scored based on:

- Expected Crash Frequency
- Ratio of Observed Fatal and Serious Injuries to Observed Total Crashes
- Relative Severity Index
- Equivalent Property Damage Only Index
- Volume to Capacity Ratio
- Benefit-Cost Ratio (anticipated savings in crash costs, property damage, injuries and fatalities relative to the cost of the improvement plus cost of maintenance for the life of the project).
- Highway Safety Improvement Program Funding Percentage

Funding awarded through the program is used to make traditional safety improvements at spot locations, such as intersections, and along sections or corridors throughout the state. Consideration is also given to lower-volume, lower-crash local roads with identified needs and cost-effective countermeasures.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Governors Highway Safety Office
Local Government Agency
Law Enforcement Agency
FHWA

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

Describe coordination with external partners.

SHSP Steering Committee
Ohio's SHSP Steering Committee represents the state's largest coordination effort with external partners. The committee includes members from 15 key safety organizations operating at the local, state and federal level including: Ohio County Engineers Association; Local Transportation Assistance Program, Ohio Association of Regional Councils (MPOs and RTPOs); Ohio Department of Public Safety; Ohio State Highway Patrol; Federal Highway Administration; Ohio State Highway Patrol; Federal Motor Carrier Administration; and Ohio Department of Health. These organizations then feed the information to a network of hundreds of other stakeholders who are getting more actively involved in the SHSP and helping to guide ODOT's HSIP efforts.

MPO/RTPO Pilot Project
Ohio is also piloting a program with the state's MPOs and RTPOs to get more local governments involved in the HSIP. In October 2016, Ohio held its first ever Transportation Safety Planning Peer Exchange with over 60 people from 12 ODOT District Offices and 23 Metropolitan and Rural Regional Planning Organizations. It was an opportunity to discuss current safety practices and identify opportunities to engage more local governments in conducting safety analysis, planning and implementing improvements. As a result of the peer exchange, Ohio formed a working group in July tasked with developing a process to provide more safety analysis assistance to local governments. Many MPOs and RTPOs publish prioritize safety lists, however, too few local governments

use this analysis to conduct reviews, make recommendations and apply for HSIP funding. This collaborative project seeks to close that gap.

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At each meeting, the SHSP Steering Committee gives an award to recognize a team of outstanding traffic safety professionals who are collaborating on strategies to prevent traffic deaths and serious injuries in their region of the state.

A new round of TZD meetings are being planned for this fall featuring Elin Schold Davis of the American Occupational Therapy Association. She is a nationally recognized speaker on driving, senior mobility and long-term care.

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

No

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

Yes

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

Ohio uses a focused approach to safety that targets resources based on the greatest need and greatest opportunity for improvements. We also promote the use of proven, cost-effective, systemic and systematic safety solutions that target critical, severe-crash types such roadway departure and intersections crashes. These focus areas are embodied in both the HSIP and the state's Strategic Highway Safety Plan.

We advanced the HSIP through the balanced deployment and implementation of a host of traditional spot safety investments and a host of systemic and systematic safety investments.

ODOT's Highway Safety Improvement Program and Safety Analyst Implementation
Each year, ODOT staff reviews the top safety locations in Ohio. Ohio is one of the first states in the country to fully implement Safety Analyst and use it to prioritize safety locations across Ohio. Safety Analyst uses state-of-the-art statistical methodologies to identify roadway locations and safety improvements with the highest potential for reducing crashes. The software systems flags spot locations and road segments that have higher-than-predicted crash frequencies. It also flags locations for review based on crash severity. This methodology is more efficient and cost effective and will allow the department to study fewer locations yet address more crashes each year.

ODOT has developed six priority lists based on rural and urban roadway types. . The urban system covers all streets, roads, and highways located within urban boundaries designated by the U.S. Census Bureau. The Bureau defines two types of urban areas based on population. Small urban areas are urban places with a population or 5,000 or more and not located within any urbanized area. An urbanized area is an area with a population of 50,000 or more. As might be expected, the rural functional classification system covers all other streets, roads, and highways that are not located within the boundaries of small urban and urbanized areas. Approximately, $90 million is used to fund projects through this program.

The priority lists are:

1. Rural Intersection Peak Searching Excess Locations: These locations were selected because they have a higher-than-predicted crash frequency for each intersection. Approximately, the Top 50 locations will be studied.
2. Rural Non-Freeway Peak Searching Excess Segment Locations: These locations were selected because they have a higher-than-predicted crash frequency for this roadway type. Approximately, the Top 50 locations will be studied. Only crashes indicated on the crash report form (OH-1) as being non-intersection crashes were included in this analysis.
3. Rural Freeway Peak Searching Excess Locations: These locations were selected because they have a higher-than-predicted crash frequency for this roadway type or interchange location. Approximately, the Top 50 locations will be studied.
4. Urban Intersection Peak Searching Excess Locations: These locations were selected because they have a higher-than-predicted fatal and injury crash frequency for each intersection. Approximately, the Top 50 locations will be studied.
5. Urban Non-Freeway Peak Searching Excess Segment Locations: These locations were selected because they have a higher-than-predicted fatal and injury crash frequency for this roadway type. Approximately, the Top 50 locations will be studied. Only crashes indicated on the OH-1 as being non-intersection crashes were included in this analysis.
6. Urban Freeway Peak Searching Excess Locations: These locations were selected because they have a higher-than-predicted fatal and injury crash frequency for this roadway type or interchange location. Approximately, the Top 50 locations will be studied.

Highway Safety Improvement Program Abbreviated Application

In 2016, ODOT began a process to implement low cost safety improvements faster. These requests are less than $500,000 that are either standalone projects or existing projects located on a priority location. This is part of an initiative to make safety improvements on all programmed projects. We anticipate spending approximately $5 million annually for these types of improvements.

Systemic and Systematic Safety Program

The Ohio Department of Transportation spends approximately $7 million annually of the $102 million program on systemic and systematic safety improvements. These are safety improvements that can be installed across hundreds of road miles for a relatively small public investment. Systematic safety improvements are low cost improvements that are complete at similar locations to address a specific type of crash pattern. Systemic safety improvements are those improvements that are constructed system-wide to reduce the likelihood of a crash of occurring based on roadway features, traffic volumes or other features such as speed limit or land use type.

Examples of systemic and systematic project types are Curve Signing Upgrade, Edge Line Rumble Stripes, Cable Barrier, Signal Upgrade, Intersection Signing Upgrade, Wider Pavement Markings, and Guardrail End Treatment Upgrade Projects.

Safe Routes to School Program

ODOT's use $4 million from the Transportation Alternatives Program to fund Ohio's Safe Routes to School Program. Again, this is separate and in addition to the $102 million ODOT HSIP program. Funds can be used on any public roadway as long as the school has completed a School Travel Plan. The School Travel Plan outlines where investments should be made for a specific school district.

Other Programs

Small portions of ODOT's state funding ($102 million) are used for work zone enforcement, OVI checkpoints, and other educational opportunities (Federal HSIP funding is no longer available for education or enforcement activities). Although money is not specifically set aside for the High Risk Rural Roads Program in Ohio at this time, we still encourage agencies to apply for funding through our traditional application process. Any projects that are prioritized based on the HRRR Program are funded through the ODOT's HSIP Program ($102 million).

ODOT also combines HSIP funding with other funding sources (such as MPO and ORDC) to make safety improvements.

Program Methodology

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

Yes

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

File Name:
Highway Safety Improvement Program Guidance.pdf
HSIP Procedures Manual.pdf
Safety Study Guidelines.pdf

Select the programs that are administered under the HSIP.

Other-State HSIP Program
Other-CEAO HSIP Program
Other-State High Risk Rural Road
Other-State Abbreviated HSIP Application

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

Program:	Other-State HSIP Program
Date of Program Methodology:	3/1/2016

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	
Fatal and serious injury crashes only		

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

Expected crash frequency with EB adjustment
EPDO crash frequency with EB adjustment
Relative severity index
Excess expected crash frequency with the EB adjustment
Other-Volume to Capacity Ratio
Other-(Total Fatal and Serious Inuries) / Total Crashes

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

Yes

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

Yes

Describe the methodology used to identify local road projects as part of this program.

How are projects under this program advanced for implementation?

Competitive application process
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

Ranking based on B/C : 1
Available funding : 3
Cost Effectiveness : 2

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

Program: Other-CEAO HSIP Program

Date of Program Methodology: 7/1/2011

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

Addresses SHSP priority or emphasis area

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

Funding set-aside

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

Crashes	Exposure	Roadway
All crashes Fatal and serious injury crashes only	Traffic	Other-Rural County Highway System

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

Crash frequency
Equivalent property damage only (EPDO Crash frequency)
Relative severity index
Crash rate
Other-Amount of Funding Requested

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

Yes

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

Yes

Describe the methodology used to identify local road projects as part of this program.

How are projects under this program advanced for implementation?

Competitive application process
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

Ranking based on B/C : 1
Available funding : 3
Cost Effectiveness : 2

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

Program: Other-State High Risk Rural Road

Date of Program Methodology: 6/1/2008

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
Other-Fatal and All Injury Crashes Only	Volume	Functional classification

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

Expected crash frequency with EB adjustment
EPDO crash frequency with EB adjustment
Relative severity index
Excess expected crash frequency with the EB adjustment
Other-(Fatal and Serious Injuries) / Total Crashes

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?

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Yes

Describe the methodology used to identify local road projects as part of this program.

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

Ranking based on B/C : 1
Available funding : 3
Cost Effectiveness : 2

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

Program:	Other-State Abbreviated HSIP Application
Date of Program Methodology:	5/1/2016

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes Fatal and serious injury crashes only	Volume	

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

2017 Ohio Highway Safety Improvement Program
Crash frequency
Expected crash frequency with EB adjustment

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

Yes

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

Yes

Describe the methodology used to identify local road projects as part of this program.

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

Ranking based on B/C : 1
Available funding : 3
Cost Effectiveness : 2

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

None.

What percentage of HSIP funds address systemic improvements?

7.5

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

Cable Median Barriers
Upgrade Guard Rails
Add/Upgrade/Modify/Remove Traffic Signal
Wrong way driving treatments
Other-ODOT - Roadway Departure
Other-ODOT - Wet Pavement Locations
Other-ODOT - Intersection Signage
Other-CEAO - Upgrade / Install Guardrail

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Other-CEAO - Upgrade Pavement Markings
Other-CEAO - Upgrade / Install RPMs
Other-CEAO - Upgrade / Install Curve Signage
Other-LTAP - Township Signage Program

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

Systematic improvements are implemented over 2 years. Approximately, seven (7) percent is spent each year.

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

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

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

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

Describe how the State HSIP considers connected vehicles and ITS technologies.

ODOT safety staff participate in bi monthly meetings with the Autonomous Vehicle, Connected Vehicle and Transportation Systems Management & Operations (AV/CV TSMO) Group. Additionally, the Ohio HSIP Program has been supportive in ITS technologies historically. Example projects include the following: Freeway queue warning system with driver messages, freeway camera monitoring equipment, and ramp wrong way driver alert systems.

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.

All projects submitting for State HSIP funds are required to complete a Part C analysis included in the Highway Safety Manual (HSM). Additionally, Ohio uses AASHTOWare Safety Analyst (Safety Analyst) to prioritize the roadway network within the state. Safety Analyst faithfully implements Part B of the HSM.

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

No

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

2017 Ohio Highway Safety Improvement Program

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

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

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$73,575,490	$58,112,278	78.98%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$42,429,039	$42,429,039	100%
Penalty Funds (23 U.S.C. 164)	$32,087,956	$32,087,956	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$100,291,277	$32,789,065	32.69%
State and Local Funds	$58,487,841	$25,902,043	44.29%
Totals	$306,871,603	$191,320,381	62.35%

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

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

31%

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

31%

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

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

2017 Ohio Highway Safety Improvement Program

$6,708,590

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

$13,500

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

This non-infrastructure project involves collecting missing Location Based Response System (LBRS) data, verify/update current LBRS datasets and incorporate LBRS data into the official ODOT Road Inventory (RIMS). The goal of this project is to complete the collection of MIRE Fundamental data elements for segments on the local system.

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

0%

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

0%

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

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

In FFY 2015, Ohio obligated 98.5% of its HSIP funds. For FFY 2016, Ohio has obligated approximately 96.7%. ODOT's safety program is making great progress working with our SHSP partners to reduce fatal and serious injury crashes in Ohio.

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

Yes

Describe any other aspects of the State’s progress in implementing HSIP projects on which the State would like to elaborate.

Ohio has had several instances over the past year where we had to use about $2.5M in state funds to support enforcement and education programs that are no longer eligible for HSIP funding. All the projects are tied to the state’s SHSP and emphasis areas that FHWA has encouraged us to address holistically using engaging engineering, enforcement, education, and emergency response (4 E's). Yet, we can’t use federal funds to supplement the associated costs.

The following are a list of projects and initiatives that are being supported with state funds instead of a mix of state and federal funds, which would be our preference.

2017 Ohio Highway Safety Improvement Program

Active Transportation Plan

In 2015, Ohio convened a statewide Active Transportation Team to examine pedestrian and bicycle safety issues. The committee included about 40 representatives from major bicycle advocacy groups, the Ohio departments of Health and Aging, and local transportation and planning agencies. The team recently completed a statewide Active Transportation Plan that identifies projects, initiatives and investments the state can make to prevent crashes and improve bicycle and pedestrian safety. ODOT pledged $2 million - in state funds -- to get the plan off the ground. Some of its projects include: leading professional development rides so public officials, community and transportation planners, and engineers can get first-hand experience of what it's like to bicycle on public roads; and launching "Your Move Ohio," a statewide campaign to educate the public on the rules of the road and encourage more Ohioans to walk, bike and bus safely.

Older Road User Action Team

The SHSP Steering Committee also convened an Older Road User Action Team in the fall of 2016, which is in the process of making recommendations. The draft plan identifies several critical strategies moving forward, including: reviewing national licensing standards and best practices; strengthening the assessment process to evaluate a driver's ability to drive safely; and increasing the knowledge of medical providers, law enforcement and licensing personnel on the recognition, assessment, and reporting of older at-risk drivers. I suspect many of these tasks will require state funds.

Regional TZD Network Meetings

In October 2016, Ohio launched a series of quarterly TZD (Toward Zero Death) Network Meetings in different regions of the state. These meetings are an opportunity to build relationships between various disciplines; network with partners; foster professional development by featuring nationally recognized speakers on a variety of traffic safety topics; and recognize outstanding work by traffic safety professionals and coalitions. We are using state funds to pay for speakers, facilities, grants and awards, etc.

Continuing Education for Ohio Road Users

This fall, Ohio will be requesting proposals to develop a web-based online education tool accessible from desktops, tablets and mobile devices. The purpose of the tool is to educate Ohio drivers, pedestrians, and bicycle and motorcycle riders about traffic safety and the laws associated with using public roads. Driver error is a factor in more than 90% of all traffic crashes nationwide. Yet driver education typically occurs one time - when drivers or riders apply for their initial license. The application will include short videos and/or animations, and interactive questions that educate, then quiz, road users on their knowledge. It will also include methods to drive users to the website through social, print and video campaigns, as well as through partnerships with other organizations.

2017 Ohio Highway Safety Improvement Program
General Listing of Projects

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

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
97202 - COL SR 164 20.080	Alignment	Horizontal and vertical alignment	0.25	Miles	$423931.95	$576047.5	HSIP (23 U.S.C. 148)	Urban Minor Arterial	1,632	55	State Highway Agency	Spot	Intersections	Realign intersections to reduce angle and rear end crashes (I-B-1)
93565 - LUC US20A 5.56 Roundabt @ Eber	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$1239401.57	$1833797.98	HSIP (23 U.S.C. 148)	Urban Minor Arterial	4,032	55	County Highway Agency	Spot	Intersections	Constructing a roundabout to reduce angle and rear end crashes (I-B-1)
92127 - LUC US 20 0.00 Resurf	Intersection geometry	Auxiliary lanes - add left-turn lane	3	Approaches	$675117.72	$4077628.4	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Interstate	10,039	55	State Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
91927 - LAW SR 243 17.83	Shoulder treatments	Widen shoulder - paved or other	0.11	Miles	$448576.46	$1103195.44	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Interstate	3,758	45	State Highway Agency	Spot	Roadway Departure	Widening shoulder to address issue of roadway departure crashes (I-A-3)
77563 - ATB US 0020 13.78	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0.5	Miles	$3602822.29	$5542229.79	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	14,366	45	City of Municipal Highway Agency	Spot	Intersections	Constructing a Two Way Left Turn Lane to reduce the number of head-on, sideswipe meeting, rear end and turning-related crashes (I-B-2)
86661 - FRA US 23 10.83 Part 1&2	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	2.28	Miles	$1000000.01	$7600853.17	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	23,114	35	City of Municipal Highway Agency	Spot	Bicyclists	Constructing a road diet to decrease travel lanes and reduce rear end and sideswipe crashes (III-A-4)
79662 - FRA US 33 26.120	Intersection geometry	Intersection geometry - other	1	Intersections	$446049.37	$1939264.63	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Other Freeways and Expressways	59,482	60	State Highway Agency	Spot	Intersections	Constructing an RCUT to reduce angle and rear end crashes (I-B-1)
92458 - FAI SR 256 00.00 Part 1 & 2	Intersection traffic control	Modify traffic signal - modernization/replacement	8	Signal heads	$1470257.24	$7779818.47	State and Local Funds	Urban Principal Arterial - Interstate	42,788	40	City of Municipal Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
91530 - CUY IR 090 14.08 Safety	Roadway	Roadway widening - add lane(s) along segment	0.61	Miles	$4106771.6	$4648581.58	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	82,440	60	State Highway Agency	Spot	Intersections	Constructing through traveled

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														lanes to reduce congestion and queue related crashes (I-B-1)
95244 - SHE SR 47 13.74	Intersection geometry	Intersection geometrics - realignment to align offset cross streets	1	Intersections	$1049576.95	$1147348.31	HSIP (23 U.S.C. 148)	Urban Minor Arterial	16,605	35	City of Municipal Highway Agency	Spot	Intersections	Realign intersections to reduce angle and rear end crashes (I-B-2)
97097 - TUS US 250 5.16	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$1151854.11	$1292306.86	HSIP (23 U.S.C. 148)	Urban Minor Arterial	9,314	50	State Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
87032 - D08 TSG FY2015	Intersection traffic control	Modify traffic signal - modernization/replacement	77	Signal heads	$273633.16	$1818569.4	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	22,015	55	State Highway Agency	Systemic	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
95628 - FRA Sawmill NB Lane Improvements	Roadway	Roadway widening - add lane(s) along segment	0.4	Miles	$1297160.86	$1904200.22	HSIP (23 U.S.C. 148)	Urban Minor Arterial	59,756	45	City of Municipal Highway Agency	Spot	Intersections	Constructing through traveled lanes to reduce congestion and queue related crashes (I-B-1)
87407 - DEL SR 750 1.230	Roadway	Roadway widening - add lane(s) along segment	0.89	Miles	$2492923.45	$7800031.1	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	12,234	51	State Highway Agency	Spot	Intersections	Constructing a road diet to decrease travel lanes and reduce rear end and sideswipe crashes (I-B-1)
84063 - ALL SR 117/501-10.76/4.34	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	$1372952.7	$1935162.51	HSIP (23 U.S.C. 148)	Urban Major Collector	5,879	55	State Highway Agency	Spot	Intersections	Realigning intersection to reduce skew angle and reduce the number of angle crashes (I-B-1)
98818 - D06 Regional Signals	Intersection traffic control	Modify traffic signal - add backplates with retroreflective borders	436	Signal heads	$774425.61	$832544.77	HSIP (23 U.S.C. 148)	Urban Minor Arterial	15,430	35	State Highway Agency	Systemic	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
97306 - D06 GR End Treat	Roadside	Barrier end treatments (crash cushions, terminals)	133	Locations	$427809.82	$630681.9	HSIP (23 U.S.C. 148)	Urban Minor Arterial	37,177	70	State Highway Agency	Systemic	Roadway Departure	Installing guardrail end treatments to address issue of roadway departure crashes (I-A-3)

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
94668 - WAY SR 0083 15.86	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$2593700.49	$2898660.85	HSIP (23 U.S.C. 148)	Urban Minor Arterial	7,260	55	County Highway Agency	Spot	Intersections	Constructing a roundabout to reduce angle and rear end crashes (I-B-1)
98592 - VIN US 50 17.440	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Approaches	$492167.13	$591807.35	HSIP (23 U.S.C. 148)	Urban Minor Arterial	4,859	25	City of Municipal Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
86923 - SUM 31st Street (CR17)	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0.6	Miles	$1158968.17	$3498443.78	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	14,554	35	City of Municipal Highway Agency	Spot	Intersections	Constructing a Two Way Left Turn Lane to reduce the number of head-on, sideswipe meeting, rear end and turning-related crashes (I-B-2)
97033 - WAS SR 32 9.41	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$931219.31	$1888490.15	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Minor Arterial	5,827	35	State Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
81656 - SUM SR 0082 04.65	Roadway	Roadway widening - add lane(s) along segment	0.69	Miles	$779053.48	$5616229.59	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Minor Arterial	13,324	35	City of Municipal Highway Agency	Spot	Intersections	Constructing through traveled lanes to reduce congestion and queue related crashes (I-B-1)
76462 - PIC US 23 0.00 Part 1 & 2	Roadside	Barrier- metal	0.6	Miles	$540000	$4770612.94	Other Federal-aid Funds (i.e. STBG, NHPP)	Rural Principal Arterial - Other	25,073	60	State Highway Agency	Systemic	Roadway Departure	Installing guardrail to address issue of roadway departure crashes (I-A-3)
82796 - CUY LAKEWOOD SIGNALS Ph 4	Intersection traffic control	Modify traffic signal - modernization/replacement	18	Intersections	$74866.67	$1963426.74	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	8,754	35	City of Municipal Highway Agency	Systemic	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
93601 - LAK US 020 25.52 Intersection	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Approaches	$1253528.1	$1601829.44	HSIP (23 U.S.C. 148)	Urban Minor Arterial	15,354	45	State Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
100702 - SUM 77/21 22.20/4.88/VAR	Intersection geometry	Intersection geometry - other	1	Intersections	$172130.2	$1045325.58	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Interstate	54,176	65	State Highway Agency	Spot	Intersections	Constructing an RCUT to reduce angle and rear end crashes (I-B-1)

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
88008 - CLA CR 316 1.71 Lower Valley Pk	Shoulder treatments	Widen shoulder - paved or other	1.4	Miles	$3791121.05	$7798237.07	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	3,276	55	City of Municipal Highway Agency	Spot	Roadway Departure	Widening shoulder to address issue of roadway departure crashes (I-A-3)
97656 - FRA-Pedestrian Hybrid Beacons	Pedestrians and bicyclists	Pedestrian signal - Pedestrian Hybrid Beacon	4	Signal heads	$385392.2	$385392.2	HSIP (23 U.S.C. 148)	Urban Minor Arterial	29,411	45	City of Municipal Highway Agency	Spot	Pedestrians	Installation of pedestrian signal equipment (III-B-4)
96355 - WOO SR 199 27.97 Roundabout	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$1458468.22	$1912837.05	HSIP (23 U.S.C. 148)	Urban Minor Arterial	3,482	55	State Highway Agency	Spot	Intersections	Constructing a roundabout to reduce angle and rear end crashes (I-B-1)
99087 - BEL SR 7 18.070	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Approaches	$1061920.43	$1304745.26	HSIP (23 U.S.C. 148)	Urban Minor Arterial	28,045	50	State Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
96394 - TRU Howland Township SRTS	Intersection traffic control	Modify traffic signal - modernization/replacement	3	Intersections	$50000	$410561.38	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Minor Arterial	14,060	40	City of Municipal Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
90771 - MOT SR 741 5.80	Pedestrians and bicyclists	Install sidewalk	0.4	Miles	$763436.69	$1797859.34	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	19,509	45	City of Municipal Highway Agency	Spot	Pedestrians	Installation of sidewalks (III-B-2)
98733 - STW-USBR 50-SIGN	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	360	Signs	$80547.37	$80547.37	HSIP (23 U.S.C. 148)	Urban Major Collector	1,500	55	State Highway Agency	Systemic	Bicyclists	Installation of bicycle signage (III-A-2)
94724 - LUC SR 2 10.67/11.71 Intersecton	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Intersections	$3226223.54	$3585848.85	HSIP (23 U.S.C. 148)	Urban Minor Arterial	28,948	45	City of Municipal Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
84556 - ERI US 0250 01.14	Access management	Change in access - close or restrict existing access	4	Approaches	$4663210.35	$6269673.65	HSIP (23 U.S.C. 148)	Urban Major Collector	19,418	35	City of Municipal Highway Agency	Spot	Intersections	Reduce the number of conflict points with driveways to reduce driveway related crashes (I-B-2)
78278 - POR SR 0014 12.55	Intersection geometry	Intersection geometrics - realignment to increase cross street offset	1	Intersections	$1128636	$7957934.02	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Other	21,718	50	State Highway Agency	Spot	Intersections	Realign intersections to reduce angle and rear end crashes (I-B-1)
92556 - HAM US 127 10.07	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Approaches	$373874.55	$421916.72	HSIP (23 U.S.C. 148)	Urban Minor Arterial	19,518	25	City of Municipal Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
92552 - BUT SR 4 3.00	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$2217221.97	$2217221.97	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	44,990	35	City of Municipal Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
92647 - ERI SR 0004 08.60	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Approaches	$1501402.5	$1879927.37	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,494	55	State Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
98304 - HOL US 62 18.640	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	$203321.14	$275880.38	HSIP (23 U.S.C. 148)	Urban Minor Arterial	12,830	35	City of Municipal Highway Agency	Spot	Intersections	Realigning intersection to reduce skew angle and reduce the number of angle crashes (I-B-1)
76439 - STA SR 0800 07.05	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0.1	Miles	$5631764.88	$8307991.49	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	12,844	45	State Highway Agency	Spot	Intersections	Constructing a Two Way Left Turn Lane to reduce the number of head-on, sideswipe meeting, rear end and turning-related crashes (I-B-2)
100244 - D08 Wet Crash Locations	Roadway	Pavement surface - high friction surface	3	Locations	$595844.29	$705948.21	HSIP (23 U.S.C. 148)	Urban Minor Arterial	5,350	55	State Highway Agency	Spot	Roadway Departure	Install pavement treatments to reduce roadway departure crashes (I-A-2)
86292 - FRA SR 710 3.760	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$337500	$9663448.07	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	8,468	45	State Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
103677 - MUS PM 2016	Roadway delineation	Longitudinal pavement markings - new	0.43	Miles	$44311.8	$44311.8	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	2,503	45	City of Municipal Highway Agency	Systemic	Roadway Departure	Adding pavement markings to reduce roadway departure crashes (I-A-2)
92555 - HAM US 27 14.15	Roadway	Roadway widening - add lane(s) along segment	0.46	Miles	$2667860	$3136405.04	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	32,716	45	State Highway Agency	Spot	Intersections	Constructing through traveled lanes to reduce congestion and queue related crashes (I-B-1)
96344 - LUC SR 25 7.01 Reconstr/Sfty	Intersection geometry	Auxiliary lanes - add left-turn lane	4	Approaches	$3556059.8	$8195060	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Minor Arterial	26,564	50	City of Municipal Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
97128 - LOR SR 0018 06.41 (Signal)	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$180000	$292005.34	HSIP (23 U.S.C. 148)	Urban Minor Arterial	5,453	25	City of Municipal Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
100664 - LIC US 62 14.72	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Approaches	$756731.7	$991714.12	HSIP (23 U.S.C. 148)	Urban Minor Arterial	5,534	55	State Highway Agency	Spot	Intersections	Constructing turn lanes to reduce rear end and left turn crashes (I-B-2)
89478 - LIC CR 804 00.90 (30th & Church)	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$182500	$959166.75	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	15,305	35	City of Municipal Highway Agency	Spot	Intersections	Improving signal operation and visibility to reduce intersection related crashes (I-B-2)
79366 - DEL US 23 8.770	Intersection geometry	Intersection geometrics - realignment to increase cross street offset	1	Intersections	$2591621.82	$3392834.94	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	31,845	55	State Highway Agency	Spot	Intersections	Realign intersections to reduce angle and rear end crashes (I-B-1)
22198 - CUY IR 090 00.00	Roadway	Pavement surface - miscellaneous	3	Ramps	$87300	$2126893.71	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Principal Arterial - Interstate	76,612	60	State Highway Agency	Spot	Roadway Departure	Install pavement treatments to reduce roadway departure crashes (I-A-2)
88739 - ASD US 0042 07.75	Intersection geometry	Intersection geometry - other	1	Intersections	$1560002.22	$9723861.66	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban Major Collector	9,725	55	City of Municipal Highway Agency	Spot	Intersections	Replacement of grade separated interchange with signalized intersection to reduce congestion and queue related crashes (I-B-1)

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

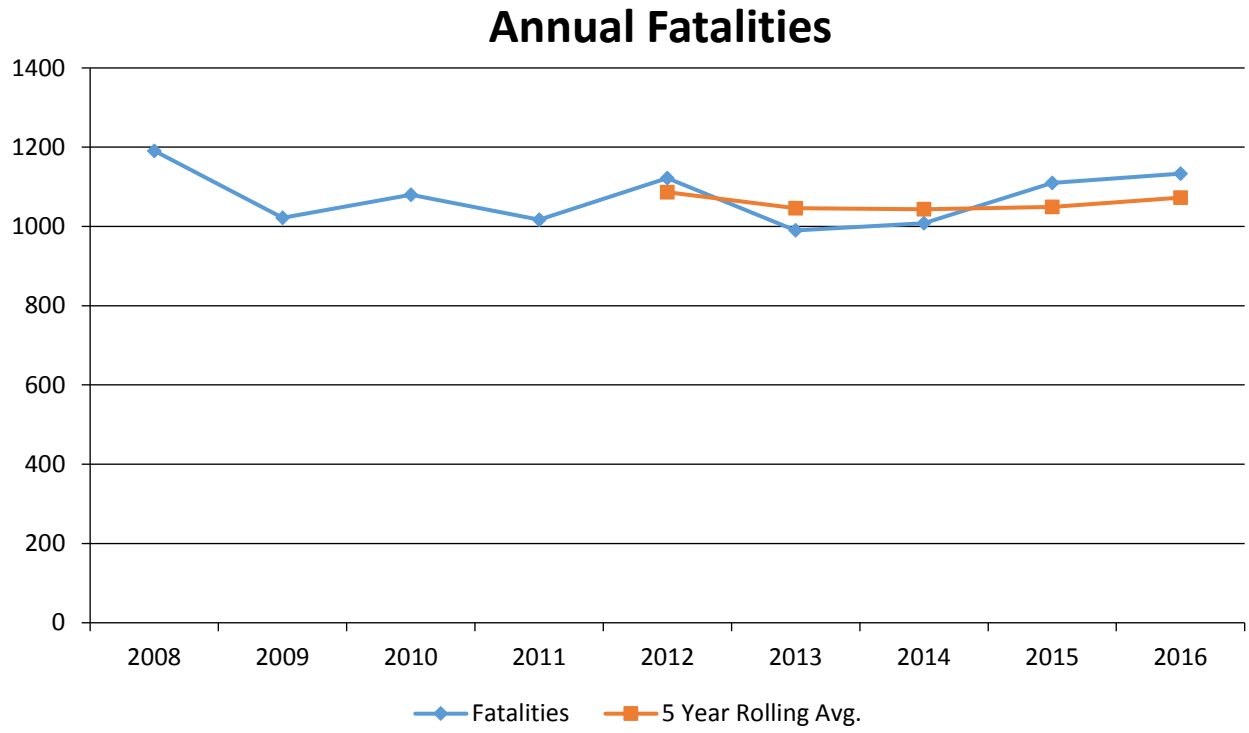
See Emphasis Area Strategies.pdf file for references to relevant Ohio SHSP strategies.

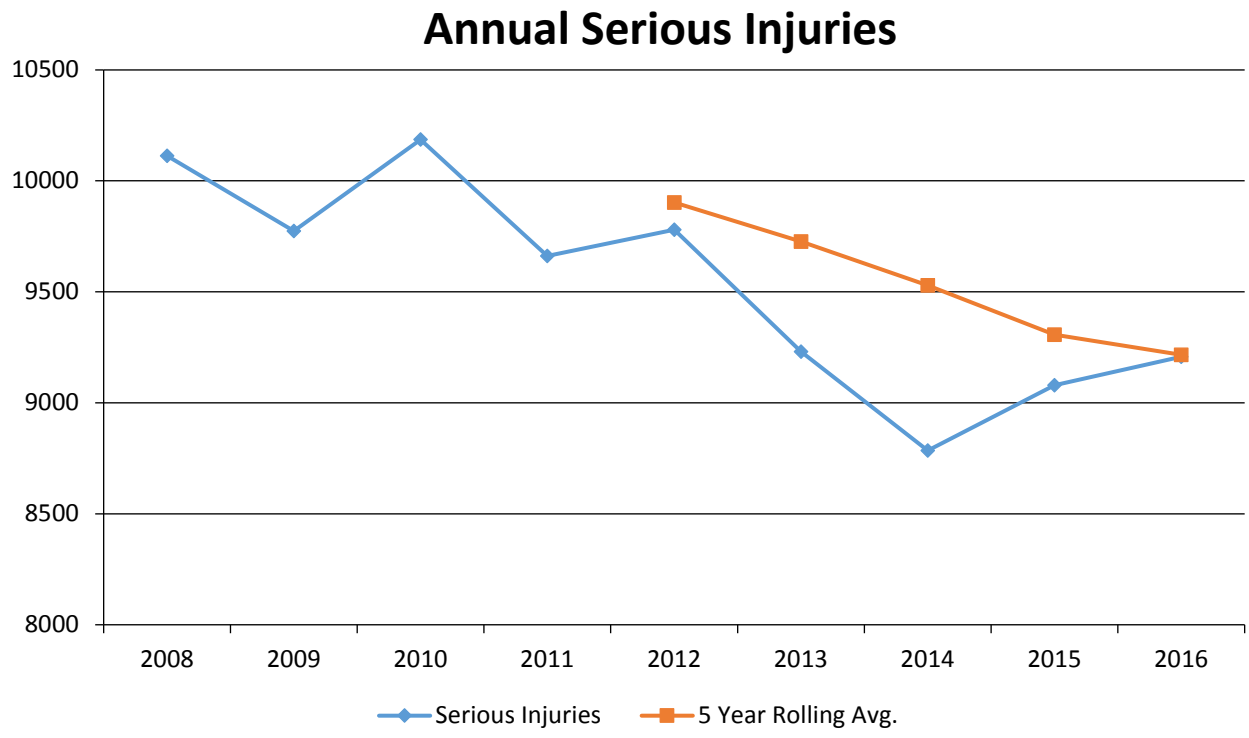
Safety Performance

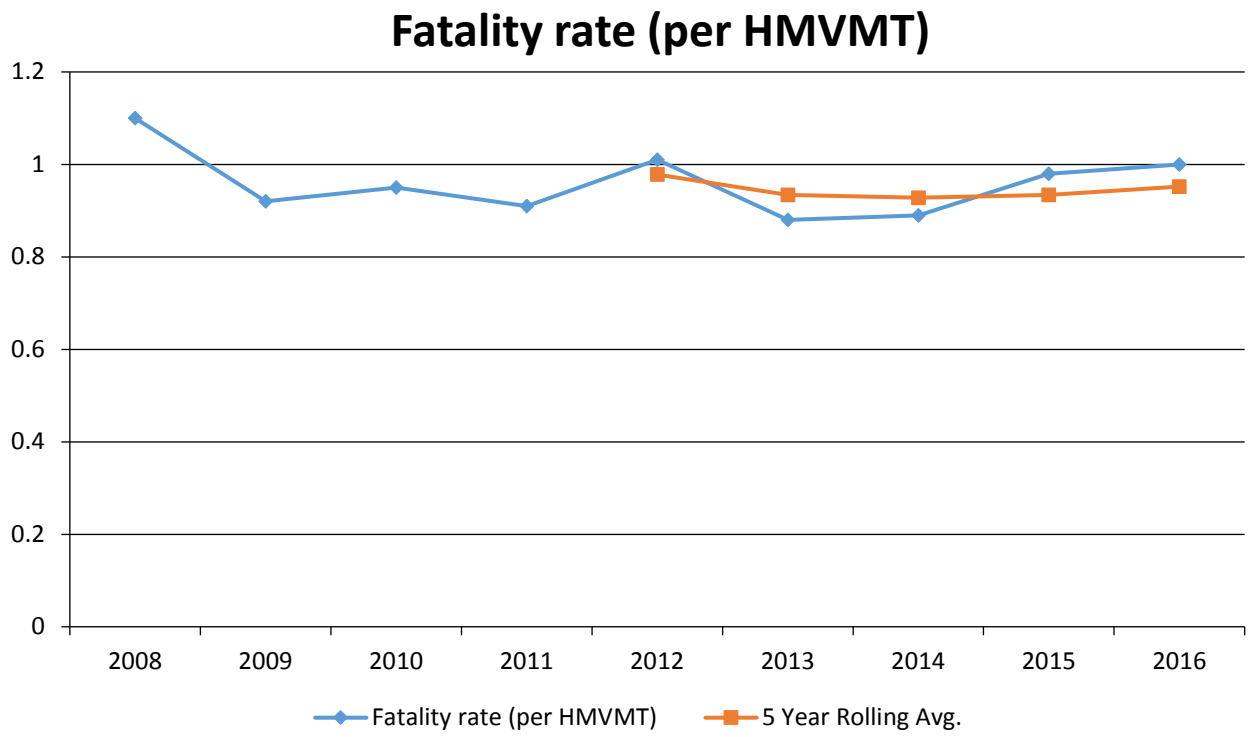
General Highway Safety Trends

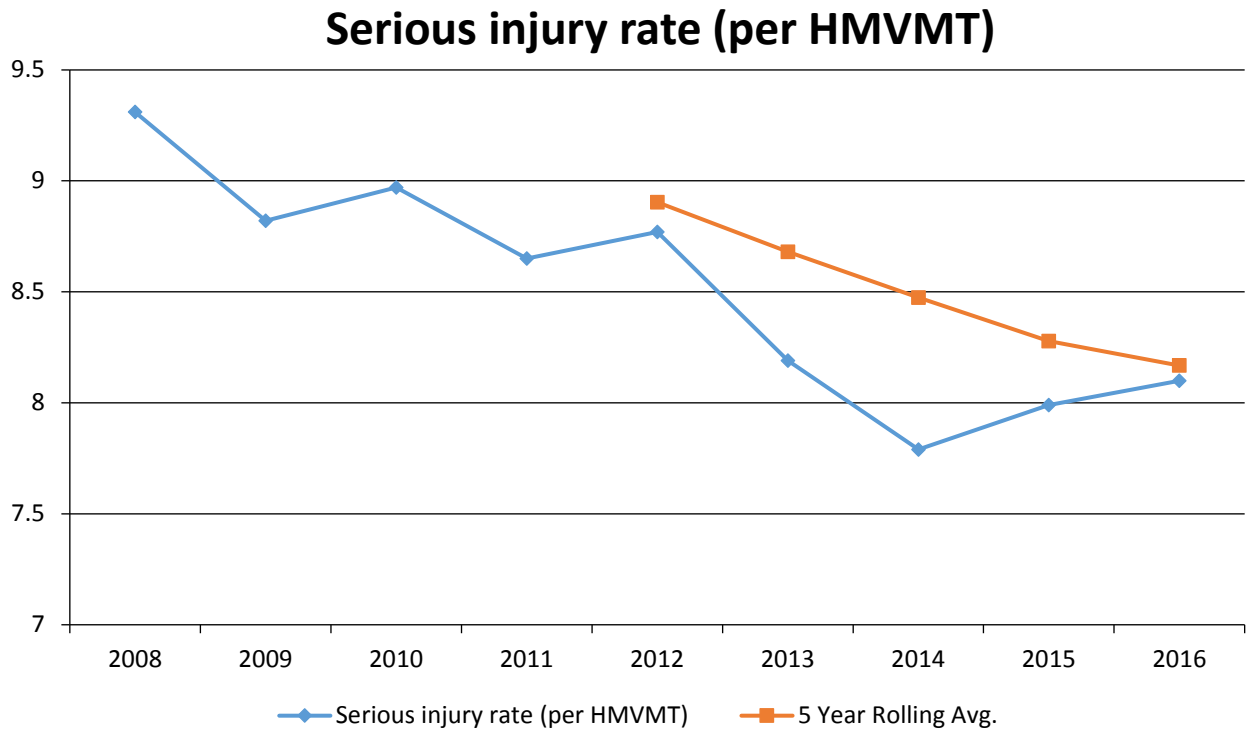
Present data showing the general highway safety trends in the State for the past five years.

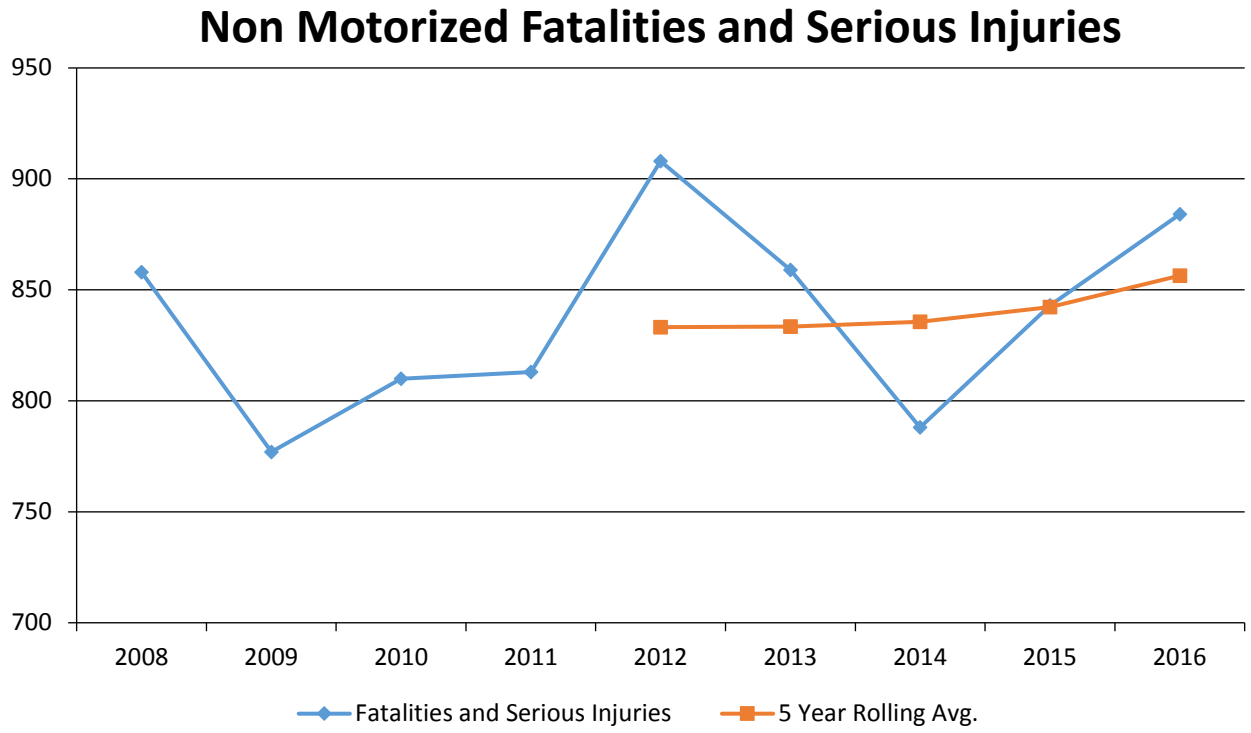
PERFORMANCE MEASURES	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fatalities	1,191	1,022	1,080	1,017	1,122	990	1,008	1,110	1,133
Serious Injuries	10,113	9,774	10,186	9,662	9,780	9,231	8,785	9,079	9,207
Fatality rate (per HMVMT)	1.100	0.920	0.950	0.910	1.010	0.880	0.890	0.980	1.000
Serious injury rate (per HMVMT)	9.310	8.820	8.970	8.650	8.770	8.190	7.790	7.990	8.100
Number non-motorized fatalities	116	101	106	116	135	108	106	143	158
Number of non-motorized serious injuries	742	676	704	697	773	751	682	700	726


Annual Fatalities
1400
1200
1000
800
600
400
200
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
10500
10000
9500
9000
8500
8000
2008
2009
2010
2011
2012
2013
2014
2015
2016
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.2
1
0.8
0.6
0.4
0.2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
9.5
9
8.5
8
7.5
7
2008
2009
2010
2011
2012
2013
2014
2015
2016
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



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

Describe fatality data source.

State Motor Vehicle Crash Database

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

The Ohio Department of Public Safety (ODPS) and ODOT work to ensure the state motor vehicle crash database matches what is reported to FARS.

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

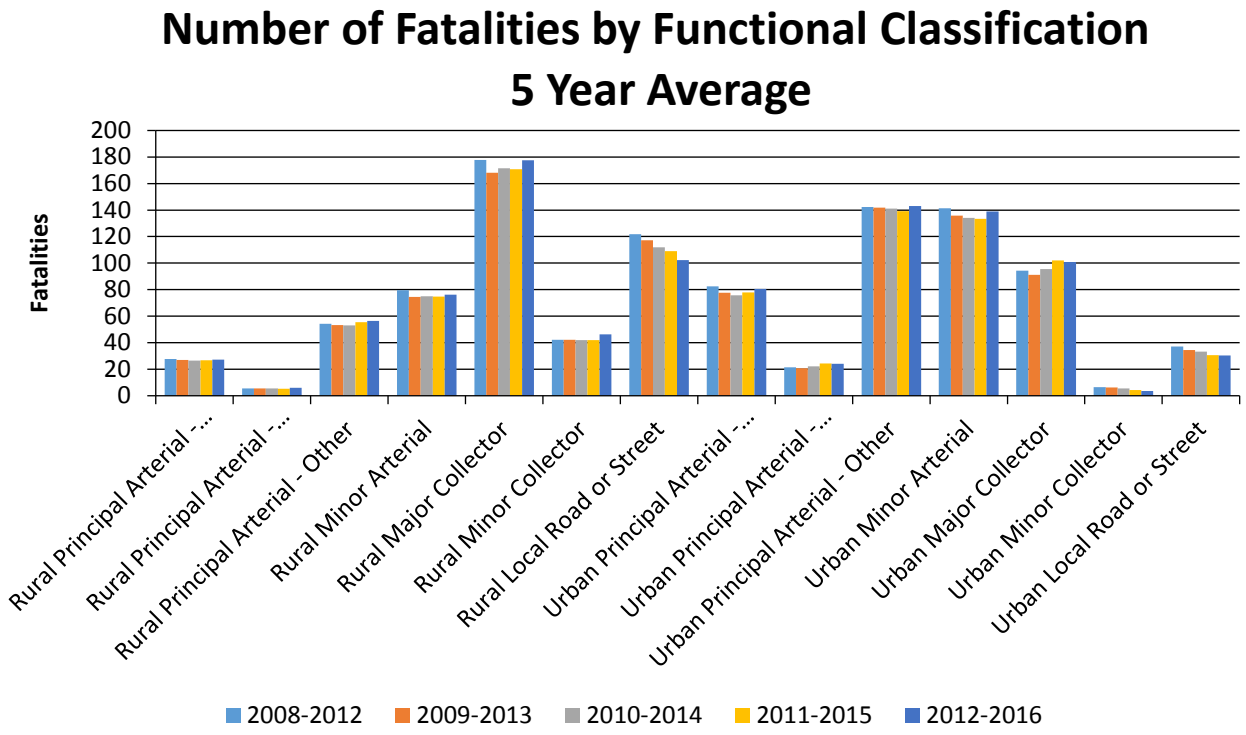
Year 2016

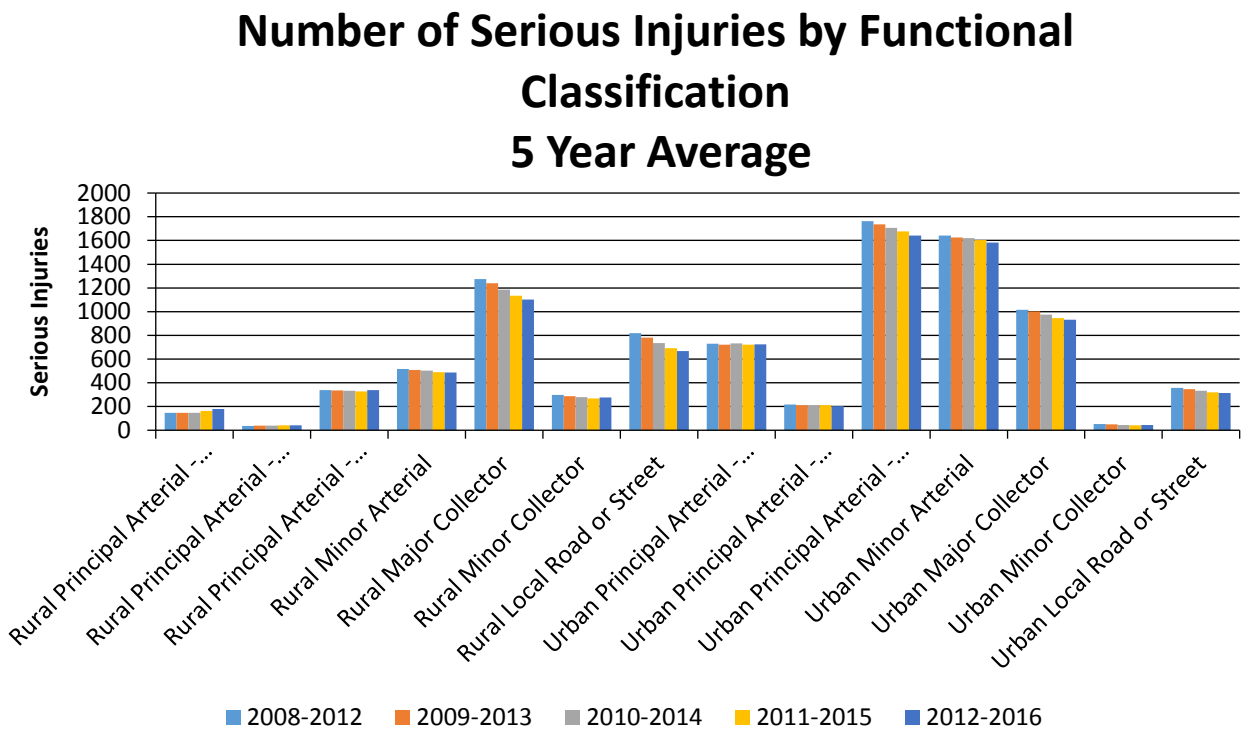
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Interstate	27.2	179.8	0.32	2.16
Rural Principal Arterial - Other Freeways and Expressways	6	42.2	0.32	2.26
Rural Principal Arterial - Other	56.4	339.6	1.28	7.68

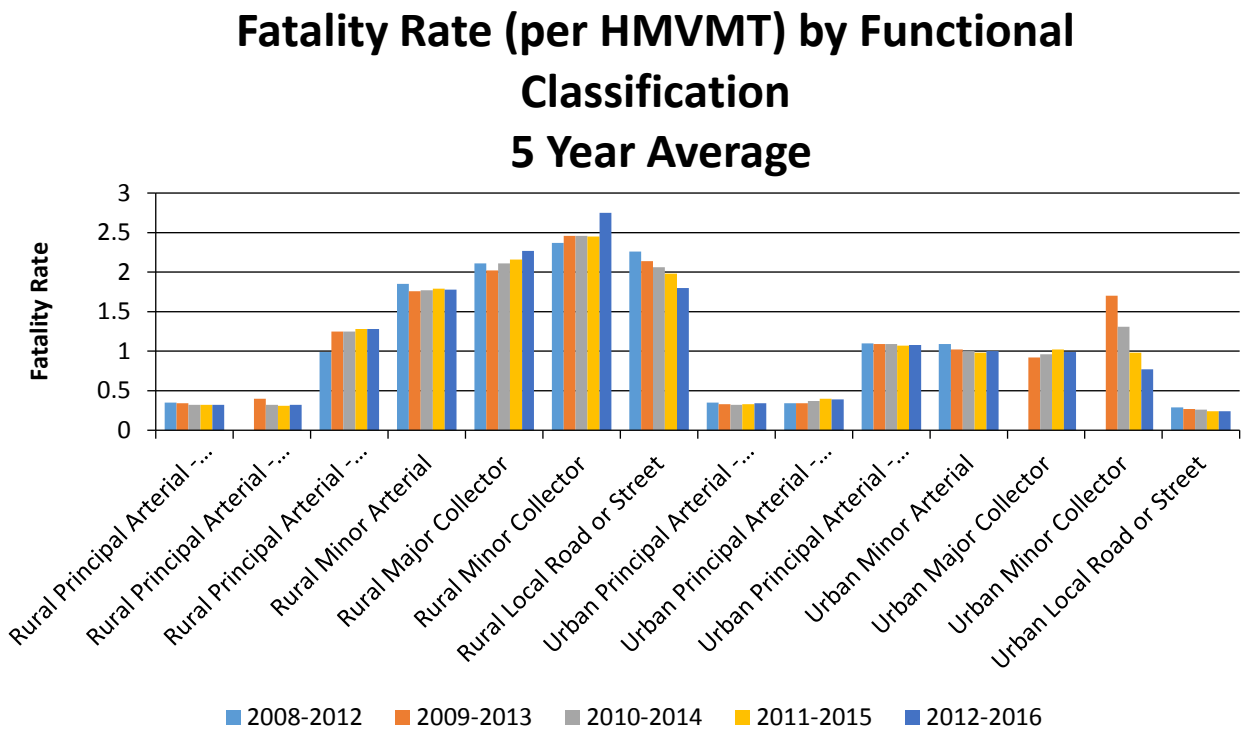
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Arterial	76.2	487.2	1.78	11.53
Rural Minor Collector				
Rural Major Collector	177.6	1,102.8	2.27	13.99
Rural Minor Collector	46.2	275	2.75	16.4
Rural Major Collector				
Rural Local Road or Street	102.2	666.2	1.8	11.73
Urban Principal Arterial - Interstate	80.6	725.2	0.34	3.05
Urban Principal Arterial - Other Freeways and Expressways	24.2	204.2	0.39	3.24
Urban Principal Arterial - Other	143	1,640.2	1.08	12.23
Urban Minor Arterial	139	1,581.6	1	11.32
Urban Minor Collector				
Urban Major Collector	100.8	931.6	0.99	9.17
Urban Minor Collector	3.6	44.8	0.77	9.57
Urban Major Collector				
Urban Local Road or Street	30.4	313.2	0.24	2.39

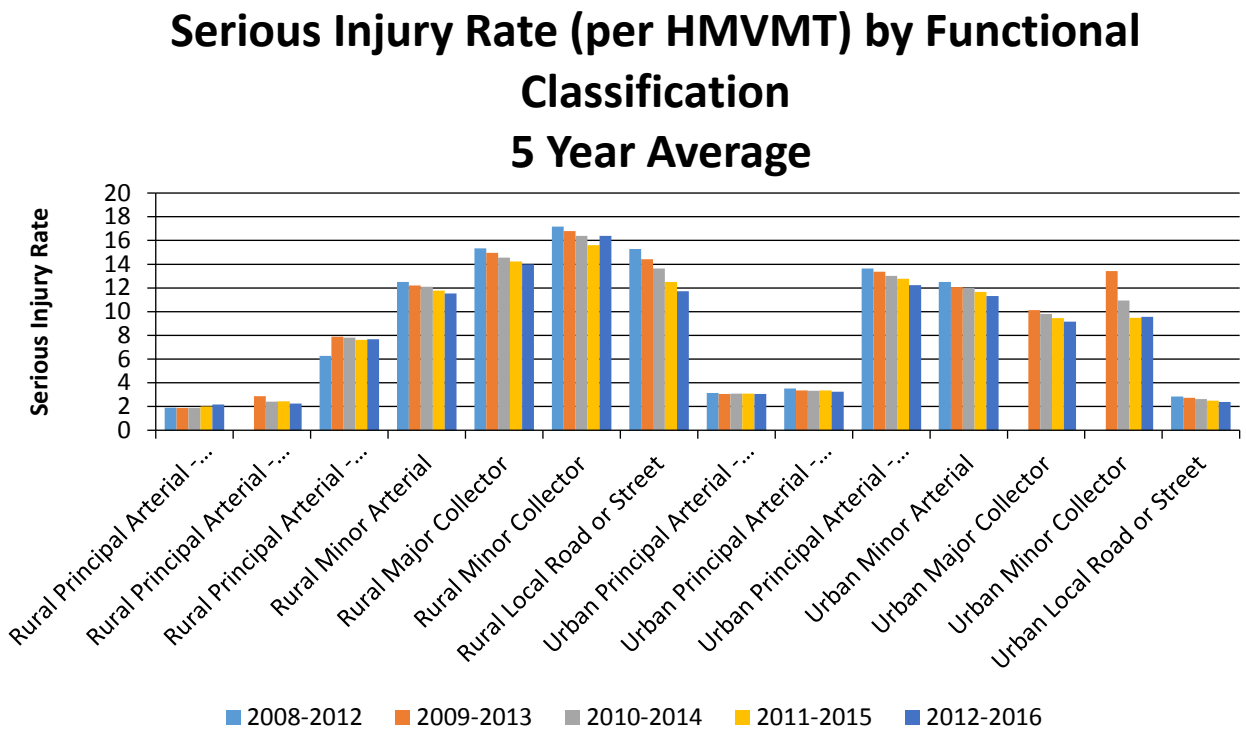
Year 2016

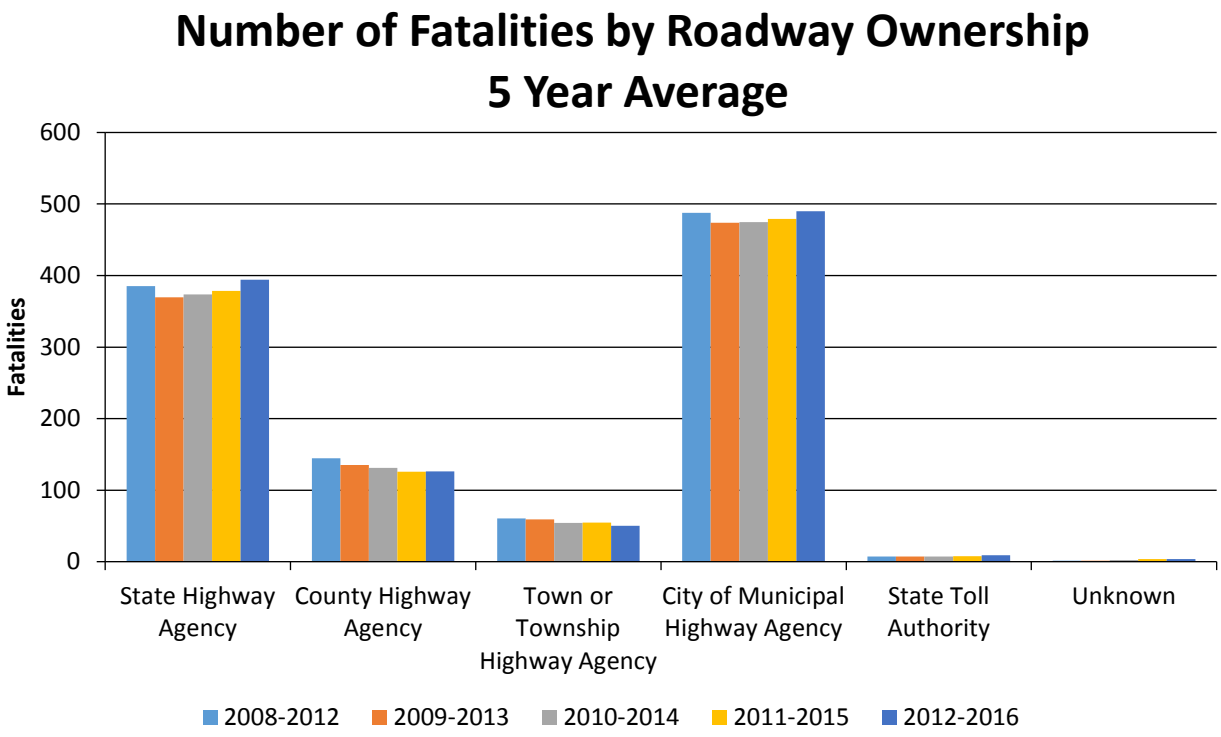
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	394.2	2,636.2	0	0
County Highway Agency	126	870.6	0	0
Town or Township Highway Agency	50.2	317.6	0	0
City of Municipal Highway Agency	489.8	5,299.8	0	0
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	8.8	59.8	0	0
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				
Unknown	3.8	32.4	0	0

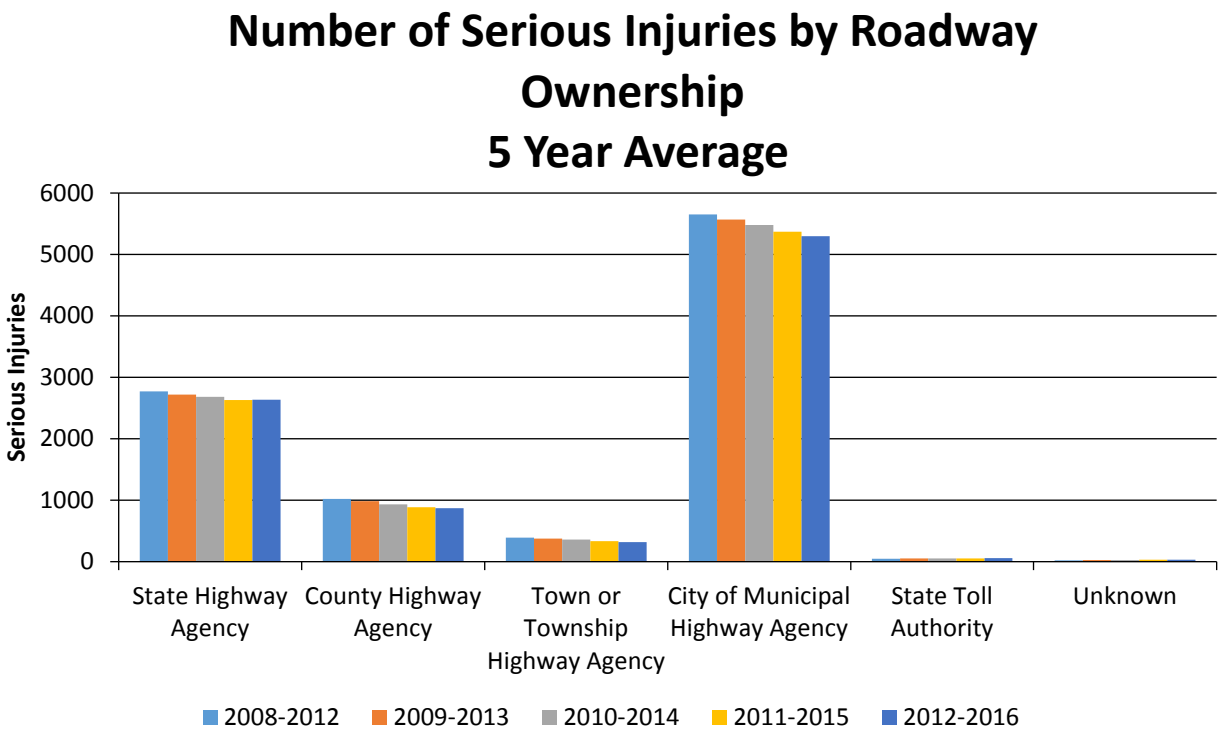

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
200
180
160
140
120
100
80
60
40
20
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Major Collector
Rural Minor Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Major Collector
Urban Minor Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016

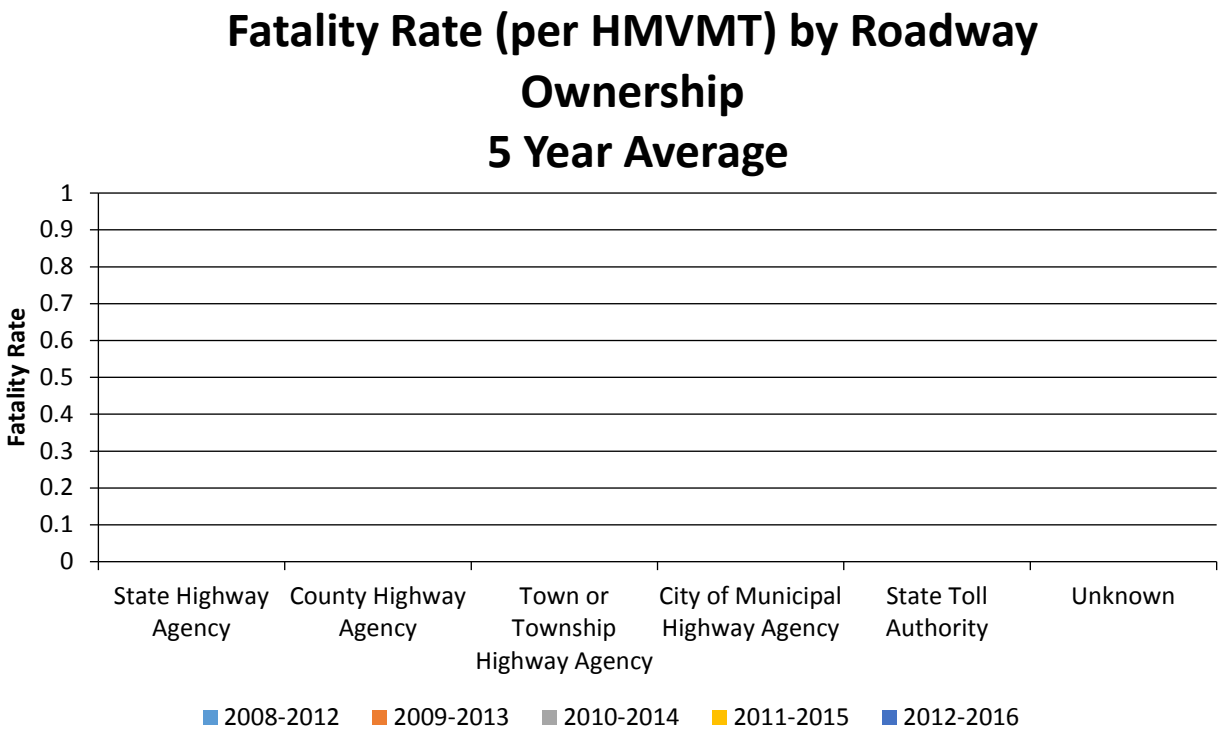

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Major Collector
Rural Minor Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Major Collector
Urban Minor Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016

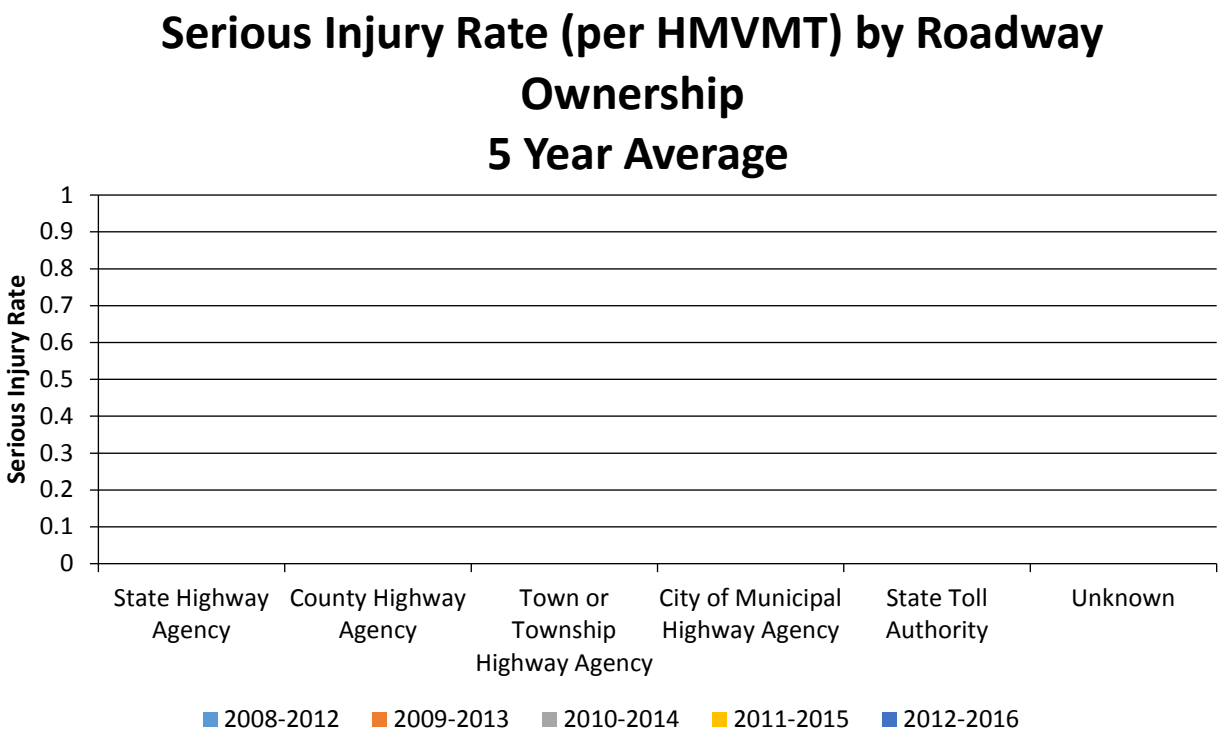

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
3
2.5
2
1.5
1
0.5
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Major Collector
Rural Minor Collector
Rural Local Road or Street
Urban Principal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


Serious Injury Rate (per HMVMT) by Functional Classification
5 Year Average
Serious Injury Rate
20
18
16
14
12
10
8
6
4
2
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Major Collector
Rural Minor Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Major Collector
Urban Minor Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
600
500
400
300
200
100
0
State Highway Agency
County Highway Agency
Town or Township Highway Agency
City of Municipal Highway Agency
State Toll Authority
Unknown
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries by Roadway Ownership
5 Year Average
Serious Injuries
6000
5000
4000
3000
2000
1000
0
State Highway Agency
County Highway Agency
Town or Township Highway Agency
City of Municipal Highway Agency
State Toll Authority
Unknown
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


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



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

Note: In 2013, the functional class system was updated to new codes (1-7) from the legacy codes (1-19). Additionally, the functional class designation was updated based on the 2010 census. Prior to 2013, rural functional class codes 2 (other freeways or expressways) and 3 (other principal arterial roads) were combined as one. Additionally, urban functional class codes 5 (major collector roads) and 6 (minor collector roads) were combined. Traffic volumes were not regenerated for the older years. This makes it difficult to calculate a 5 year rolling average crash rates with data prior to 2013. Crashes were located to the new network, and therefore, can be compared.

The Functional Class conversion should have little to no impacted on the Special Rule for High Risk Rural Roads. However, when looking at the Special Rule for High Risk Rural Road, crash rates were impacted as well due to changing of the urban and rural boundary limits.

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

No

Safety Performance Targets

Safety Performance Targets

Calendar Year 2018 Targets *

Number of Fatalities	1051.0

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

See additional comments.

Number of Serious Injuries	9033.0

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

See additional comments.

Fatality Rate	0.910

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

See additional comments.

Serious Injury Rate	9.010

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

See additional comments.

Total Number of Non-Motorized Fatalities and Serious Injuries	840.0

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

See additional comments.

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

To establish new statewide targets, Ohio examined crash trends from 2006 to 2016. During this time period, annual crash reductions had slowed to between 1.3% and 2.3%. Trends for non-motorists fatalities and serious injuries increased by 0.3%.

As a result, the five-year rolling average for most of the state's targets will likely grow over the next few years as rising crashes in 2014, 2015, and 2016 are added to the five-year rolling average and as earlier years with fewer crashes drop out of the calculation.

In setting new targets, Ohio also considered external factors such as the economy, travel forecasts, and the potential for crash reductions based on legislation and statewide safety investments.

Over the past two years, vehicle miles traveled in the state has increased by about 3% annually, which has resulted in more crashes. This growth in travel has been triggered by relatively stable, low gas prices and an

improved statewide economy.

After reviewing historical crash trends, external factors, and through consultation with Ohio's Metropolitan and Rural Planning Organizations, the Strategic Highway Safety Plan Steering Committee has recommended that Ohio adopt a 1 percent annual reduction target across all five categories.
Ohio is reducing its statewide annual goal to 1% based on a body of evidence that suggests Ohio's previous goal of 2% is not attainable.

While ODOT and its partners agree that "Zero Deaths" is the only acceptable goal, states must recognize that reaching that goal will require time and significant effort by many different partners - including the public. Setting data-driven performance targets will help decision makers allocate their resources in ways that help Ohio achieve its interim targets, which is the only sustainable path to Ohio's Zero Deaths goal.

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

Ohio held several meetings with MPOs, RTPOs and the SHSP Steering Committee to establish state performance targets. These meetings began in the fall of 2016 and culminated into a formal workshop facilitated by FHWA in February 2017. This workshop was helpful in establishing a framework for considering various targets, collecting and responding to comments, then adopting targets by the first deadline of July 1, 2017.

The Ohio Traffic Safety Office, which is the Governor's Highway Safety Representative for Ohio, also participated in these meetings and workshops. Ohio held an additional two meetings between the two agencies - ODOT and the Ohio Department of Public Safety - to consider stakeholder feedback and determine final goals and targets to be included in the HSIP and NHTSA Highway Safety Program (HSP) Report.

Does the State want to report additional optional targets?

No

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

Applicability of Special Rules

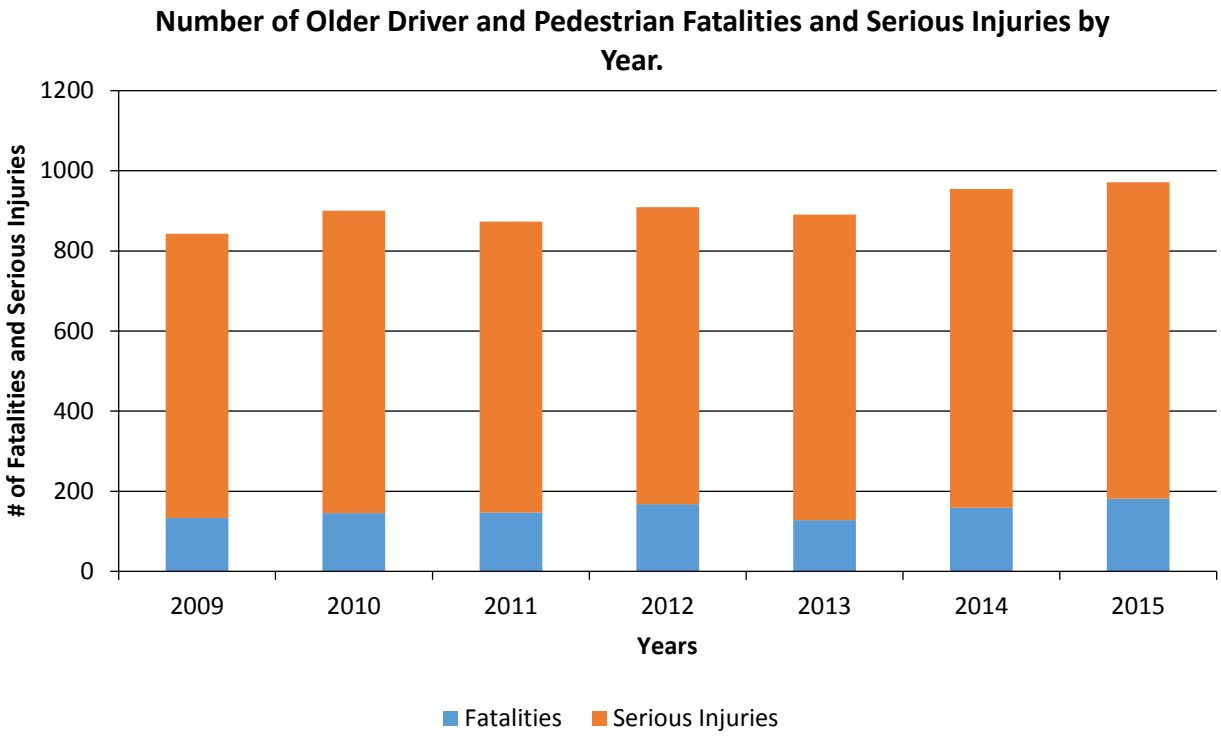
Does the HRRR special rule apply to the State for this reporting period?

No

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

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

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015
Number of Older Driver and Pedestrian Fatalities	133	145	147	168	128	159	181
Number of Older Driver and Pedestrian Serious Injuries	710	755	726	741	763	796	790



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

Example calculation for 2015:

[(F+SI 2015 Drivers and Pedestrians 65 years of age and older/2015 Population Figure) + (F+SI 2014 Drivers and Pedestrians 65 years of age and older/2014 Population Figure) + (F+SI 2013 Drivers and Pedestrians 65 years of age and older/2013 Population Figure) + (F+SI 2012 Drivers and Pedestrians 65 years of age and older/2012 Population Figure) + (F+SI 2011 Drivers and Pedestrians 65 years of age and over/2011 Population Figure)]/5

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries
Benefit/Cost Ratio

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

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

Ohio routinely evaluates crash trends, quarterly and annually, to determine the effectiveness of its Highway Safety Improvement Program. In 2016, Ohio had 1,133 traffic deaths and 9,207 serious injuries, representing a 2% and 1.5% increase respectively compared to 2015. While deaths rose across all crash categories, Ohio saw significant increases in deaths involving Speed, Motorcycle riders, and Pedestrians. Work Zone related deaths remained high in 2016 when comparing 2014 and 2015.

Despite these numbers, Ohio has made significant improvements in highway safety over the past several years. Since 2007, Ohio fatalities have decreased 10%; serious injuries decreased 12%; all injuries decreased 3.5%; and all crashes decreased 7%.

The safety benefits are calculated by using the total number of crashes by year and severity in order to determine a 5-year average. Crash cost where calculated for 2016 based on the Highway Safety Manual methodologies. For each year, the crash severity was multiplied by its associated cost and then summed for all severity levels. A five-year rolling average was calculated for 2015 (2011-2015) and 2016 (2012-2016). The difference between these two values equates to the safety benefits between the two years and is equal to an increase of $172 million. ODOT receives a total of $82 million in Federal HSIP dollars annually on safety projects. Since the cost of crashes in Ohio increased, the benefits are zero. This makes the benefit-cost ratio equal 0.0.

We also track our statewide progress in implementing systematic safety treatments that target serious crash types and roadway features that can potentially increase the likelihood of crashes. This program element has been successful in reducing crashes based on the naïve before-and-after results for the different systematic treatments. In addition, we have increased our efforts to complete systematic projects on locally maintained roads by working with MPOs, County Engineers and LTAP to provide technical assistance and funding for local road safety improvements.

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

RSAs completed
Increased awareness of safety and data-driven process

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

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

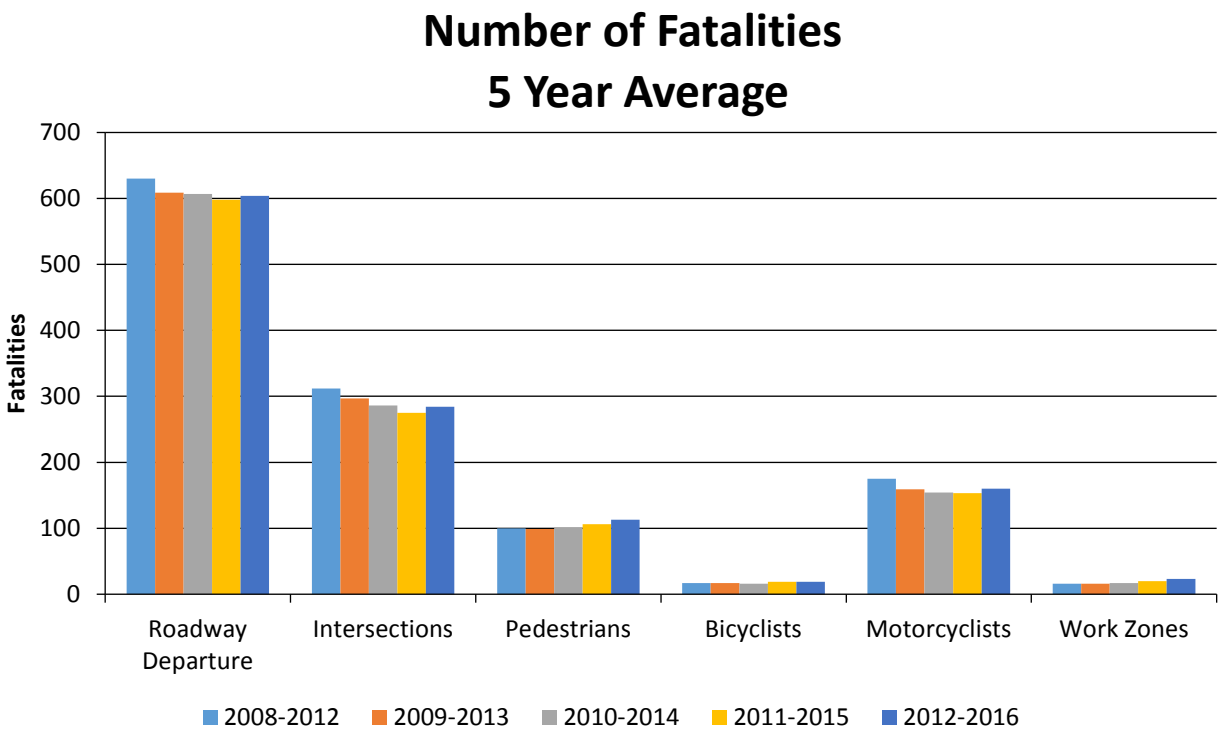
No

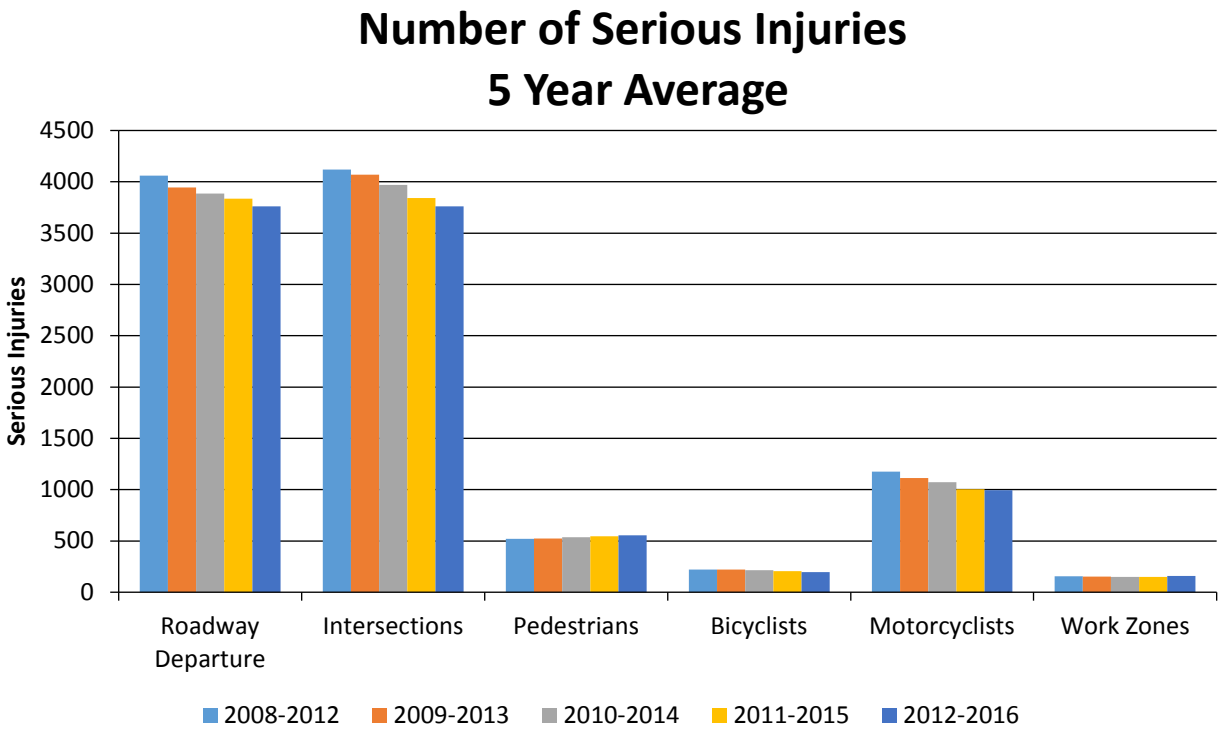
Effectiveness of Groupings or Similar Types of Improvements

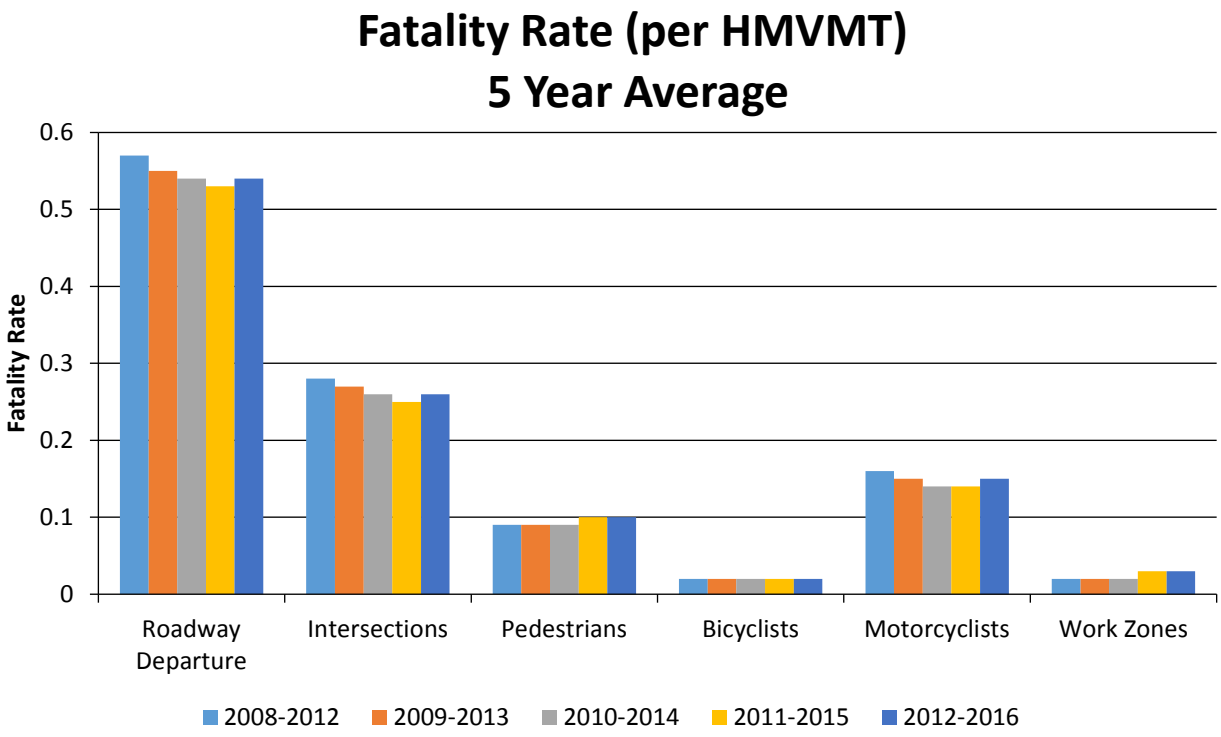
Present and describe trends in SHSP emphasis area performance measures.

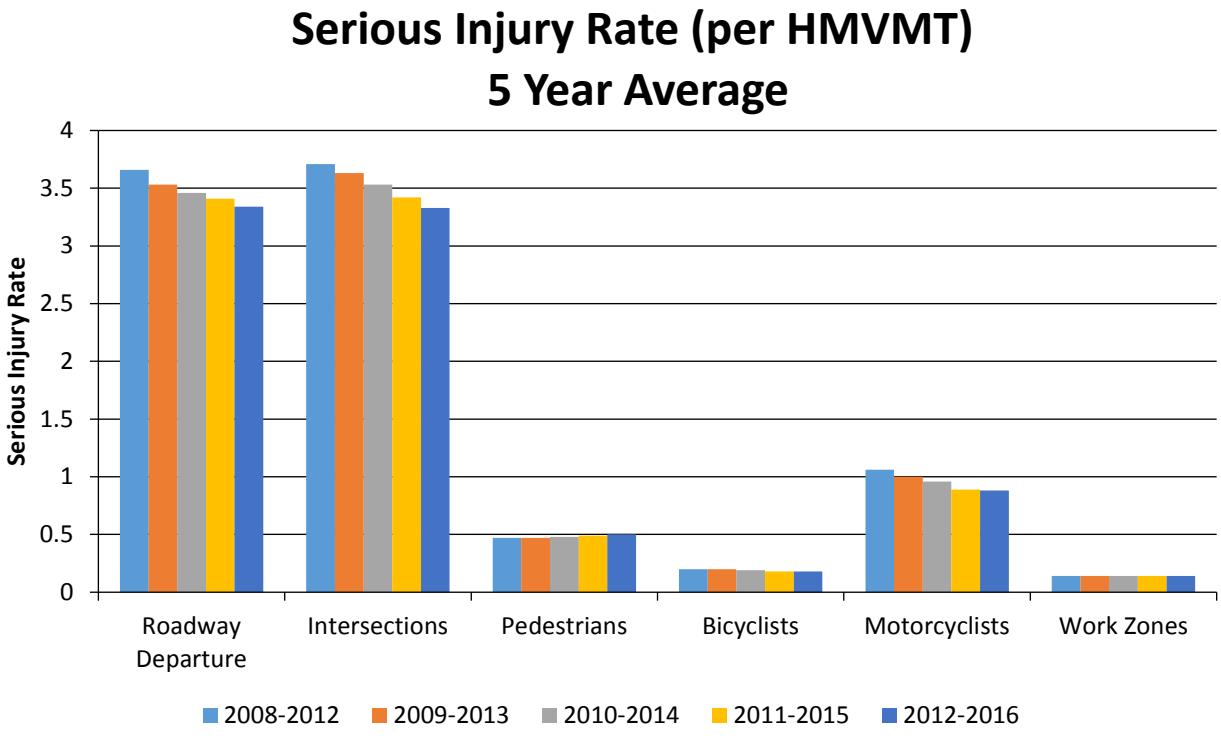
Year 2016

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Roadway Departure	Roadway Departure	604	3,762	0.54	3.34			
Intersections	Intersections	284	3,760	0.26	3.33			
Pedestrians	Vehicle/pedestrian	113	556	0.1	0.5			
Bicyclists	Vehicle/bicycle	19	196	0.02	0.18			
Motorcyclists	Motorcycle Involved	160	994	0.15	0.88			
Work Zones	Work Zone Related	23	157	0.03	0.14			


Number of Fatalities
5 Year Average
Fatalities
700
600
500
400
300
200
100
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Motorcyclists
Work Zones
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries
5 Year Average
Serious Injuries
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Motorcyclists
Work Zones
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016





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

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

No

Enter additional comments here to clarify your response for this question or add supporting information.
In May of 2017, ODOT let a project to identify, develop, and implement an appropriate approach to before-after safety project evaluation that can be applied to ODOT's Highway Safety Improvement Program (HSIP) projects or any other completed project(s) of interest to ODOT. The evaluation approach will quantify project effectiveness in terms of crash frequency reduction and percentage crash frequency reduction overall, by crash severity level, and by crash type. The recommended project evaluation approach will be:

- Scientifically sound
- Applicable to evaluation of individual projects and to crash modification factor (CMF) development
- Consistent with HSM guidance, FHWA HSIP requirements, and ODOT needs and preferences

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL INJURY BEFORE	ALL INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
None														

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

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

No

Compliance Assessment

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

11/04/2015

What are the years being covered by the current SHSP?

From: 2011 To: 2019

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

2020

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

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

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	95					100	95	100	95
Route Number (8)	100	95								
Route/Street Name (9)	100	95								
Federal Aid/Route Type (21)	100	95								
Rural/Urban Designation (20)	100	95					100	95		
Surface Type (23)	100	95					100	95		
Begin Point Segment Descriptor (10)	100	95					100	95	100	95
End Point Segment Descriptor (11)	100	95					100	95	100	95
Segment Length (13)	100	95								
Direction of Inventory (18)	100	95								
Functional Class (19)	100	95					100	95	100	95
Median Type (54)	100	95								

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Access Control (22)	100	95								
One/Two Way Operations (91)	100	95								
Number of Through Lanes (31)	100	95					100	95		
Average Annual Daily Traffic (79)	100	95					100	95		
AADT Year (80)	100	95								
Type of Governmental Ownership (4)	100	95					100	95	100	95
INTERSECTION										
Unique Junction Identifier (120)			100	95						
Location Identifier for Road 1 Crossing Point (122)			100	95						
Location Identifier for Road 2 Crossing Point (123)			100	95						
Intersection/Junction Geometry (126)			100	95						
Intersection/Junction Traffic Control (131)			100	95						
AADT for Each Intersecting Road (79)			100	95						
AADT Year (80)			100	95						
Unique Approach Identifier (139)			100	95						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	100				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
Ramp Length (187)					100	100				
Roadway Type at Beginning of Ramp Terminal (195)					100	100				

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Roadway Type at End Ramp Terminal (199)					100	100				
Interchange Type (182)					100	100				
Ramp AADT (191)					100	100				
Year of Ramp AADT (192)					100	100				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	**100.00**	**95.00**	**100.00**	**95.00**	**100.00**	**100.00**	**100.00**	**95.00**	**100.00**	**95.00**

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

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

The Location Based Response System (LBRS) is an initiative of the Ohio Geographically Referenced Information Program (OGRIP). The LBRS establishes partnerships between State and County government for the creation of spatially accurate street centerlines with address ranges and field verified site-specific address locations.

A project is underway to collect missing LBRS data, verify/update current LBRS datasets and incorporate LBRS data into the official ODOT Road Inventory (RIMS).

With the ultimate goal of reducing fatalities, injuries, and traffic crashes statewide, the LBRS projects' accurate, timely, reliable road inventory data as well as seamless integration among all highway safety stakeholders will make traffic crash analysis and emergency response more effective and efficient. In addition, ODOT and it's partner agencies will benefit by:

- Meeting Federal reporting requirements (HPMS, ARNOLD)
- Improving the planning process for Data Governance and Transportation Asset Management Decision Support Tool (TAM DST)
- Enhancing routing for autonomous vehicles and smart corridors

The project will be divided into the following tasks:

1. Develop LBRS data for 6 counties.
2. Verify and update data sets for 13 counties.
3. Integrate LBRS data into Roadway Inventory Management System (RIMS) for 37 counties.
4. Provide a mechanism for County resources to maintain their LBRS data in a distributed environment

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

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Report Form	Incapacitating	No	N/A	No	N/A	No
Crash Report Form Instruction Manual	Incapacitating	No	Any injury, other than a fatal injury, which prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as "needing help from the scene."	No	N/A	No
Crash Database	Incapacitating	No	N/A	No	N/A	No
Crash Database Data Dictionary	Incapacitating	No	Any injury, other than a fatal injury, which prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as "needing help from the scene."	No	N/A	No

Please describe the actions the State is taking to become compliant by April 15, 2019.
Ohio has formed a crash report form (OH-1) Revision Committee. The multiple disciplinary committee is discussing changes desired by stakeholders. The Department of Public Safety is leading the committee and the changes will be implemented by the end of calendar year 2018.

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

Did the State conduct an HSIP program assessment during the reporting period?

Yes

Describe the purpose and outcomes of the State’s HSIP program assessment.

Ohio conducted an HSIP Self-Assessment with the FHWA Division Office in April 2017. The self-assessment showed that ODOT has an advanced HSIP that has been successful in reducing traffic fatalities and serious injuries over the long term. Several Opportunities for Improvement were also identified to take Ohio's HSIP to the next level of success.

Optional Attachments

Program Structure:

Highway Safety Improvement Program Guidance.pdf
HSIP Procedures Manual.pdf
Safety Study Guidelines.pdf

Project Implementation:

Ohio Emphasis Area Strategies.pdf

Safety Performance:

2006-2016 SHSP Annual Emphasis Area Tracker.pdf
2006-2016 SHSP Monthly Emphasis Area Tracker - Fatalities.pdf
2006-2016 SHSP Monthly Emphasis Area Tracker - Serious Injuries.pdf
2011-2015 SHSP Matrix.pdf
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.