SOUTH DAKOTA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2018 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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Disclaimer

Protection of Data from Discovery Admission into Evidence

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

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

Executive Summary

The South Dakota Highway Safety Improvement Program (HSIP) is administered through the Office of Project Development in the South Dakota Department of Transportation (SDDOT) Central Office. The SDDOT uses Road Safety Audits Review(RSAR), Roadway Safety Review (RSR) inspections, Safety Module software program, and ArcGIS to identify locations that would benefit from a safety improvement project. RSR inspections are developed by utilizing the South Dakota Department of Public Safety's

(SDDPS) crash reporting database, SDDOT's roadway and traffic data, and ArcGIS software to determine high crash locations. Both the RSAR process and RSR inspections are available for use on all public roadways in South Dakota. HSIP projects are selected for implementation by determining which project will result in the greatest safety improvement for the investment. The overall coordination and collaboration efforts for HSIP projects involve Regional SDDOT personnel, city representatives, county representatives, township representatives, consultant firms, law enforcement representatives, among other agencies. The SDDOT HSIP process will be expanded in further detail in the Program Methodology section of this report.

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.

HSIP is managed by the Highway Safety Engineer within the Planning and Engineering Division. A portion of the funds are set aside for a countywide signing project, systemic improvements, and spot locations with improvements ranked by benefit/cost.

Where is HSIP staff located within the State DOT?

Other-Planning and Engineering

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

How are HSIP funds allocated in a State?

Other-Central Office using SHSP Emphasis Area Data

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

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

The SDDOT administers a County wide signing program which conducts approximately four County wide signing projects each year. Counties are prioritized by crash rate based on serious injury and fatal crashes per million vehicle miles traveled.

Routes are also identified for improvements by conducting both RSR and RSAR inspections and by an over representation of crash clusters and higher than average crash rates. Routes are also identified to deploy systemic improvements.

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

Traffic Engineering/Safety
Design
Planning
Maintenance
Operations
Districts/Regions
Local Aid Programs Office/Division

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

Describe coordination with internal partners.

The SHSP is used along with crash record analysis and mapping to hold meetings with operation and maintenance personal to identify locations to apply safety improvements.

During the planning and design process of a project, the HSM and IHSDM software is used to compare options to increase safety.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Governors Highway Safety Office
Local Technical Assistance Program
Local Government Agency
Tribal 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.

Coordination with the FHWA Division Office takes place throughout the year. HSIP staff take part in an annual Tribal Transportation Safety Summit which brings together several tribal agencies, engineering consultants, universities, city, county, township representatives. Coordination with the Highway Safety Office also takes place throughout the year.

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.

The SDDOT completed their SHSP in August of 2014. Emphasis has been placed on implementing safety strategies within the SHSP.

Program Methodology

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

No

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

File Name:

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

The SDDOT is working to develop an in-house software tool that will evaluate HSIP projects after construction to track performance.

Select the programs that are administered under the HSIP.

Intersection
Horizontal Curve
Skid Hazard
Roadway Departure
Low-Cost Spot Improvements
Sign Replacement And Improvement
Local Safety
Shoulder Improvement

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

Program: Horizontal Curve

Date of Program Methodology: 3/1/2013

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	Horizontal curvature

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

Crash frequency
Crash rate

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?

Other-B/C ratio

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

Program: Intersection

2018 South Dakota Highway Safety Improvement Program
Date of Program Methodology: 3/1/2013

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	Other-Intersection Type

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

Crash frequency
Crash rate
Excess expected crash frequency using SPFs

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

Yes

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

No

Describe the methodology used to identify local road projects as part of this program.
When ADT is available and intersects with State road.

How are projects under this program advanced for implementation?

Other-B/C ratio

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
Incremental B/C : 4
Ranking based on net benefit : 2

Program: Local Safety

Date of Program Methodology: 3/1/2015

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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

Crash frequency
Crash rate

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

Yes

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

No

Describe the methodology used to identify local road projects as part of this program.
Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-SDDOT Project Developement Personel

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

Program: Low-Cost Spot Improvements

Date of Program Methodology: 5/1/2014

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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

Crash frequency
Crash rate

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.
Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

Program: Roadway Departure

Date of Program Methodology: 2/2/2014

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

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

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

Crash frequency
Equivalent property damage only (EPDO Crash frequency)
Crash rate
Excess expected crash frequency using SPFs

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

No

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

Yes

Describe the methodology used to identify local road projects as part of this program.
Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

Program: Shoulder Improvement

Date of Program Methodology: 5/1/2014

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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

Crash frequency
Crash rate

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.
Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4
Available funding : 1
Ranking based on net benefit : 2
Cost Effectiveness : 2

Program: Sign Replacement And Improvement

Date of Program Methodology: 5/1/2017

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	

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

Crash rate

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.
Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4
Available funding : 1
Ranking based on net benefit : 2
Cost Effectiveness : 2

Program: Skid Hazard

Date of Program Methodology: 2/1/2016

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

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

Crash frequency

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

Yes

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

Yes

Describe the methodology used to identify local road projects as part of this program.
Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

What percentage of HSIP funds address systemic improvements?

50

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

Rumble Strips
Pavement/Shoulder Widening
Install/Improve Signing
Install/Improve Pavement Marking and/or Delineation
Upgrade Guard Rails
Horizontal curve signs

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

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

Engineering Study
Crash data analysis
SHSP/Local road safety plan
Stakeholder input

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

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

ITS technologies such as adaptive signal controls, and intersection conflict warning systems are installed within the HSIP program.

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.

The HSM was used in the development of in-house software which is used to identify locations and improvement types for rural 2 lane segments and intersections. The HSM is also used during corridor planning studies to compare different design alternatives.

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

No

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

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

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

July 1, 2017 to June 30, 2018

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$43,193,000	$32,246,539	74.66%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$0	$0	0%
Totals	$43,193,000	$32,246,539	74.66%

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?

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

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?

$121,500

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

$135,000

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

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

$15,000,000

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.

The way projects are reported is based on the amount obligated when the first 292 is submitted for the project. In a lot of cases that amount is not the total project cost so that funding amount is tough to compare to the programmed amount. Although a project is only programmed within one study period it could be obligated over multiple study periods. A multi-million dollar project could be let within this study period but only a couple hundred thousand dollars is obligated during the same study period.

Typical project obstacles such as estimating project costs to be programmed, projects time line slipping due to environmental impacts, right-of-way impacts, can all be expected on any type of project.

Ways to overcome these obstacles is to do a better job of estimating projects and when scheduling projects allow for the proper time to accomplish environmental and ROW activities.

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

No

General Listing of Projects

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

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
03B2	Alignment	Horizontal and vertical alignment	12.4	Miles	$13105894.72	$11810000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	2,177	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening
05W4	Roadway	Rumble strips - edge or shoulder	42.9	Miles	$328880.93	$400000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	55	County Highway Agency	Systemic	Roadway Departure	Shoulder Rumble Strips
05MJ	Roadway	Pavement surface - high friction surface	1	Locations	$220655.76	$1682000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Interstate	17,782	65	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
04HD	Non-infrastructure	Road safety audits	3	Numbers	$4500	$5000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	200	65	State Highway Agency	Spot	Planning	Conduction Roadway Safety Audits
04KC	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	County	$189513	$808000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
04HA	Roadway delineation	Longitudinal pavement markings - remarking	34.3	Miles	$162031.15	$325000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	3,603	70	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
04JC	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$154779.39	$169000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	1,360	70	State Highway Agency	Spot	Intersections	Intersection Conflict Warning System
06N4	Roadway	Rumble strips - edge or shoulder	8	Miles	$311400.45	$150000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	2,346	45	State Highway Agency	Systemic	Lane Departure	Shoulder Rumble Strips
04H7	Roadway delineation	Longitudinal pavement markings - remarking	48	Miles	$839526.45	$550000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Interstate	8,209	80	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
023A	Shoulder treatments	Widen shoulder - paved or other	10.6	Miles	$5468207.88	$7190000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	688	65	State Highway Agency	Systemic	Roadway Departure	Shoulder Widening
06ML	Roadway	Rumble strips - edge or shoulder	16.2	Miles	$36613.73	$100000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,357	65	State Highway Agency	Systemic	Lane Departure	Shoulder Rumble Strips
04H2	Roadway signs and traffic control	Roadway signs (including post) - new or updated	37.3	Miles	$47987.93	$256000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	3,019	65	State Highway Agency	Systemic	Roadway Departure	Signing
05W2	Roadway	Rumble strips - edge or shoulder	111.4	Miles	$507182.5	$700000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	55	County Highway Agency	Systemic	Roadway Departure	Shoulder Rumble Strips
05FY	Roadway signs and traffic control	Roadway signs (including post) - new or updated	30	Locations	$24449.7	$200000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	506	65	State Highway Agency	Systemic	Roadway Departure	Signing

													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**
		markings - remarking												
04HE	Non-infrastructure	Transportation safety planning	1	Locations	$117000	$130000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	1,000	65	State Highway Agency	State Highway Agency	Planning	Highway Safety Planning
062F	Roadside	Barrier - other	19	Locations	$1452622.5	$1000000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Interstate	4,434	80	State Highway Agency	Spot	Roadway Departure	Barrier Treatments
04XX	Roadway signs and traffic control	Roadway signs (including post) - new or updated	67.8	Miles	$97993.59	$400000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,725	65	State Highway Agency	Systemic	Roadway Departure	Signing
04H9	Roadway delineation	Longitudinal pavement markings - remarking	24.6	Miles	$328410.24	$200000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	3,726	70	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
03BC	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	County	$401579	$1293000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
05W1	Roadway	Rumble strips - edge or shoulder	12.5	Miles	$78825.58	$100000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	55	County Highway Agency	Systemic	Roadway Departure	Shoulder Rumble Strips
04HQ	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	County	$165983	$680000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
036A	Shoulder treatments	Widen shoulder - paved or other	14.2	Miles	$7968594.74	$14825000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	1,306	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening

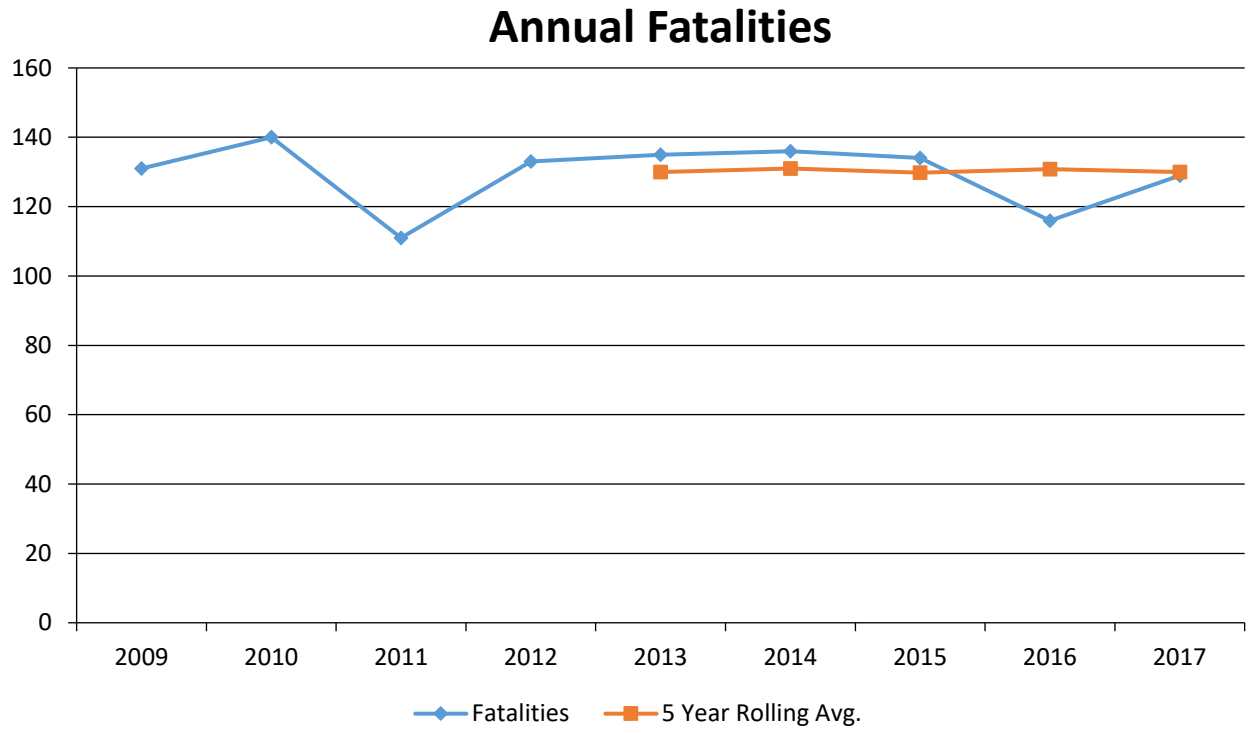
Enter additional comments here to clarify your response for this question or add supporting information.

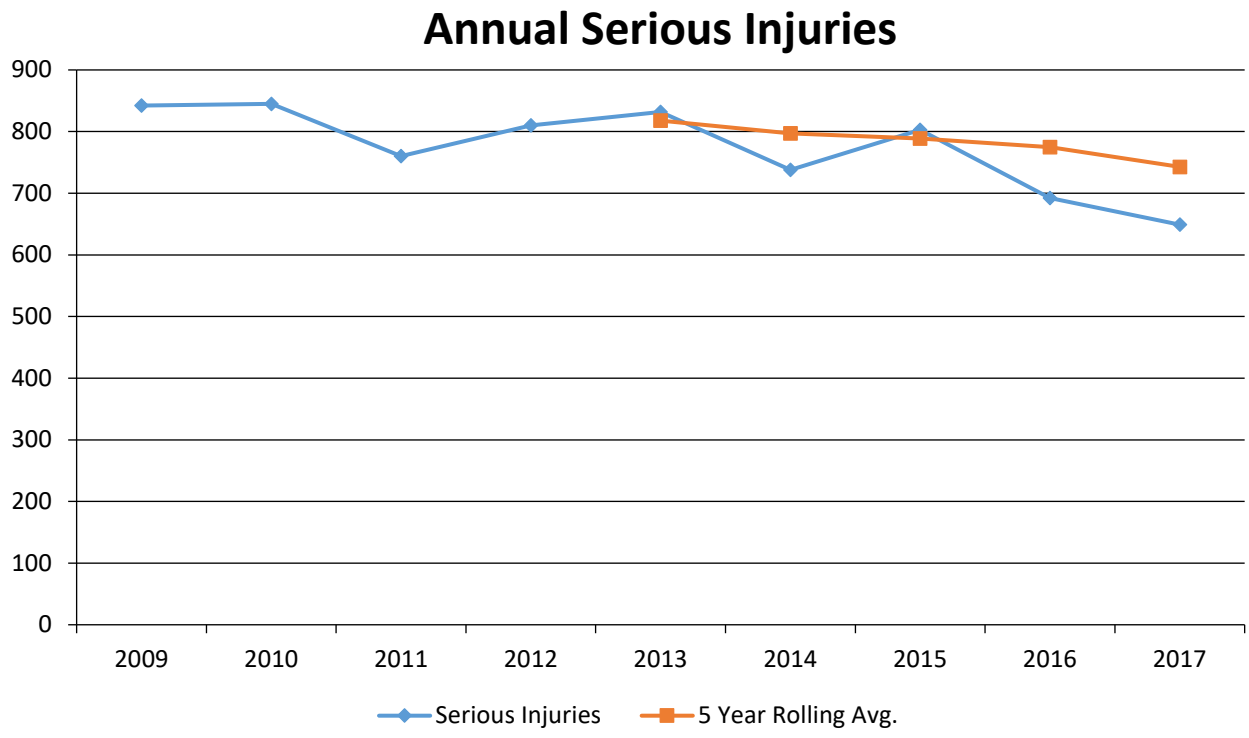
Safety Performance

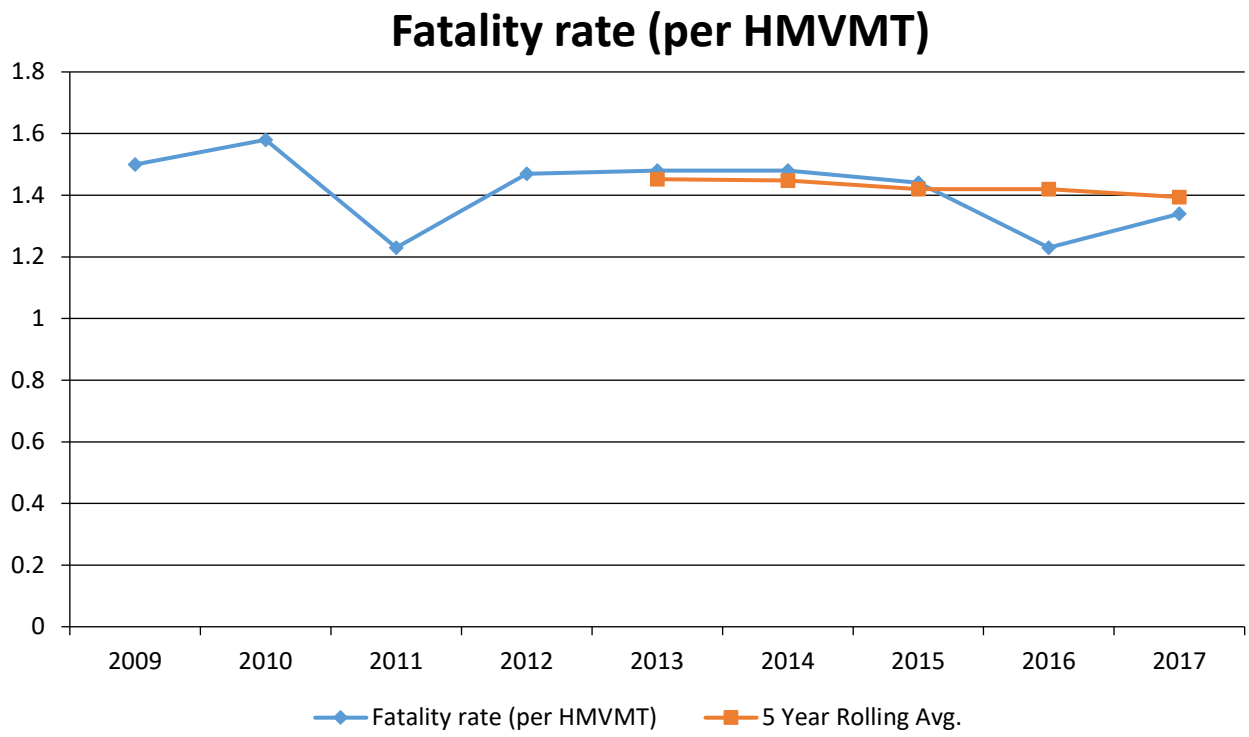
General Highway Safety Trends

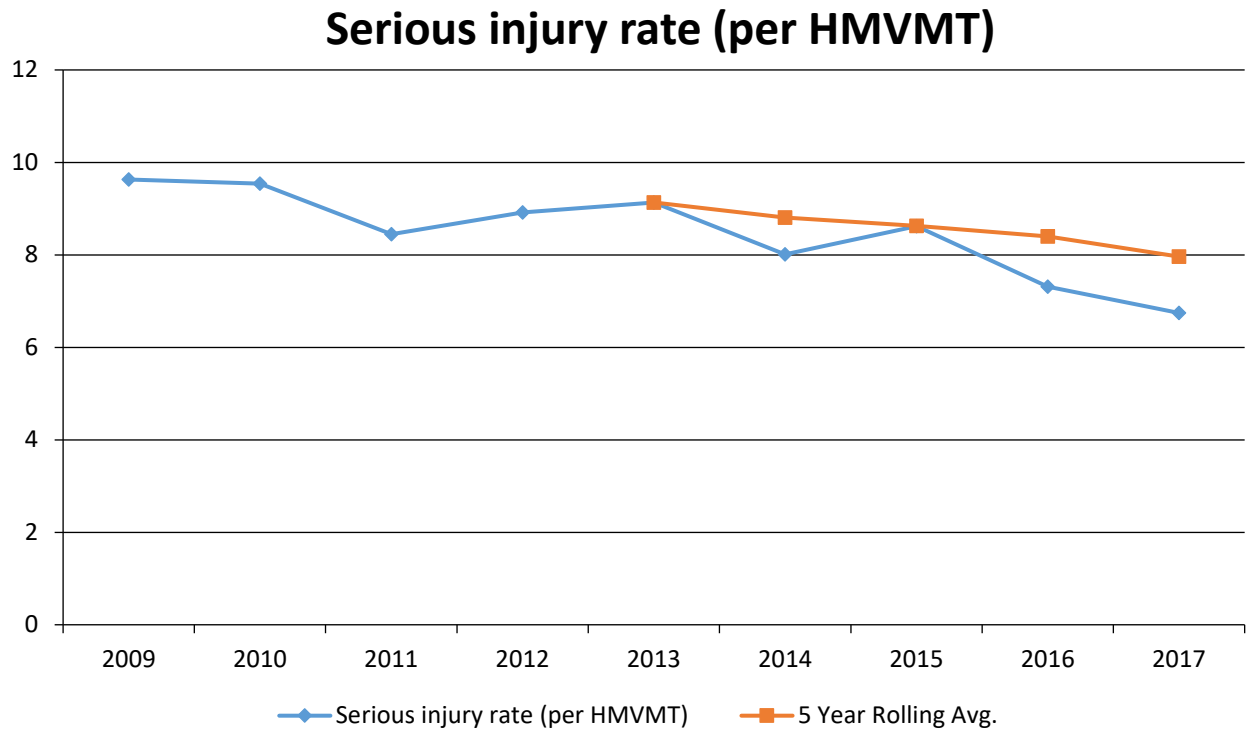
Present data showing the general highway safety trends in the State for the past five years.

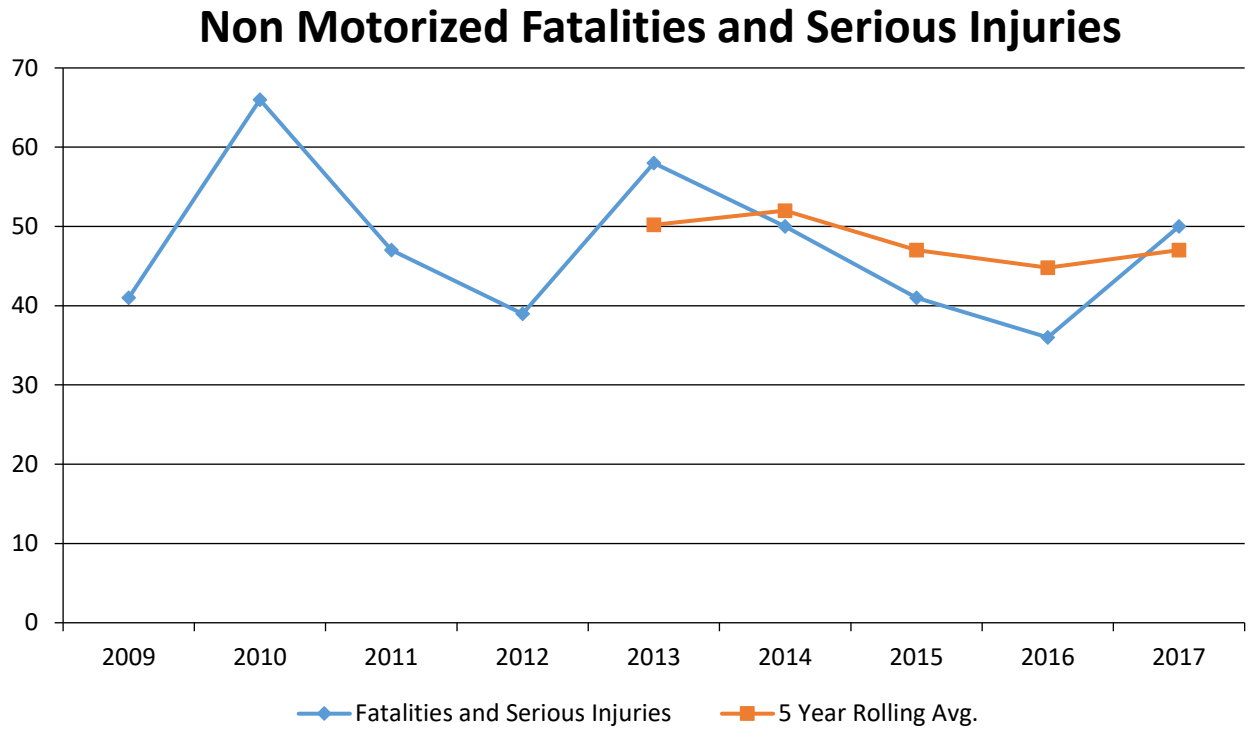
PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	131	140	111	133	135	136	134	116	129
Serious Injuries	842	845	760	810	832	738	803	692	649
Fatality rate (per HMVMT)	1.500	1.580	1.230	1.470	1.480	1.480	1.440	1.230	1.340
Serious injury rate (per HMVMT)	9.630	9.540	8.450	8.920	9.130	8.010	8.620	7.310	6.744
Number non-motorized fatalities	4	11	8	2	9	11	6	6	10
Number of non-motorized serious injuries	37	55	39	37	49	39	35	30	40


Annual Fatalities
160
140
120
100
80
60
40
20
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
900
800
700
600
500
400
300
200
100
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
12
10
8
6
4
2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



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

Describe fatality data source.

Other

If Other Please describe

FARS & South Dakota Accident Records System

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

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

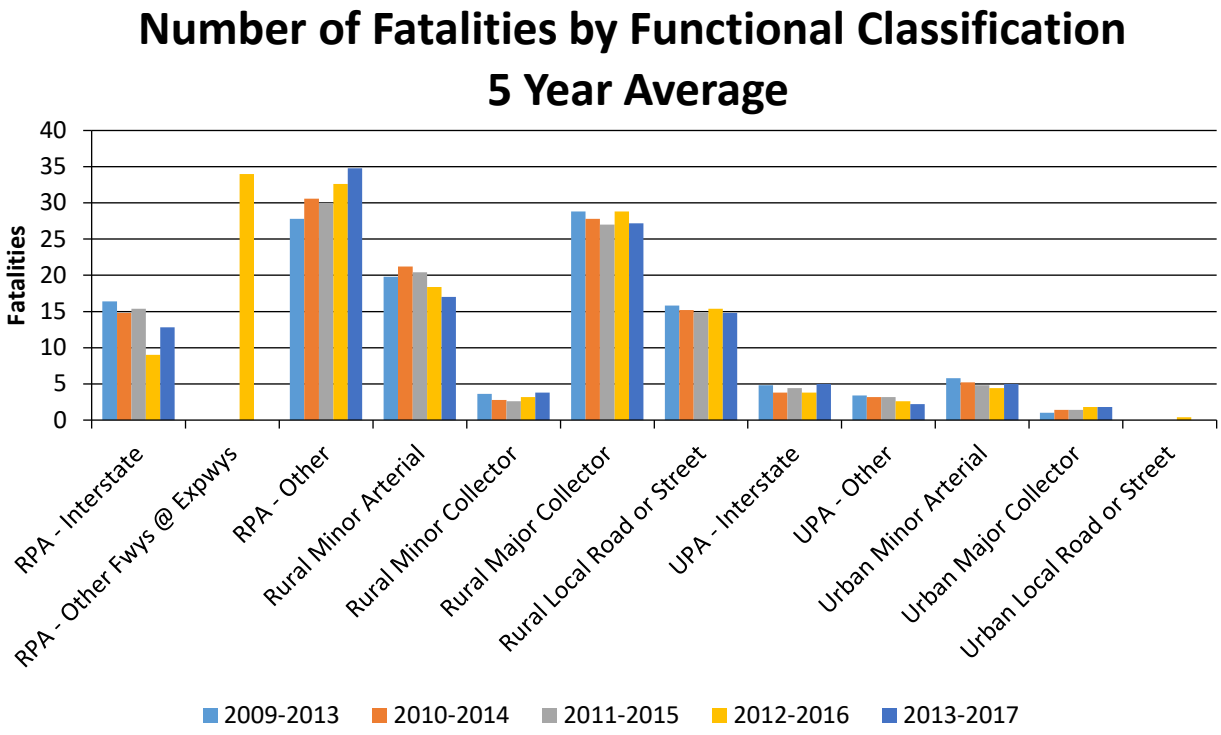
Year 2017

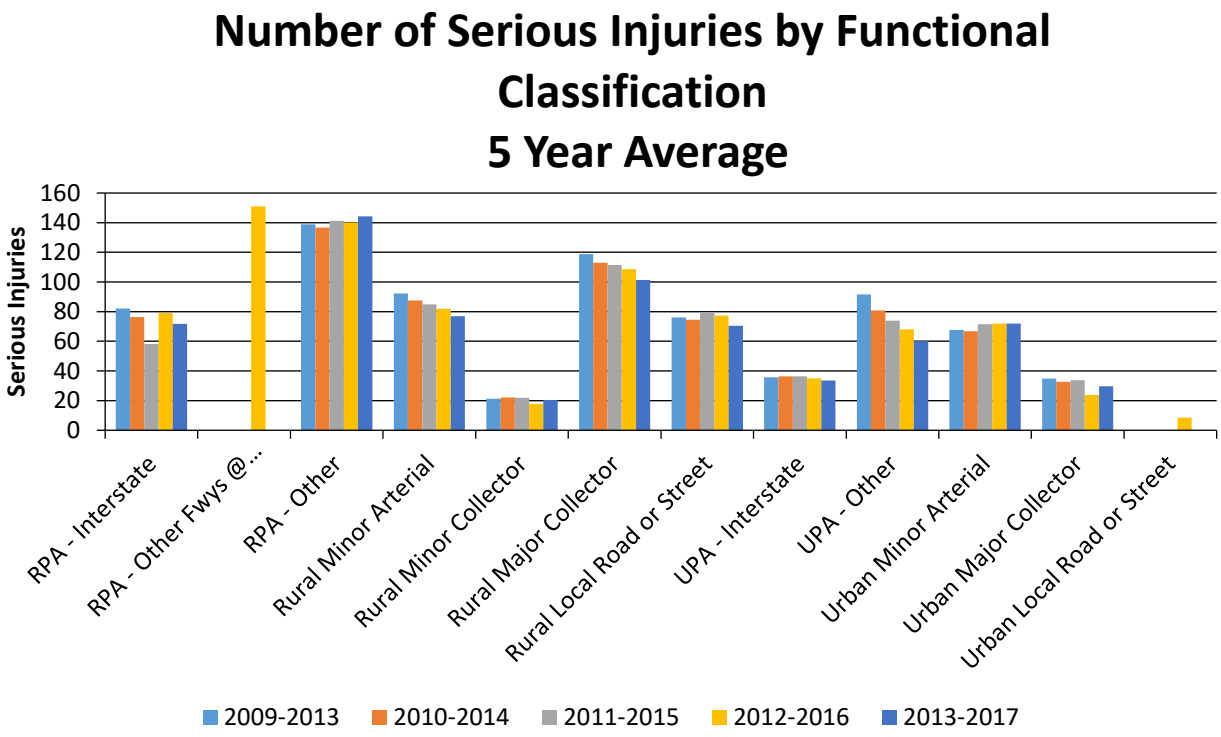
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	12.8	71.8	0.62	3.65
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	34.8	144.2	1.82	7.53

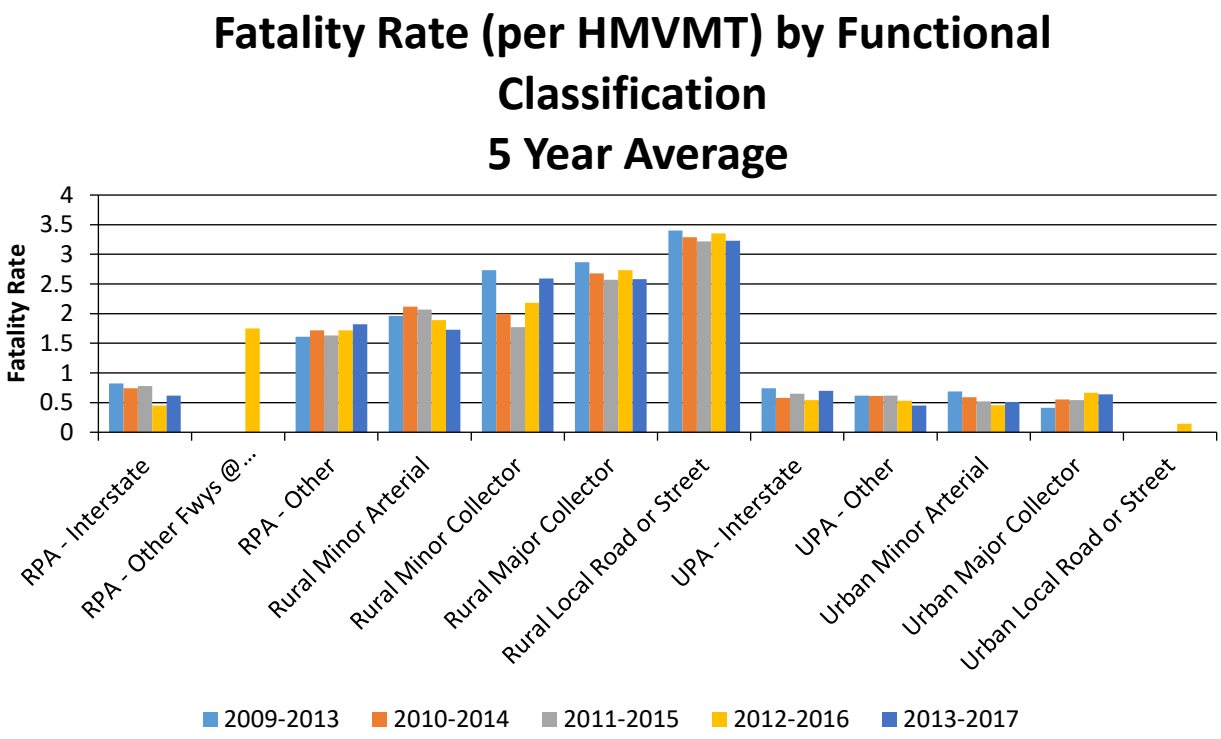
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Arterial	17	77	1.73	7.82
Rural Minor Collector	3.8	20.4	2.59	13.92
Rural Major Collector	27.2	101.4	2.58	9.6
Rural Local Road or Street	14.8	70.4	3.23	15.35
Urban Principal Arterial (UPA) - Interstate	5	33.6	0.7	4.7
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	2.2	60	0.45	12.33
Urban Minor Arterial	5	72	0.51	7.36
Urban Minor Collector				
Urban Major Collector	1.8	29.6	0.64	10.84
Urban Local Road or Street				

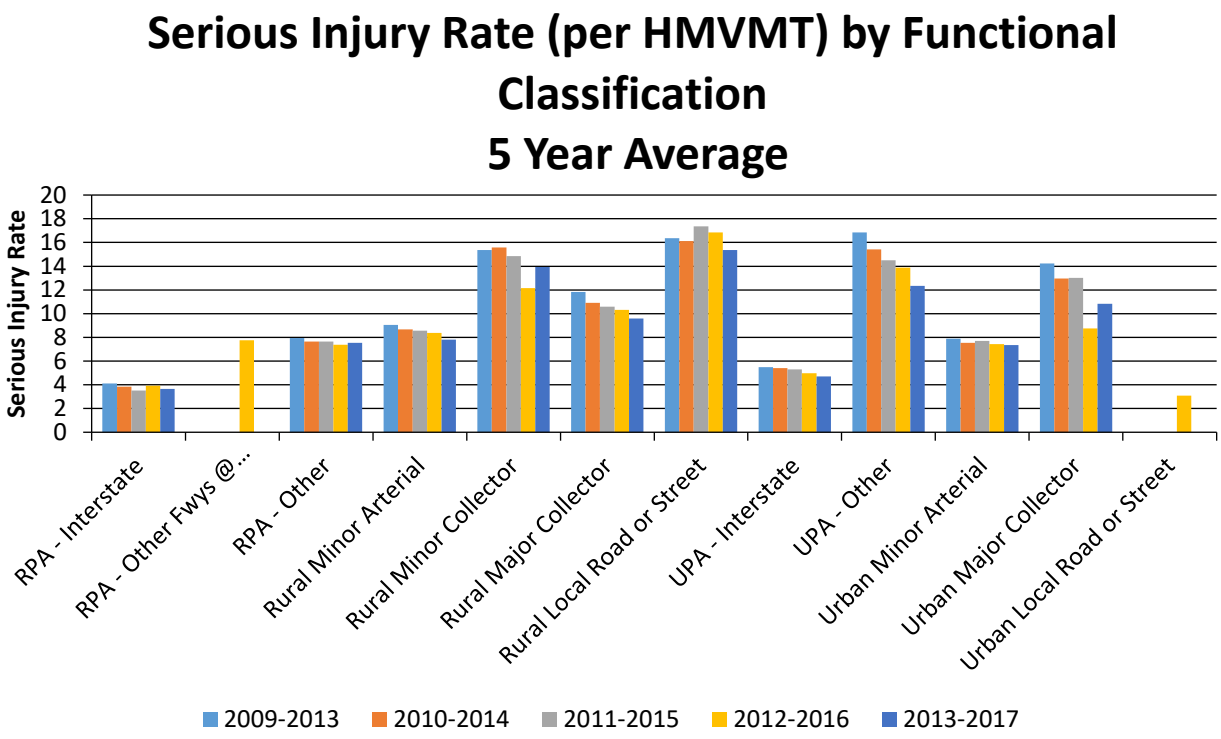
Year 2016

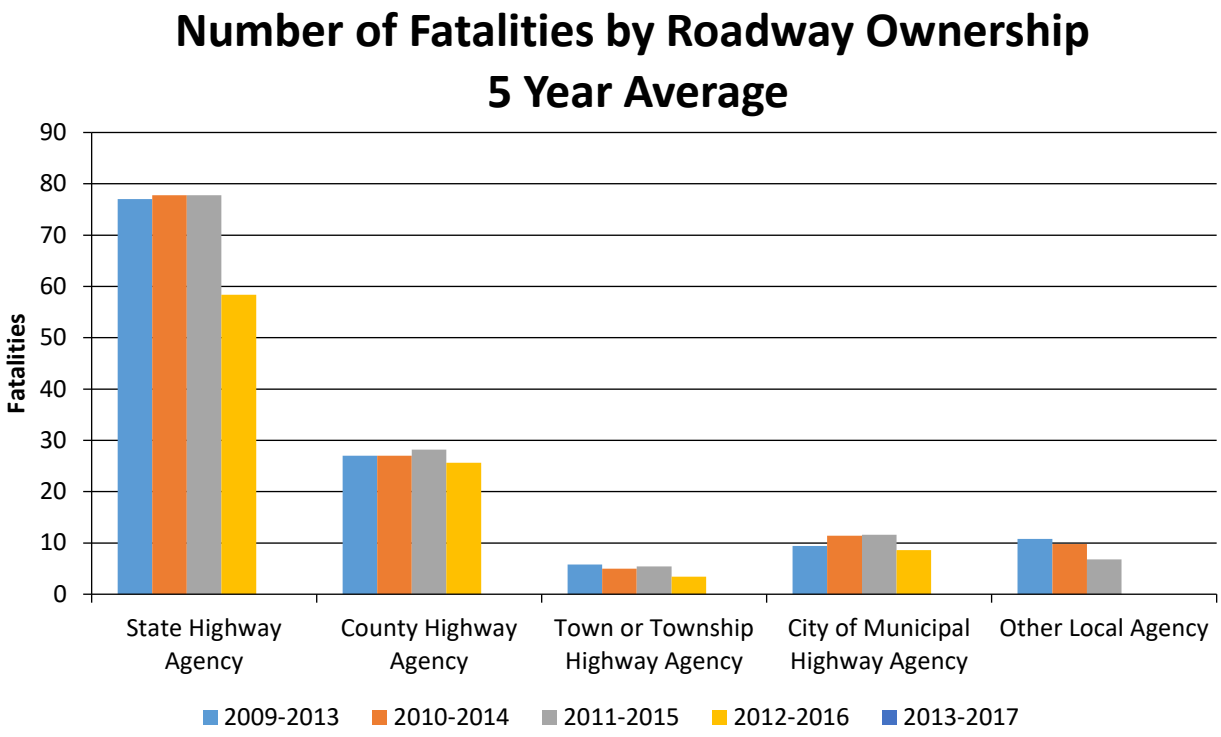
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	58.4	303	0.94	4.89
County Highway Agency	25.6	120	2.01	9.4
Town or Township Highway Agency	3.4	29	1.4	11.88
City of Municipal Highway Agency	8.6	135.4	0.65	10.17
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

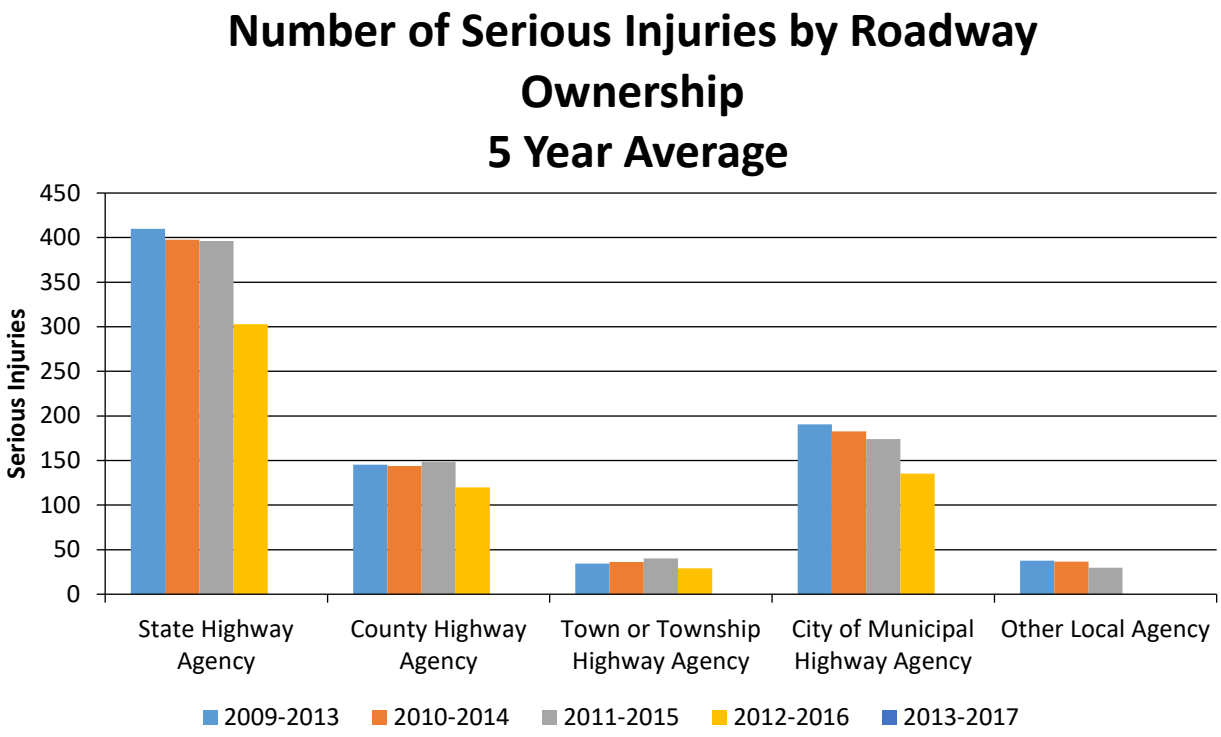

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
40
35
30
25
20
15
10
5
0
RPA - Interstate
RPA - Other Fwys @ Expwys
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017

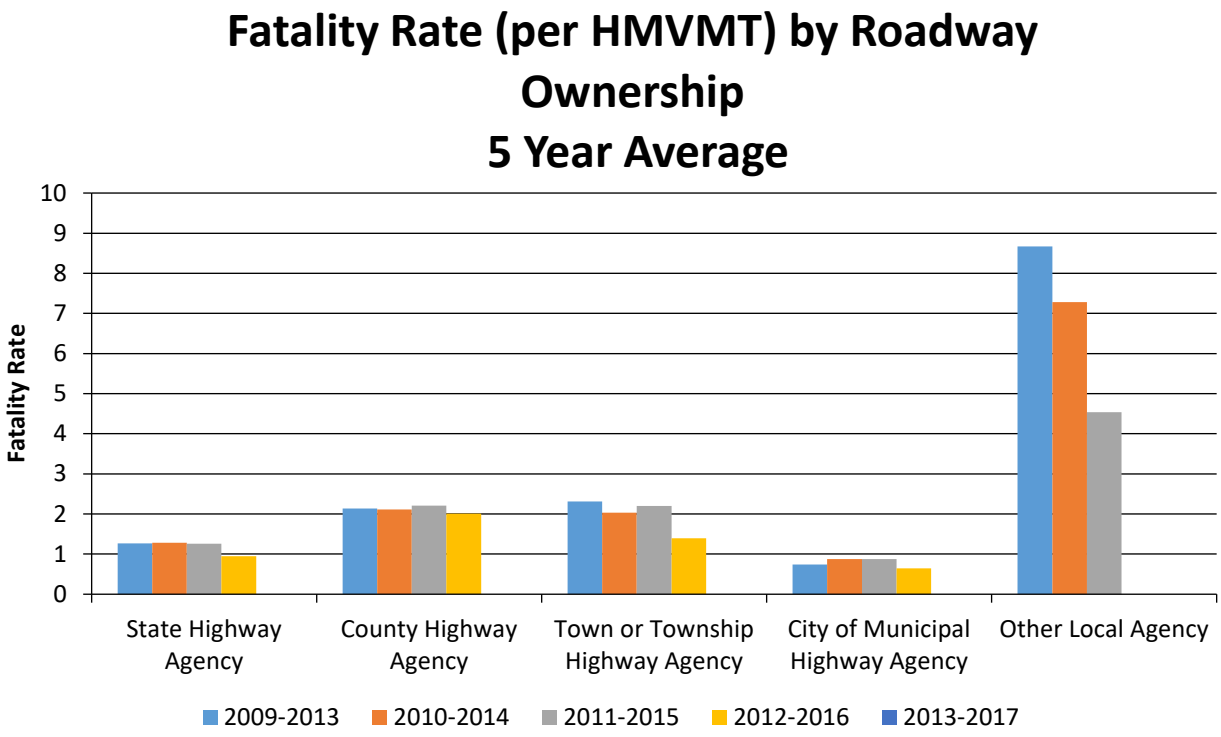

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
160
140
120
100
80
60
40
20
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017

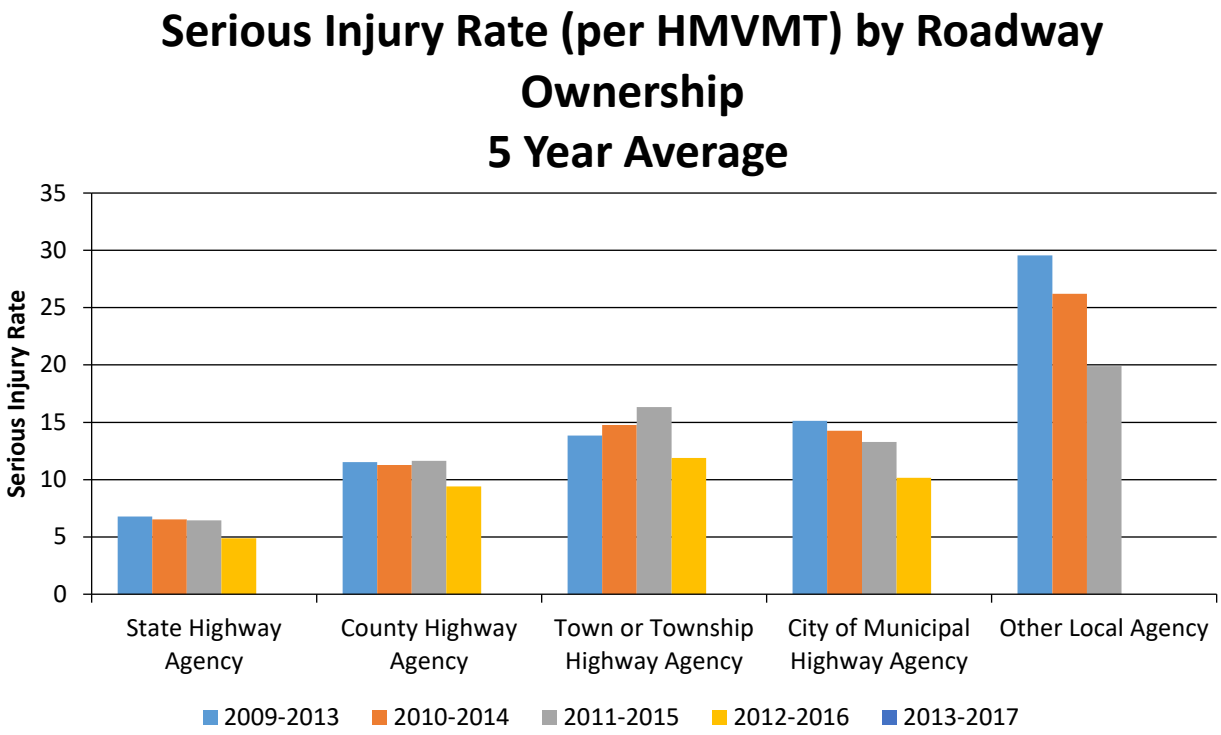

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
4
3.5
3
2.5
2
1.5
1
0.5
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


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
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
90
80
70
60
50
40
30
20
10
0
State Highway Agency
County Highway Agency
Town or Township Highway Agency
City of Municipal Highway Agency
Other Local Agency
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries by Roadway Ownership
5 Year Average
Serious Injuries
450
400
350
300
250
200
150
100
50
0
State Highway Agency
County Highway Agency
Town or Township Highway Agency
City of Municipal Highway Agency
Other Local Agency
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Fatality Rate (per HMVMT) by Roadway Ownership
5 Year Average
Fatality Rate
10
9
8
7
6
5
4
3
2
1
0
State Highway Agency
County Highway Agency
Town or Township Highway Agency
City of Municipal Highway Agency
Other Local Agency
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017



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

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

No

Safety Performance Targets

Safety Performance Targets

Calendar Year 2019 Targets *

Number of Fatalities 127.4

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Number of Serious Injuries 703.4

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Fatality Rate	1.310

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Serious Injury Rate	6.740

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Total Number of Non-Motorized Fatalities and Serious Injuries	43.0

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

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

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

A one day work shop was conducted on April 4th, 2017 with SDDOT, SD Office of Highway Safety, FHWA SD Division Office, Rapid City MPO, Sioux City MPO, and Sioux Falls MPO representatives in attendance. The work shop went through the 5 performance measures in detail and the reporting requirements. There was a lot of discussion on current crash trends and external factors such as VMT, laws, and investments. Everyone involved agreed that the targets shall be data driven, realistic and attainable.

The OHS also conducts four meetings throughout the year with local law enforcement and EMS representatives to garner buy in from all safety stakeholders throughout the state.

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

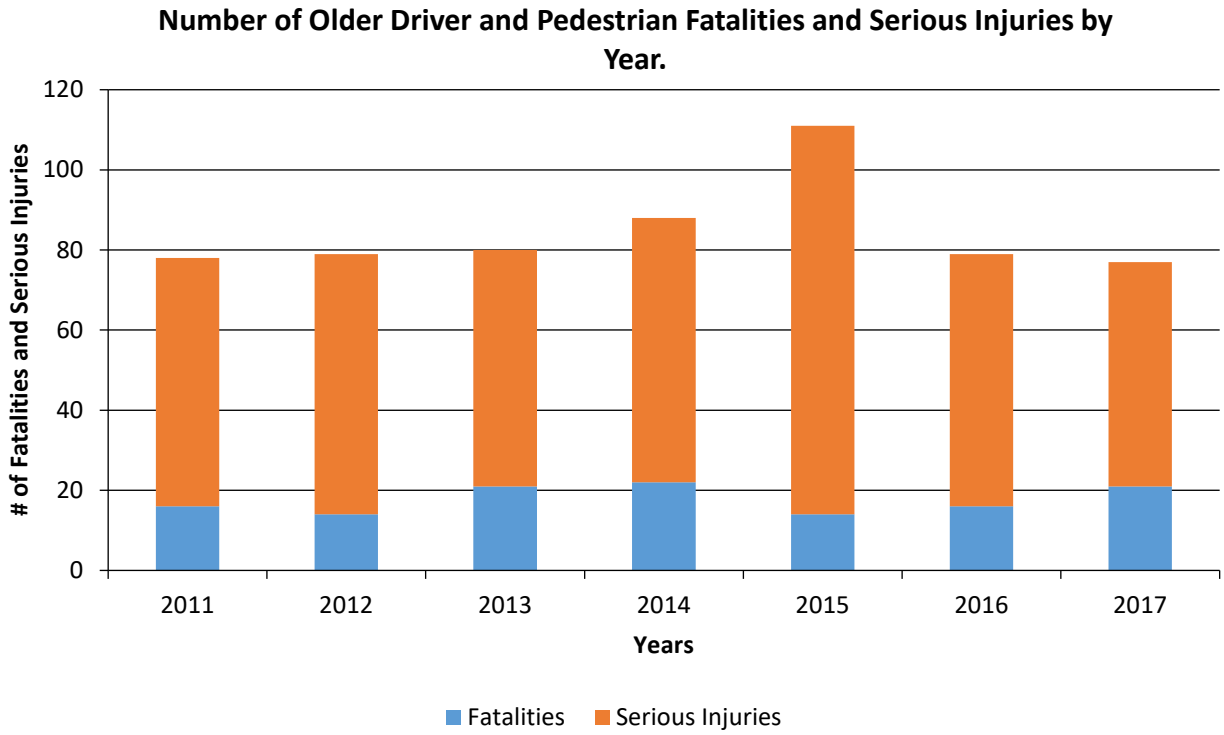
Does the HRRR special rule apply to the State for this reporting period?

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 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017
Number of Older Driver and Pedestrian Fatalities	16	14	21	22	14	16	21
Number of Older Driver and Pedestrian Serious Injuries	62	65	59	66	97	63	56



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

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries

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

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

The goal of the 2014 Strategic Highway Safety Plan is to reduce the fatal and serious injury crash rates by 15% by the year 2020. The 2017 five year average fatal crash rate per 100MVMT was 3.8% lower and the serious injury crash rate was 9.6% lower than the 2010-2014 crash rates. The five year rolling averages are showing a trend on the way of meeting the establish goal of the 2014 SHSP.

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

HSIP Obligations

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

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

No

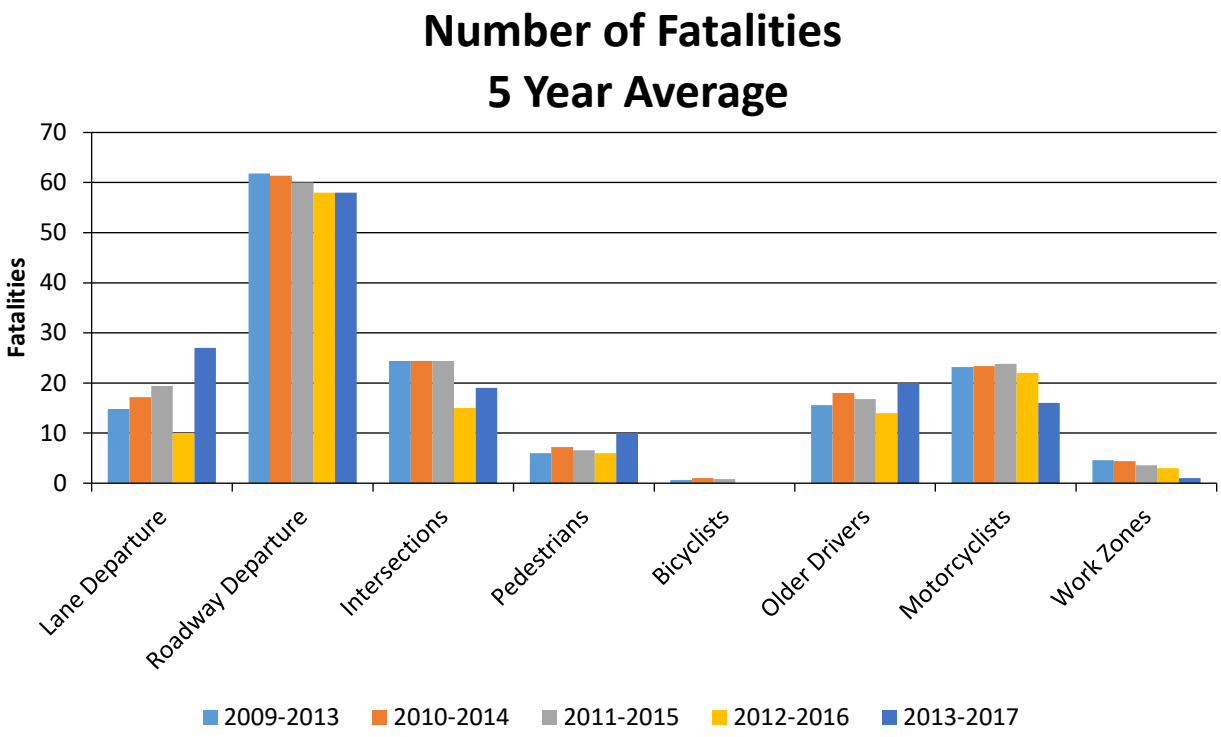
Effectiveness of Groupings or Similar Types of Improvements

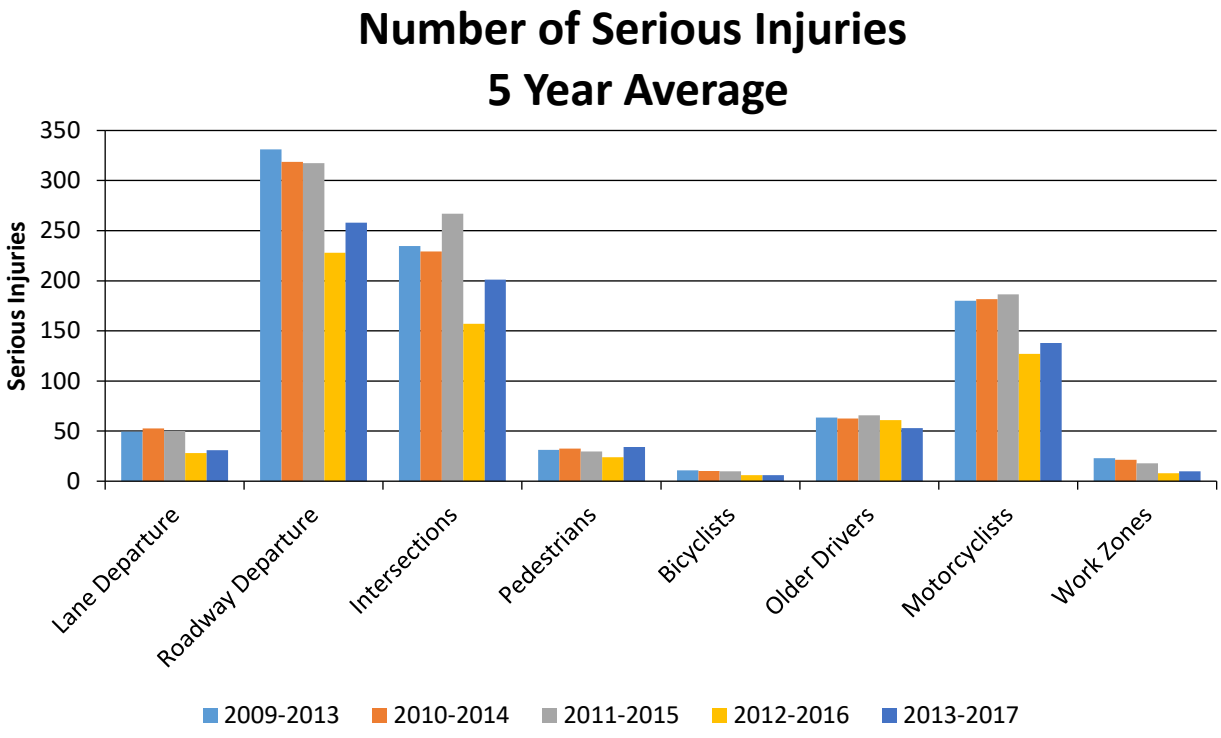
Present and describe trends in SHSP emphasis area performance measures.

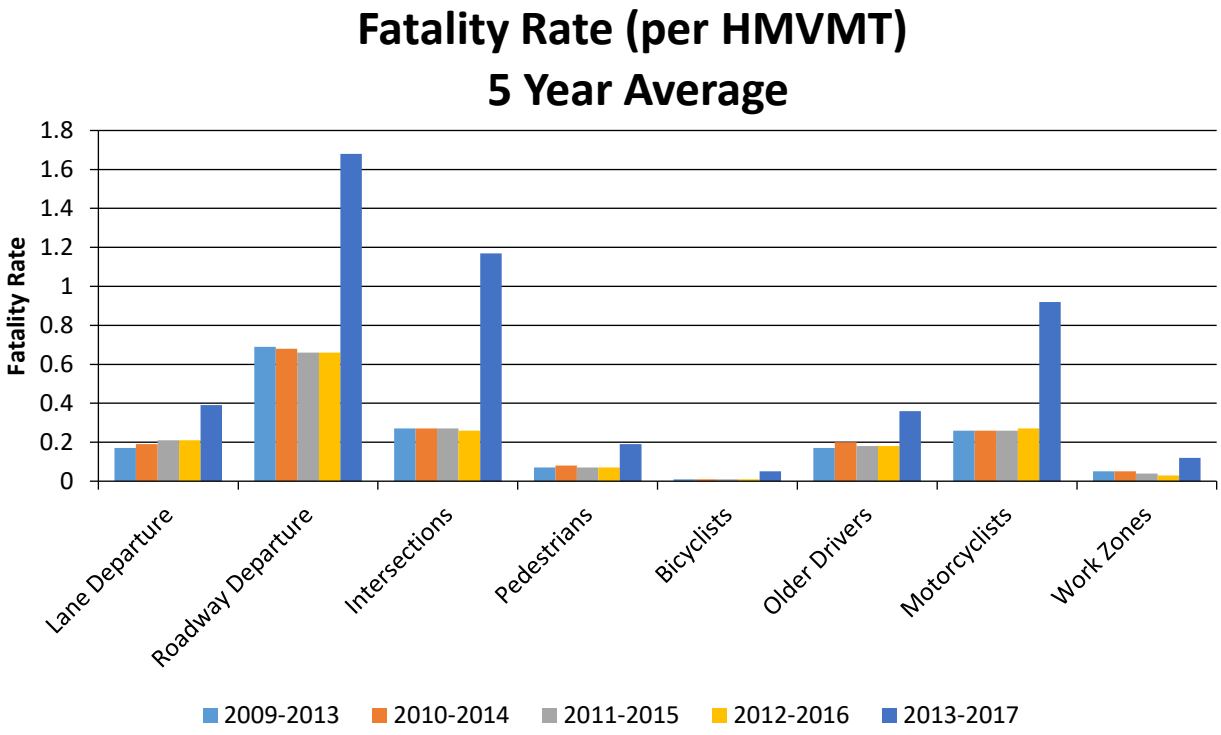
Year 2017

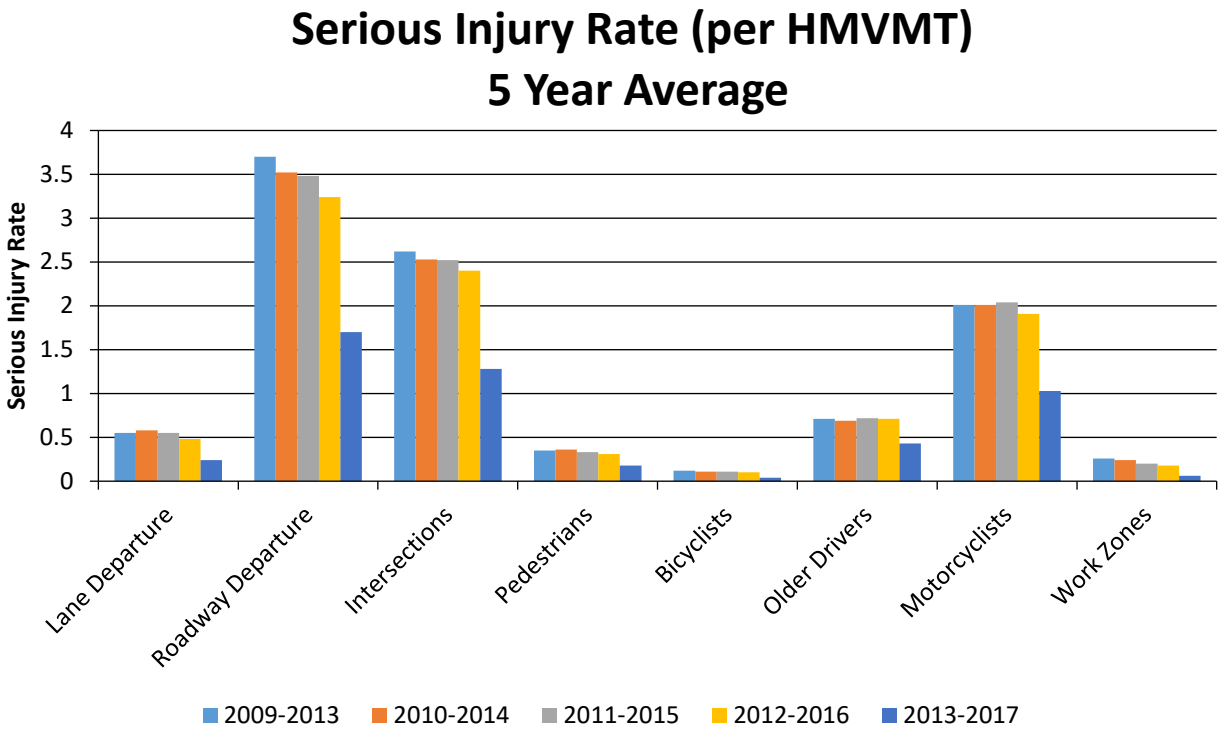
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure	All	27	31	0.39	0.24

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure	Run-off-road	58	258	1.68	1.7
Intersections	Angle	19	201	1.17	1.28
Pedestrians	Vehicle/pedestrian	10	34	0.19	0.18
Bicyclists	Vehicle/bicycle	0	6	0.05	0.04
Older Drivers	All	20	53	0.36	0.43
Motorcyclists	All	16	138	0.92	1.03
Work Zones	All	1	10	0.12	0.06


Number of Fatalities
5 Year Average
Fatalities
70
60
50
40
30
20
10
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries
5 Year Average
Serious Injuries
350
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017





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

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

Yes

Please provide the following summary information for each countermeasure effectiveness evaluation.

CounterMeasures:	High Friction Surface Treatment
Description:	HFST was placed at 4 horizontal curves in the fall of 2014. The locations were identified as having an overrepresentation of winter road condition run-off-road crashes.
Target Crash Type:	Other (define)
Number of Installations:	4
Number of Installations:	4
Miles Treated:	
Years Before:	3
Years After:	3
Methodology:	Simple before/after
Results:	The 3 year before and after analysis showed an 80% crash reduction of winter road condition run-off-road crashes. If the winter severity index is applied the crash reduction is 77%.
File Name:	SDDOT - AID Demo Final Report UPDATED.pdf

Project Effectiveness

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
Mitchell Region	Rural Principal Arterial (RPA) - Other	Roadway	Rumble strips - edge or shoulder	22.00	12.00					10.00	6.00	32.00	18.00	76
US14A - Horizontal curves at MRM 34 and 49	Rural Principal Arterial (RPA) - Other	Roadway	Pavement surface - high friction surface	22.00	12.00					17.00	11.00	39.00	23.00	15
I-229 N & S - Horizontal curve south of 18th Street	Rural Principal Arterial (RPA) - Other	Roadway	Pavement surface - high friction surface	28.00	8.00					6.00	2.00	34.00	10.00	9
Various Locations on the State System in the Mitchell Region	Rural Minor Arterial	Roadway	Rumble strips - edge or shoulder	38.00	56.00					30.00	23.00	68.00	79.00	24

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?

08/08/2014

What are the years being covered by the current SHSP?

From: 2015 To: 2019

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

2019

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.

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 SEGMENT										
Segment Identifier (12)	1	1					1	1	1	1
Route Number (8)	1	1								
Route/Street Name (9)	1	1								
Federal Aid/Route Type (21)	1	1								
Rural/Urban Designation (20)	1	1					1	1		
Surface Type (23)	1	1					1	1		
Begin Point Segment Descriptor (10)	1	1					1	1	1	1
End Point Segment Descriptor (11)	1	1					1	1	1	1
Segment Length (13)	1	1								
Direction of Inventory (18)	1	1								
Functional Class (19)	1	1					1	1	1	1
Median Type (54)	1	1								
Access Control (22)	1	0								

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
One/Two Way Operations (91)	1	0.75								
Number of Through Lanes (31)	1	1					1	1		
Average Annual Daily Traffic (79)	1	1					1	1		
AADT Year (80)	1	1								
Type of Governmental Ownership (4)	1	1					1	1	1	1
INTERSECTION										
Unique Junction Identifier (120)			1	1						
Location Identifier for Road 1 Crossing Point (122)			1	1						
Location Identifier for Road 2 Crossing Point (123)			1	1						
Intersection/Junction Geometry (126)			1	1						
Intersection/Junction Traffic Control (131)			1	0.98						
AADT for Each Intersecting Road (79)			1	1						
AADT Year (80)			1	1						
Unique Approach Identifier (139)			1	1						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					1	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					1	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					1	0				
Ramp Length (187)					1	0				
Roadway Type at Beginning of Ramp Terminal (195)					1	0				
Roadway Type at End Ramp Terminal (199)					1	0				

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Interchange Type (182)					1	0				
Ramp AADT (191)					1	0				
Year of Ramp AADT (192)					1	0				
Functional Class (19)					1	0				
Type of Governmental Ownership (4)					1	0				
Totals (Average Percent Complete):	**1.00**	**0.93**	**1.00**	**1.00**	**1.00**	**0.00**	**1.00**	**1.00**	**1.00**	**1.00**

*Based on Functional Classification

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.

South Dakota is aggressively collecting the needed data for the MIRE fundamental data elements. South Dakota will continue on this path as only a few data elements remain incomplete on the list.

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 Injury	No	N/A	No	N/A	No
Crash Report Form Instruction Manual	Incapacitating Injury	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.	No	Severe lacerations Broken or distorted limbs Skull or chest injuries Abdominal injuries Unconsciousness at or when taken from scene Unable to leave the accident scene without assistance EXCLUDED: Momentary unconsciousness	No
Crash Database	Incapacitating Injury	No	N/A	No	N/A	No
Crash Database Data Dictionary	Incapacitating Injury	No	Definitions are not listed for each accident severity.	No	Attributes are not listed for each accident severity.	No

Please describe the actions the State is taking to become compliant by April 15, 2019.
This effort is being managed by the South Dakota Office of Highway Safety, the lead agency for crash reporting, and any questions on compliance should be directed to Lee Axdahl, Director of Highway Safety in South Dakota.

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

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

No

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

2019

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

Optional Attachments

Program Structure:

Project Implementation:

Safety Performance:

Evaluation:

SDDOT - AID Demo Final Report UPDATED.pdf

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.