



NEBRASKA

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2019 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

State FY 2018 (July 1, 2018 - June 30, 2019) was a successful year for the Nebraska HSIP Program. Over \$13 million was obligated for twenty-nine projects. Four major new projects were let for bids of over \$8.8 million. In addition, over \$0.5 million was obligated for Preliminary Engineering on two projects that will be constructed in the future. Completed HSIP projects were shown to be effective, with three evaluations resulting in an overall Benefit-Cost Ratio of 10.4. Although statewide fatalities increased slightly from 2017 to 2018, the fatality rate of 1.095 fatalities per hundred million vehicle miles traveled is lower than the rate of ten years ago. A continuing bright spot is the reduction in Serious Injuries. Serious Injuries declined by 6% in 2018, when compared to 2017. Since 2009, Serious Injuries have decreased by over 25%.

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.

The HSIP in Nebraska is administered by the NDOT under the direction of the State Highway Safety Engineer. The NDOT maintains three separate committees that are responsible for identifying projects that qualify for HSIP funding. The long-standing Safety Committee is made up of members from several NDOT Divisions, local governments, and the FHWA Division Safety Engineer. They review crash studies in an attempt to find countermeasures for a location, both at sites identified by NDOT's High Crash Locations computer program and those requested by others. When they find a potential project, a benefit/cost study is prepared by Traffic Engineering's Highway Safety/Accident Records section. Local governments or their consultants also present potential projects to the Committee. If the B/C ratio shows significant benefit, the Committee may vote to advance the proposal as an HSIP project.

The Strategic Safety Infrastructure Team was created by the NDOT when HSIP funding was significantly raised by Congress. It is made up of several NDOT division heads and a District Engineer. Higher cost projects (typically over \$400,000) that are approved by the Safety Committee are passed up to the SSIT for final approval and determination of funding splits. The committee also identifies projects on its own, especially systemic projects. The committee developed and maintains a five-year HSIP and RHCP Expenditures Plan.

A High Risk Rural Roads committee was formed by NDOT when specific funding for HRRR projects was available. The Department has elected to maintain this committee, even though the dedicated HRRR funding no longer exists. The committee is made up of representatives from NDOT's Traffic Engineering Division, Local Assistance Division, LTAP, and a representative from the Nebraska Association of County Officials. They work to find viable HSIP projects on rural county roads.

Approved HSIP projects generally go through NDOT's letting system. Many completed projects are evaluated to see whether or not they were effective in reducing crashes.

Where is HSIP staff located within the State DOT?

Engineering

The State Highway Safety Engineer is responsible for the HSIP program. Analysis and technical support is provided by the Highway Safety/Crash Records Section of the Traffic Engineering Division.

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How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process
- SHSP Emphasis Area Data

The NDOT has three teams that determine projects for HSIP funding. The Strategic Safety Infrastructure Team has final approval over higher cost jobs. The Highway Safety/Crash Records Section supplies these teams with crash data analysis which can lead to projects at specific sites or systemic projects. These must support the SHSP critical emphasis areas. Project proposals can also be brought to these teams by local governments, District Engineers, or other NDOT engineers.

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

Local road projects are regularly funded under the HSIP. The NDOT's various safety committees identify potential locations for projects and send this information to local governments for their consideration as HSIP projects. City governments are encouraged to submit potential projects to the NDOT for consideration. Representatives of the state's four largest cities, Omaha, Lincoln, Bellevue, and Grand Island regularly attend Safety Committee meetings; and officials from the smaller cities are always welcome. Representatives from the Nebraska LTAP Center and the Nebraska Highway Superintendents Association sit on the High Risk Rural Roads committee, which continues to function despite the loss of dedicated funding. The number of projects built on local roads varies from year to year. Over \$7 million in HSIP funds were spent on local projects in State FY 2018.

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

- Design
- Districts/Regions
- Governors Highway Safety Office
- Local Aid Programs Office/Division
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Program Management
- Other-Communication
- Other-Project Development

All of these areas have some part in the HSIP process, some more than others. Most of them are represented on at least one of our three safety committees.

Describe coordination with internal partners.

All of the above named disciplines play a role in the HSIP process. Highway Safety prepares collision diagrams, spot maps, or lists of high crash locations and presents them to committee members at their monthly meetings. They coordinate with the engineering divisions to get estimated project costs, from which they calculate benefit-cost ratios. They also complete evaluations of completed projects and present them to the group for use in making future decisions. Proposed projects on the state highway system are sent to the appropriate District Engineer for concurrence. The DE often submits the required paperwork to begin the project process. The Traffic Engineering Division is the lead office for all HSIP activity. All HSIP projects are

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approved by either the NDOT Safety Committee or the Strategic Safety Infrastructure Team. The usual procedure is for an approved HSIP project to be assigned to Roadway Design Division, Traffic Engineering Division, or Local Assistance Division as the lead element, depending on the type of project and whether or not it is on a local road. These units work with Program Management to get the project scheduled and to make sure it is progressing adequately through the steps in the Clarity software, which is used for project programming. This includes the important step of working with the Environmental Section to make sure all environmental concerns are met. The lead units either design the project or oversee the design of a consultant and prepare the project for letting. If railroad property is involved in the project, the Rail and Public Transportation Section of Local Assistance Division must also be consulted. The Operations Division has taken the lead on projects involving bridge anti-icing systems, dynamic message signs, and required engineering analysis. The NDOT has begun using the Highway Safety Manual procedures in the analysis and evaluation of some HSIP projects. The Communication Division prepares professional documents for use in the HSIP program, such as the Strategic Highway Safety Plan, as well as print, television, and radio spots focusing on highway safety improvements, like roundabouts and flashing yellow arrows.

Identify which external partners are involved with HSIP planning.

- FHWA
- Governors Highway Safety Office
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-City of Omaha Public Works Department
- Other-City of Lincoln Public Works Department
- Other-City of Bellevue
- Other-City of Grand Island

Each of these partners sit on one or more of our Safety Committees, giving them the opportunity for input into the project selection process.

Describe coordination with external partners.

Most of the interaction with our external partners occurs through one of our three safety committees. Representatives from the Public Works departments of our two largest cities, Omaha and Lincoln, regularly attend the monthly meetings of the long-standing Safety Committee, reviewing crash locations, making suggestions for countermeasures, presenting project proposals, and agreeing to make low cost changes or do further studies at locations within their own jurisdiction. Delegates from other cities attend less often, but do come when they have a project proposal to present.

LTAP has proven to be very helpful to the High Risk Rural Roads committee. Not only have they been involved in the development of projects, they have agreed to serve as liaison with the individual counties, recruiting them to take part in systemic projects. The County Highway Superintendent's representative helps NDOT better see the picture from the county's point of view. The FHWA Division Safety Engineer provides all of the committees with good information on whether ideas are likely to qualify for HSIP funding.

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

NDOT selected a vendor for building a new crash database. A new crash report, which follows Version 5 of MMUCC, has been designed to work in conjunction with the new database. The project is projected to be

2019 Nebraska Highway Safety Improvement Program completed in 2021. NDOT is continuing development of a crash spot mapping and crash diagramming system. NDOT is developing a Highway Safety Manual based Empirical Bayes Estimate crash prediction method to replace our crash history based hazardous location analysis process.

Program Methodology

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

Yes

FileName:

HSIP Process Document 2015.doc

Select the programs that are administered under the HSIP.

- HRRR
- HSIP (no subprograms)

While Nebraska may include projects that fall under many of these categories in our HSIP, we have no specific programs, such as those that would require that a certain amount of money be spent each year on a given category of projects.

Program: HRRR

Date of Program Methodology: 2/23/2015

What is the justification for this program?

- Other-23% of fatalities occur on rural collector and local roads

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All	crashes Volume	
Fatal and serious injury crashes only	Lane miles	Roadside features

What project identification methodology was used for this program?

- 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 frequency and crash types at specific locations or systemically

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:2

The Rate Quality Control method is used to identify high crash locations on state highways. This same method is not used on local roads because traffic volume data is incomplete, preventing valid comparisons of different sites.

Program: HSIP (no subprograms)

Date of Program Methodology:2/23/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Volume	Other-Roadway Departure, Intersection, or other

What project identification methodology was used for this program?

- Critical rate
- Relative severity index

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 frequency and crash type at specific locations

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:2

What percentage of HSIP funds address systemic improvements?

4

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

- Clear Zone Improvements
- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Rumble Strips
- Safety Edge
- Upgrade Guard Rails

The percentage of HSIP funds used for Systemic Projects varies from year to year.

What process is used to identify potential countermeasures?

- Crash data analysis
- Engineering Study
- Stakeholder input

Countermeasures are normally identified by engineers on one of the NDOT safety committees. Crash studies

2019 Nebraska Highway Safety Improvement Program are available to help guide them in these decisions. Project proposals from local jurisdictions often come with pre-determined countermeasures, although these may be amended by the committee.

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

NDOT has not considered any connected vehicle technology for HSIP funding. We have funded projects for dynamic message signs, anti-icing systems on bridges, and Adaptive Traffic Signal systems that were considered ITS.

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.

Highway Safety Manual techniques are used to determine benefit/cost ratios for some project proposals.

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

The NDOT is partnering with the University of Nebraska-Lincoln on the development of a new high crash software package. The Rate Quality Control method which we currently use is based on 1950's research. The new program will select locations using the Empirical Bayes method, similar to what is used in the Highway Safety Manual.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

Since the latest Federal Fiscal Year will not be over at the time the HSIP Report is due, we are reporting on the State Fiscal Year (July 1, 2018 to June 30, 2019).

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$19,834,000	\$12,196,351	61.49%
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	\$2,097,100	\$1,291,635	61.59%
Totals	\$21,931,100	\$13,487,986	61.5%

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

49%

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

55%

The percentage of HSIP that goes to local projects varies significantly from year to year.

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

5%

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

1%

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Nebraska non-infrastructure safety projects are for improving the crash database and safety analysis tools.

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

No fund transfers were made into or out of the HSIP program in State FY 2019.

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

As projects become more expensive and more complex, it often takes longer to move them from the planning stage to completion. We have been successful, however, in obligating most of our available HSIP funds. We have an expenditure plan in place which should allow us to continue at this pace into the future. At this point in time, we don't have any serious impediments to HSIP obligation.

General Listing of Projects

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

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
22629 132nd & West Center, Omaha	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$4800000	\$5868230	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	48,450	45	State Highway Agency	Spot	Intersections	Add dual left turn lanes and right turn lanes.
00869C Advance Railroad Pavement Marking For County Roads	Roadway signs and traffic control	Roadway signs (including post) - new or updated		Approaches	\$9211	\$27682	HSIP (23 U.S.C. 148)	Rural	Major Collector	0	50	County Highway Agency	Systemic	Intersections	Marking drivers aware of approaching railroad crossing
00975 Flagging Training	Roadway signs and traffic control	Roadway signs and traffic control - other			\$90000	\$100000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Other Local Agency	Systemic	Work Zones	Teach county and city personnel proper flagging techniques in work zones
00976 Work Zone Training	Roadway signs and traffic control	Roadway signs and traffic control - other			\$90000	\$100000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Other Local Agency	Systemic	Work Zones	Teach county and city personnel how to properly setup work zones
13347 Lincoln - 56th St & Yankee Hill Rd (ROW)	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	\$2397599	\$3899462	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	9,085	45	City or Municipal Highway Agency	Spot	Intersections	Rebuild two-way stop controlled intersection into a roundabout
13367 Malcom Signs	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	Municipality	\$3000	\$3000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		City or Municipal Highway Agency	Systemic	Intersections	Improve signage in municipalities
13368 Syracuse Signs	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	Municipality	\$7000	\$7000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		City or Municipal Highway Agency	Systemic	Intersections	Improve signage in municipalities
22506 Omaha - 24th St Road Diet, L St to	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1.37	Miles	\$3103327	\$3592022	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	10,405		City or Municipal Highway Agency	Spot	Intersections	Reduce rear-end, left turn, pedestrian involved, and bicyclist

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Leavenworth St															involved crashes
22685 Omaha - Message Boards	Advanced technology and ITS	Dynamic message signs	15	Signs	\$247500	\$275000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		City or Municipal Highway Agency	Systemic	Work Zones	Improve signage for work zones
22702 Omaha - 72nd St & Maple St (N-64) (PE and ROW)	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$3756991	\$4666673	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	47,940	40	City or Municipal Highway Agency	Spot	Intersections	Add dual left turn lanes
22704 Omaha - 96th St & N-370	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$302492	\$336104	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		City or Municipal Highway Agency	Spot	Intersections	Add right turn lane
42863 Grand Island - 5-Points Intersection	Intersection traffic control	Modify control - traffic signal to roundabout	1	Intersections	\$1565710	\$2422775	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	17,335		City or Municipal Highway Agency	Spot	Intersections	Convert traffic signal to roundabout
13249 Palmyra Southwest (PE)	Alignment	Horizontal curve realignment	0.9	Miles	\$1368092	\$1523625	HSIP (23 U.S.C. 148)	Rural	Minor Collector	260	50	County Highway Agency	Spot	Roadway Departure	Reduce number of vehicles running off the road
22438 Omaha - 132nd St Adaptive Traffic Control System, Farnum St to Cuming St (PE)	Advanced technology and ITS	Advanced technology and ITS - other	7	Intersections	\$1094836	\$1216486	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	23,005	40	City or Municipal Highway Agency	Spot	Intersections	Improve traffic signal coordination
22449 Omaha - 144th St Adaptive Traffic Control System, F St to Arbor St (PE)	Advanced technology and ITS	Advanced technology and ITS - other	7	Intersections	\$897731	\$998066	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	28,730	45	City or Municipal Highway Agency	Spot	Intersections	Improve traffic signal coordination
22482 Omaha - Dodge St Adaptive	Advanced technology and ITS	Advanced technology and ITS - other	9	Intersections	\$1930563	\$2155072	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	53,950	45	City or Municipal Highway Agency	Spot	Intersections	Improve traffic signal coordination

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Traffic Control System, 69th St to 93rd St															
22706 Omaha - 30th St Road Diet, Cuming St to Ames Ave (PE)	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1.11	Miles	\$1442321	\$2802299	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	8,920	35	City Municipal Highway Agency or	Spot	Intersections	Reduce left turn crashes
00864 District 3 & 4 Bridge Repair, Guardrail	Roadside	Barrier - other	37	Locations	\$3533309	\$4916458	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Improve guardrail and bridge rail to reduce crash severity
00996 Nebraska Vehicle Crash Information Portal	Non-infrastructure	Data/traffic records		Numbers	\$13500	\$15000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	Create a software to determine crash patterns
00997 Nebraska Vehicle Crash Information Portal - Crash Diagram	Non-infrastructure	Data/traffic records		Numbers	\$43200	\$48000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	Create a software to determine crash patterns
22530 N-31 & N-36	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	\$2982015	\$3544785	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Convert two-way stop control to roundabout
22648 N-370, 168th St to US-75 NB	Intersection traffic control	Intersection flashers - add "when flashing" warning sign-mounted			\$905083	\$2093299	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	58,125		State Highway Agency	Spot	Intersections	Improve traffic signal coordination and provide driver with advance warning of signal change
22682 District 2 Shoulders	Shoulder treatments	Widen shoulder - paved or other	15.63	Miles	\$468263	\$2093299	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Roadway Departure	Resurface existing shoulders and install shoulder rumble strips

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
42728 Kearney - US-30, 12th Ave to 7th Ave	Access management	Raised island - install new	0.52	Miles	\$1987032	\$2717583	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	20,510		City Municipal Highway Agency or	Spot	Intersections	Add raised median and left turn lanes
51507 US-26, Scottsbluff to Minatare	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$206003	\$4051191	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	6,170	60	State Highway Agency	Spot	Intersections	Add offset right turn lane
31925 Columbus - UPRR/12th Ave	Railroad grade crossings	Grade separation	1	Locations	\$421981	\$19512085	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	4,125		City Municipal Highway Agency or	Spot	Intersections	Separate vehicle traffic from railroad traffic to eliminate crashes

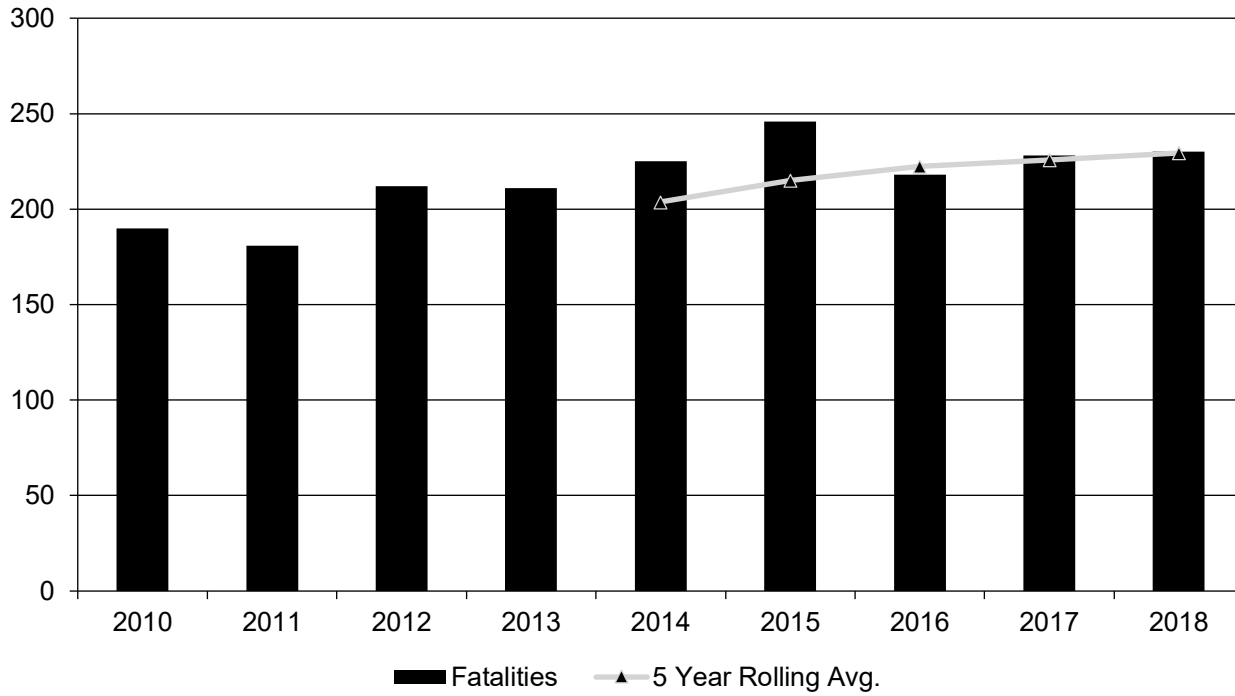
Safety Performance

General Highway Safety Trends

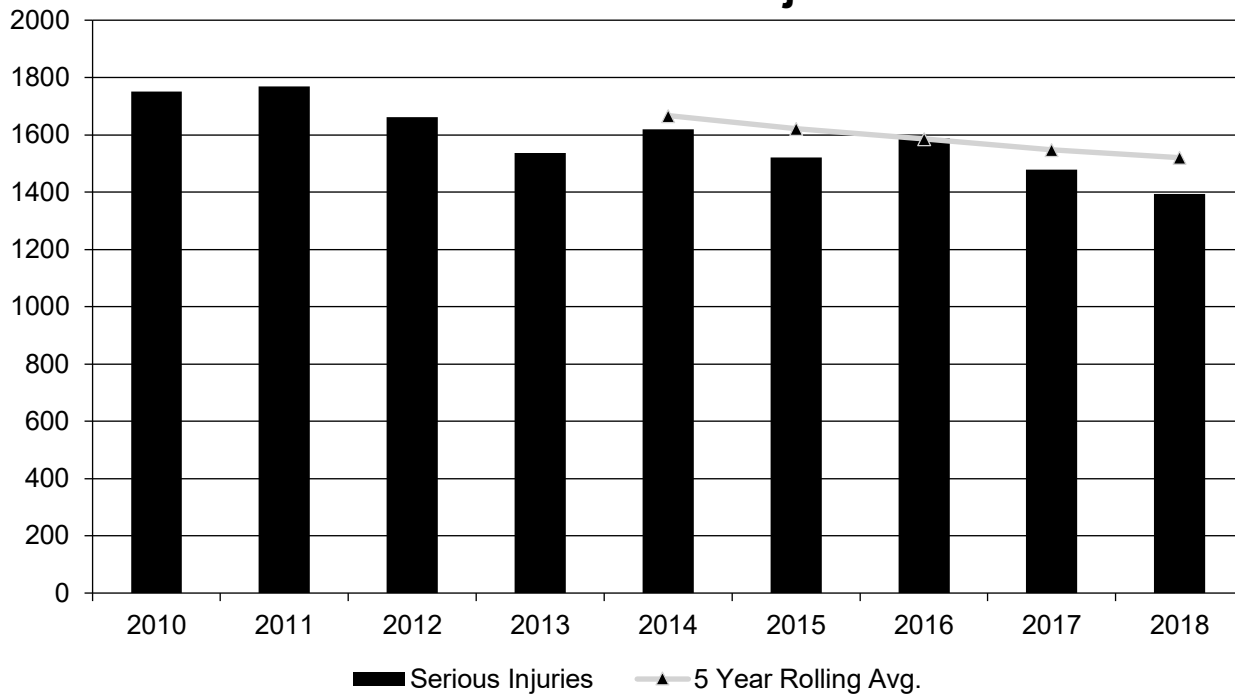
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fatalities	190	181	212	211	225	246	218	228	230
Serious Injuries	1,750	1,768	1,661	1,536	1,620	1,520	1,588	1,478	1,394
Fatality rate (per HMVMT)	0.973	0.947	1.103	1.092	1.147	1.216	1.053	1.085	1.095
Serious injury rate (per HMVMT)	8.965	9.251	8.640	7.949	8.260	7.514	7.668	7.034	6.639
Number non-motorized fatalities	10	9	15	15	11	24	13	23	24
Number of non-motorized serious injuries	110	156	139	132	130	125	113	121	103

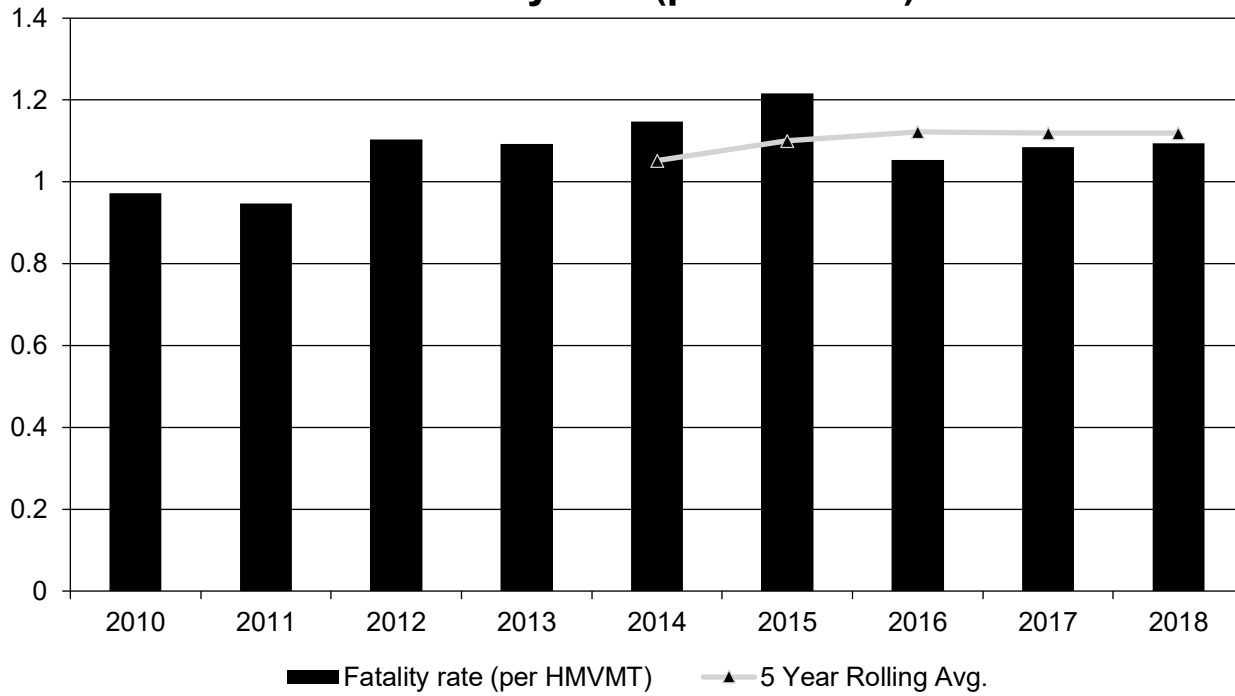
Annual Fatalities



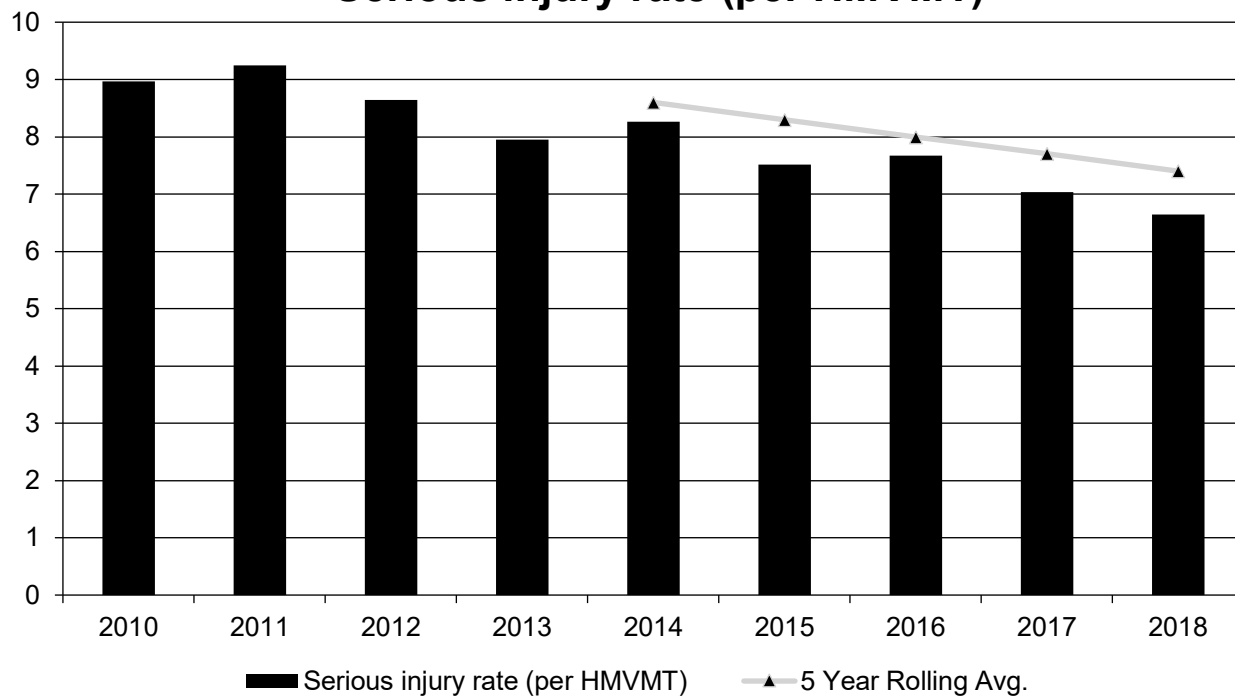
Annual Serious Injuries



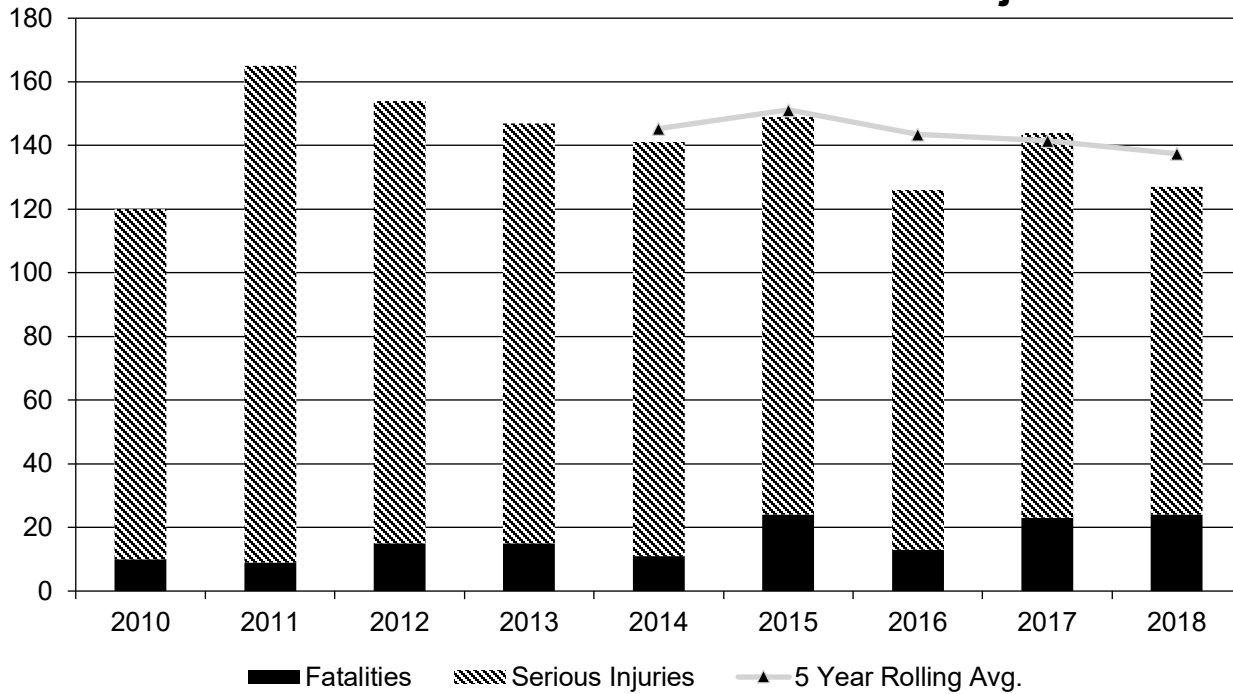
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



Describe fatality data source.

FARS

The Nebraska FARS operation is located within the Highway Safety Section of Traffic Engineering Division (NDOT). Consequently, the FARS data and the state fatality data should always be the same.

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

Year 2018

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	21.6	83.2	0.75	2.88
Rural Principal Arterial (RPA) - Other Freeways and Expressways	5.6	71	0.55	6.99
Rural Principal Arterial (RPA) - Other	42.8	141.2	1.83	6.05
Rural Minor Arterial	42	155.4	1.78	6.57
Rural Minor Collector	4.6	29.8	1.83	11.84

2019 Nebraska Highway Safety Improvement Program

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Major Collector	19.4	147.4	1.31	9.99
Rural Local Road or Street	33	158.4	2.95	14.16
Urban Principal Arterial (UPA) - Interstate	5.8	56.6	0.37	3.6
Urban Principal Arterial (UPA) - Other Freeways and Expressways	2.8	59.8	0.24	5.22
Urban Principal Arterial (UPA) - Other	21.4	269.8	1.01	12.75
Urban Minor Arterial	13.6	210.6	0.61	9.4
Urban Minor Collector	0.2	2.6	0.83	10.81
Urban Major Collector	2.8	42.8	0.45	6.95
Urban Local Road or Street	13.8	91.6	1.03	6.81

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Year 2018

Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	137	720.2	1.04	5.48
County Highway Agency	53.2	291	2.3	12.57
Town or Township Highway Agency				
City or Municipal Highway Agency	38.8	509.6	0.77	10.09
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				

Provide additional discussion related to general highway safety trends.

As we move farther away from the recession years, when fatalities were lower, the 5-year rolling averages for fatalities and fatality rate continue to increase. Given the increases in traffic volume, this result is not surprising. On the other hand, the 5-year rolling averages for serious injuries and serious injury rate have declined. Non-motorist fatality and serious injury numbers are small, but pedestrian fatalities have risen in the last few years, as have motorcycle fatalities.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2020 Targets *

Number of Fatalities:239.0

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

This target was selected based on a 2% reduction of the current trend line of 5-year averages of fatalities over the last several years. Based on this trend, we believe the established target is a realistic goal.

Number of Serious Injuries:1442.0

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

This target was selected based on the current trend line of 5-year averages of serious injuries over the last several years. Based on this trend, we believe the established target is a realistic goal. This target continues the downward trend in serious injuries over the last several years. If this target is met, a basic goal of the SHSP, the reduction of serious injuries, will be advanced.

Fatality Rate:1.140

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

This target was selected based on a 2% reduction of the current trend line of 5-year averages of fatality rates over the last several years. Based on this trend, we believe the established target is a realistic goal.

Serious Injury Rate:6.803

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

This target was selected based on the current trend line of 5-year averages of serious injury rates over the last several years. Based on this trend, we believe the established target is a realistic goal. This target continues the downward trend in serious injury rates over the last several years. If this target is met, a basic goal of the SHSP, the reduction of serious injuries, will be advanced.

Total Number of Non-Motorized Fatalities and Serious Injuries:133.0

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

This target was selected based on the current trend line of 5-year averages of non-motorized fatalities and serious injuries over the last several years. Based on this trend, we believe the established target is a realistic goal. This target continues the downward trend in non-motorized fatalities and serious injuries over the last several years. If this target is met, the basic goals of the SHSP, the reduction of fatalities and serious injuries, will be advanced.

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

The NDOT Highway Safety Office is also located within the Traffic Engineering Division, so it is easy for us to get together to establish performance targets. Since their annual Highway Safety Plan must be submitted to NHTSA by July 1, we need to determine the targets we share with them early. This year, we held a teleconference with our MPOs to discuss target setting. We explained to them again their responsibilities under the rule and offered to provide crash data to them.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State’s 2018 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

NDOT has made significant progress toward meeting the state's 2018 safety performance targets. NDOT met their target for number of serious injuries and number of non-motorized fatalities and serious injuries. Out of the other three performance targets, the actual outcome for fatality rate and serious injury rate were better than the baseline. Only the number of fatalities performance measure did not meet the target or have an actual outcome better than the baseline. Since NDOT met the target or was better than the baseline for 4 of the 5 performance measures, NDOT has made significant progress toward meeting the state's 2018 safety performance targets.

Applicability of Special Rules

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

No

The fatality rate on Nebraska's High Risk Rural Roads (Rural Major Collectors, Rural Minor Collectors, and Rural Local roads) was 2.017 fatalities per 100 million vehicle miles traveled for the 5-year period from 2012 to 2016. For the comparable 5-year period from 2014 to 2018, the fatality rate was 1.912 fatalities/100 million VMT. Since the rate decreased, the HRRR special rule does not apply to Nebraska.

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	24	30	21	33	37	41	31
Number of Older Driver and Pedestrian Serious Injuries	186	182	161	182	199	233	154

NDOT was recently informed by FHWA to modify the calculation method described in the Special Rule Guidance by multiply the rate by 100 to create a percentage. Using the population of drivers and pedestrians age 65 and older included in the Special Rule Guidance and the new calculation methodology, the fatality and

2019 Nebraska Highway Safety Improvement Program

serious injury rate for the 5-year period of 2013 to 2017 was 77.8. For the comparable 5-year period from 2011 to 2015, the fatality and serious injury rate was 79.1. Since the rate decreased, the Special Rule does not apply to Nebraska.

2019 Nebraska Highway Safety Improvement Program
Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio
- Change in fatalities and serious injuries

NDOT uses benefit/cost analysis in the selection of most HSIP projects and then evaluates completed projects to see if they were effective in reducing crashes. A few projects that are not chosen on the basis of crash data will not be evaluated.

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

The Nebraska HSIP Program was very successful in State FY 2019. The combined benefit-cost ratio for all the HSIP projects evaluated during this year was 10.43. Although our fatality numbers have fluctuated up and down in recent years, even the highest years have been significantly below the numbers recorded in the first decade of this century. Serious injuries, on the other hand, have steadily declined during this same time period.

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

- HSIP Obligations
- Increased focus on local road safety
- More systemic programs
- Policy change

We have been successful in increasing our HSIP obligations over the last several years. Although we do not reserve a specific amount of funding for them, we try to include some High Risk Rural Roads projects each year. We have instituted several systemic projects in recent years and hope to include more of them in our HSIP program. Several improvements that started as HSIP projects have become agency policy, such as shoulder rumble strips and safety edge.

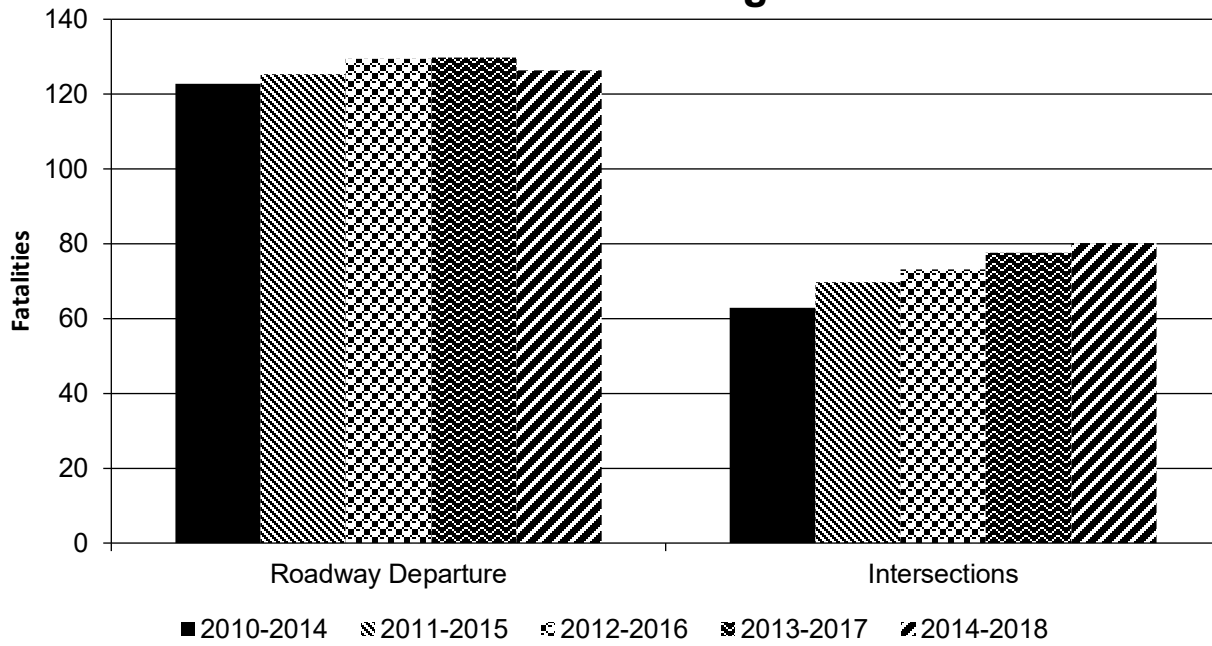
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

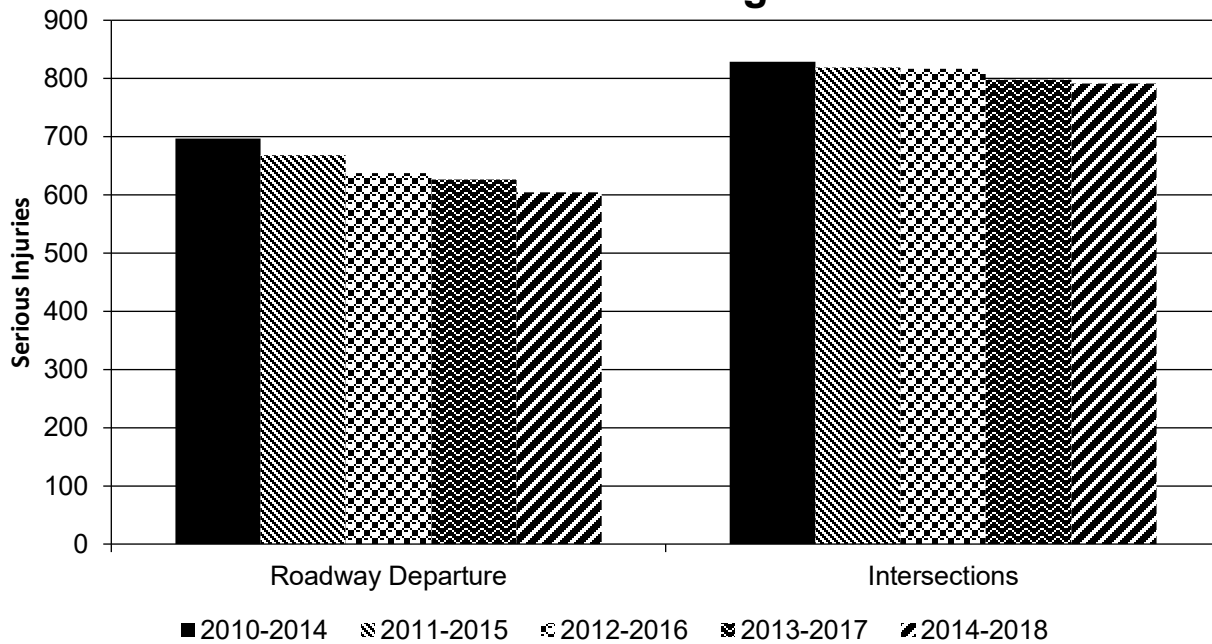
Year 2018

SHSP Emphasis Area	Targeted Crash Type	Number Fatalities (5-yr avg)	of	Number Serious Injuries (5-yr avg)	of	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure		126.4		604.6		0.62	2.95
Intersections		80.2		791.4		0.39	3.86

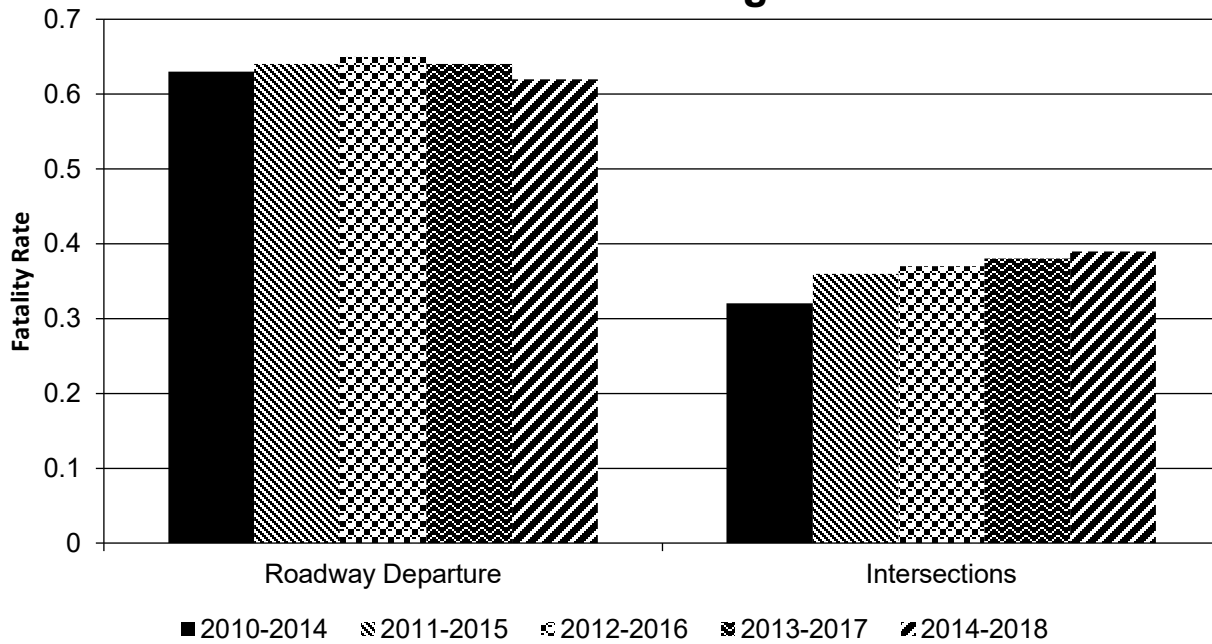
Number of Fatalities 5 Year Average



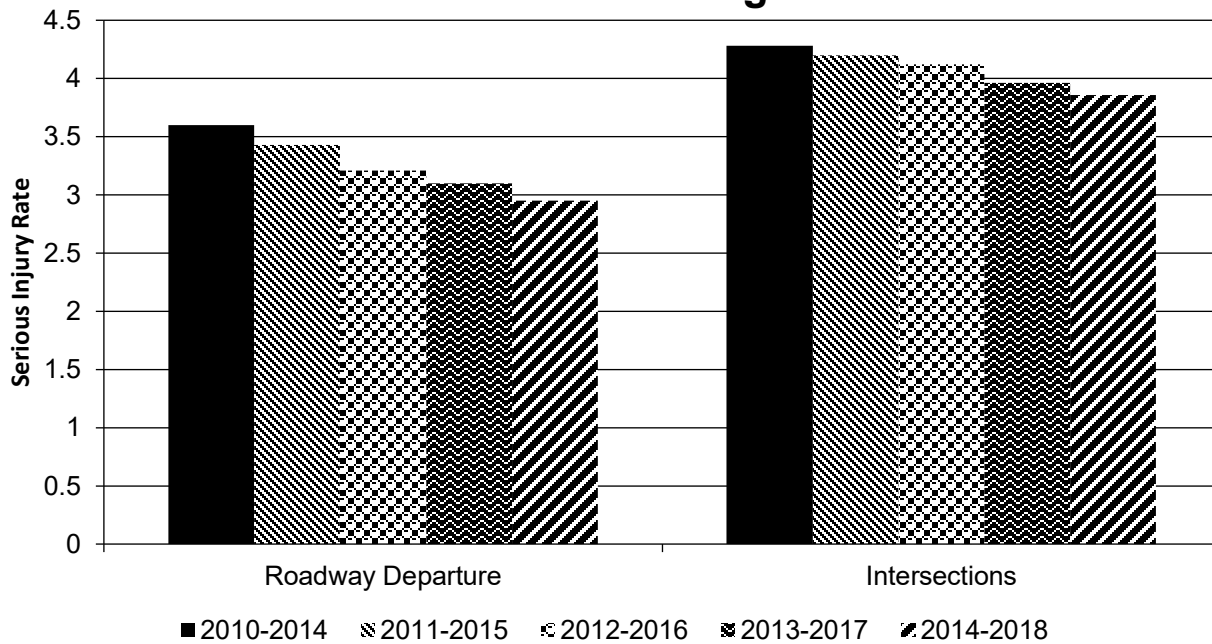
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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

No

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)
Lincoln - "O" St (US-6) & SW 40th St	Urban Principal Arterial (UPA) - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	3.00	1.00		1.00			3.00		6.00	2.00	0.28
Omaha - Maple St (N-64) & 102nd St	Urban Principal Arterial (UPA) - Other	Intersection geometry	Auxiliary lanes - add right-turn lane	44.00	24.00					18.00	12.00	62.00	36.00	9.67
Omaha - 108th St from 'L' St (US-275) to 'M' St	Urban Minor Arterial	Access management	Raised island - install new	142.00	72.00			3.00		34.00	23.00	179.00	95.00	21.35

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

The NDOT has increased the effectiveness of its HSIP program over the last several years. We are obligating a higher percentage of our available funds and are building projects that have a positive effect on crashes, fatalities, and serious injuries based on benefit-cost analysis.

Compliance Assessment

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

03/31/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2021

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

2022

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

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
ROADWAY SEGMENT	Segment Identifier (12)	100	100					100	100	100	100
	Route Number (8)	100	100								
	Route/Street Name (9)	100	100								
	Federal Aid/Route Type (21)	100	100								
	Rural/Urban Designation (20)	100	100					100	100		
	Surface Type (23)	100	100					100	100		
	Begin Point Segment Descriptor (10)	100	100					100	100	100	100
	End Point Segment Descriptor (11)	100	100					100	100	100	100
	Segment Length (13)	100	100								
	Direction of Inventory (18)	100	100								
	Functional Class (19)	100	100					100	100	100	100
	Median Type (54)	100	100								
Access Control (22)	100	100									

2019 Nebraska Highway Safety Improvement Program

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	One/Two Way Operations (91)	100	100								
	Number of Through Lanes (31)	100	100					100	100		
	Average Annual Daily Traffic (79)	100	100					100			
	AA DT Year (80)	100	100								
	Type of Governmental Ownership (4)	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120)			100	100						
	Location Identifier for Road 1 Crossing Point (122)			100	100						
	Location Identifier for Road 2 Crossing Point (123)			100	100						
	Intersection/Junction Geometry (126)			100	100						
	Intersection/Junction Traffic Control (131)			100	100						
	AA DT for Each Intersecting Road (79)			100	100						
	AA DT Year (80)			100	100						
	Unique Approach Identifier (139)			100	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178)					75	75				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197)					75	75				
	Location Identifier for Roadway at Ending Ramp Terminal (201)					75	75				
	Ramp Length (187)					75	75				

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ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Roadway Type at Beginning of Ramp Terminal (195)					68	68				
	Roadway Type at End Ramp Terminal (199)					68	68				
	Interchange Type (182)					75	75				
	Ramp AADT (191)					71	75				
	Year of Ramp AADT (192)					71	75				
	Functional Class (19)					75	75				
	Type of Governmental Ownership (4)					75	75				
Totals (Average Percent Complete):		100.00	100.00	100.00	100.00	73.00	73.73	100.00	88.89	100.00	100.00

*Based on Functional Classification

Ramps are still be inventoried and added to the database. 75% of the ramps have been inventoried. AADT data collection lags about a year behind the addition of a ramp to the database and is at 95% for inventoried state owned ramps. AADT will reach 100% the year after all ramps have been inventoried.

The state local paved roads percentage only includes roads owned by the DOT. Local paved roads owned by other state agencies are not completely inventoried.

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.

We are continuing to inventory ramps and add them to the database. We have inventoried 75% of the ramps in the state. We have collected sample AADT data for local paved roads. The AADT data will be added to the database before 2026.

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

No

NDOT plans to complete their next HSIP program assessment in coordination with development of the next Strategic Highway Safety Plan in 2021.

When does the State plan to complete its next HSIP program assessment.

2021

2019 Nebraska Highway Safety Improvement Program

Optional Attachments

Program Structure:

HSIP Process Document 2015.doc

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

Glossary

5 year rolling average: means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).

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

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

HMVMT: means hundred million vehicle miles traveled.

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

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

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

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

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

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

Systematic: refers to an approach where an agency deploys countermeasures at all locations across a system.

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

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