



NEBRASKA

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2020 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. 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 2020 (July 1, 2019 - June 30, 2020) was a successful year for the Nebraska HSIP Program. Over \$9 million was obligated for thirty-seven projects. Six major new projects were let for bids of over \$7.3 million in total. In addition, over \$0.2 million was obligated for Preliminary Engineering on five projects that will be constructed in the future. Completed HSIP projects were shown to be somewhat effective, with two evaluations resulting in an overall Benefit-Cost Ratio of 1.6. Statewide fatalities and the fatality rate increased from 2018 to 2019. A continuing bright spot is the reduction in serious injuries. Although serious injuries went up slightly from 2018 to 2019, the serious injury rate dropped to a historical low of 6.591 serious injuries per 100 million vehicle miles traveled. Since 2010, serious injuries have decreased by 20% and the serious injury rate has 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 Highway 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 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 (over \$1M) 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 are provided by the Highway Safety Section of the Traffic Engineering Division.

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process

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- 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 (over \$1M). The Highway Safety 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 Highway 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 \$6 million in HSIP funds were spent on local projects in State FY 2020.

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
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Program Management

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 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

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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 Highway 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 new safety improvements and 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 Model Minimum Uniform Crash Criteria, has been designed to work in conjunction with the new database. The project is projected to be completed in 2021. NDOT is continuing development of a crash spot mapping and crash diagramming system. NDOT is investigating implementing Highway Safety Manual based Empirical Bayes Estimate crash prediction method safety analysis software 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

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.

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. Nebraska has been discussing creating a Safe Transportation For Every Pedestrian program with dedicated funding each year to reduce non-motorist involved crashes at intersections.

Program: HRRR

Date of Program Methodology:2/23/2015

What is the justification for this program?

- Other-17% 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
<ul style="list-style-type: none">• All crashes• Fatal and serious injury crashes only	<ul style="list-style-type: none">• Volume• Lane miles	<ul style="list-style-type: none">• 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

- All crashes

Exposure

- Volume

Roadway

- 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

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.

What percentage of HSIP funds address systemic improvements?

3

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
- Pavement/Shoulder Widening
- 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

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Countermeasures are normally identified by engineers on one of the NDOT safety committees. Crash studies 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. NDOT is investigating implementing Highway Safety Manual based Empirical Bayes Estimate crash prediction method safety analysis software to replace our crash history based hazardous location analysis process.

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

NDOT is investigating implementing Highway Safety Manual based Empirical Bayes Estimate crash prediction method safety analysis software to replace our crash history based hazardous location analysis process. The Rate Quality Control method which we currently use is based on 1950's research.

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, 2019 to June 30, 2020).

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$18,472,000	\$9,539,366	51.64%
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	\$3,094,300	\$1,329,500	42.97%
Totals	\$21,566,300	\$10,868,866	50.4%

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

79%

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

67%

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?

17%

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 2020.

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. We also recently developed Nebraska's first HSIP Implementation Plan to align our HSIP expenditures based on crash history, historical funding obligations, and safety improvement outcomes . 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
00919A - TIM Safety Kits	Roadway signs and traffic control	Roadway signs and traffic control - other			\$243837	\$300000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Other Local Agency	Systemic	Traffic Incident Management	Teach traffic incident management personnel proper crash scene management
00975 - Flagging Training	Roadway signs and traffic control	Roadway signs and traffic control - other			\$200000	\$200000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Other Local Agency	Systemic	Motorcyclists	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			\$200000	\$203238	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
01017 - NDOT Crash Module	Non-infrastructure	Data/traffic records			\$58079	\$64532	HSIP (23 U.S.C. 148)	N/A	N/A	0		Statewide	Systemic	Data	Upgrade electronic crash reporting system to MMUCC
01018 - Peace Officer Crash Reporting System	Non-infrastructure	Data/traffic records			\$1207818	\$1342020	HSIP (23 U.S.C. 148)	N/A	N/A	0		City Municipal Highway Agency or	Systemic	Data	Upgrade electronic crash reporting system to MMUCC
01025 - NE Transportation Information Portal-Ph4	Non-infrastructure	Data/traffic records			\$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
00979 - Software Purchase	Non-infrastructure	Data/traffic records			\$4021754.4	\$4468616	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	Upgrade crash records database to current national standard
13147 - S Coddington / Van Dorn St	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	\$1762387	\$2493939	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	5,075	45	City Municipal Highway Agency or	Spot	Intersections	Convert a two-way stop to a roundabout
13249 - Palymra Southwest	Alignment	Horizontal curve realignment	0.9	Miles	\$1910436	\$2134899	HSIP (23 U.S.C. 148)	Rural	Minor Collector	260	50	County Highway Agency	Spot	Roadway Departure	Realign section with 3 reverse curves into one continuous curve

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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
13297 - N-2/"I" St, Palmyra	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$438506	\$601053	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	12,405	65	State Highway Agency	Spot	Intersections	Add offset right turn lane
13332 - Denton South	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$1060358	\$1280276	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	5,455	55	State Highway Agency	Spot	Intersections	Add left turn lanes and intersection lighting
13338 - Pickrell North	Shoulder treatments	Widen shoulder - paved or other	7.3	Miles	\$808567	\$11381100	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	7,685	60	State Highway Agency	Systemic	Lane Departure	Widen shoulders
13347 - 56th / Yankee Hill Rd, Lincoln	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	\$2399849	\$4544930	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	11,000	45	City Municipal Highway Agency or	Spot	Intersections	Convert a two-stop intersection into a roundabout
13391 - Saltillo Rd, Lincoln	Shoulder treatments	Widen shoulder - paved or other	2.7	Miles	\$7230651	\$8774058	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	8,850	55	City Municipal Highway Agency or	Systemic	Roadway Departure	Widen shoulders
22506 - 24th St Complete Streets Project, Omaha	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	2.8	Miles	\$3058760	\$5062536	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	15,000	40	City Municipal Highway Agency or	Systemic	Intersections	Convert 4 lane into 3 lane section with directional bike lanes
22648 - N-370, 168th St - US-75 NB	Intersection traffic control	Modify traffic signal timing - signal coordination	12.97	Miles	\$922080	\$2112285	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	33,855	55	State Highway Agency	Systemic	Intersections	Interconnect traffic signals and add advanced warning beacons
22702 - 72nd / Maple St, Omaha	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$4919446	\$5553272	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	53,594	40	State Highway Agency	Spot	Intersections	Add dual left turn lanes
22706 - 30th St. Road Diet, Omaha	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	2.15	Miles	\$1667130	\$3199021	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	14,000	35	City Municipal Highway Agency or	Systemic	Intersections	Convert 4 lane to 3 lane section with directional bike lanes
22741 - N-370 - Douglas Co Line	Intersection traffic control	Modify traffic signal timing - signal coordination	3.07	Miles	\$1051055	\$1204895	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	30,835	45	State Highway Agency	Systemic	Intersections	Interconnect traffic signals and add advanced warning beacons
42789 - Geneva North	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$447518	\$526368	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	7,925	60	State Highway Agency	Spot	Intersections	Add right turn lane and intersection lighting

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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
42863 - Grand Island Five Points	Intersection traffic control	Modify control - traffic signal to roundabout	1	Intersections	\$2735594	\$3419494	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	13,900	40	City Municipal Highway Agency or	Spot	Intersections	Convert 5-way traffic signal into a roundabout
51507 - Scottsbluff Minatare	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Intersections	\$211131	\$4768377	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	6,230	60	State Highway Agency	Spot	Intersections	Add offset right turn lane
71018 - Benkelman Northeast	Roadway	Roadway widening - travel lanes	0.2	Miles	\$219780	\$276522	HSIP (23 U.S.C. 148)	Rural	Major Collector	30	55	County Highway Agency	Spot	Roadway Departure	Widen and re-align roadway to improve sight distance
01010 - Midwest Roadside Safety Pooled Fund Program	Non-infrastructure	Non-infrastructure - other			\$59850	\$615951	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Research	Research roadside safety improvement countermeasures

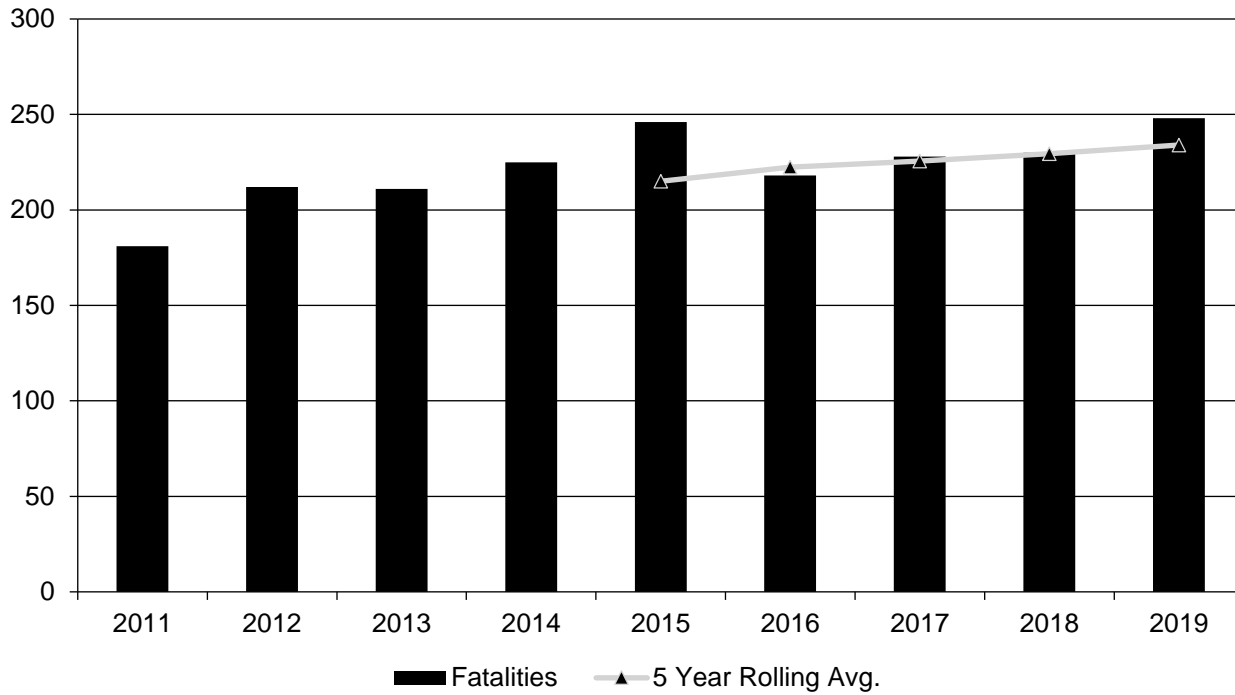
Safety Performance

General Highway Safety Trends

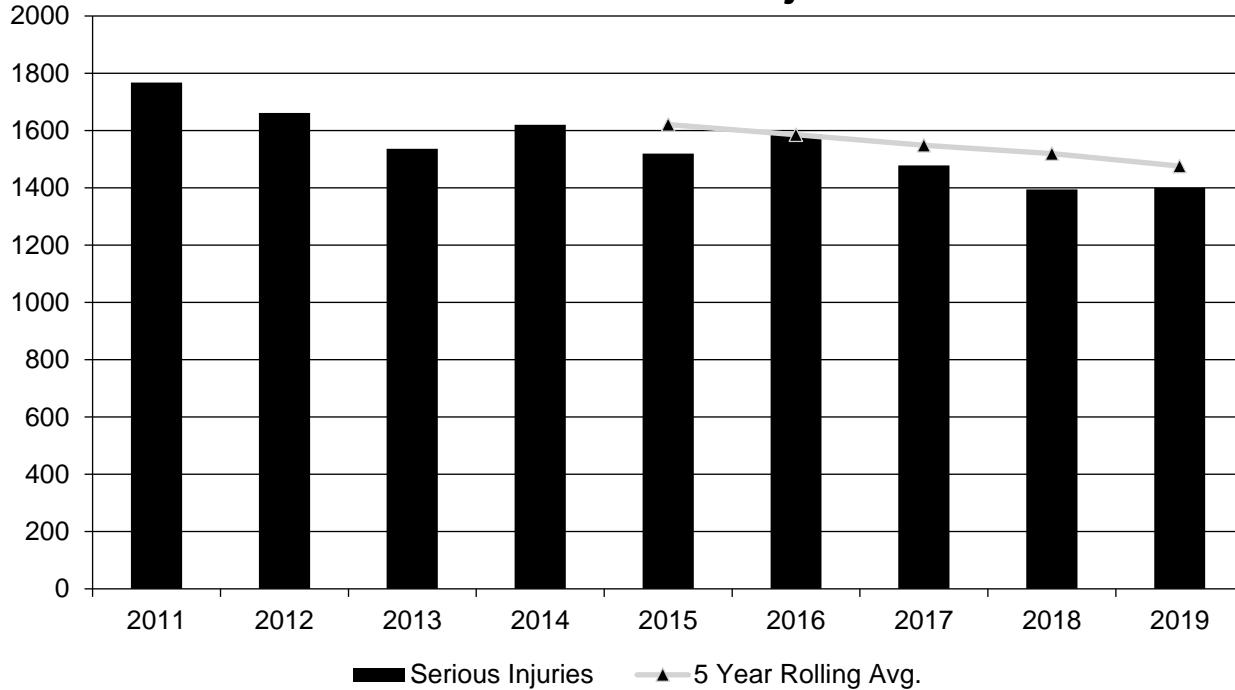
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fatalities	181	212	211	225	246	218	228	230	248
Serious Injuries	1,768	1,661	1,536	1,620	1,520	1,588	1,478	1,394	1,400
Fatality rate (per HMVMT)	0.947	1.103	1.092	1.147	1.216	1.053	1.085	1.095	1.167
Serious injury rate (per HMVMT)	9.251	8.640	7.949	8.260	7.514	7.668	7.034	6.639	6.591
Number non-motorized fatalities	9	15	15	11	24	13	23	24	21
Number of non-motorized serious injuries	156	139	132	130	125	113	121	103	108

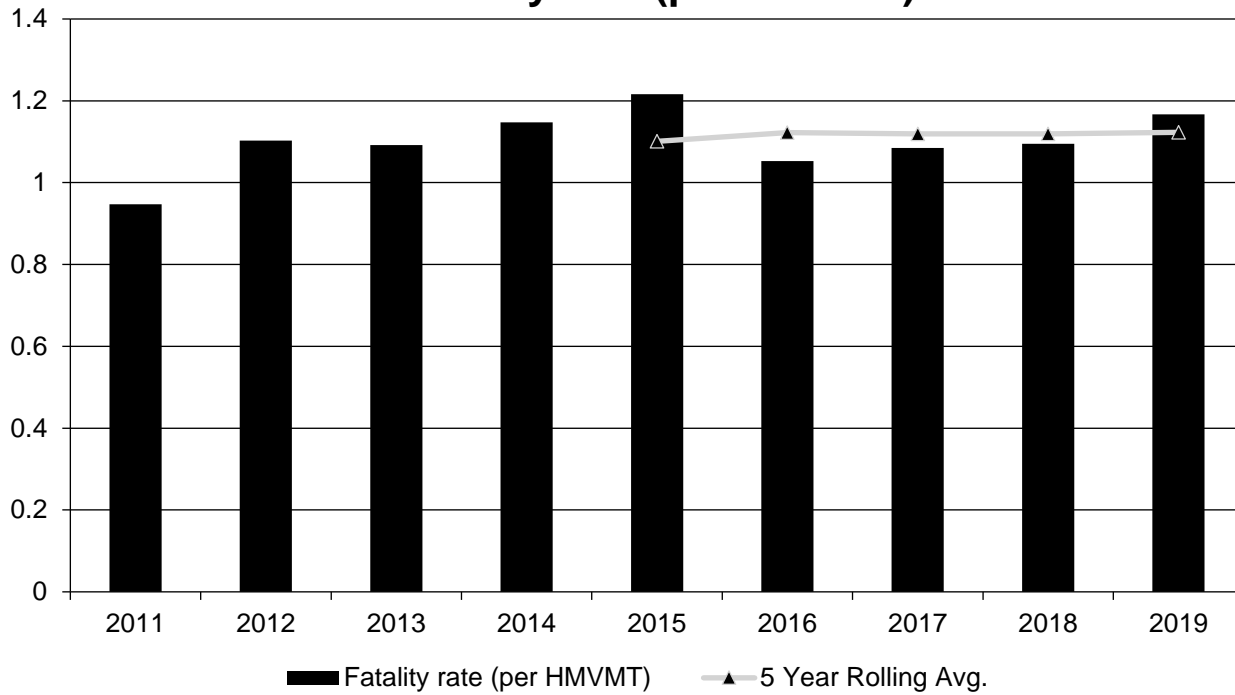
Annual Fatalities



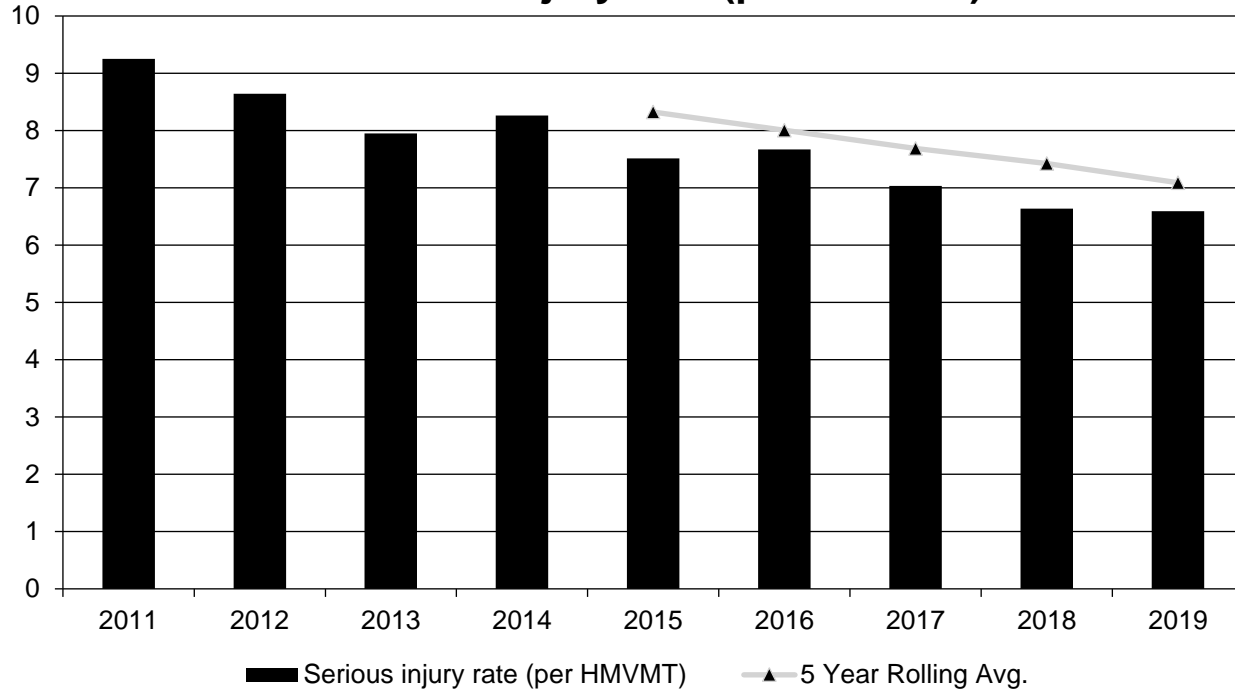
Annual Serious Injuries



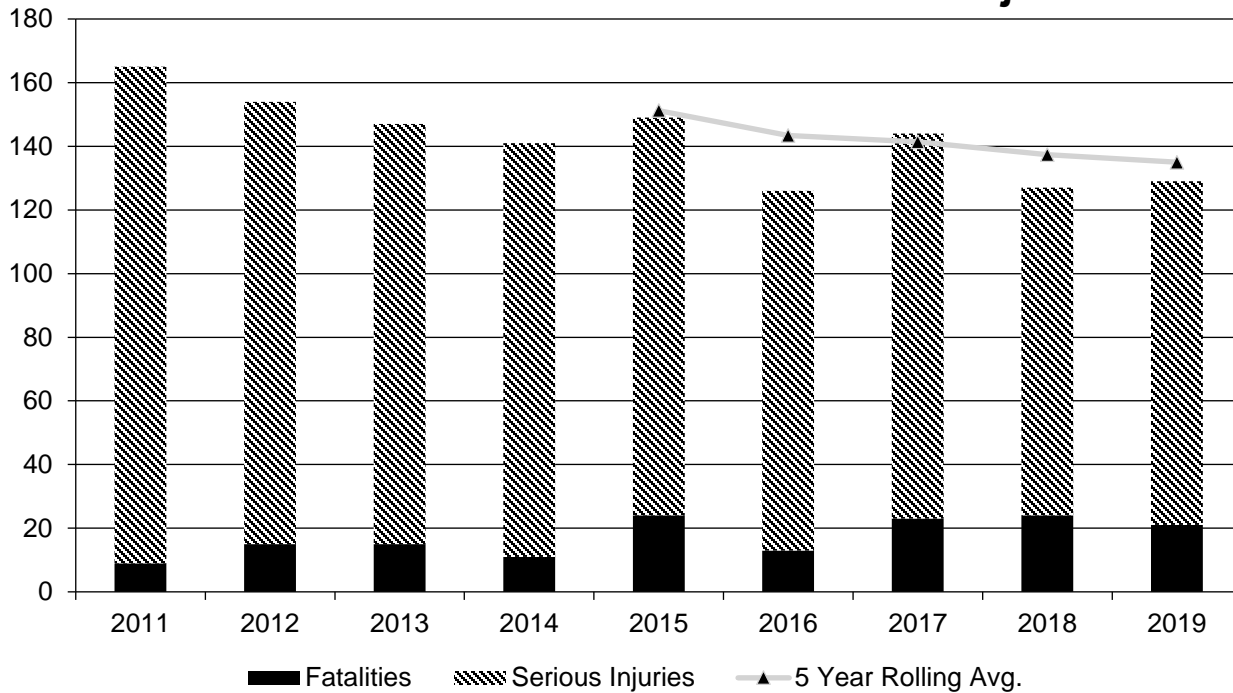
Fatality rate (per HMVMT)



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 2019

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	23.4	75.4	0.8	2.56
Rural Principal Arterial (RPA) - Other Freeways and Expressways	5.8	66	0.58	6.57
Rural Principal Arterial (RPA) - Other	50	136.2	2.15	5.84
Rural Minor Arterial	39.8	149	1.67	6.27

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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 Collector	3.2	26.6	1.23	10.25
Rural Major Collector	19.2	129	1.32	8.85
Rural Local Road or Street	28	136.2	2.49	12.1
Urban Principal Arterial (UPA) - Interstate	5.6	56.4	0.34	3.46
Urban Principal Arterial (UPA) - Other Freeways and Expressways	2.6	57.2	0.22	4.78
Urban Principal Arterial (UPA) - Other	23.6	261.2	1.13	12.47
Urban Minor Arterial	15.2	230.2	0.65	9.8
Urban Minor Collector	0.2	4	0.63	12.7
Urban Major Collector	2.4	50.8	0.38	7.99
Urban Local Road or Street	15	98	1.07	6.97

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Year 2019

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	145.8	718.75	1.09	5.39
County Highway Agency	47	280	2.02	12.03
Town or Township Highway Agency				
City or Municipal Highway Agency	40.8	497.25	0.79	9.59
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				

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.

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-

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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 2021 Targets *

Number of Fatalities:241.0

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

This target was selected based on a 1% 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:1408.0

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:1.130

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

This target was selected based on a 1% 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.

Serious Injury Rate:6.507

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:126.6

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.

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

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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 2019 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	239.0	234.0
Number of Serious Injuries	1540.0	1476.0
Fatality Rate	1.180	1.123
Serious Injury Rate	7.500	7.089
Non-Motorized Fatalities and Serious Injuries	140.0	135.0

NDOT has made significant progress toward meeting the state's 2019 safety performance targets. NDOT met their target for all safety performance targets. Actual outcomes for serious injuries, serious injury rate, and non-motorized fatalities and serious injuries were better than the baseline. Since NDOT met the target or was better than the baseline for 5 of the 5 performance measures, NDOT has made significant progress toward meeting the state's 2019 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 2.0426 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 1.9602 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	2013	2014	2015	2016	2017	2018	2019
Number of Older Driver and Pedestrian Fatalities	21	33	27	41	31	33	32
Number of Older Driver and Pedestrian Serious Injuries	161	182	199	233	154	129	139

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The fatality and serious injury rate for the 5-year period of 2014 to 2018 was 74.5. For the comparable 5-year period from 2012 to 2016, the fatality and serious injury rate was 81.5. Since the rate decreased, the Special Rule does not apply to Nebraska.

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 successful in State FY 2020. The combined benefit-cost ratio for all the HSIP projects evaluated during this year was 1.65. The recent change of the minimum benefit-cost ratio to 5.0 should bring the HSIP project evaluation benefit-cost ratios up in the future. 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.

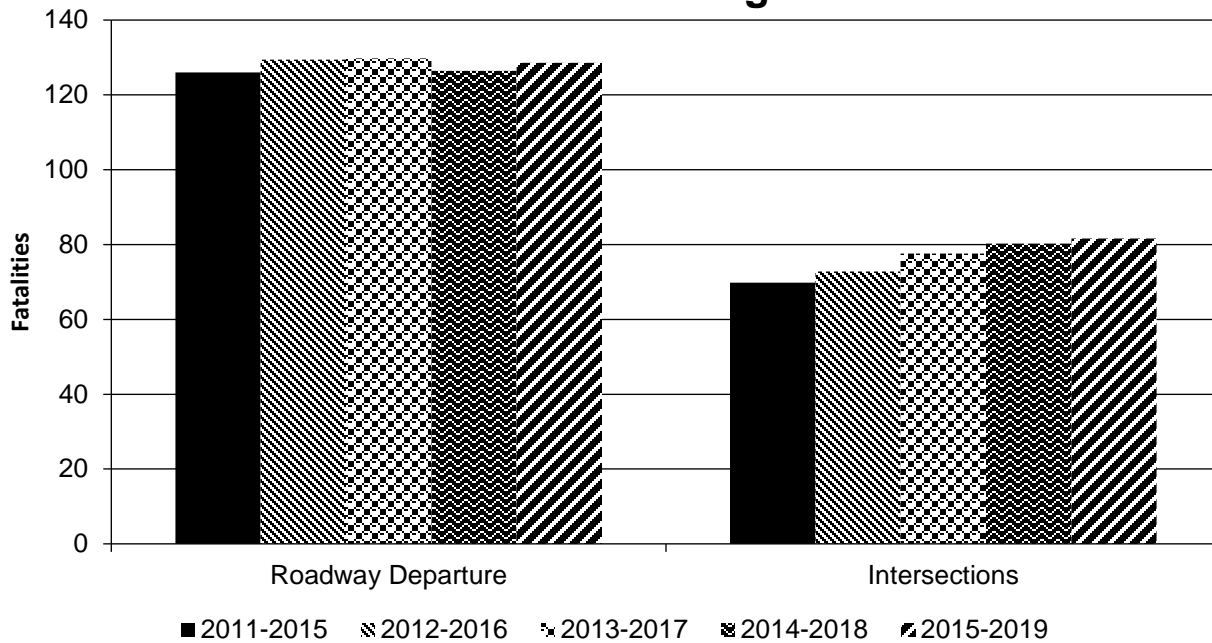
Year 2019

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		128.6	582.8	0.62	2.8

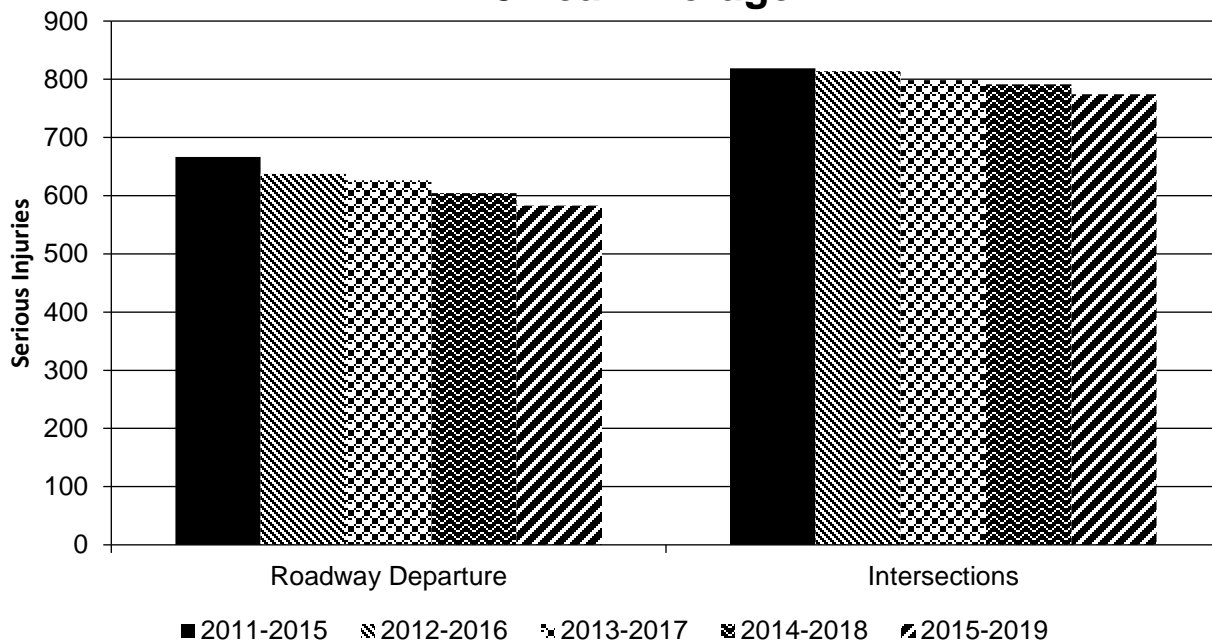
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SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Intersections		81.6	774.4	0.39	3.72

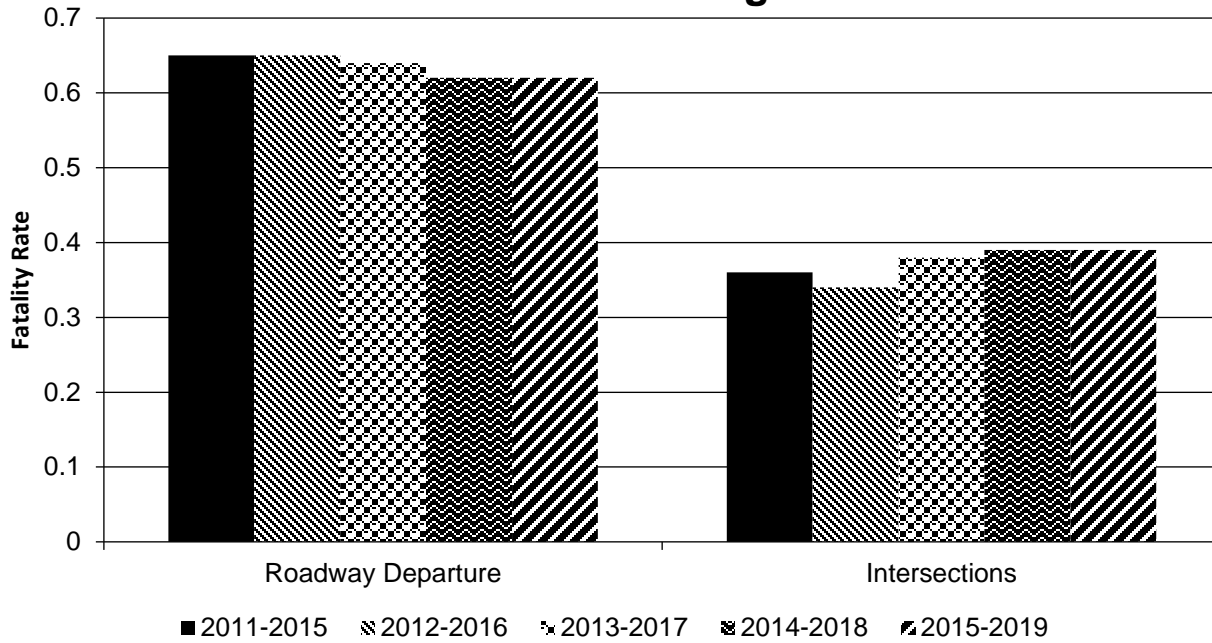
Number of Fatalities 5 Year Average



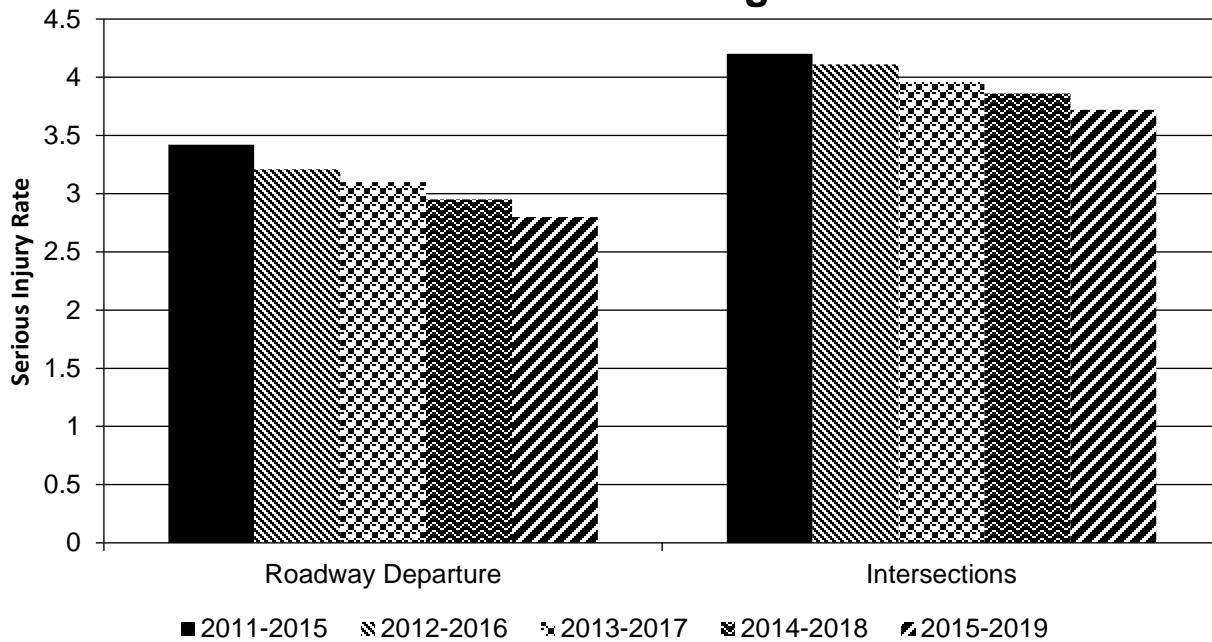
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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)
Seward County - I-80 Bridges (RP 380.62 & 380.96).	Rural Principal Arterial (RPA) - Interstate	Roadway	Pavement surface - miscellaneous	2.00	2.00					5.00	2.00	7.00	4.00	2.27
Omaha - Spring Lake Dr & F St / 16th St	Urban Major Collector	Intersection traffic control	Modify control - two-way stop to roundabout	3.00	1.00					2.00		5.00	1.00	1.03

This year's HSIP project evaluation results are lower than the previous years. NDOT's strategic safety committee recently increased the minimum benefit-cost ratio to 5.0 to bring the HSIP project evaluation benefit-cost ratios up in the future. NDOT completed fewer evaluations than usual this year due to staff turnover and focusing on developing a new HSIP Implementation Plan. We anticipate submitting more HSIP project evaluations next year.

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.

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

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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT	Segment Identifier (12) [12]	100	100					100	100	100	100
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					100	100		
	Surface Type (23) [24]	100	100					100	100		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100	100	100
	End Point Segment Descriptor (11) [11]	100	100					100	100	100	100
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
Functional Class (19) [19]	100	100					100	100	100	100	

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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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	100	100								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	100		
	Average Annual Daily Traffic (79) [81]	100	100					100			
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
	INTERSECTION	Unique Junction Identifier (120) [110]			100	100					
	Location Identifier for Road 1 Crossing Point (122) [112]			100	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			100	100						
	Intersection/Junction Geometry (126) [116]			100	100						
	Intersection/Junction Traffic Control (131) [131]			100	100						
	AADT for Each Intersecting Road (79) [81]			100	100						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]			100	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					80	80				
	Location Identifier for Roadway at					80	80				

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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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					80	80				
	Ramp Length (187) [177]					80	80				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					80	80				
	Roadway Type at End Ramp Terminal (199) [189]					80	80				
	Interchange Type (182) [172]					80	80				
	Ramp AADT (191) [181]					80	80				
	Year of Ramp AADT (192) [182]					80	80				
	Functional Class (19) [19]					80	80				
	Type of Governmental Ownership (4) [4]					80	80				
Totals (Average Percent Complete):		100.00	100.00	100.00	100.00	80.00	80.00	100.00	88.89	100.00	100.00

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]
Ramps are still be inventoried and added to the database. 80% of the 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 80% of the ramps in the state.
We have collected sample AADT data for local paved roads. The AADT data for local paved roads will be added to the database before 2026.

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.