



NORTH DAKOTA

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

The state of North Dakota has seen some encouraging trends in 2019. Motor vehicle fatalities have decreased for the second year in a row and the 5-year moving average for fatalities has decreased for the 7th year in a row. Accounting for changes in traffic volume, the fatality rate is at its lowest in 10 years—1.01 fatalities per hundred million vehicle-miles traveled. In addition, all five HSIP performance measures have met their targets this year.

The North Dakota HSIP is administered through the Programming Division in the North Dakota Department of Transportation (NDDOT). Safety investments are based on the state's current Strategic Highway Safety Plan (SHSP). The current SHSP document is called ND Vision Zero Plan and has six priority emphasis areas:

- Lane departure
- Intersections
- Alcohol and/or drug related
- Unbelted vehicle occupants
- Speeding/aggressive driving
- Young drivers

Median-barriers are now being installed as part of a new focus on reducing cross-median crashes. These crashes, occurring on high-speed divided highways, are often severe. In 2020, \$8 million in HSIP funds will be used to install barriers on various interstate locations in North Dakota.

In July 2020, a program review was completed by the FHWA North Dakota Division and the NDDOT. The "2020 North Dakota HSIP Self Assessment" showed there are no compliance issues with the NDDOT's HSIP Program.

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 NDDOT solicits state and local agencies to submit safety project applications each year. Potential projects are identified through the traditional "reactive" approach that address high crash locations, fatal crash locations or areas where road safety reviews took place. Projects are also developed using a "systemic" approach that apply low-cost treatments over a large area. The NDDOT central office reviews applications and selects/prioritizes. After projects are programmed, they get designed and implemented with the same process as regular federally funded transportation projects. Overall evaluation of the program is done through monitoring of the fatal and serious injury statistics as part of this annual report.

Where is HSIP staff located within the State DOT?

Other-Programming

The Office of Transportation Programs at NDDOT has HSIP staff within the "Programming" division.

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process

50% funds are dedicated to local roads if projects are identified

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

The NDDOT addresses safety on local roads through the Local Road Safety Program (LRSP). Local public agencies can also submit applications for non-LRSP safety projects each year during the solicitation period. Selection of local and tribal road projects use the same methodology as State roads.

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
- Planning

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- Traffic Engineering/Safety
- Other-Safety Division, Local Government

Describe coordination with internal partners.

Design

The Design Division is included in the distribution of the high crash listings. All road safety reviews require at least one member of the Design Division. Their participation and review of at-risk locations helps in the development of potential project countermeasures.

Planning

The Planning Division provides data for the development of the HSIP. Roadway features are collected and maintained in the Planning Division include: traffic volume, truck volumes, traffic projections, roadway features, roadway viewer (for state highways) and mapping. The Planning Division is also included in the distribution of the high crash listings.

Safety Highway Safety Office (SHSO)

The SHSO is the lead entity for the State's Strategic Highway Safety Plan (SHSP) and involves law enforcement and other partners in the process. In North Dakota, the behavioral strategies in the SHSP are largely funded through the National Highway Traffic Safety Administration (NHTSA) funds with funding going to various traffic safety partners including law enforcement agencies statewide for overtime enforcement of traffic safety laws. The SHSP process drives HSIP project priorities. Infrastructure strategies in the North Dakota SHSP are largely funded through HSIP and deployed through the State's Local Road Safety Program (LRSP) and State Road Safety Program (SRSP). These programs identify proven, low-cost road safety strategies and prioritize the road safety strategies for implementation at identified at-risk locations on the local and state road systems.

Local Government

Members of the Local Government Division provide project development through city, county and tribal agencies. The local government assists in the solicitation of safety projects. They also participate in road safety reviews.

Identify which external partners are involved with HSIP planning.

- Academia/University
- FHWA
- Law Enforcement Agency
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency
- Other-and other traffic safety advocates/partners

Describe coordination with external partners.

All the entities are involved at SHSP at some level (Executive Leadership Team, SHSP Steering Committee, SHSP Implementation Team or general SHSP stakeholder).

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Regional Planning Organizations: North Dakota has 3 MPO's that must approve any HSIP applications that are submitted by their respective cities. The MPO's were also included in the team that developed the ND Local Road Safety Program (LRSP).

Local Government Agency, Tribal Agency: The cities, counties, and tribal agencies are solicited each year for potential safety projects. They are encouraged to submit projects directly from the LRSP or at high crash locations.

Law Enforcement Agency: Law enforcement and HSIP personnel are extensively involved in North Dakota's SHSP process. The Programming Division Director serves on the SHSP Steering Committee and as chairperson for two SHSP emphasis area teams (Lane Departure and Intersection implementation Teams). Law enforcement serve at all levels of the SHSP including the SHSP Executive Leadership Team, the SHSP Steering Committee and SHSP Implementation Teams.

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

Schedule for HSIP requests:

- Fall – send out HSIP solicitation letter, HSIP application forms (SFN 59959) are due by the end of the year
- Winter – NDDOT analysis of HSIP requests and Draft HSIP project listing
- Spring – verify the construction year for previously approved projects
- Summer – finalize HSIP project listing, send responses out on approvals (or non-approvals) for the HSIP applications and send out high crash location lists/maps
- August 31st – Final HSIP project list due to FHWA, HSIP online reporting due

Program Methodology

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

Yes

Select the programs that are administered under the HSIP.

- HSIP (no subprograms)

Program: HSIP (no subprograms)

Date of Program Methodology: 3/1/2017

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?

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Crashes

- All crashes

Exposure

- Traffic

Roadway

- Horizontal curvature

What project identification methodology was used for this program?

- Crash frequency
- Equivalent property damage only (EPDO Crash frequency)
- Other-Systemic

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

Yes

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

Yes

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

Available funding:1

What percentage of HSIP funds address systemic improvements?

10

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

- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Traffic Control Device Rehabilitation

What process is used to identify potential countermeasures?

- Crash data analysis
- Engineering Study
- Road Safety Assessment

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- SHSP/Local road safety plan
- Stakeholder input
- Other-National Cooperative Highway Research Program (NCHRP) and other evidence-based practices

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

The NDDOT has implemented the ITS technology of ICWS (Intersection Conflict Warning Systems).

Does the State use the Highway Safety Manual to support HSIP efforts?

No

NDDOT is currently working on integrating the HSM into its HSIP process.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

2020 Federal Fiscal Year (Oct 1, 2019 through July 27, 2020)

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$23,240,000	\$18,309,218	78.78%
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)	\$4,971,170	\$4,971,170	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$0	\$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$0	\$0	0%
Totals	\$28,211,170	\$23,280,388	82.52%

HSIP (Section 148): Programmed **\$23,240,000**, Obligated **\$18,309,218.04 (as of 7/27/20)**

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

\$483,000

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

\$225,000

Funding as of 7/27/20

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

\$483,000

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

\$225,000

as of 7/27/2020

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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?

\$6,433,940

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

None

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
Minot Crosswalks RRFB's	Pedestrians and bicyclists	Modify existing crosswalk	2	Crosswalks	\$77000	\$86000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Improve pedestrian and bicycle facilities to reduce conflicts between motorists and non-motorists
US 83 Safety Corridor (Wilton-Washburn)	Roadway	Roadway - other	15	Miles	\$876000	\$973000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0	70	State Highway Agency	Systemic	Lane Departure	Designate as safety corridor
Barnes Co #22 Grade Raise	Alignment	Vertical alignment or elevation change	1	Locations	\$1399000	\$1554000	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		County Highway Agency	Spot	Lane Departure	Design safer slopes and ditches to prevent rollovers
Erosion control Dickey Co Roads	Roadside	Roadside grading	2	Locations	\$675000	\$750000	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	0		County Highway Agency	Spot	Lane Departure	Design safer slopes and ditches to prevent rollovers
Various US/State Hwys Pvmnt Markings - Bismarck Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$937000	\$1041000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Various US/State Hwys Pvmnt Markings - Dickinson Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$1246000	\$1384000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Median Barrier: I-29 S of 17 Ave S	Roadside	Barrier - concrete	0.9	Miles	\$3168000	\$3520000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Lane Departure	Median barrier
Var State Highways in Bismarck District - SRSP	Intersection traffic control	Intersection signing - add basic advance warning	70	Intersections	\$805000	\$894000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Improve intersection visibility
Various US/State Hwys Pvmnt Markings - Devils Lake Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$696000	\$773000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking

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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
Var Hwys - Spirit Lake Reservation	Roadway delineation	Longitudinal pavement markings - remarking			\$390000	\$390000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Various US/State Hwys Pvmnt Markings - Minot Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$1251900	\$1391000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Var State Highways in Dickinson District - SRSP	Intersection traffic control	Intersection signing - add basic advance warning	99	Intersections	\$903000	\$1003000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Improve intersection visibility
Various US/State Hwys Pvmnt Markings - Grand Forks Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$704000	\$782000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Var State Highways in Williston District - SRSP	Intersection traffic control	Intersection signing - add basic advance warning	64	Intersections	\$700000	\$778000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Improve intersection visibility
Various US/State Hwys Pvmnt Markings - Williston Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$1528000	\$1698000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Various US/State Hwys Pvmnt Markings - Fargo Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$1001000	\$901000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
ND 8,22,23 Signs & Markings for Passing/Climbing Lanes - Phase 1	Roadway delineation	Roadway delineation - other			\$124000	\$138000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Lane Departure	
Various US/State Hwys Pvmnt Markings - Valley City Dist	Roadway delineation	Longitudinal pavement markings - remarking			\$751000	\$834000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Bottineau - Lake Road	Roadway	Roadway widening - travel lanes	9.3	Miles	\$1557000	\$1730000	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		County Highway Agency	Spot	Lane Departure	Widen shoulders
Gateway Dr (US 2) SE Ramp Flush	Intersection traffic control	Modify traffic signal timing - general retiming	1	Intersections	\$47000	\$52000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Signal operations
Grand Forks Traffic Signals	Intersection traffic control	Modify traffic signal - add backplates with retroreflective borders	27	Intersections	\$303000	\$337000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		City or Municipal	Spot	Intersections	Improve Visibility of Signals,

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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
												Highway Agency			Confirmation lights
Erosion control Dickey County Roads	Roadside	Drainage improvements	2	Locations	\$184000	\$204000	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	0		County Highway Agency	Spot	Lane Departure	Design safer slopes and ditches to prevent rollovers
Var Hwys - Fort Berthold Reservation	Roadway delineation	Longitudinal pavement markings - remarking			\$439000	\$439000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
Var Hwys - Standing Rock Reservation	Roadway delineation	Longitudinal pavement markings - remarking			\$88000	\$88000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Lane Departure	Pavement Marking
US 83 & 128 Ave NW -- Ruthville #3	Intersection traffic control	Intersection flashers - add "when flashing" warning sign-mounted	1	Intersections	\$152000	\$169000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Dynamic Warning Signs
Various BIA Roads in Spirit Lake Reservation	Roadside	Roadside grading			\$430000	\$430000	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	0		Indian Tribe Nation	Spot	Lane Departure	Design safer slopes and ditches to prevent rollovers
Mountrail Co 21 - skid surfacing	Roadway	Pavement surface - high friction surface	1	Intersections	\$23000	\$26000	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	0		Indian Tribe Nation	Spot	Lane Departure	Skid-resistance
US 2 at Turtle River State Park	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$660000	\$733000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Turn Lanes
Grand Forks 32nd Ave S	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	8	Intersections	\$3891000	\$4323000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Improve Left-Turn Channelization
Cass Co 5 & Cass Co 10 - Radial-T	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	\$694000	\$771000	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		County Highway Agency	Spot	Intersections	Radial-T
Standing Rock Reservation Road Projects from LRSP	Roadway delineation	Longitudinal pavement markings - remarking			\$27000	\$27000	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		Indian Tribe Nation	Spot	Lane Departure	Pavement Marking
Turtle Mountain LRSP Intersections	Intersection traffic control	Intersection signing - add basic advance warning	9	Intersections	\$160000	\$160000	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	0		Indian Tribe Nation	Systemic	Intersections	Improve intersection visibility
McKenzie Co - Various locations	Roadway	Rumble strips - edge or shoulder			\$450000	\$500000	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		County Highway Agency	Spot	Lane Departure	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
Bismarck Century Ave Positive Left Turns	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	2	Intersections	\$770000	\$856000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		City Municipal Highway Agency or	Spot	Intersections	Improve Left-Turn Channelization
Median Barrier: I-94, W of Sunset Dr to E of Mandan Ave	Roadside	Barrier - cable	3.1	Miles	\$796000	\$884000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Lane Departure	Median barrier
Median Barrier: I-194, S of I-94 to Memorial Hwy - EB/WB	Roadside	Barrier - concrete	0.6	Miles	\$1228000	\$1364000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Lane Departure	Median barrier
Median Barrier: ND 810, Memorial Hwy to McKenzie Dr - EB/WB	Roadside	Barrier - concrete	0.4	Miles	\$812000	\$902000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Lane Departure	Median barrier
Median Barrier: I-94, W of Main Ave to 42 St Separation - EB/WB	Roadside	Barrier - cable	4.1	Miles	\$1505000	\$1672000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Lane Departure	Median barrier
Median Barrier: I-94, 42 St Separation to I-29 - EB/WB	Roadside	Barrier - concrete	2.2	Miles	\$473000	\$526000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Lane Departure	Median barrier
Small Scale Improvements	Non-infrastructure	Non-infrastructure - other			\$100000	\$111000	HSIP (23 U.S.C. 148)	N/A	Multiple/Varies	0		State Highway Agency		Intersections	
Statewide Crash Report Evaluation	Non-infrastructure	Data/traffic records			\$225000	\$250000	HSIP (23 U.S.C. 148)	N/A	Multiple/Varies	0		State Highway Agency		Data	
SHSP Planning and Implementation	Non-infrastructure	Transportation safety planning			\$45000	\$50000	HSIP (23 U.S.C. 148)	N/A	Multiple/Varies	0		State Highway Agency		Intersections	
Highway Safety Improvements	Non-infrastructure	Non-infrastructure - other			\$2000000	\$2222000	HSIP (23 U.S.C. 148)	N/A	Multiple/Varies	0		State Highway Agency		Intersections	

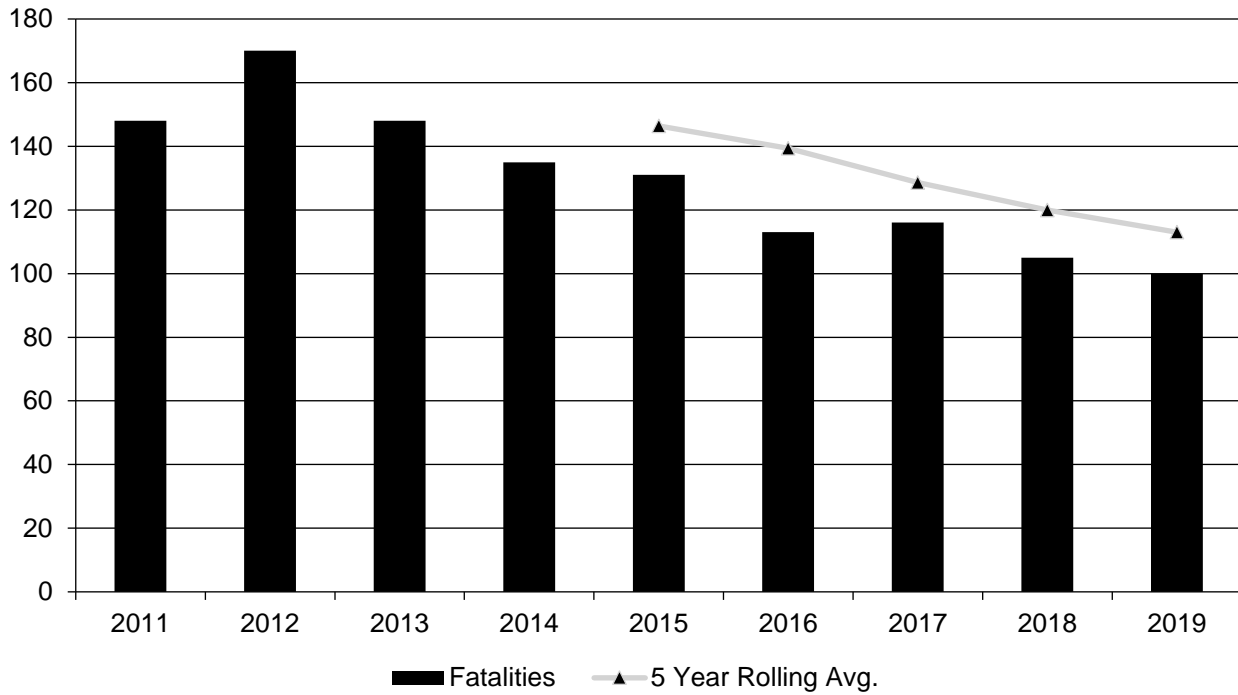
Safety Performance

General Highway Safety Trends

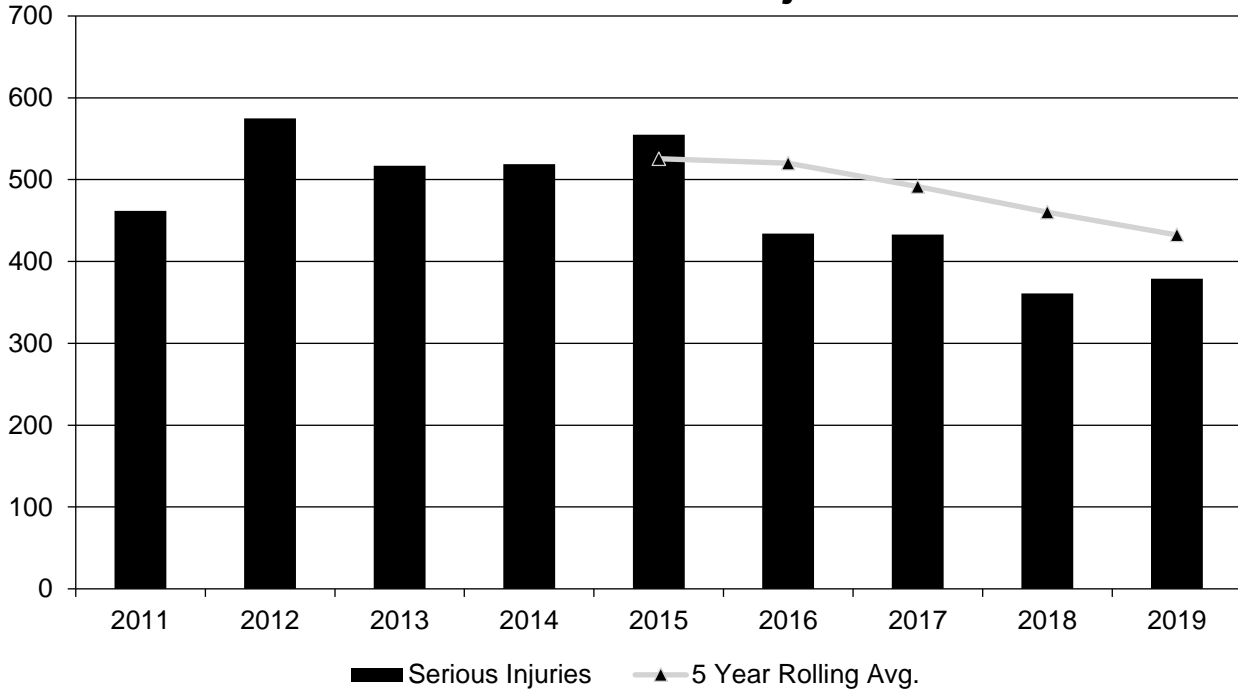
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fatalities	148	170	148	135	131	113	116	105	100
Serious Injuries	462	575	517	519	555	434	433	361	379
Fatality rate (per HMVMT)	1.620	1.690	1.470	1.280	1.310	1.160	1.190	1.070	1.010
Serious injury rate (per HMVMT)	5.060	5.700	5.120	4.940	5.530	4.460	4.460	3.660	3.840
Number non-motorized fatalities	10	7	2	12	8	10	7	8	7
Number of non-motorized serious injuries	39	25	30	32	31	21	24	28	21

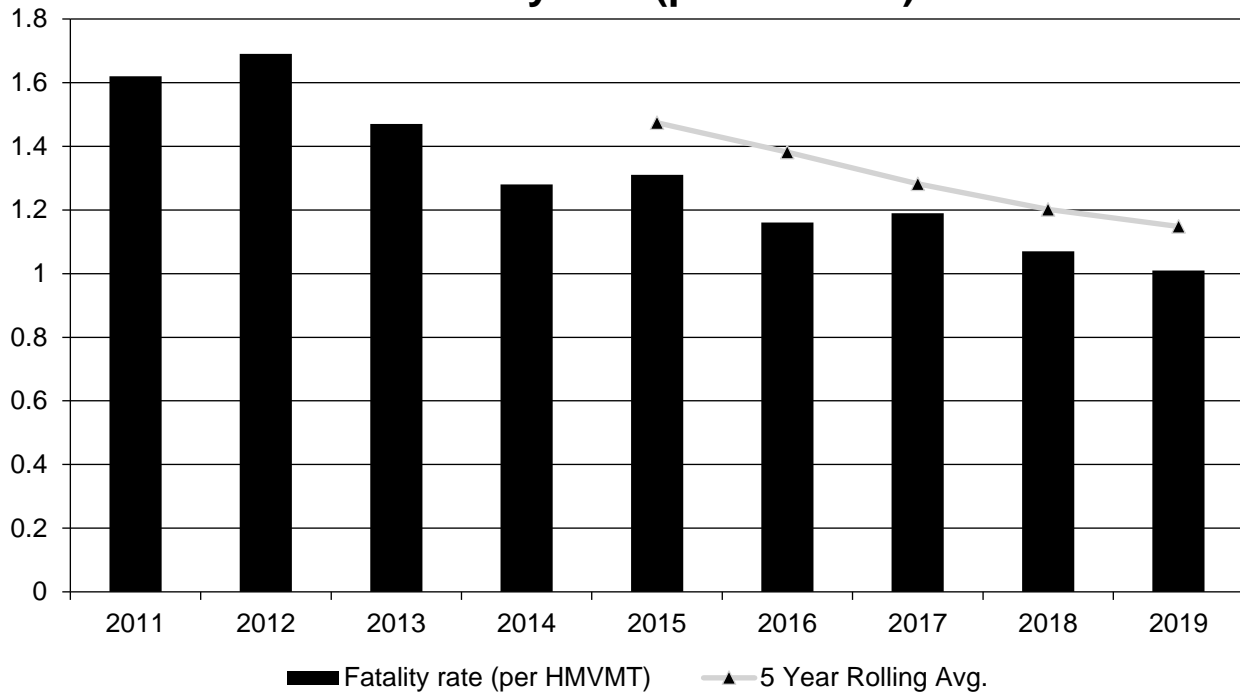
Annual Fatalities



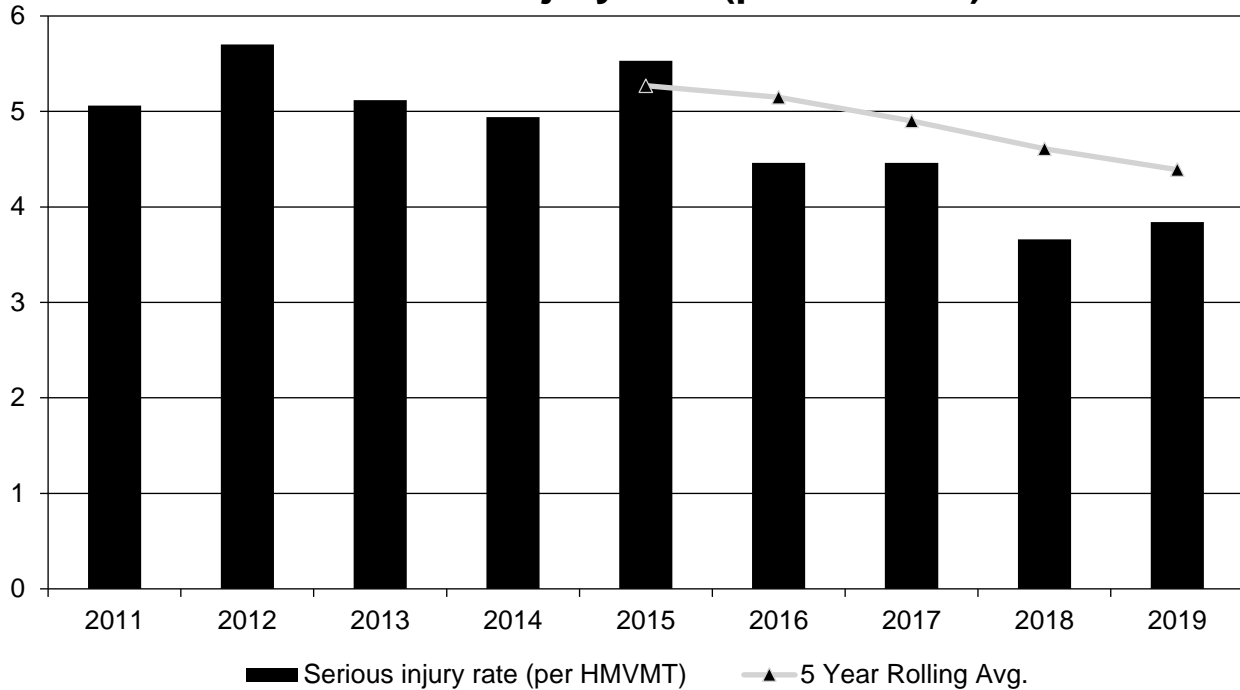
Annual Serious Injuries



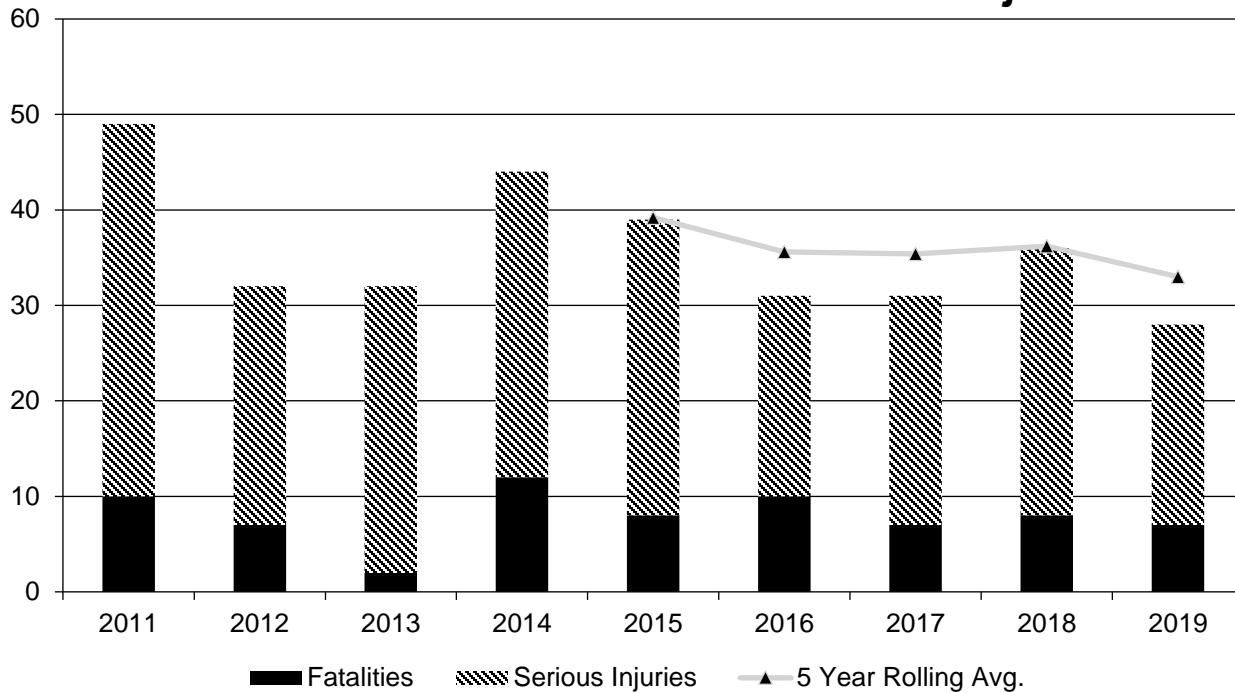
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



Describe fatality data source.

State Motor Vehicle Crash Database

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	8.6	27.8	0.53	1.73
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	31.4	78.8	1.34	3.37
Rural Minor Arterial	16.2	43	1.9	5.05
Rural Minor Collector				
Rural Major Collector	22.8	74.2	3.6	12.61

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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 Local Road or Street	17.4	53.8	1.37	4.15
Urban Principal Arterial (UPA) - Interstate	1.2	5.8	0.24	1.17
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	7	53.2	0.85	6.47
Urban Minor Arterial	3.2	36.4	0.5	5.77
Urban Minor Collector				
Urban Major Collector	0.8	16	0.28	5.71
Urban Local Road or Street	3.6	28.8	0.69	5.52

2020 North Dakota Highway Safety Improvement Program

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	70.2	219.6		
County Highway Agency	28.8	102		
Town or Township Highway Agency				
City or Municipal Highway Agency	7.8	85.2		
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				

Safety Performance Targets

Safety Performance Targets

Calendar Year 2021 Targets *

Number of Fatalities:102.0

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

Review of historical data and expert group input.

Number of Serious Injuries:382.1

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

Review of historical data and expert group input.

Fatality Rate:1.103

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

Review of historical data and expert group input.

Serious Injury Rate:4.046

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

Review of historical data and expert group input.

Total Number of Non-Motorized Fatalities and Serious Injuries:30.4

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

Review of historical data and expert group input.

The long-term goal of the North Dakota SHSP is to move toward zero deaths. Targets were established with consideration of this long term goal but also considering SMART objectives. The targets were considered specific, measurable, achievable, relevant and time-oriented.

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

The State Highway Safety Office (SHSO) resides in the NDDOT. The SHSO (i.e., the NDDOT Safety Division) and other NDDOT Divisions including Local Government, Programming and planning/Asset Management review performance measure data and define the method to set the targets. Proposed targets are then shared by the NDDOT at a regular meeting between NDDOT and the MPOs.

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	127.3	113.0
Number of Serious Injuries	486.2	432.4
Fatality Rate	1.271	1.148
Serious Injury Rate	4.848	4.390
Non-Motorized Fatalities and Serious Injuries	34.6	33.0

2020 North Dakota Highway Safety Improvement Program

For all five performance measures, the actual outcomes are lower than the targets. This is an encouraging trend and suggests that NDDOT is considering safety for all roadway users.

Applicability of Special Rules

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

No

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	8	10	11	9	14	19	17
Number of Older Driver and Pedestrian Serious Injuries	23	36	37	36	28	29	39

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries

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

The number of fatalities (rolling average) has decreased for the 7th year in a row. The rates of fatalities and serious injuries is also on a downward trend. HSIP projects that focus on the lane departure and intersection emphasis areas appear to be contributing to these decreases. In the last year, the NDDOT and FHWA completed a "Program Review - 2020 North Dakota HSIP Self Assessment". This report looked at North Dakota's progress towards improving the effectiveness of the HSIP over the long term, raise the level of awareness of HSIP-related practices/strategies, identify gaps in HSIP efforts, and generate strategies to improve the HSIP program. Overall, the report concluded that there are no compliance issues with NDDOT's HSIP Program. Several recommendations were provided in the report:

- NDDOT Director to include HSIP discussion points in meetings with the Governor
- NDDOT will share the HSIP Guidebook with FHWA and any future HSIP processes will be developed in cooperation with the FHWA Division Administrator
- Incorporate innovative practices
- Continue working with NDDOT Planning Division for MIRE development
- Consider targets for roadway departure and intersection crashes
- Add ND HSIP contact information to public website
- Meet with Tribes quarterly and encourage them to apply for HSIP funds
- Use CMF Clearinghouse to identify specific CMFs to be used for ND

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

- More systemic programs

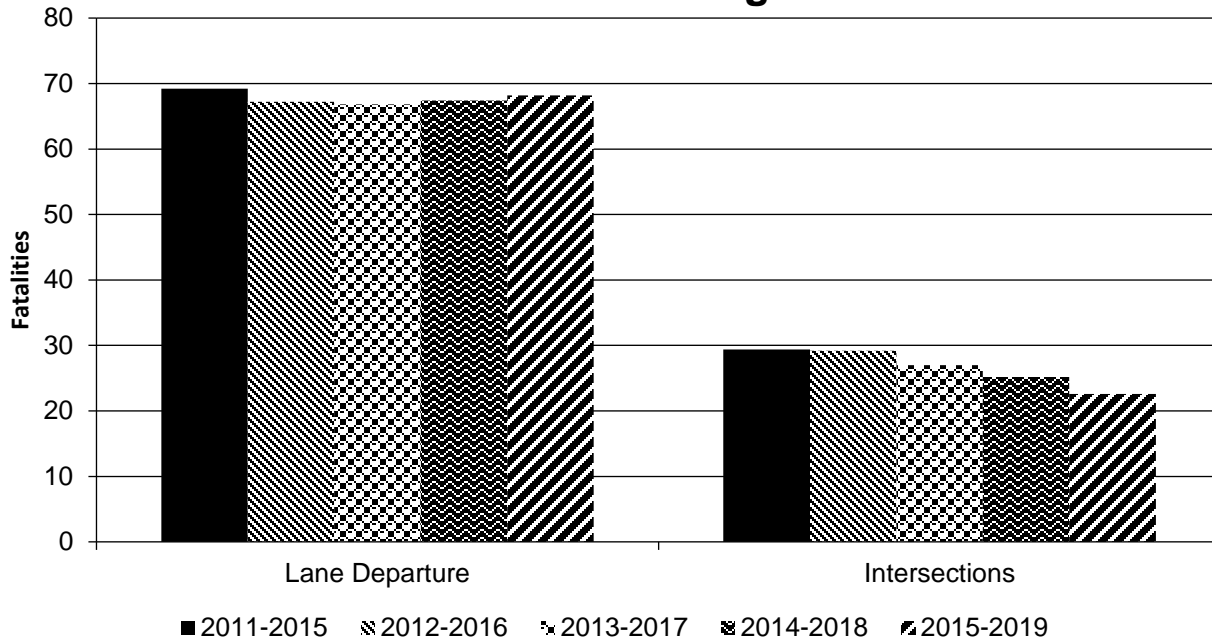
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

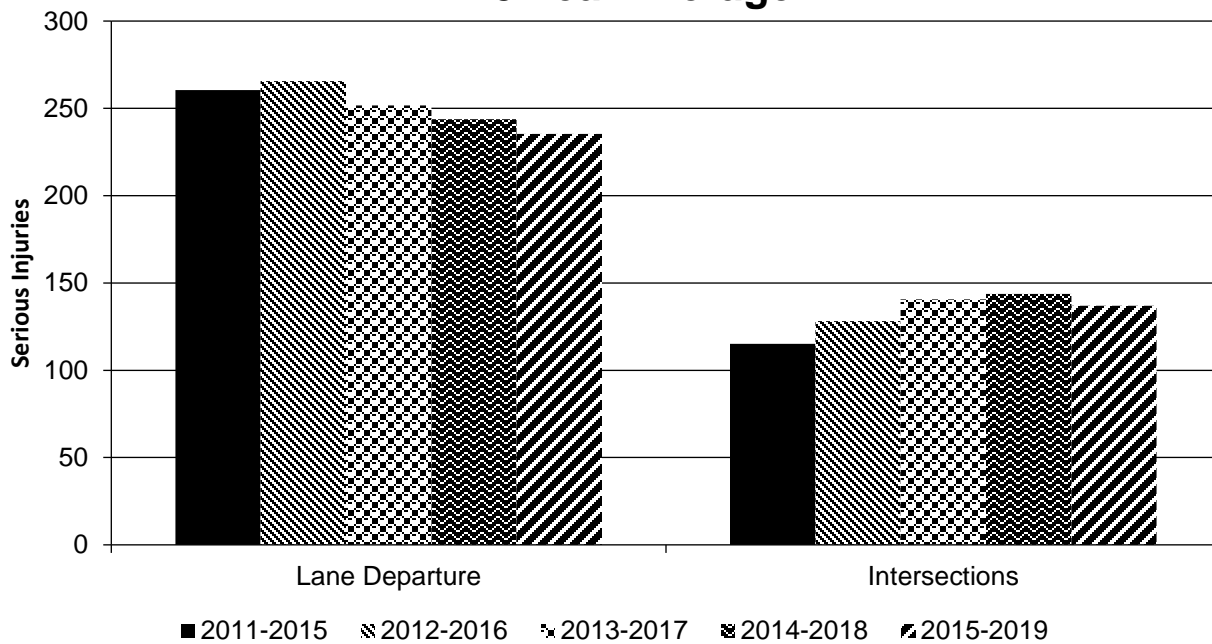
Year 2019

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)
Lane Departure		68.2	235.4	0.69	2.39
Intersections		22.6	137	0.23	1.39

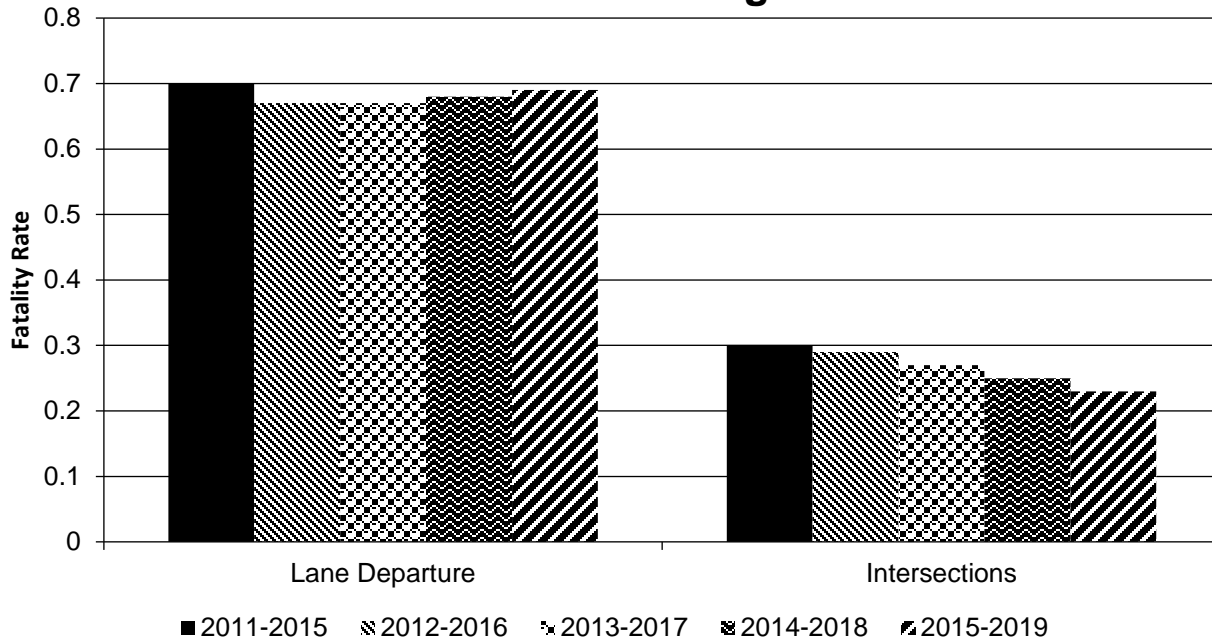
Number of Fatalities 5 Year Average



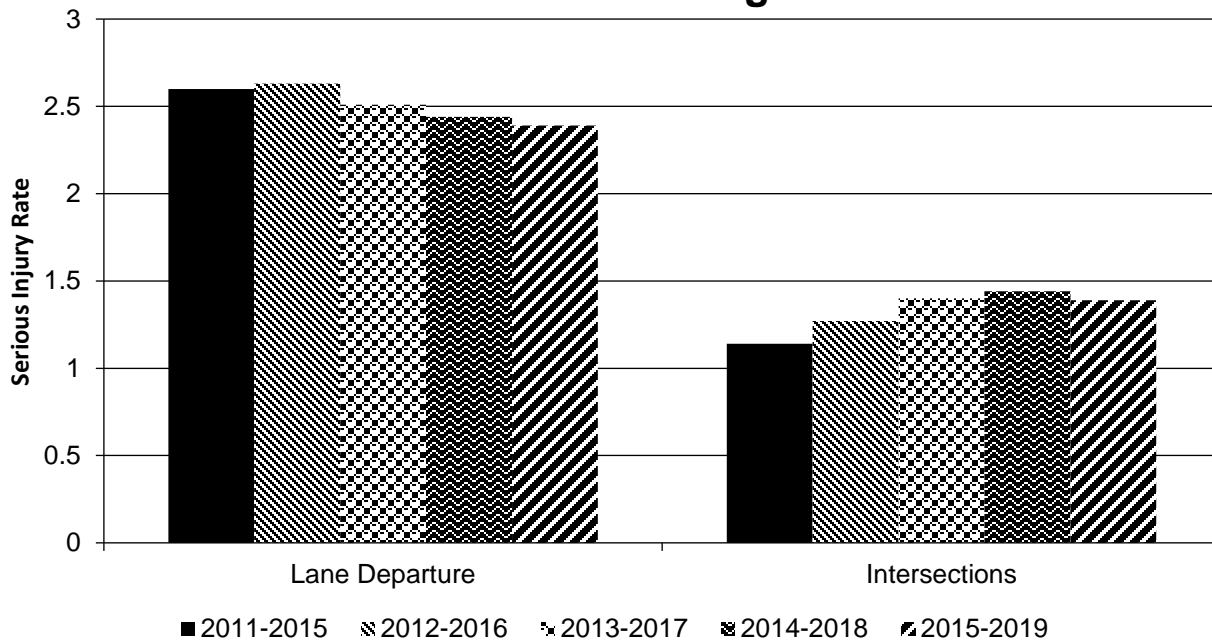
Number of Serious Injuries 5 Year Average



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.

Compliance Assessment

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

09/18/2018

What are the years being covered by the current SHSP?

From: 2018 To: 2023

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

2023

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]	25	25					25	25	25	25
	Route Number (8) [8]										
	Route/Street Name (9) [9]	25	25								
	Federal Aid/Route Type (21) [21]										
	Rural/Urban Designation (20) [20]										
	Surface Type (23) [24]										
	Begin Point Segment Descriptor (10) [10]	25	25					25	25	25	25
	End Point Segment Descriptor (11) [11]	25	25					25	25	25	25
	Segment Length (13) [13]	25	25								
	Direction of Inventory (18) [18]										
Functional Class (19) [19]											

2020 North Dakota 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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]										
	Access Control (22) [23]										
	One/Two Way Operations (91) [93]										
	Number of Through Lanes (31) [32]										
	Average Annual Daily Traffic (79) [81]										
	AADT Year (80) [82]										
	Type of Governmental Ownership (4) [4]										
INTERSECTION	Unique Junction Identifier (120) [110]										
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]										
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]										
	AADT Year (80) [82]										
	Unique Approach Identifier (139) [129]										
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					30	30				
	Location Identifier for Roadway at					30	30				

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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]					30	30				
	Ramp Length (187) [177]					30	30				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					30	30				
	Roadway Type at End Ramp Terminal (199) [189]					30	30				
	Interchange Type (182) [172]					30	30				
	Ramp AADT (191) [181]					30	30				
	Year of Ramp AADT (192) [182]					30	30				
	Functional Class (19) [19]					30	30				
	Type of Governmental Ownership (4) [4]					30	30				
Totals (Average Percent Complete):		6.94	6.94	0.00	0.00	30.00	30.00	8.33	8.33	15.00	15.00

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]
 It is anticipated that the interchanges/ramps will be completed by the end of September 2020.

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

The NDDOT has developed the following goals to meet MIRE requirements and future road data management:

- Develop a robust/integrated data warehouse to connect all geodatabase items with each other
- More efficiently and effectively extract information from the database:
 - Querying will be the initial capability of data warehouse
 - Develop a framework that allows tools and models to be shared by NDDOT
 - Application of AI/ML-based techniques over the data warehouse
- The data warehouse will be an efficient framework for data governance in NDDOT
 - Other geo-databases (safety, construction, maintenance, etc.) could be integrated into the data warehouse

Optional Attachments

Program Structure:

HSIP Guidebook OCT 2019.pdf

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.