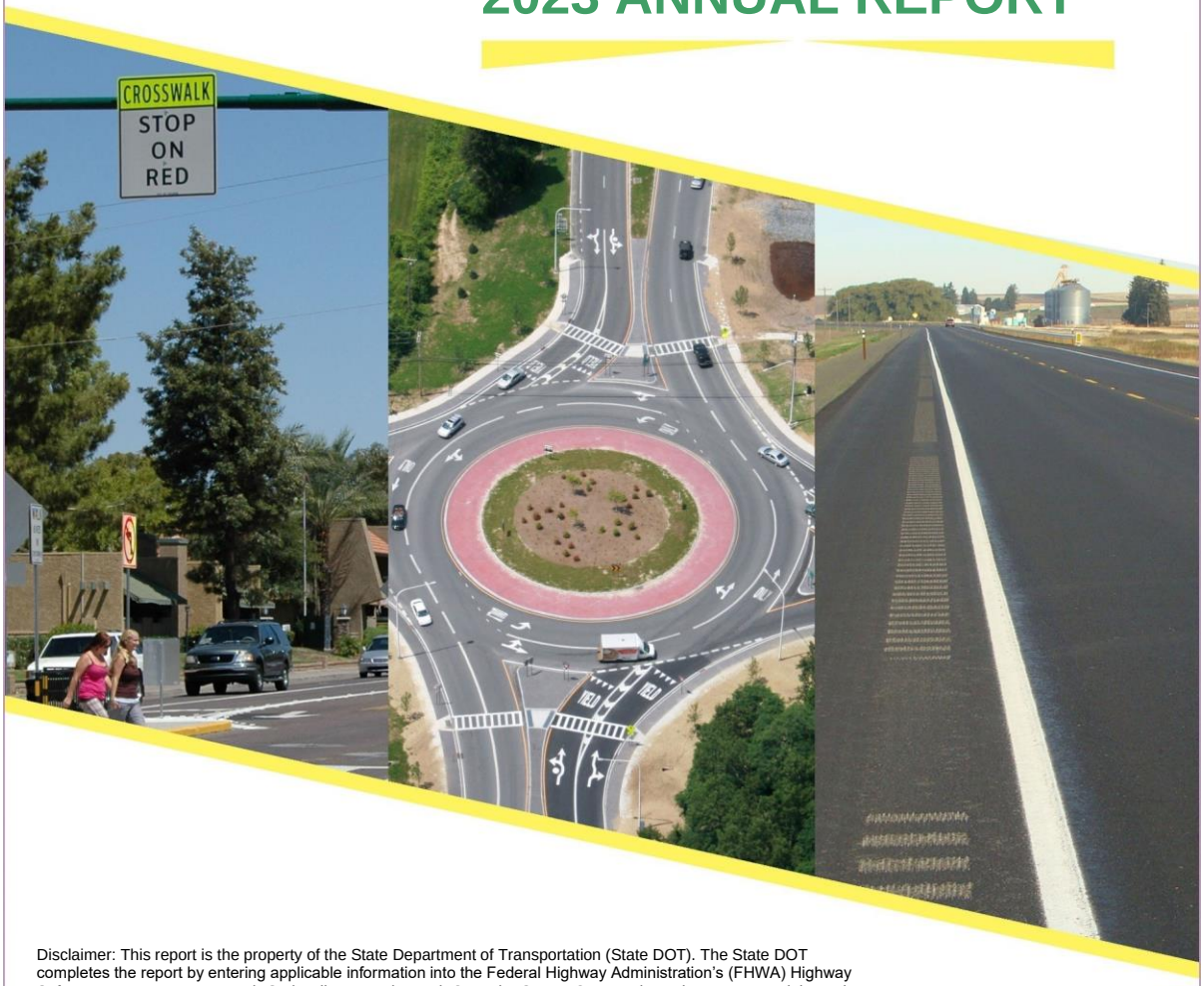
MINNESOTA

DEPARTMENT OF TRANSPORTATION

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2023 ANNUAL REPORT



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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. 407 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

Relative to the three years prior (i.e., 2017-2019), there were 8% more fatal and serious injury crashes on all Minnesota roads from 2020-2022. The largest shifts in these crashes continue to be around higher risk acceptance or limited options for mitigating serious outcomes (e.g., motorcyclists or unforgiving roadside): 41% increase in Unlicensed driver 19% increase in Motorcyclist 17% increase in Speed 15% increase in Impairment 14% increase in Single vehicle run-off-road 11% increase in Unbelted occupant 10% increase in Younger driver Traffic fatalities statewide appear to have peaked in 2021; both 2022 and year-to-date 2023 are lower than prior years. Serious injuries continue to climb. Despite these trends, Minnesota recognizes the prior success of addressing sustained crash locations or proactive safety treatments. MnDOT continues to distribute HSIP funds between state and local jurisdictions. Minnesota will continue initiatives to create safer roads for all road users; at this time, additional efforts are aimed at addressing underserved, vulnerable, or high risk crash types. 71% of fatal and serious injury crashes occur on locally owned roads. Minnesota continues investing in local road safety planning. In project selection, Minnesota sets targets of approximately 70% of HSIP distributed to local agencies. This framework continues to support the development and implementation of local safety projects while efficiently using all safety funds available. See "Funding for Local Safety Projects" section for more information. 49% of fatal and serious injury crashes occur on rural roads (i.e., population of 5,000 or less). Minnesota continues to promote low-cost/high-benefit, systemic countermeasures. 13% of fatal and serious injury crashes involve a person walking or biking. MnDOT has targeted funding for projects to improve vulnerable road user safety by setting solicitation criteria to make these projects more competitive. Less than 10% of fatal and serious injury crashes occur at sustained, high crash locations. Minnesota continues to invest in proactive, systemic countermeasures that can be deployed over as many miles and intersections as possible. MnDOT published an Implementation Plan for HSIP in June of 2023 outlining specific initiatives and programs in the coming years.

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 Minnesota HSIP program is split between Local and State projects. MnDOT Office of Traffic Engineering (OTE) solicits projects from local governing units for the next four years; a parallel solicitation for State projects is issued to the districts. These solicitations aim to fully program safety projects in the next two years, but projects three to four years out are awarded to ensure planning. A parallel process is conducted within the Minneapolis-Saint Paul Metro that is coordinated through the MPO. Funding is distributed between Local and State based on fatal and serious injury crashes; distribution between each district or Area Transportation Partnership is based on the location of these fatal and serious injury crashes.

OTE approves all State and Local HSIP projects before they are entered in the STIP: the award memo received is the basis for being allowed to enter the STIP.

Where is HSIP staff located within the State DOT?

Operations

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process
- Formula via Districts/Regions

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

MnDOT distributes funds to local roads through the annual Greater Minnesota Local Solicitation and biannual Metro Local Solicitation. OTE with representatives from State-Aid and MnDOT District Traffic Engineers, prioritize the local HSIP projects for each Area Transportation Partnership (ATP). Districts are given the opportunity to comment on the prioritization of projects.

The allocation of HSIP funds is based on the distribution of fatal and serious injury crashes. Funds are distributed as follows:

Step 1: Funds are split based on % of K and A crashes in each District.
Step 2: Funds are split again based on % of K and A crashes occurring on State vs. local system.

After the new crash reporting system was implemented in 2016, Minnesota experienced an increase in

Suspected Serious Injury (A) crashes. This change was not uniform across all roadway jurisdictions: MnDOT is in the revised the HSIP targets based on the updated crash data. Current HSIP targets are approximately 40% state agency, 60% local agencies; future targets are approximately 30% state agency, 70% local agencies. These target distributions began for projects programmed in 2026 and on. These additional funds for local agencies also requires additional outreach by State Aid to encourage cities and tribal governments to apply for funds. Historically HSIP funds are available to these agencies but applications for funding have remained low.

MnDOT has worked to develop a County Road Safety Plan for all 87 counties within the state based on systemic risk assessment. These plans are given priority in the selection process. Stand-alone safety projects rather than countermeasures within larger projects are given priority.
A subset of counties has opted to join OTE in updating the County Road Safety Plan. This phased update is continuing.

MnDOT OTE and District 4 have begun work with White Earth Nation Tribe to assist in the development of a Tribal Transportation Safety Plan. MnDOT is providing technical assistance, funding, and project management support while engaging with the Tribe and Tribal Leadership.
The original scope was expanded to ensure the project meets the requirements of the Comprehensive Safety Action Plan as described for the “Safe Streets for All” federal program. This will make for more eligible funding sources, including the “Safe Streets for All” national funding solicitation set to occur for the next few years. MnDOT has also been working with more engagement with Tribal Nations. In partnership with OTE, White Earth Nation is developing a systemic safety plan using HSIP funds to improve traffic safety and to facilitate future applications for local HSIP fundsl.

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

- Districts/Regions
- Local Aid Programs Office/Division
- Planning
- Traffic Engineering/Safety

Describe coordination with internal partners.

MnDOT's Office of Traffic Engineering (OTE) works closely with the State Aid for Local Transportation (SALT) office as well as district traffic engineers in the distribution of HSIP funds.

A representative from the State Aid office sits on the both the steering and selection committees for HSIP. The offices work together to educate local agencies and district personnel on the HSIP program. Once projects are selected the state aid office coordinates with the local agencies and provides support as necessary.

The HSIP project selection committee asks for input from the district traffic engineers during the selection and award processes. District traffic engineers provide vital background information on proposed projects as well as adding the local perspective. Additionally, local partners are asked to provide some documentation that the district traffic engineer is aware of and supportive of their prospective project if it impacts MnDOT roadways.

MnDOT also holds quarterly TEO (Traffic Engineering Organization) Safety Subcommittee meetings, at which additional HSIP coordination occurs.

Identify which external partners are involved with HSIP planning.

- FHWA
- Governors Highway Safety Office

- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency
- Other-City Engineer Safety Committee
- Other-County Engineer Safety Committee

Describe coordination with external partners.

Districts and Counties collaborate extensively to develop and implement safety plans as funded by HSIP; a subset of Minnesota's 87 counties have opted in to updating these plans.

MPOs review the priorities of the HSIP selection committees to ensure compliance with long range goals. The annual HSIP solicitation briefings provide an overview of the process.

MnDOT planning staff and FHWA completed a review of coordination with MPOs across all programs. The report highlighted HSIP coordination in Greater Minnesota (i.e. outside Twin Cities metro) needs improvement. The HSIP solicitation guidance has been updated to place greater emphasis on early coordination with MPOs. To this end, MnDOT has clarified the procedure and is educating both Local Agencies and District staff on appropriate timing for engagement. For those projects that occur within planning boundaries, a review of the application by the MPO prior to submission is necessary: MPO staff provide a letter of support and prioritization ranking. Without this letter, a project cannot be further scored. All award letters are now provided to both the applicant and appropriate MPO to streamline processing of TIPs. OTE continues to discuss traffic safety trends with MPOs at update meetings and receive feedback about regional needs.

MnDOT Metro District solicits a biannual solicitation for HSIP funds. MnDOT Metro District and the Metropolitan Council have been working on modifying the timing of their HSIP Solicitation for Local Projects with the intent on better aligning with the regional solicitation and other federal funding programs administered by the Metropolitan Council. Additional selection committee members from OTE provide feedback and consistency with the Greater Minnesota solicitation. In both HSIP solicitations, feedback is encouraged with each iteration: both before and after project selection. Typically, a group of core selection members work with a rotating ground of selection team members, comprising MnDOT and Local Agencies to help ensure that projects selected reflect the needs, desires, and fairness that is necessary for a balanced program.

Minnesota's Toward Zero Deaths program is the primary way local partners can integrate and become involved in Statewide safety programming. TZD regional coordinators build coalitions through outreach and workshops helping to direct action among local partners.

Program Methodology

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

Yes

See attachment "HSIP funding guide FINAL.pdf" for current guidance. Minnesota anticipates updating the HSIP manual to better reflect the process for how applicants will coordinate and solicit approval from our eight Metropolitan Planning Organizations.

Select the programs that are administered under the HSIP.

- HSIP (no subprograms)

Program: HSIP (no subprograms)

Date of Program Methodology:8/1/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• Fatal and serious injury crashes only	• Volume • Lane miles	• Median width • Horizontal curvature • Roadside features • Other-distance to prior STOP sign; • Other-shoulder width

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Critical rate
- Excess proportions of specific crash types
- Probability of specific crash types

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

Ranking based on B/C:5
Available funding:5
Cost Effectiveness:5
Other-Treatment Effectiveness:5
Other-Site Selection: planning or spot location:5

Less than 10 percent of fatal and serious injury crashes occur at sustained, high crash locations. This speaks to the need for safety investments to be proactively and systemically deployed over many miles and many intersections to the greatest extent possible. However, MnDOT also recognizes that these high crash locations--while infrequent--require additional safety investment.

HSIP solicitations encourage both of these project types. All projects are competitive across key areas, however the metrics to evaluate each project type (reactive vs. proactive) are designed to achieve parity in the final ranking.

What percentage of HSIP funds address systemic improvements?

52

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

- Cable Median Barriers
- Clear Zone Improvements
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- Rumble Strips
- Safety Edge

What process is used to identify potential countermeasures?

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

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

Connected vehicle and ITS projects are considered for HSIP funding in Minnesota. Funds for these initiatives are available from multiple sources, so while the projects are competitive in HSIP solicitation, investments and investigations in Minnesota have been funded outside of HSIP. MnDOT has created a standalone Connected Autonomous Vehicle (CAV-X) office to advance connected and automated vehicle and other advanced ITS technologies in Minnesota. HSIP funds are no longer directly funding this program as it is supported by other state funds. www.mndot.gov/automated/index.html

The Minnesota CAV-X office is funded separate from HSIP with state money set aside by the Legislature. ITS projects will continue to be competitive in HSIP solicitation rather than program support.

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.

Minnesota does not use the more advanced, predictive methods in the HSM. However, CMFs are used to rank and select reactive safety projects.

Central Office performs a limited form of Highway Safety Manual analysis at the request of District Traffic Engineering staff. Reactive projects use a simplified form of HSM methods. Spot location projects are evaluated based on prior crash history weighted by the appropriate crash modification factor for the crash type and countermeasure proposed; the resulting benefit-cost ratio is used to prioritize which of these reactive projects receive funding. While training on the HSM predictive analysis continues, widespread use for proactive projects has not been adopted: Minnesota has developed risk factors for proactive projects rather than a prediction of total crashes.

Currently the full HSM predictive models and IHSDM software are used for corridor studies and larger MnDOT projects to evaluate alternatives.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$58,351,539	$16,461,551	28.21%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
VRU Safety Special Rule (23 U.S.C. 148(g)(3))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$11,264,740	$4,685,949	41.6%
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	$69,616,279	$21,147,500	30.38%

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

53%

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

25%

MnDOT has targets to aid in selecting projects. In 2022 this distribution was approximately 60 percent targeted to local agencies. As projects are programmed and final bids are accepted, these funds can shift. However the majority of HSIP funds were programmed to local projects as the target distributions specify.

Minnesota has a policy to ensure all available federal funds are programmed before they expire. A prior analysis of local HSIP found that in practice this results in Advanced Construction of programmed projects; consequently this will be expressed as a relatively lower obligation rate. Further, as time passes the original unit costs for projects in the County and District Safety Plans are deviating from realized bids.

Minnesota has started a systemic safety planning project with White Earth Nation to identify proactive locations and provide the tribe with similar resources as county agencies in the annual HSIP solicitation for local projects.

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

10%

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

12%

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%

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

MnDOT programs HSIP funds to 100% apportionment and will monitor for effects on obligation rate. We expect this over-programming of safety will continue to raise the obligation rate. OTE continues to have on-going discussions with MnDOT Districts on creating shelf ready safety projects to better capitalize on any cost-savings in the HSIP projects.

Funding to Local safety projects continues to report at a lower obligation rate compared to programmed projects. Project estimates derived from prior published County and District Safety Plans are not necessarily consistent with bid prices: where the estimates are high (due to prior higher costs or recent efficiency advances), the obligation amount will show a lower rate reflecting reduced funding due to actual costs. is reduced. Outreach continues to encourage applications to review and revise any published estimates with current bids where appropriate. Prior analysis in 2017 highlighted that many local HSIP projects were programmed but not awarded as projects on the time line as scheduled. MnDOT tends to utilize Advanced Construction funds on local projects to ensure that all federal funds available are used. While this process maximizes the number of safety projects delivered by HSIP funds it depresses the reported obligation amounts.

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
#0223202 (SP 002-601-057) ANOKA COUNTY: SIGNAL REVISION AT CSAH-1/MISSISSIPPI BLVD	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$601576	$1032990	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Intersections	Improve signal operations
#0223079 (SP 002-635-012) ANOKA COUNTY: ROUNDABOUT AT CSAH-35/GARDENA AVE NE	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1565614	$1739572	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Intersections	Roundabout
#0223061 (SP 002-683-006) ANOKA COUNTY: ROUNDABOUT AT CSAH-83/ALPINE DR	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1684766	$1994111	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Intersections	Roundabout
#1023074 (SP 010-030-010) CARVER COUNTY: ENHANCED PAVEMENT MARKINGS ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	56	Miles	$609151	$676834	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#1923012 (SP 019-673-011) DAKOTA COUNTY: ROUNDABOUT AT CSAH-73/CR-6	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1571638	$1800370	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Intersections	Roundabout
#2723052 (SP 027-617-033) HENNEPIN COUNTY: ROAD DIET ON CSAH-17	Pedestrians and bicyclists	ADA curb ramps	0.7	Miles	$2461400	$3725000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Pedestrians	Improve intersection crossings
#2723182 (SP 027-650-005) HENNEPIN COUNTY: ROAD DIET ON CSAH-50	Pedestrians and bicyclists	ADA curb ramps	0.5	Miles	$522435	$650000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Pedestrians	Improve intersection crossings
#7023142 (SP 070-030-012) SCOTT COUNTY: 6-IN GIWR EDGELINES AND LIGHTING (10 XING) ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	45	Miles	$1017000	$1243000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#8223197 (SP 082-615-045) WASHINGTON COUNTY: CENTERLINE SINUSOIDAL RUMBLE STRIPS AND GIWR ON CSAH-15	Roadway	Rumble strips – center	17	Miles	$111657	$129026	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs
#0212327 (SP 1013-101) METRO: HIGH TENSION CABLE BARRIER ON US-212	Roadside	Barrier – cable	3.4	Miles	$951442	$1057158	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Roadway Departure	High tension cable

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
															median barrier
#0223118 (SP 106-101-010) CITY OF BLAINE: ROUNDABOUT AT 99TH AVE/BALTIMORE ST NE	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1530000	$1768000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	City or Municipal Highway Agency	Spot	Intersections	Roundabout
#0223090 (SP 127-319-006) CITY OF FRIDLEY: ALTERNATIVE INTERSECTION/TURNABOUT MEDIAN ON 53RD AVE	Intersection geometry	Splitter island – install on one or more approaches	0.2	Miles	$1201036	$1334484	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	City or Municipal Highway Agency	Spot	Commercial Vehicles	Provide appropriate space for safe maneuvers
#2723193 (SP 141-020-127) CITY OF MINNEAPOLIS: SIGNAL REVISIONS AND BUMPOUTS ON CSAH-66	Intersection traffic control	Modify traffic signal – modernization/replacement	4	Intersections	$1907900	$2750000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Intersections	Improve signal operations
#1923273 (SP 1926-22; -25) METRO: POST-PROJECT TRAFFIC STUDY ON MN-316 IN HASTINGS	Miscellaneous	Data analysis	1	Studies	$110000	$110000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	State Highway Agency	Spot	Data	Safety studies
#I394002 (SP 2789-165) METRO: PEDESTRIAN RAMPS AND TURN LANE AT I-394 AND 3RD AVE	Pedestrians and bicyclists	ADA curb ramps	1	Intersections	$977612	$1086236	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Pedestrians	Improve intersection crossings
#6223187 (SP 6229-37) METRO: SIGNAL REVISIONS AND PEDESTRIAN BUMPOUTS ON MN-5	Intersection traffic control	Modify traffic signal – modernization/replacement	4	Intersections	$1080000	$1200000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Pedestrians	Improve intersection crossings
#7023107 (SP 7002-53) METRO: ROUNDABOUT AT MN-21/CSAH-66	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$997497	$2563926	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#7023108 (SP 7007-51) METRO: HIGH TENSION CABLE BARRIER ON US-169	Roadside	Barrier – cable	8.6	Miles	$5661900	$6500000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Roadway Departure	High tension cable median barrier
#8823181 (SP 088-070-081) STATEWIDE: COUNTY ROAD SAFETY PLANS (56X) AND PILOT STATE-AID CITY SAFETY PLANS (4X)	Miscellaneous	Local road safety plans	60	Plans	$5000000	$6250000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	Non-infrastructure	Non-infrastructure	Data	Safety studies
#8824040 (SP 880C-TZDC-24) STATEWIDE: SFY 2024 TZD COORDINATOR SALARIES AND EXPENSES	Miscellaneous	Transportation safety planning	8	Regional coordinators	$900000	$900000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	Non-infrastructure	Non-infrastructure	Traffic Safety Culture & Awareness	Improve outreach and coordinatio

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
															n with safety partners
#8823176 (SP 8816-3425) STATEWIDE: VULNERABLE ROAD USER ASSESSMENT FOR SHSP UPDATE	Miscellaneous	SHSP Development	1	Studies	$150000	$150000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	Non-infrastructure	Non-infrastructure	Data	Safety studies
#8823091 (SP 8816-3383) WHITE EARTH NATION: WHITE EARTH NATION TRIBAL SAFETY PLAN	Miscellaneous	Local road safety plans	1	Plans	$100000	$100000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	Indian Tribe Nation	Non-infrastructure	Data	Safety studies
#8823214 (SP 8816-3462) STATEWIDE: REGIONAL LOCAL ROAD SAFETY WORKSHOPS ACROSS STATE (24X)	Miscellaneous	Local road safety plans	24	Workshops	$400000	$400000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	Non-infrastructure	Non-infrastructure	Data	Safety studies
#8823250 (SP 8816-3476) STATEWIDE: DEVELOP THE 2025-2029 SHSP	Miscellaneous	SHSP Development	1	Plans	$600000	$600000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	Non-infrastructure	Non-infrastructure	Data	Safety studies
#0002346 (SP 3104-62S) D-1: ROUNDABOUT AT US-2/MN-65	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1800000	$2000000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Intersections	Roundabout
#6923255 (SP 069-070-048) ST LOUIS COUNTY: SINGLE T-CURVES ON CSAH-100	Intersection geometry	Intersection realignment	4	Intersections	$396800	$496000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Intersections	Improve skewed intersection sight-lines
#6923244 (SP 069-070-050) ST LOUIS COUNTY: CHEVRONS ON VARIOUS COUNTY CURVES	Roadway signs and traffic control	Curve-related warning signs and flashers	27	Curves	$122400	$137400	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Roadway Departure	Delinate curves
#6923155 (SP 069-070-051) ST LOUIS COUNTY: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	45.6	Miles	$498700	$561930	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#6923095 (SP 069-070-053; -052; -057) ST LOUIS COUNTY: LEFT TURN LANES AND LIGHTING ON CSAH-13	Lighting	Intersection lighting	3	Intersections	$1417163	$1574626	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Intersections	Intersection lighting
#8823277 (SP 088-070-072) ATP-2 COUNTIES: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	536.3	Miles	$440000	$488889	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines

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
#3023249 (SP 030-070-016) ISANTI COUNTY: 6-IN GIWR EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	36.5	Miles	$264240	$293600	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#4923149 (SP 049-070-027) MORRISON COUNTY: 2-FT PAVED SHOULDER, RUMBLE STRIPES ON CSAH-1	Roadway	Rumble strips – edge or shoulder	8	Miles	$350129	$693568	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs
#5623174 (SP 056-070-028) OTTER TAIL COUNTY: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	335.2	Miles	$218718	$391945	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#5623147 (SP 056-070-029) OTTER TAIL COUNTY: INTERSECTION LIGHTING AT VARIOUS COUNTY INTERSECTIONS	Lighting	Intersection lighting	15	Intersections	$229440	$254933	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Intersections	Intersection lighting
#8823152 (SP 088-070-073) ATP-4 COUNTIES: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	1539.4	Miles	$1688777	$1876418	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#0002345 (SP 6908-61S) D-1: ROUNDABOUT AT US-2/MN-194/CSAH-46	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$2621582	$2912869	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#0002345 (SP 6908-61S) D-1: ROUNDABOUT AT US-2/MN-194/CSAH-46	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$2621582	$2912869	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#0923144 (SP 0980-162) D-1: CLEAR ZONE IMPROVEMENTS ON I-35	Roadside	Removal of fixed objects (trees, poles, etc.)	8	Miles	$831870	$924300	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Lane Departure	Minimize hazards of leaving roadway
#0059324 (SP 5705-61; 057-070-020) D-2: ROUNDABOUT AT US-59/CSAH-3	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1681931	$1868812	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#0023325 (SP 0503-91) D-3: US10/MN-23 PEDESTRIAN CONNECTIVITY	Pedestrians and bicyclists	Pedestrians and bicyclists – other	4	Intersections	$800641	$1779201	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Pedestrians	Improve midblock crossings
#5624015 (SP 5680-152) D-4: RURAL INTERCHANGE LIGHTING ON I-94	Lighting	Interchange lighting	7	Interchanges	$1137600	$1272000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Intersections	Intersection lighting

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
#2423119 (SP 2482-80) D-6: HIGH TENSION CABLE BARRIER ON I-90	Roadside	Barrier – cable	6.4	Miles	$1550055	$1722284	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Roadway Departure	High tension cable median barrier
#4023057 (SP 4002-49S; 040-070-006) D-7: ROUNDABOUT AT MN-13/CSAH-28	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1573388	$1748208	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#4323116 (SP 4302-96; 043-070-020) D-8: ROUNDABOUT AT MN-7/CSAH-1	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1672000	$2279582	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#5123085 (SP 5104-42) D-8: LEFT TURN LANES ON US-59 AT 29TH ST AND 30TH ST	Intersection geometry	Add/modify auxiliary lanes	2	Intersections	$336091	$373434	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Reduce rear-ends
#8823018 (SP 8828-252) D-8: LED STOP SIGNS AT VARIOUS TRUNK HWY INTERSECTIONS	Roadway signs and traffic control	Roadway signs and traffic control - other	16	Intersections	$143773	$159748	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Intersections	Improve visibility
#8023200 (SP 080-070-011) WADENA COUNTY: 6-IN EPOXY EDGELINES	Roadway delineation	Wider Edge Lines (6 inch markings)	60.4	Miles	$264097	$293441	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#7323231 (SP 073-070-025) STEARNS COUNTY: ROUNDABOUT AT CSAH-4/CSAH-33	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$800000	$1800000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Spot	Intersections	Roundabout
#1723117 (SP 017-070-011; -013) COTTONWOOD COUNTY: SINUSOIDAL RUMBLE STRIPS AND GIWR AT VARIOUS COUNTY ROADS	Roadway	Rumble strips – edge or shoulder	239	Miles	$1163105	$1252404	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs
#8823151 (SP 8824-207) D-4: 6-IN EDGELINES ON VARIOUS STATE ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	158	Miles	$716539	$796155	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#4923179 (SP 049-070-029) MORRISON COUNTY: 6-IN MULTICOMP EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	44.5	Miles	$207471	$230524	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#1123199 (SP 011-070-010) CASS COUNTY: 6-IN MULTICOMP EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	122.1	Miles	$471790	$524211	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines

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
#7923092 (SP 079-070-021) WABASHA COUNTY: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	207.7	Miles	$266674	$296305	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#7423184 (SP 074-070-007) STEELE COUNTY: COUNTYWIDE RUMBLE STRIPS	Roadway	Rumble strips – edge or shoulder	116	Miles	$354400	$393840	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs
#6623140 (SP 066-070-027S) RICE COUNTY: ROUNDABOUT AT AT I-35/MN19/CSAH-46/CR 59	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$800000	$1275000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	Roundabout
#3423242 (SP 034-070-014) KANDIYOHI COUNTY: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	43.9	Miles	$243071	$270079	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#8723281 (SP 087-070-019) YELLOW MEDICINE COUNTY: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	89.8	Miles	$52533	$58370	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#6523272 (SP 065-070-012) RENVILLE COUNTY: 6-IN EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	124	Miles	$83700	$93000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#5123216 (SP 051-070-005) MURRAY COUNTY: 6-IN GIWR EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	51.8	Miles	$524722	$583025	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#8823011 (SP 8823-407) D-3: HIGH TENSION CABLE BARRIER ON US-10, MN-27, AND MN-65	Roadside	Barrier – cable	30.3	Miles	$6800825	$7556472	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Roadway Departure	High tension cable median barrier
#8823146 (SP 8823-344) D-3: PAVEMENT MARKINGS AT VARIOUS TRUNK HWY SITES IN CASS AND AITKIN CO.	Roadway delineation	Wider Edge Lines (6 inch markings)	80	Miles	$1056026	$1173362	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	State Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#8823146 (SP 8823-344) D-3: PAVEMENT MARKINGS AT VARIOUS TRUNK HWY SITES IN CASS AND AITKIN CO.	Roadway delineation	Wider Edge Lines (6 inch markings)	80	Miles	$1056026	$1173362	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Lane Departure	Enhanced edgelines

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
#8823264 (SP 8827-390) D-7: CENTER- AND EDGE-LINE RUMBLE STRIPS AT VARIOUS STATE HIGHWAYS	Roadway	Rumble strips – edge or shoulder	20	Miles	$455988	$509860	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Lane Departure	Rumble stripEs
#0123248 (SP 001-070-010) AITKIN COUNTY: COUNTYWIDE 6-IN GIWR AND STOP AHEAD/STOP BARS	Roadway delineation	Wider Edge Lines (6 inch markings)	33.2	Miles	$124410	$124410	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#0423227 (SP 004-070-042; -043) BELTRAMI COUNTY: TURN LANES ON CSAH-21	Intersection geometry	Add/modify auxiliary lanes	2	Intersections	$450000	$1123239	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Intersections	Reduce rear-ends
#7123177 (SP 071-070-045) SHERBURNE COUNTY: SINUSOIDAL RUMBLE STRIPS AT VARIOUS COUNTY ROADS	Roadway	Rumble strips – edge or shoulder	24.1	Miles	$24634	$27371	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs
#7023142 (SP 071-070-044) SHERBURNE COUNTY: INTERSECTION LIGHTING AT VARIOUS COUNTY INTERSECTIONS	Lighting	Intersection lighting	26	Intersections	$331200	$521577	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Intersections	Intersection lighting
#2423207 (SP 024-070-033) FREEBORN COUNTY: CLEAR ZONE IMPROVEMENTS ON CSAH-26	Roadside	Removal of fixed objects (trees, poles, etc.)	7	Miles	$450000	$500000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Minimize hazards of leaving roadway
#4023189 (SP 237-070-001) CITY OF NEW PRAGUE: RRFB AT MSAS 112/1ST ST	Pedestrians and bicyclists	Rapid Rectangular Flashing Beacons (RRFB)	1	Intersections	$58500	$65000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	City or Municipal Highway Agency	Systemic	Pedestrians	Improve intersection crossings
#6423221 (SP 064-070-009) REDWOOD COUNTY: INTERSECTION LIGHTING AT VARIOUS COUNTY INTERSECTIONS	Lighting	Intersection lighting	4	Intersections	$125000	$135000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Intersections	Intersection lighting
#8823285 (SP 088-070-088) SHERBURNE COUNTY: PRELIMINARY ENGINEERING ON SINUSOIDAL RUMBLES AND INTERSECTION LIGHTING	Miscellaneous	Miscellaneous - other	1	Studies	$101246	$101246	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Data	Safety studies

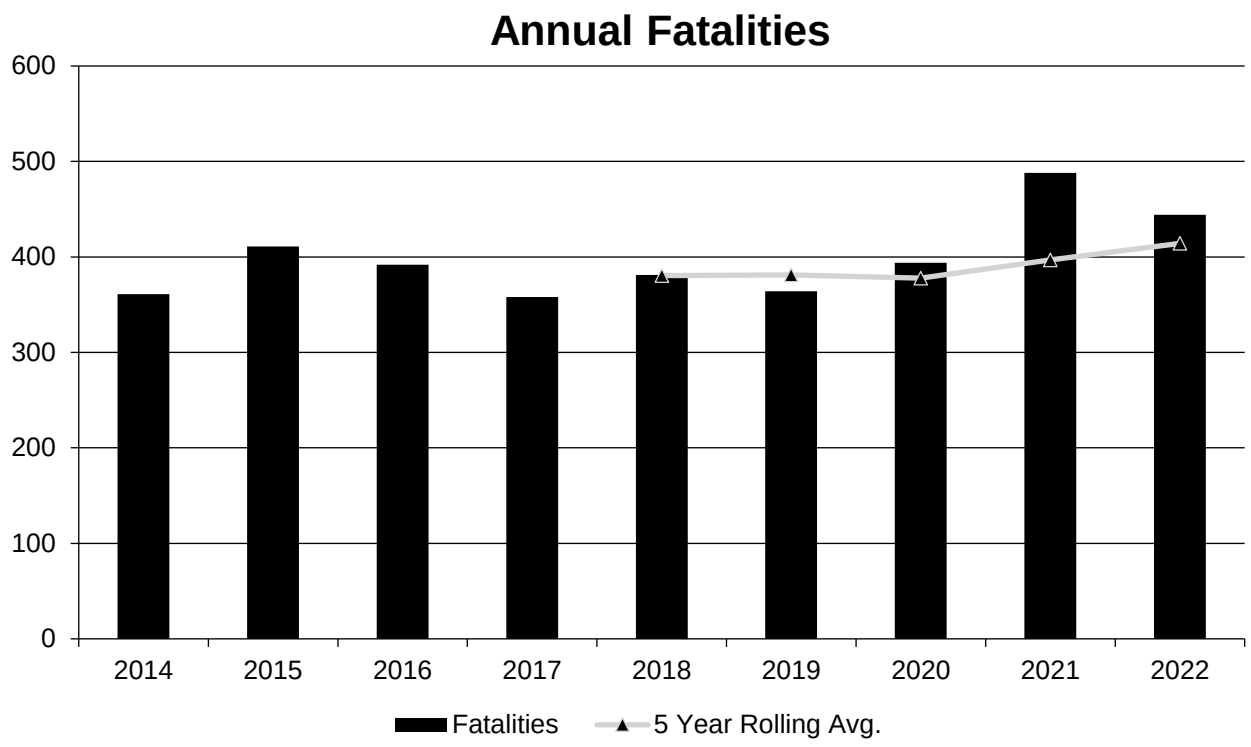
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
#6923223 (SP 069-070-075; -076) ST LOUIS COUNTY: HIGH FRICTION SURFACE TREATMENT ON VARIOUS CURVES	Roadway	Pavement surface – high friction surface	12	Curves	$880334	$978149	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Keep vehicles on road
#4923198 (SP 049-070-034) MORRISON COUNTY: CHEVRONS ON VARIOUS COUNTY CURVES	Roadway signs and traffic control	Curve-related warning signs and flashers	118	Curves	$77667	$77667	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Roadway Departure	Delinate curves
#7123209 (SP 071-070-046) SHERBURNE COUNTY: 6-IN GIWR EDGELINES ON VARIOUS COUNTY ROADS	Roadway delineation	Wider Edge Lines (6 inch markings)	54	Miles	$400000	$444444	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Enhanced edgelines
#5523241 (SP 055-070-024) OLMSTED COUNTY: COUNTYWIDE CENTER- AND EDGE-LINE RUMBLE STRIPES	Roadway	Rumble strips – center	44.9	Miles	$669425	$669425	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs
#2823232 (SP 028-070-010; -616-006) HOUSTON COUNTY: 2-FT PAVED SHOULDER, RUMBLE STRIPES ON CSAH-16	Roadway	Rumble strips – edge or shoulder	4.6	Miles	$175000	$247860	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	County Highway Agency	Systemic	Lane Departure	Rumble stripEs

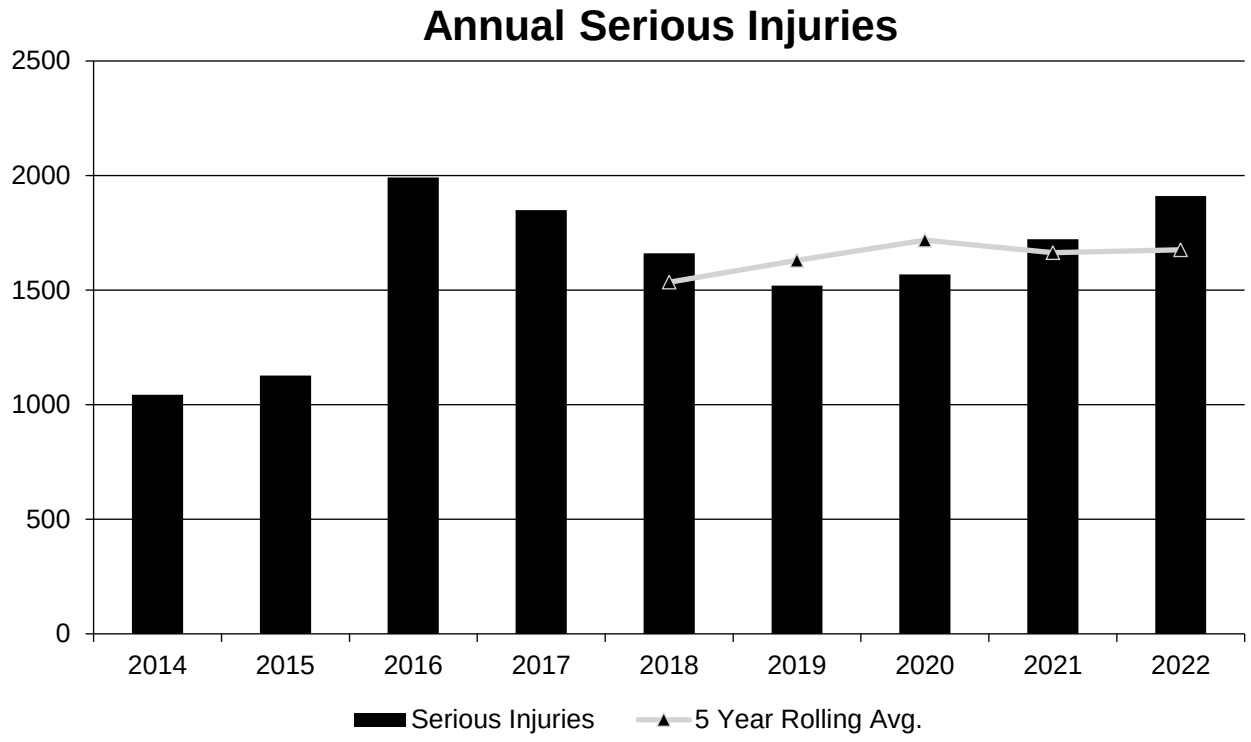
Safety Performance

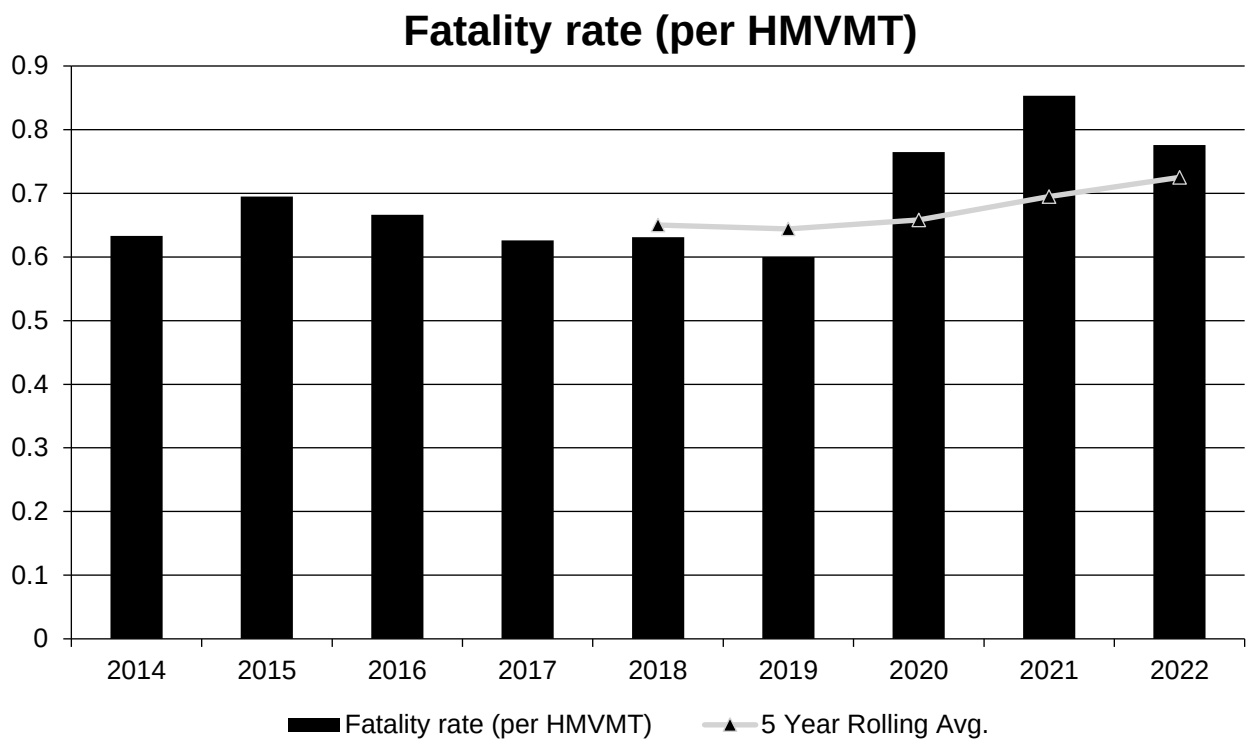
General Highway Safety Trends

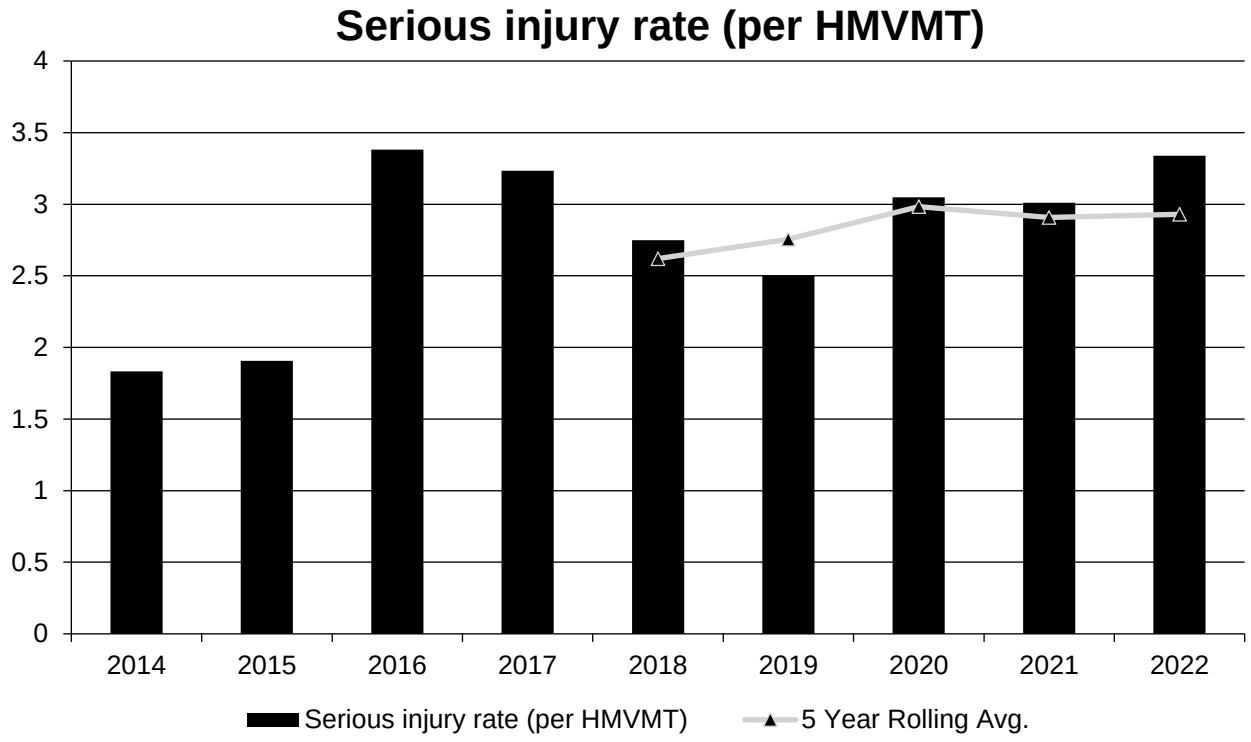
Present data showing the general highway safety trends in the State for the past five years.

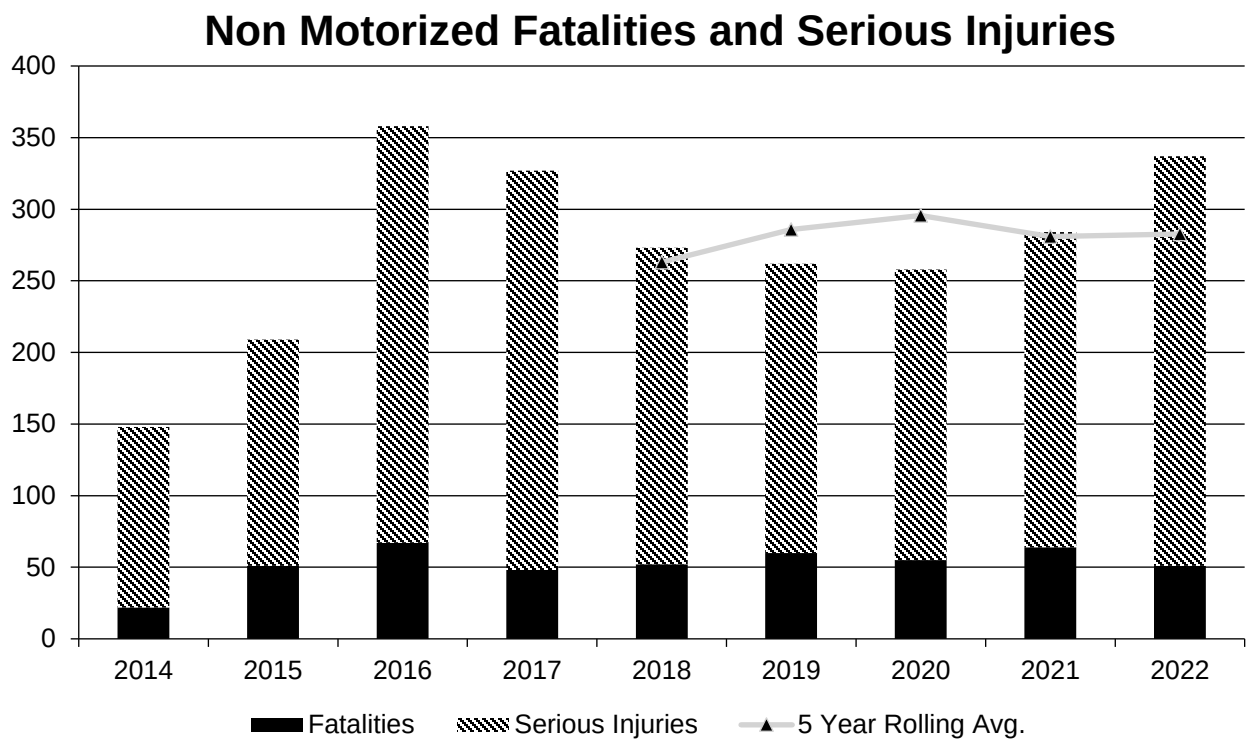
PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fatalities	361	411	392	358	381	364	394	488	444
Serious Injuries	1,044	1,127	1,992	1,849	1,660	1,520	1,569	1,722	1,910
Fatality rate (per HMVMT)	0.633	0.695	0.666	0.626	0.631	0.600	0.765	0.853	0.776
Serious injury rate (per HMVMT)	1.832	1.907	3.382	3.233	2.748	2.504	3.047	3.010	3.339
Number non-motorized fatalities	22	51	67	48	52	60	55	64	51
Number of non-motorized serious injuries	126	158	291	279	221	202	203	220	286


Annual Fatalities
600
500
400
300
200
100
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
2500
2000
1500
1000
500
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
4
3.5
3
2.5
2
1.5
1
0.5
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



With the introduction of "Suspected Serious Injury (A)" definitions, the number of reported serious injury crashes increased over 80 percent in the first year (i.e., 2016) relative to prior baselines. This initial increase persisted: by 2019, the number of serious injury crashes statewide were 55 to 60 percent greater than the pre-report change. However, this trend was not equal across all roadway jurisdictions. The initial increase on state highways was only 36 percent which dropped to 10 to 15 percent by 2019; on local roadways, this was an initial doubling of serious injury crashes dropping to 75 to 80 percent by 2019.
Similarly, recent trends in severe crash trends have not been even across all jurisdictions. Comparing the three years before and after (i.e., 2017-2019 vs. 2020-2022), there were larger increases in fatal and serious injury crashes on the state system and county system. While this trend initially paralleled the shifts in traffic patterns early on, it remain to be seen if this is a long-term shift in safety patterns. Continued HSIP support to local agencies is vital in Minnesota.

See attached PDF for a summary of fatal and serious injury crashes by SHSP focus area from 2020 to 2022.

Describe fatality data source.

State Motor Vehicle Crash Database

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

Year 2020

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				

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) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other				
Rural Minor Arterial				
Rural Minor Collector				
Rural Major Collector				
Rural Local Road or Street				
Urban Principal Arterial (UPA) - Interstate				
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other				
Urban Minor Arterial				
Urban Minor Collector				
Urban Major Collector				
Urban Local Road or Street				

Year 2022

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	188.2	453.8	0.57	1.38
County Highway Agency	150.6	683.4	1.1	5
Town or Township Highway Agency	24	118.4	1.97	9.72
City or Municipal Highway Agency	51.4	420.6	0.55	4.48
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				

Functional classification trends are intentionally left blank due to quality concerns in linking the datasets.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2024 Targets *

Number of Fatalities:352.4

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

Overall from 2018 to 2022, fatalities increased on average 6% annually. Given this environment, it is not reasonable to apply the trend toward SHSP goals in 2025. However, Minnesota does not support setting targets greater than the prior year. The 2024 target is set equal to the 2023 target.

Number of Serious Injuries:1463.4

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

Overall from 2018 to 2022, serious injuries increased on average 4% annually. Given this environment, it is not reasonable to apply the trend toward SHSP goals in 2025. However, Minnesota does not support setting targets greater than the prior year. The 2024 target is set equal to the 2023 target.

Fatality Rate:0.582

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

Overall from 2018 to 2022, the statewide fatality rate increased on average 8% annually. Given this environment, it is not reasonable to apply the trend toward SHSP goals in 2025. However, Minnesota does not support setting targets greater than the prior year. The 2024 target is set equal to the 2023 target.

Serious Injury Rate:2.470

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

Overall from 2018 to 2022, the statewide serious injury rate increased on average 6% annually. Given this environment, it is not reasonable to apply the trend toward SHSP goals in 2025. However, Minnesota does not support setting targets greater than the prior year. The 2024 target is set equal to the 2023 target.

Total Number of Non-Motorized Fatalities and Serious Injuries:258.4

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

Overall from 2018 to 2022, the number of people walking and biking killed or seriously injured increased on average 5% annually. Given this environment, it is not reasonable to apply the trend toward SHSP goals in 2025. However, Minnesota does not support setting targets greater than the prior year. The 2024 target is set equal to the 2023 target.

Minnesota supports setting aspirational targets but these must be achievable. Given the outcomes of 2020 and 2021, a large, sustained reduction would be needed in all measures to maintain the prior methodology of progress toward the Strategic Highway Safety Plan (SHSP) goals of no more than 225 fatalities and 980 serious injuries by 2025. While using a data-driven approach, Minnesota does not support setting targets greater than the prior year. The 2024 targets are equal to the 2023 targets. To meet these targets, traffic fatalities and serious injuries must be reduced by 10 to 15 percent annually in 2023 and 2024. This will require innovative thinking and sustained support to achieve these goals given recent trends in traffic safety.

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

Methodologies were coordinated between MnDOT and Department of Public Safety based on input from respective stakeholders. Given the recent safety challenges, it was recognized the targets should (1) take into account the pandemic spike in fatalities; (2) measure progress toward Strategic Highway Safety Plan goal rather than prior trends alone; and (3) not be set higher than prior years. This last point was particularly important to our MPO partners. Furthermore, we heard from stakeholders and leadership that targets should be set to inspire action but not be unachievable.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2022 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	352.4	414.2
Number of Serious Injuries	1463.4	1676.2
Fatality Rate	0.582	0.725
Serious Injury Rate	2.470	2.930
Non-Motorized Fatalities and Serious Injuries	258.4	282.8

Recent spikes in fatalities and serious injuries continue be a significant challenge for Minnesota in achieving performance targets. Outcomes in 2022 and preliminary trends in 2023 show a return to annual reductions in fatalities, although likely still elevated from 2019. However, serious injuries have continued to grow.

Minnesota does not anticipate meeting or making significant progress toward 2022 targets. There will not be an about-face in the state's traffic safety program, but upcoming changes to better address challenges are being incorporated. These include additional considerations for vulnerable users in annual HSIP solicitations, reinvigorating local road safety planning, and integrating Safe System approaches to reduce the severity of crashes.

Applicability of Special Rules

Does the VRU Safety Special Rule apply to the State for this reporting period?

No

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	2016	2017	2018	2019	2020	2021	2022
Number of Older Driver and Pedestrian Fatalities	77	68	59	68	61	92	94
Number of Older Driver and Pedestrian Serious Injuries	160	164	150	174	130	166	185

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries
- Other-Change in fatal and serious injury crashes

Minnesota measures success in the change of fatalities and serious injuries: this analysis is applied statewide as well as geographically to ensure no one segment of the state is left behind or burdened with more risk. In communicating the effect of our Toward Zero Deaths program, we will cite potential lives saved had the number of statewide fatalities remained unchanged since 2003. While this metric is compelling for communicating the impact, it is not used as a measure of effectiveness.

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

Minnesota's HSIP strategies and tactics (action items) from the current plan are still applicable. MnDOT and partners are still working on tactics and believe there are still opportunities to achieve "low hanging fruit" or low cost/high impact items. In addition, MnDOT and partners are looking toward what segments may have been underserved (e.g., vulnerable road users or environmental justice) and ensuring safety remains at the table as economic trade-offs need to be negotiated.

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

- Other-Under consideration

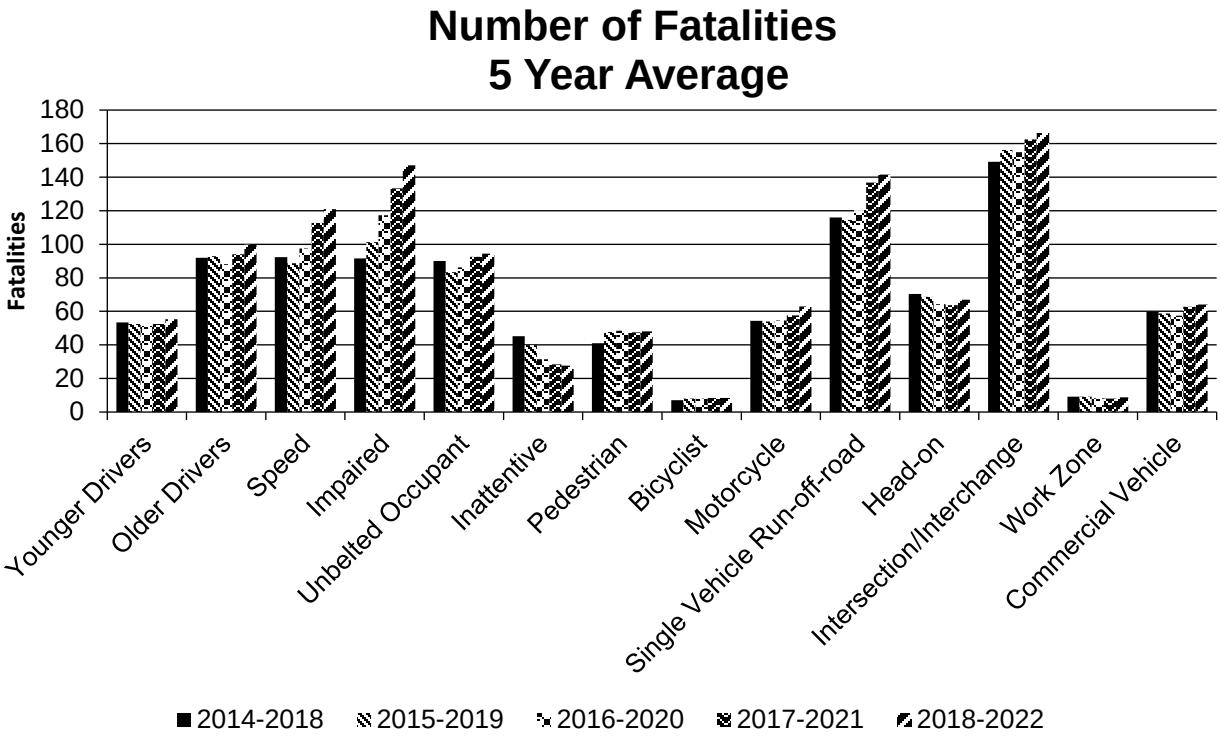
Minnesota demonstrates the success of the HSIP through reduction in fatalities and serious injuries. This is a "lagging indicator" (i.e., outcome based) that is also influenced by other environmental factors, as the last three years have demonstrated. As MnDOT shifts to a more Safe System approach, new "leading indicators" (i.e., metrics associated with expected improved safety) are under consideration.

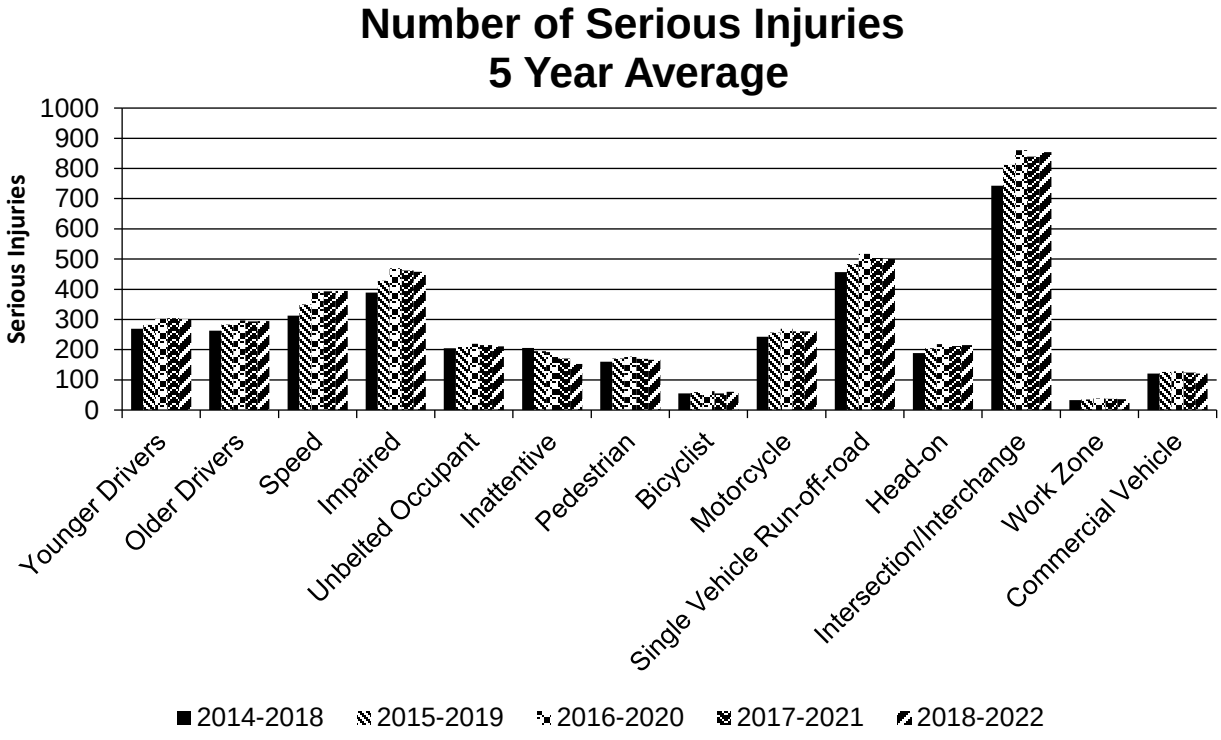
Effectiveness of Groupings or Similar Types of Improvements

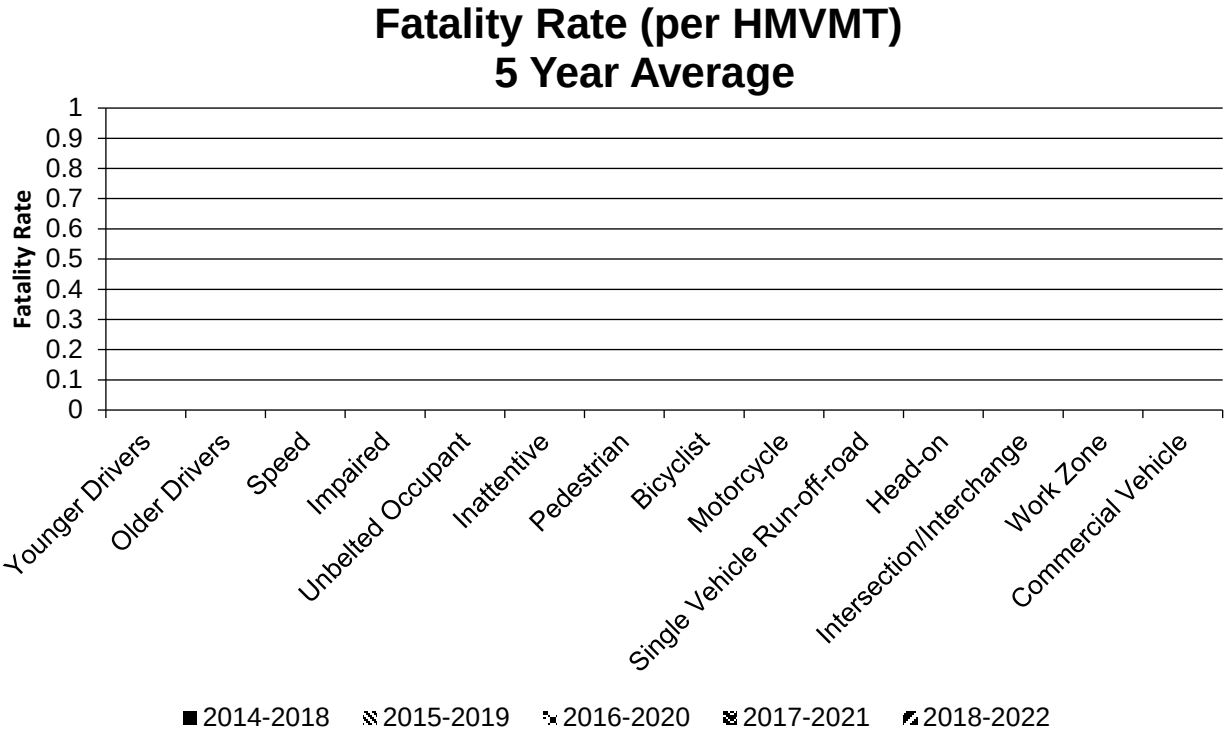
Present and describe trends in SHSP emphasis area performance measures.

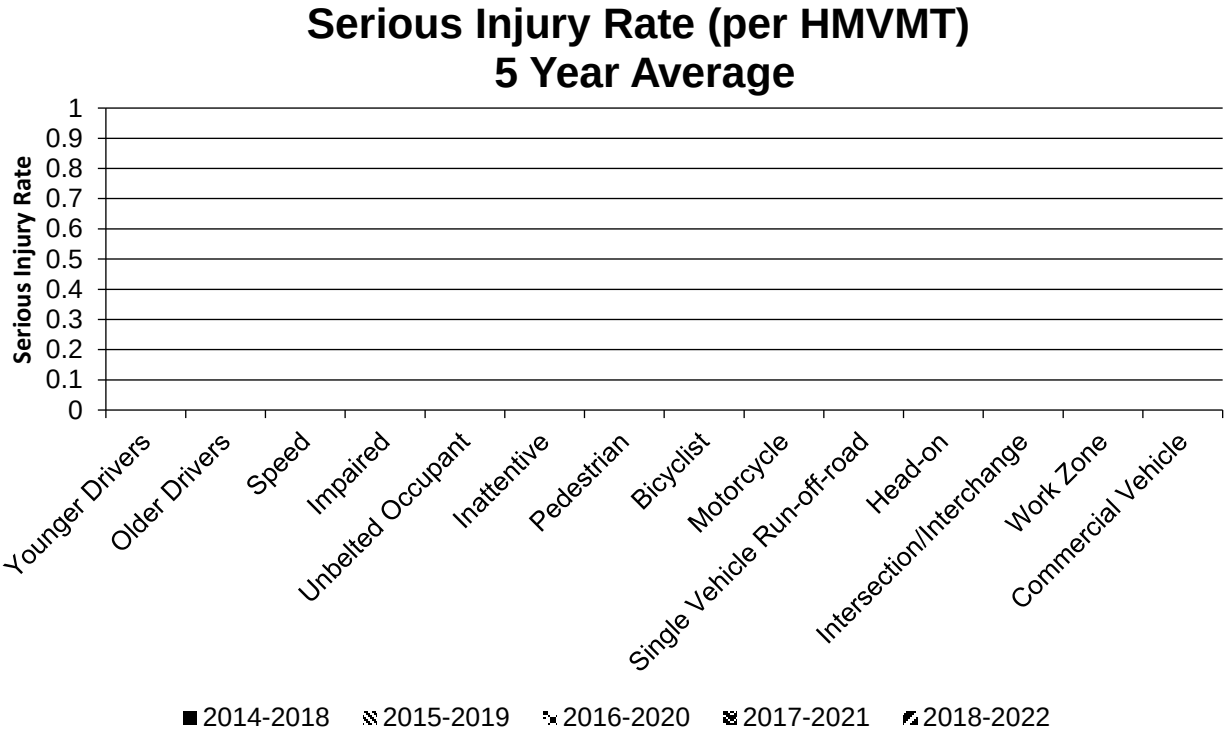
Year 2022

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)	FATAL CRASHES	SERIOUS INJURY CRASHES	FATAL AND SERIOUS INJURY
Younger Drivers		55.4	301			50.2	234.8	285
Older Drivers		99.8	295			91.6	238.6	330.2
Speed		121	394.6			109.6	308.2	417.8
Impaired		147	457.6			136.2	367.8	504
Unbelted Occupant		94.4	210.6			94.2	172.8	267
Inattentive		27.6	152.2			26	123.4	149.4
Pedestrian		48	166			47.6	162.2	209.8
Bicyclist		8.4	60			8.6	59.2	67.8
Motorcycle		63	260.4			62	241	303
Single Vehicle Run-off-road		141.6	499.8			135.4	434.8	570.2
Head-on		67	215			56.4	148	204.4
Intersection/Interchange		166.4	854.2			156.4	723	879.4
Work Zone		8.8	35.6			8.2	31.6	39.8
Commercial Vehicle		64	121.2			58.8	97.6	156.4


Number of Fatalities
5 Year Average
Fatalities
180
160
140
120
100
80
60
40
20
0
Younger Drivers
Older Drivers
Speed
Impaired
Unbelted Occupant
Inattentive
Pedestrian
Bicyclist
Motorcycle
Single Vehicle Run-off-road
Head-on
Intersection/Interchange
Work Zone
Commercial Vehicle
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022


Number of Serious Injuries
5 Year Average
Serious Injuries
1000
900
800
700
600
500
400
300
200
100
0
Younger Drivers
Older Drivers
Speed
Impaired
Unbelted Occupant
Inattentive
Pedestrian
Bicyclist
Motorcycle
Single Vehicle Run-off-road
Head-on
Intersection/Interchange
Work Zone
Commercial Vehicle
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022





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

Yes

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

CounterMeasures:	High Tension Cable Median Barrier
Description:	
Target Crash Type:	Cross median
Number of Installations:	
Number of Installations:	
Miles Treated:	
Years Before:	
Years After:	
Methodology:	Other (define)
Results:	Equation for CMF for offset greater than 0 feet: [a] CMF total crashes = (offset x 1/8) ^ -0.1498; [b] CMF cross median crashes = exp(-0.0186 x (offset - 8)); CMF barrier crashes = exp(-0.0204 x (offset - 8)). As the barrier was placed farther away from the inside edge line, total crashes, target crashes, and barrier crashes re expected to decrease. These CMFs can be used by practitioners to determine the impact to crash frequency by changing the barrier's position in the median.

File Name: HTCB-evaluation-report.pdf

CounterMeasures:	High Tension Cable Median Barrier
Description:	
Target Crash Type:	Cross median
Number of Installations:	
Number of Installations:	
Miles Treated:	
Years Before:	
Years After:	
Methodology:	Simple before/after
Results:	All the CMFs were statistically different from 1.0 at the 5% significance level (95% confidence level). Total and target crashes increased when barriers were installed, while KA, KAB, and KABC crashes decreased (CMFs for K crashes were not estimated due to small samples). In reviewing these CMFs, it was important to consider that the definition of A and B crashes changed in 2016, and the naïve analysis did not explicitly account for these changes. Total KA crashes: CMF = 0.682 Total crashes: CMF = 1.288 Target KA crashes: CMF = 0.017 Target total crashes: CMF = 0.009

2023 Minnesota Highway Safety Improvement Program

File Name: Hyperlink

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)
PROJECT SPECIFIC EVALUATIONS NOT CONDUCTED														

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

Despite recent upticks in traffic fatalities, Minnesota continues to believe the focus of the HSIP is effective. The core of the safety program remains to reduce fatalities and serious injuries on all roads: with 70 percent of severe crashes occurring on the local system, the continued distribution of HSIP funds to local agencies remains important. The program is data driven, responding to both sustained crash locations and proactive, risk based methodologies. By prioritizing safety projects that implement cost-effective (e.g., benefit-cost ratio greater than 1.00), widely deployed, proven countermeasures with a prior systemic plan or safety analysis, Minnesota is able to provide the most safety benefit for the investment.

Compliance Assessment

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

07/01/2020

What are the years being covered by the current SHSP?

From: 2020 To: 2024

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

2025

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	90
	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	80		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100	100	90
	End Point Segment Descriptor (11) [11]	100	100					100	100	100	90
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
	Functional Class (19) [19]	100	100					100	100	100	90
	Median Type (54) [55]	100	100								

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
	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	100		
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	90
INTERSECTION	Unique Junction Identifier (120) [110]			95	100						
	Location Identifier for Road 1 Crossing Point (122) [112]			95	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			95	100						
	Intersection/Junction Geometry (126) [116]			95	100						
	Intersection/Junction Traffic Control (131) [131]			95	100						
	AADT for Each Intersecting Road (79) [81]			95	100						
	AADT Year (80) [82]			95	100						
	Unique Approach Identifier (139) [129]			95	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					95	100				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					100	100				

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
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					100	100				
	Roadway Type at End Ramp Terminal (199) [189]					100	100				
	Interchange Type (182) [172]					95	100				
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					100	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					70	100				
Totals (Average Percent Complete):		**100.00**	**100.00**	**95.00**	**100.00**	**96.36**	**100.00**	**100.00**	**97.78**	**100.00**	**90.00**

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

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.

Minnesota anticipates having complete access to MIRE Fundamental Data Elements on all public roads. Verification of existing data quality continues at MnDOT Office of Transportation System Management (OTSM) to ensure existing default values are appropriate and local agencies can continue to update datasets.

Optional Attachments

Program Structure:

2023-06-26_HSIP-Implementation-Report.pdf
HSIP funding guide FINAL.pdf
Project Implementation:

Safety Performance:

MN_SHSP-Crib-Sheets_K-A-crashes_2020-2022.pdf
Evaluation:

HTCB-evaluation-report.pdf
Compliance Assessment:

Glossary

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

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

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

HMVMT: means hundred million vehicle miles traveled.

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

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

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

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

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

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

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

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

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