MICHIGAN

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2024 ANNUAL REPORT

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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

The 2024 HSIP Annual Report for the Michigan Department of Transportation (MDOT) will be for the one year time period of FY 2023 which commenced on October 1, 2022 and ended on September 30, 2023. This report addresses safety improvements funded through MDOT on both trunkline and non-trunkline roadways.

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 general structure of the HSIP is to select cost-effective safety improvements, as identified in Michigan's Strategic Highway Safety Plan (SHSP), to address locations with correctable fatality (K) and serious injury (A) crashes. Projects are selected and identified during the annual Call for Projects process for trunkline and non-trunkline roadways. The selected projects are designed and implemented via the Region offices and Local Agency Programs oversight. Before and After studies are conducted to evaluate the effectiveness of a particular countermeasure.

Where is HSIP staff located within the State DOT?

Other-TSMO (Transportation Systems Management and Operations)

The HSIP Trunkline program is managed out of the MDOT Central Office in the Bureau of Field Services - TSMO Division - Traffic and Safety Section - Safety Programs/Pavement Markings.

The HSIP Local Agency (non-trunkline) program is managed out of the MDOT Central Office in the Bureau of Highway Development - Development Services Division - Local Agency Program - Special Funding Program.

How are HSIP funds allocated in a State?

- Other-Central Office via Statewide Formula via MDOT Regions
- Other-Central Office via Statewide Competitive Application Process for Local Agencies
- Other-Central Office via Funding Set Aside

The Lansing Central Office managed a separate Call for Projects process for both Trunkline and Non-Trunkline roadways. There is also a funding set aside directly for Trunkline pavement markings and delineation.

The statewide Trunkline Call for Projects has specific funding for each of the seven MDOT Regions. The funding targets are calculated based on lane miles, traffic volumes, and Fatality and Serious injuries that occur within each Region. The Trunkline Call for Projects cycles on a five-year call for projects platform.

The Local Agency (non-trunkline) Call for Projects is a competitive application process between all the local agencies of Michigan and cycles on a two-year call for projects.

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

For the local roadway network HSIP funds, originally, $15M was programmed. Due to additional funding from the Bipartisan Infrastructure Law (BIL), $25M were obligated by the Local Agency Programs Safety Engineer located in the Central Office. The HSIP funds were originally allocated to three separate Call for Projects: $6M for High-Risk Rural Roads (HRRR), $7.5M for General Highway Safety Improvement Program (HSIP), and $1.5M for Streamlined Systemic HSIP. Typically, only the construction phase is eligible for federal aid. Preliminary engineering costs were eligible for federal participation if it was for a project identified by the Local Safety Initiative (LSI), in a Road Safety Audit (RSA), or in a traffic signal optimization project. Otherwise, preliminary engineering was not eligible for federal safety funds.

General HSIP and HRRR Projects are federally funded up to an amount not to exceed $600,000 of Federal funding per project. Streamlined Systemic HSIP projects are federally funded up to an amount not to exceed $200,000. If multiple projects from one Local Agency are selected in the Streamlined Systemic HSIP program, multiple projects were programmed together, not to exceed $600,000, into one project to provide time and cost savings during the letting process. A maximum amount of $1.5M per Local Agency per fiscal year was allowed. HRRR and Streamlined Systemic HSIP projects were funded at 90 percent federal and 10 percent Local Agency match. General HSIP Projects are funded with a combined 90 or 80 percent federal and 10 or 20 percent Local Agency match. General HSIP Projects funded at 90 percent were required to address a roadway feature related to a fatality (K) and/or an incapacitating (A) injury within the limits of proposed work.

All Local Agencies within Metropolitan Planning Organizations (MPO) areas must coordinate with their MPO to ensure inclusion of their project in the area’s Transportation Improvement Plan (TIP). Those Local Agencies that are part of a rural task force are to notify their members that they applied for safety funds. Rural task force approval is not necessary. MDOT Local Agency Programs (LAP) coordinates with MDOT Planning to ensure these projects are included in the Statewide Transportation Improvement Plan (STIP).

The planning and selection of projects for the local roadway system is very similar to that of the state trunkline. Local agencies were invited by a February 1, 2021 memorandum to submit proposed projects for consideration as part of an annual Call for Projects (CFP). All Local Agencies (counties, cities, tribes and villages) are able to apply for the funds. MDOT asked the County Road Association of Michigan and the Michigan Municipal League to distribute this notice to their member agencies. Townships were also eligible to receive the safety funds but must work with their respective local agency for submittal of the application. The emphasis of the local FY 2023 CFP was to address those locations with correctable fatality and injury crashes to support the department’s efforts of reducing fatalities and serious injuries striving for Toward Zero Deaths. Per the CFP, the Local Agency was to provide a Time of Return (TOR) analysis showing how the proposed improvement would address fatalities and all injuries. In the TOR, all crash types and severity levels correctable by the proposed improvement can be included. A maximum of five years of available crash data is to be used in the TOR analysis. For FY 2023 call for projects, 2015 to 2019 (or the current availability) crash data was used.

Eligible projects must meet current design standards and warrants. Project types may be either systemic or spot locations and may include replacement, installation or elimination of guardrail, removal of fixed objects from clear zones, traffic and pedestrian signal optimization, installation and upgrades of traffic signals, access management, horizontal and vertical curve modifications, sight distance and drainage improvements, bridge railing replacement or retrofit, roadway intersection improvements specifically to improve safety, mid-block pedestrian crossings, improvements to school zones, shoulder and centerline rumble strips, and improved permanent signing and pavement markings, or any other safety related work.

For the FY 2023 CFP, an emphasis was placed on the identification of correctable fatalities and serious injuries, both in the selection and the prioritization of safety projects. A portion of the local safety funds were allocated to six subprograms in 2023: Projects with scopes that directly address areas with a concentration of K and A crashes ($11M), Non-motorized Facility/Pedestrian Improvements ($850K), High Friction Surface

Treatment ($500K), Road Safety Audits ($60K), Guardrail Upgrades and Clear Zone Improvements ($750K), and Safety Funds per MDOT Region ($500K). Each selected project could count towards multiple subprograms. Local agencies were informed of the listed subprograms and encouraged to submit projects based on the subcategories.

The Streamlined Systemic program allowed the submittal of six specific project types: Horizontal Curve Delineation, Edgeline Pavement Markings (on roadways that did not previously have striped edgelines), Rumble Strips/Corrugations (centerline and edgeline, or both), Signal backplates, Countdown Pedestrian Signals, and Stop Controlled Intersection Sign Upgrade projects.

The FY 2023 CFP letter was updated to clarify the eligibility of tribal organizations and tribal roadways. Federally recognized Tribes are allowed to submit applications for safety funds directly during the call for projects time frame instead of through their corresponding Local Agency. There were not any funds directed to tribal organizations in 2023, as no tribal organizations submitted an application.

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

- Design
- Districts/Regions
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Local Agency Programs
- Other-TSMO

Describe coordination with internal partners.

MDOT's Safety Programs Unit provides support and coordination to internal partners within the Department. Each of the seven Regions is comprised of a Traffic Safety and Operations Engineer as well as Traffic and Safety Engineers located in the Transportation Service Center (TSC) offices. Employees within the Safety Programs Unit distribute the High Crash List and Pavement Friction Analysis to the Region and TSC staff for their use in project selection. Road Safety Audits and 3R/4R Safety Reviews are conducted with various internal partners located within the Central, Region, and TSC offices. In addition, the Safety Programs Unit supports the Regions and TSC's with special data requests in the development of their safety program including various types of GIS mapping.

HSIP funding partnering is also coordinated between the Safety Programs Unit and Local Agency Programs.

Internal training is also provided to new Traffic and Safety staff including the TOR form, HSM spreadsheet, Roadsoft, and general safety information related to the call for projects and MDOT standards and guidance.

Identify which external partners are involved with HSIP planning.

- Academia/University
- FHWA
- Local Government Agency
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-County Road Association of Michigan
- Other-Office of Highway Safety Planning
- Other-Michigan's Local Technical Assistance Program

- Other-State Highway Strategic Planning Action Teams

Describe coordination with external partners.

MDOT coordinates with various Colleges and Universities to provide research opportunities on existing and upcoming safety countermeasures. MDOT coordinates with FHWA on existing and proposed federal legislation and standards. MDOT also coordinates with the County Road Association, Regional Planning Organizations, and Local Government Agencies to help communicate safety initiatives and safety countermeasures. Overall, MDOT is vigilant about coordination with external partners specifically to promote Toward Zero Deaths (TZD) initiatives as a member of the Governors Traffic Safety Advisory Council (GTSAC). MDOT will continue to assist the Office of Highway Safety Planning (OHSP) and the GTSAC in planning Engineering sessions for the Annual Michigan Traffic Safety Summit. MDOT has provided scholarship opportunities to Local Agencies to attend the Traffic Safety Summit to help educate them on TZD Initiatives and to help reduce fatalities and serious injuries on every roadway in Michigan.

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

For the State Trunkline Program, safety funds are administered by the Safety Template Program Manager in Traffic and Safety (Central Office). For FY 2023, $21.5 M in safety funding was available, of which $16.6 M was allocated to the seven MDOT Regions as funding targets. The allocations were based on the percentage of fatalities and serious injuries, lane miles and Vehicle Miles Traveled in each Region. The goal is that all Regions receive a minimum of 5 percent of the Safety Target. $3.5 M of the safety funds was reserved by the Traffic and Safety area to apply to projects in any Region at their discretion. The Regions were permitted to submit candidate projects with total costs exceeding their funding targets; the central office review team then selected the projects to be funded in each Region, taking into account priorities expressed by the Regional staffs, and use their discretionary funds to apply to worthy projects that exceeded a particular Region’s funding target. All project phases; preliminary engineering, construction engineering, right of way and construction are eligible for safety funding. In addition, each Region was given $200,000 for low-cost safety improvements to be chosen at the discretion of the Region staff.

Local Road Safety HSIP administration is explained under the previous Addressing Local Safety question. It should be reiterated that originally, $15M was programmed, but due to additional funding from the Bipartisan Infrastructure Law (BIL), $25M was obligated. The Local Road Safety program continues to communicate with Local Agencies on new and emerging technologies and crash reductions focusing on Vulnerable Road Users, High Risk Rural Roads and Systemic type projects.

Program Methodology

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

Yes

A HSIP Manual describing the planning, selection, and evaluation of HSIP projects for the state trunkline program is provided as part of the annual Call for Projects (CFP) Process. It is updated yearly to reflect changing CFP subcommittees, funding targets and any other changes that may be necessary.

HSIP planning, selection and evaluation for local roadways (non-trunkline), including the HRRR and VRU Special Rule, are provided annually in the Local Safety CFP and application process. This information is shared through the County Road Association (CRA) and Michigan Municipal League (MML) distribution network. The funding targets, required local match and eligibility requirements are updated yearly.

Select the programs that are administered under the HSIP.

- Vulnerable Road Users
- Other-Pavement Markings
- Other-Highway Safety Call for Projects
- Other-Local Safety Call for Projects
- Other-Local Safety High Risk Rural Roads
- Other-Delineation

The Local Agency Program administers a High Risk Rural Roads (HRRR) program with the Local Safety program.

Program: Vulnerable Road Users

Date of Program Methodology:7/7/2023

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes

- All crashes

Exposure

- Traffic
- Volume

Roadway

- Other-VRU

What project identification methodology was used for this program?

- Crash frequency
- Excess expected crash frequency using SPFs
- Expected crash frequency with EB adjustment
- Other-Systemic VRU Improvements

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

Yes

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

No

Describe the methodology used to identify local road projects as part of this program.

Local VRU projects are identified through competitive application process, based on available funding, cost effectiveness and expected crash frequency.

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
Cost Effectiveness:2

Program: Other-Pavement Markings

Date of Program Methodology:9/1/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
	• Lane miles	• Functional classification

What project identification methodology was used for this program?

- Other-Retroreflectivity of pavement marking

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

No

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

How are projects under this program advanced for implementation?

- Other-funding set aside per each Region

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
Cost Effectiveness:2

Program: Other-Highway Safety Call for Projects

Date of Program Methodology:4/20/2016

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes

- Other-Focus on fatal and serious injury crashes along with fixes based on crash types and patterns

Exposure

- Volume
- Lane miles

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Excess expected crash frequency using SPFs
- Expected crash frequency with EB adjustment
- Level of service of safety (LOSS)
- Probability of specific crash types
- Relative severity index

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

No

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

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:3
Available funding:1
Cost Effectiveness:2

Program: Other-Local Safety Call for Projects

Date of Program Methodology:2/1/2021

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes

- All crashes

Exposure

- Traffic
- Volume

Roadway

- Horizontal curvature
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Excess expected crash frequency using SPFs
- Expected crash frequency with EB adjustment
- Level of service of safety (LOSS)
- Probability of specific crash types
- Relative severity index

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

Yes

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

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:2
Available funding:1
Cost Effectiveness:3
Other-Funding set asides for specific countermeasures:4

Program: Other-Local Safety High Risk Rural Roads

Date of Program Methodology:4/2/2020

What is the justification for this program?

- FHWA focused approach to safety

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes

- Fatal and serious injury crashes only

Exposure

- Traffic
- Volume

Roadway

- Horizontal curvature
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Excess expected crash frequency using SPFs
- Expected crash frequency with EB adjustment
- Level of service of safety (LOSS)
- Probability of specific crash types
- Relative severity index

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

Yes

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

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:2
Available funding:1
Cost Effectiveness:3

Program: Other-Delineation

Date of Program Methodology:10/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes

- Other-Lane departure crashes

Exposure

- Volume

Roadway

- Roadside features

What project identification methodology was used for this program?

- Probability of specific crash types

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

No

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

How are projects under this program advanced for implementation?

- Other-funding set aside

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
Cost Effectiveness:2

What percentage of HSIP funds address systemic improvements?

44

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

- Add/Upgrade/Modify/Remove Traffic Signal
- Clear Zone Improvements
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- Rumble Strips
- Safety Edge
- Upgrade Guard Rails

Systemic projects selected through the Local Safety Call for Projects (CFP) process are awarded a higher federal funding percentage (90 percent federal with 10 percent local match). For the Local system, 8 percent of projects were dedicated to specific systemic type fixes.

The Trunkline Call for Projects (CFP) allowed for up to 25 percent of systemic funded projects. Along with the Annual CFP, MDOT elects to construct longitudinal and special pavement markings as part of the HSIP program. Overall, in FY 2023, 58 percent of the total HSIP Trunkline Program funds (Safety, Pavement Markings, and Delineation) was used for systemic type projects. Regions can use Low-cost Safety Improvement Projects to select systemic type projects.

Overall, 44 percent of HSIP project funds selected were considered to be systemic type fixes (Trunkline Safety, Pavement markings, Delineation, and Local Safety).

What process is used to identify potential countermeasures?

- Crash data analysis
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Other-High Crash List
- Other-Transparency Report
- Other-Fatality and Serious Injury Region-wide Maps
- Other-3R/4R Safety Reviews
- Other-Pavement Friction Analysis
- Other-Customer Concerns
- Other-Local Safety Initiative

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

MDOT is considering connected vehicles and ITS technologies as part of the HSIP program. In response to the need for wider lane markings and proposed changes to national standards, MDOT moved forward with converting four-inch-wide markings to six-inch-wide lane markings on all state highways in summer 2020, beginning with freeway lane lines. As of the end of 2024, MDOT will have completed its implementation of six-inch-wide centerline, lane line, and edge line markings on all state trunklines through annual restriping and through updates to Pavement Marking Standard Plans. Additionally, all freeway exit and entrance ramps now include dotted edge line extensions through taper and merge areas in the field and in Pavement Marking Standard Plans.

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.

Michigan DOT utilizes Part B of the HSM through continued development and use network analysis for the trunkline roadways. The locations that are determined are then provided to Region and Transportation Service Center offices. As they evaluate the locations on the list, Michigan’s own HSM spreadsheet is utilized to develop a substantive perspective. The quantitative performance of alternatives allowed in the spreadsheet have come from three separate research efforts to better understand safety performance in Michigan. Regionally, it was found that there are differences resulting in the latest version of our HSM spreadsheet to account for this in the analysis. Road Safety Audits have been performed both informally and formally that utilize the Michigan HSM spreadsheet based on suggested improvements. Training on the Interactive Highway Safety Design Model (IHSDM) was completed in 2016 and 2018. Since then, a build of the software has been provided throughout MDOT and is available for use external to the agency.

The Trunkline Safety Call for Projects requires that a HSM analysis be completed for all qualifying non-freeway, non-systemic projects. The Local Safety Call for Projects recommends the HSM to be submitted for additional project support. An internal MDOT HSM training was conducted in June of 2019 including an updated analysis spreadsheet and additional training was conducted in 2023.

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

The annual Trunkline process for submitting safety projects starts with a Call for Projects (CFP) issued to the seven MDOT Regions from the Safety Template Program Manager. The FY 2023 Safety Call request was made to the Regions in April 2017. In response to the CFP, the Regions identify locations where safety improvements (i.e. add a center left turn lane, right turn lane, geometric improvements to accommodate signalization, median protection, etc.) could be made. These locations are to be identified through the current Transparency (5%) Report, Fatality and Serious Injury Regionwide Maps, High Crash List, 3R/4R Safety Reviews, customer concerns, and Pavement Friction Analyses. Upon location identification an engineering study is conducted by the Region to determine the appropriate safety improvement. The emphasis of the Safety Call was to address those locations with correctable fatality and serious injury crashes to support the department's efforts of reducing fatalities and serious injuries and support the vision of Toward Zero Deaths (TZD).

All safety projects and proposed candidates must address a focus area of the Michigan Strategic Highway Safety Plan (SHSP). Submitted concepts must meet a maximum Time-of-Return (TOR) to qualify for safety funding. The TOR is a cost benefit analysis of proposed safety improvement which considers all crash types and severity levels that are correctable by the proposed safety improvement. A minimum of the latest three years of available crash data is to be used in the TOR analysis. For FY 2023 project, in which 2014 to 2016 (or most current data available) crash data was used. The following TOR criteria was established:

· Stand-alone safety improvement - TOR of 7 years or less

· Stand-alone safety improvement for location on the current Transparency – TOR of 10 years or less.

· Safety improvement in conjunction with another Construction project (Bridge, R&R, etc.) - TOR of 9 years or less.

Each Region's submittal was reviewed by the Central office review team to ensure all criteria was met. The Regions were permitted to submit candidate projects with total costs exceeding their funding targets. The review team, taking into account priorities expressed by the Regions, used the TOR values as a means to develop project rankings (lowest to highest TOR value) within each Region.

For FY 2023, funding was included in programmed preliminary engineering for outer year safety projects to conduct a road safety audit (RSA). For guidance, a RSA should be conducted for all proposals exceeding $750,000 in programmed construction costs. The RSA should be done prior to 30 percent completion of the plans. The purpose of the RSA is to ensure that the appropriate safety fixes are incorporated into the overall design based on crash patterns within the project limits.

Each Region was required to allocate up to a certain percent of their funding target for low cost safety improvements. This amount is in addition to the Safety Work Authorizations (SWA funding). The focus is to be on system wide safety improvements done by work authorization or through the letting process, each Region received $200,000 for FY 2023. A TOR justification is not required if the proposed improvement is selected from the list of approved and proven safety system wide fixes (outlined below). The percentage submitted shall be a minimum of 25 percent up to a maximum of 50 percent over a five-year rolling average period.

In an effort to incorporate the Highway Safety Manual (HSM) into MDOT's business process all safety projects submitted for FY 2021 to present, except for freeway improvements, shall have the HSM predictive analysis performed on them. A comparison of future conditions with and without the proposed improvement shall be provided. For FY 2021 to the present, all submitted concepts must address two or more fatal and/or serious injury crashes and align with their Region Toward Zero Deaths plan.

Eligibility Guidelines for Low Cost Safety Improvement Projects

Location: State Trunkline Highways

Funding: Highway Safety Improvement Program (HSIP) Funds

Purpose: To authorize low-cost, system-wide improvements on State Trunkline Highways

Description: Projects to be funded under this program are proven low-cost safety improvements not requiring a Time-of-Return (TOR) cost/benefit analysis, meet the eligibility requirements for funding, and are to be constructed through the contract letting or Safety Work Authorization processes. Example improvements are:

· Attaching guardrail to structure railings (does not include general gr upgrade)

· Re-grading side slopes to 1:4, or flatter, to eliminate the need for guardrail

· Obstacle removal, clear zone widening

· Improvements to sight vision corners

· Extending or modifying culverts to eliminate a fixed-object

· Pavement grooving/high-friction surface treatment

· Installing or reconstructing impact attenuators

· Installing delineators, including linear systems

· Installing channelization

· Installing warning/regulatory signs

· Reflective sign post strips for horizontal alignment signs

· Re-striping to provide an offset, left-turn lane

· Installing horizontal signing, pavement markings (i.e., STOP AHEAD markings in advance of a T-intersection)

· Eliminate drop-offs, edge-rutting/ Safety Edge

· Construct centerline or shoulder rumble strips

· Construct roadside access control/driveway consolidation

· Construct right-turn lanes, including offset

· Construct minor intersection widening

· Construct or widen shoulders

· Widen shoulders to accommodate shoulder rumble strips

· Construct passing flares

· Construct intersection curb control

· Sidewalk gap filling (Maintenance agreement required)

Local Road Safety HSIP methodology is explained under the previous Addressing Local Safety question. For the FY 2023 CFP, an emphasis was placed on the identification of correctable fatalities and serious injuries, both in the selection and the prioritization of safety projects. A portion of the local safety funds were allocated to six subprograms in 2023: Projects with scopes that directly address areas with a concentration of K and A crashes ($11M), Non-motorized Facility/Pedestrian Improvements ($850K), High Friction Surface Treatment ($500K), Road Safety Audits ($60K), Guardrail Upgrades and Clear Zone Improvements ($750K), and Safety Funds per MDOT Region ($500K). Each selected project could count towards multiple subprograms. Local agencies were informed of the listed subprograms and encouraged to submit projects based on the subcategories.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

The State Fiscal Year ran from October 1, 2022 to September 30, 2023.

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$59,913,900	$68,066,743	113.61%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$6,508,584	$7,093,453	108.99%
VRU Safety Special Rule (23 U.S.C. 148(g)(3))	$11,453,225	$11,934,316	104.2%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$15,042,482	$19,829,330	131.82%
Totals	$92,918,191	$106,923,842	115.07%

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

$22,227,980

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

$24,942,036

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

$64,000

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

$64,000

For FY2023, the Local Agency safety program had four Road Safety Audits projects programmed and obligated ($64,000 HSIP) which accounted for 0.26 percent of the obligated funds for the Local HSIP program.

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

$6,974,350

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.

Overall, the time frame to obligate a specific project is longer due to MPO required approvals. During the end of the fiscal year if there are bid savings from earlier let projects coming in under budget, utilization of those savings can be difficult due to the lengthy approval process of the MPO. MDOT has very limited ability to influence this, as MPO's set their own meeting and approval schedules. This has not been a recent issue due to inflation rates resulting in limited bid savings.

MDOT promotes the Toward Zero Deaths (TZD) campaign and the Safe System Approach (SSA) to the citizens of Michigan; however, utilizing as much HSIP funds as possible for roadway safety improvements limits available HSIP funds for educational and promotional materials. As such, MDOT promotes and supports statewide TZD and SSA efforts as much as available funding allows. In addition, MDOT coordinates with its safety partners, such as the Office of Highway Safety Planning (OHSP), to support their outreach and media campaign efforts with the same goals.

Describe any other aspects of the State's progress in implementing HSIP projects on which the State would like to elaborate.

In the Trunkline safety program, 10.0 percent programmed funds used were from State funding sources.

On the Local Agency side, 10.0 percent or 20.0 percent programmed funds used were from Local funding source, depending on certain criteria at the time of project selection. No HSIP funds were directed toward tribal safety projects.

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 OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
205508 US-23 Plank, Milan Oakville & Carpenter over US-23, sidewalk replacement and improvements	Pedestrians and bicyclists	Install sidewalk	0	Miles	$375000	$13312841	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Minor Arterial	49,900	75	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As
132043 US-127 M-57 to Bagley Road Milling, two course overlay, joint repairs, guardrail, construction of indirect lefts	Access management	Median crossover - directional crossover	27.028	Miles	$2631000	$27693134	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	20,959	65	State Highway Agency	Spot	Intersections	Reduce Fs and As
128163 M-89 from M-222 east to 29th Street fill sidewalk gaps	Pedestrians and bicyclists	Install sidewalk	5.739	Miles	$50000	$2705084	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other	14,341	30	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As
214905 M-89 At Hubbard Street/Ely Street/M-40 Intersection add sidewalk	Pedestrians and bicyclists	Install sidewalk	1.044	Miles	$200000	$2889584	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other	6,442	50	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As
131655 US-31/M-37 (Division) E to M-37 N/Garfield Ave Pedestrian Refuge Island, Crosswalk Markings, Pedestrian Warning Signs, Sidewalk, PHB	Pedestrians and bicyclists	Medians and pedestrian refuge areas	8.71	Miles	$572950	$20496654	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other	29,200	35	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As
201118 M-55 From west of Fairview Street to west of M-30 New and Wider Sidewalk, Special Emphasis Crosswalk Markings	Pedestrians and bicyclists	Pedestrians and bicyclists – other	5.996	Miles	$351980	$9351784	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Minor Arterial	12,689	35	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
204211 I-75BL from south bound I-75 off ramp to Wisconsin Avenue/Grandview Boulevard Creating Separated Bike Path, Pedestrian Countdown Signals	Pedestrians and bicyclists	Pedestrians and bicyclists – other	10.949	Miles	$961658	$11119267	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other	13,500	50	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As
127449 US-12 Galien Township line to west of Mayflower Road Shoulder Widening	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	14.456	Miles	$4695793	$8768751	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Minor Arterial	9,825	55	State Highway Agency	Systemic	Bicyclists	Reduce Fs and As
204074 M-28 from M-64 North to Ewen. Shoulder Widening	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	29.745	Miles	$516802	$8812526	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Principal Arterial-Other	2,375	40	State Highway Agency	Systemic	Bicyclists	Reduce Fs and As
210068 US-23 South of M-36 to one mile north of Spencer Rd multimodal pathway and sidewalk	Pedestrians and bicyclists	Pedestrians and bicyclists – other	36.332	Miles	$350000	$64705663	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other Freeways & Expressways	68,650	70	State Highway Agency	Systemic	Bicyclists	Reduce Fs and As
201955 TSC Wide Multiple Locations in the Alpena TSC Delineation Installation	Roadway delineation	Delineators post-mounted or on barrier	109.512	Miles	$162382	$162382	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
212957 M-28 in Schoolcraft, Luce, Chippewa County Installation of delineators	Roadway delineation	Delineators post-mounted or on barrier	216.932	Miles	$182043	$182043	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207356 Regionwide All trunkline routes in Bay Region Longitudinal pavement marking application on trunklines in Bay Region	Roadway delineation	Longitudinal pavement markings - remarking	8.144	Miles	$4511253	$4511253	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
207374 Regionwide All trunkline routes in Bay Region Pavement marking retroreflectivity readings on trunklines in Bay Region	Roadway delineation	Improve retroreflectivity	8.48	Miles	$32528	$32528	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207358 Regionwide All trunkline routes in Grand Region Longitudinal pavement marking application on trunklines in Grand Region	Roadway delineation	Longitudinal pavement markings - remarking	6.847	Miles	$3599377	$3599377	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207375 Regionwide All trunkline routes in Grand Region Pavement marking retroreflectivity readings on trunklines in Grand Region	Roadway delineation	Improve retroreflectivity	6.804	Miles	$13431	$13431	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207361 Regionwide All trunkline routes in Metro Region Longitudinal pavement marking application on trunklines in Metro Region	Roadway delineation	Longitudinal pavement markings - remarking	0.564	Miles	$3577876	$3577876	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207376 Regionwide All trunkline routes in Metro Region Pavement marking retroreflectivity readings on trunklines in Metro Region	Roadway delineation	Improve retroreflectivity	0.564	Miles	$24001	$24001	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207364 Regionwide All trunkline routes in	Roadway delineation	Longitudinal pavement markings - remarking	2.116	Miles	$3121348	$3121348	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
North Region Longitudinal pavement marking application on trunklines in North Region															
207377 Regionwide All trunkline routes in North Region Pavement marking retroreflectivity readings on trunklines in North Region	Roadway delineation	Improve retroreflectivity	2.116	Miles	$12594	$12594	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207365 Regionwide All trunkline routes in Southwest Region Longitudinal pavement marking application on trunklines in Southwest Region	Roadway delineation	Longitudinal pavement markings - remarking	4.789	Miles	$2289249	$2289249	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207378 Regionwide All trunkline routes in Southwest Region Pavemt marking retroreflectivity readings on Southwest Region trunklines	Roadway delineation	Improve retroreflectivity	5.693	Miles	$12690	$12690	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207368 Regionwide All trunkline routes in Superior Region Longitudinal pavement marking application on trunklines in Superior Region	Roadway delineation	Longitudinal pavement markings - remarking	0.535	Miles	$3190736	$3190736	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207379 Regionwide All trunkline routes in Superior Region Pavement marking retroreflectivity	Roadway delineation	Improve retroreflectivity	0.43	Miles	$13652	$13652	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
readings on Superior Region trunklines															
207372 Regionwide All trunkline routes in University Region Longitudinal pavement marking application on University Region trunklines	Roadway delineation	Longitudinal pavement markings - remarking	3.756	Miles	$4147790	$4147790	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
207381 Regionwide All trunkline routes in University Region Pavement Marking retroreflectivity readings on University Region trunklines	Roadway delineation	Improve retroreflectivity	5.9	Miles	$15787	$15787	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Reduce Fs and As
201942 US-131 US-131 from 44th to Post Queue management system	Advanced technology and ITS	Congestion detection / traffic monitoring system	75.682	Miles	$2455211	$2455211	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other Freeways & Expressways	9,658	70	State Highway Agency	Spot	Intersections	Reduce Fs and As
204951 Regionwide 10 intersections in Grand Region Install traffic signal dilemma zone systems	Intersection traffic control	Dilemma Zone Detection System	10	Intersections	$463931	$463931	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0	0	State Highway Agency	Systemic	Intersections	Reduce Fs and As
204953 I-75BL N Woodward at South Blvd, Indirect left-turns, new crossovers, modernize traffic signal, add signals at crossovers	Access management	Access management - other	4.245	Miles	$3569473	$3569473	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	34,958	40	State Highway Agency	Spot	Intersections	Reduce Fs and As
214046 I-75BL between Madison and Giddings Install pedestrian crossing island with rectangular	Pedestrians and bicyclists	Medians and pedestrian refuge areas	3.433	Miles	$185586	$185586	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other	17,901	45	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As

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rapid flashing beacons.															
209401 US-12 E from Haggerty to Hannan Rd, Improved pedestrian warning, crosswalk installations and pedestrian activated devices.	Pedestrians and bicyclists	Pedestrians and bicyclists – other	8.36	Miles	$590543	$590543	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial-Other	0	0	State Highway Agency	Systemic	Pedestrians	Reduce Fs and As
214023 I-75 N Otsego and Cheboygan counties Cable median Guardrail	Roadside	Barrier – cable	4.31	Miles	$742154	$742154	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	15,830	75	State Highway Agency	Spot	Roadway Departure	Reduce Fs and As
201994 M-60 Intersections located in Cass, Branch and Calhoun Counties Install rural intersection warning systems at four intersections	Advanced technology and ITS	Intersection Conflict Warning System (ICWS)	4	Intersections	$676664	$676664	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	7,075	55	State Highway Agency	Spot	Intersections	Reduce Fs and As
132636 US-131 North city limit of Three Rivers to Shaver Rd, Indirect lefts, remove median crossovers, remove and replace signals, add signal	Access management	Access management - other	6.876	Miles	$5754638	$5754638	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	25,255	55	State Highway Agency	Spot	Intersections	Reduce Fs and As
201941 US-41 at Lakeshore Drive Construction of a Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$7031771	$7031771	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	18,200	55	State Highway Agency	Spot	Intersections	Reduce Fs and As
202023 I-496 Westbound off-ramp at Pennsylvania Signal improvements	Intersection traffic control	Modify traffic signal –other	1	Intersections	$356223	$356223	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	15,719	30	State Highway Agency	Spot	Intersections	Reduce Fs and As

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209403 E I-96 west of College Rd Median guardrail extension	Roadside	Barrier - other	1.527	Miles	$154823	$154823	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	20,270	70	State Highway Agency	Spot	Roadway Departure	Reduce Fs and As
132635 M-50 in Jackson County shoulder widening and paving full width	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	4.656	Miles	$604256	$604256	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Minor Arterial	4,900	55	State Highway Agency	Systemic	Bicyclists	Reduce Fs and As
202028 Regionwide Various Locations-University Region install recessed pavement markings	Roadway delineation	Roadway delineation - other	0	Miles	$618212	$618212	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0	0	State Highway Agency	Systemic	Lane Departure	Reduce Fs and As
204949 US-127/US-223 Intersection Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1.286	Miles	$1990279	$1990279	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	11,000	55	State Highway Agency	Spot	Intersections	Reduce Fs and As
209388 2 locations on US-12, near Deer Run Ct and east of Person Hwy Installation of Curve Warning System	Roadway signs and traffic control	Curve-related warning signs and flashers	0.85	Miles	$229871	$229871	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	7,492	55	State Highway Agency	Systemic	Lane Departure	Reduce Fs and As
211818 S US-23 and M-14 Trilevel interchange ramps High friction surface treatment	Roadway	Pavement surface – high friction surface	1.555	Miles	$408020	$408020	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other Freeways & Expressways	48,475	70	State Highway Agency	Spot	Lane Departure	Reduce Fs and As
210252 N Waldo Road at Monroe Road, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$704645	$985471	HSIP (23 U.S.C. 148)	Urban	Minor Collector	3,112	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
211773 Central Road at Angola Road and at Behnke Road, Intersection Signing	Intersection traffic control	Intersection signing – add enhanced regulatory sign (double-up and/or oversize)	2	Intersections	$15897	$17663	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	2,644	55	County Highway Agency	Systemic	Intersections	Reduce Fatalities and Serious Injuries

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
211842 Gumwood Road at Redfield Street (E), Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$776130	$1146291	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	9,050	50	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
211868 Lutz Road from Fairchild Road to M-86, Shoulder widening and tree removals	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	2.03	Miles	$401884	$709947	HSIP (23 U.S.C. 148)	Urban	Major Collector	4,330	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
213709 3rd Street (CR 426) and 29th Street (CR 420), Recessed Pavement Markings	Roadway delineation	Roadway delineation - other	2.08	Miles	$42391	$47102	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	4,482	40	County Highway Agency	Systemic	Lane Departure	Reduce Fatalities and Serious Injuries
213712 Various Routes in Delta County, Curve Warning Signs	Roadway signs and traffic control	Roadway signs (including post) - new or updated	38.96	Miles	$80575	$89528	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	2,429	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
213723 CR 581 from M-69 to CR 426, Curve Warning Signs	Roadway signs and traffic control	Roadway signs (including post) - new or updated	9.5	Miles	$32768	$36409	HSIP (23 U.S.C. 148)	Rural	Major Collector	800	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
213735 S Belsay Road at Bristol Road and at Lippincott Road, Intersection Signing	Intersection traffic control	Intersection signing – add enhanced advance warning (double-up and/or oversize)	2	Intersections	$13523	$15025	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	7,500	45	City or Municipal Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213737 Various Routes in Menominee County, Intersection and Curve Warning Signs	Roadway signs and traffic control	Roadway signs (including post) - new or updated	27	Locations	$42044	$59505	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	1,693	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
213738 Various Routes in Midland County, Intersection Signing	Intersection traffic control	Intersection signing – add enhanced advance warning (double-up and/or oversize)	127	Approaches	$220276	$295621	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	2,356	35-55	County Highway Agency	Systemic	Intersections	Reduce Fatalities and Serious Injuries
213746 Various Routes in the city of Royal Oak,	Pedestrians and bicyclists	Pedestrian signal - other	24	Intersections	$115978	$128864	VRU Safety Special Rule	Urban	Major Collector	19,570	35	City or Municipal	Systemic	Pedestrians	Reduce Fatalities

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Pedestrian Countdown Signals							(23 U.S.C. 148(g)(3))					Highway Agency			and Serious Injuries
213761 Various Routes in Oscoda County, Intersection Signing	Intersection traffic control	Intersection signing – add enhanced advance warning (double-up and/or oversize)	45	Approaches	$106458	$127545	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	848	55	County Highway Agency	Systemic	Intersections	Reduce Fatalities and Serious Injuries
213762 Various Routes in Oscoda County, Curve Warning Signs	Roadway signs and traffic control	Roadway signs (including post) - new or updated	93	Curves	$145357	$163526	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	848	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
213768 Lake Lansing Road from Abbot Road to Hagadorn Road, Road Diet (4-3 lane conversion), Intersection Realignment, Signal Modernization	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1.4	Miles	$735728	$1529806	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	10,920	35	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213784 E Cody Estey Rd from M-15 to Mount Forest Road, Shoulder Widening, Overlay and High Friction Surface Treatment	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	2.03	Miles	$256880	$869965	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	2,525	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
213787 CR 356 at CR 577, Vertical Curve Modification and Shoulder Paving	Alignment	Vertical alignment or elevation change	1	Intersections	$231084	$256760	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	305	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213788 N Federal Road (CR 599) from Howard City Limits to M-46, Shoulder Widening and Rumble Strips	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	1.7	Miles	$417002	$434213	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	6,306	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
213822 Kindig Road from Yarish Road to Alger Road, Road Safety Audit	Miscellaneous	Road safety audits	0.3	Miles	$16000	$20000	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	280	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
213838 Morrish Road at Lennon Road, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$731227	$1167132	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	6,958	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213853 138th Avenue from 24th Street to 21st Street, Alignment Modifications and Shoulder Widening	Alignment	Horizontal and vertical alignment	1.53	Miles	$600842	$835872	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Local Road or Street	614	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
213866 S Garfield Road at Potter Road, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$586017	$1449106	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	9,685	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213879 N Dearing Road and Jefferson Road, Tree Removals, Signing and Pavement Markings	Roadside	Removal of fixed objects (trees, poles, etc.)	4.3	Miles	$432177	$480196	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	4,959	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
213984 Springport Road at Minard Road, Construct Compact Roundabout	Intersection traffic control	Modify control – Compact/Mini-roundabout	1	Intersections	$461704	$618547	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	1,500	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213985 Almena Drive at 2nd Street, Intersection Realignment	Intersection geometry	Intersection realignment	1	Intersections	$483605	$537339	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	3,199	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
213986 Palmer Road at Hoffman Road, Intersection Realignment	Alignment	Horizontal curve realignment	1	Intersections	$376221	$418023	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	995	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214006 Dixie Highway at Curtis Road, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$956304	$1432146	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	9,000	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214007 Capac Road from Downey Road to Yale Road, Centerline Rumble Strips	Roadway delineation	Roadway delineation - other	7.25	Miles	$91732	$101924	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	5,070	55	County Highway Agency	Spot	Lane Departure	Reduce Fatalities and Serious Injuries

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
214011 N Territorial Rd from W of Dexter Townhall Road to Toma Road, Intersection and Alignment Modification, Turn Lane, Rumble Strips, and Signing	Intersection geometry	Intersection geometry - other	1.2	Miles	$677797	$985017	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	5,700	50	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214014 Various Routes in Barry County, Guardrail	Roadside	Barrier- metal	10	Locations	$299220	$386289	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	2,000	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214035 N West Silver Lake Road at Secor Road	Miscellaneous	Road safety audits	1	Intersections	$16000	$20000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	6,901	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214036 Territorial Road, Bankers Road and Moscow Road, Rumble Strips and Pavement Markings	Roadway delineation	Roadway delineation - other	38.15	Miles	$509047	$606655	HSIP (23 U.S.C. 148)	Rural	Major Collector	3,000	55	County Highway Agency	Spot	Lane Departure	Reduce Fatalities and Serious Injuries
214059 Various Routes in Houghton County, Guardrail	Roadside	Barrier- metal	29	Locations	$546231	$826976	HSIP (23 U.S.C. 148)	Urban	Major Collector	2,408	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
214063 Various Routes in the city of Jackson, Pedestrian Crossing Improvements	Pedestrians and bicyclists	Install new crosswalk	5	Crosswalks	$344967	$506448	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Minor Arterial	12,137	25-30	City or Municipal Highway Agency	Spot	Pedestrians	Reduce Fatalities and Serious Injuries
214064 Horton Road from Ferguson Road to Weatherwax Drive, Road Safety Audit	Miscellaneous	Road safety audits	0.44	Miles	$16000	$20000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	9,700	45	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214065 Moscow Road in Jackson County, Road Safety Audit	Miscellaneous	Road safety audits	4	Locations	$16000	$20000	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	7,100	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
214066 Parkview Avenue from 11th Street to 12th Street, Construct Mini Roundabouts	Intersection traffic control	Modify control – Compact/Mini-roundabout	2	Intersections	$668117	$1970021	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	7,855	45	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214069 84th Street SE at Kalamazoo Avenue, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$593734	$933190	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	6,600	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214076 Main Street from S Second Street to S West Street, Flashing Pedestrian Crossing Signs	Pedestrians and bicyclists	Rapid Rectangular Flashing Beacons (RRFB)	5	Locations	$120962	$134402	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Minor Arterial	13,329	25	City or Municipal Highway Agency	Spot	Pedestrians	Reduce Fatalities and Serious Injuries
214118 E Grand River Avenue at St Joseph Mercy Health Center, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$213123	$284325	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	18,400	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214122 Various Locations in Macomb County, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	6	Intersections	$768941	$1277700	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	29,738	30-50	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214123 Various Locations in Macomb County, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	5	Intersections	$664331	$945229	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	29,738	30-50	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214126 Fleming Street from Ruddiman Drive to Moulton Avenue, Add Curb to Provide Positive Separation with Sidewalk	Pedestrians and bicyclists	ADA curb ramps	0.14	Miles	$325495	$463272	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Local Road or Street	600	25	City or Municipal Highway Agency	Spot	Pedestrians	Reduce Fatalities and Serious Injuries
214217 Golf Drive from Old Telegraph Road to Bagley Road, Construct Shoulders, Bike	Pedestrians and bicyclists	On road bicycle lane	1.24	Miles	$420145	$503704	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Minor Arterial	6,300	35	City or Municipal Highway Agency	Spot	Bicyclists	Reduce Fatalities and Serious Injuries

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Lanes, Sidewalk, and Signing															
214218 14 Mile Road from Middle Branch River to 5th Avenue, Realignment Roadway for Shoulder Widening and Guardrail	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	0.24	Miles	$148764	$222719	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	100	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214234 Various Routes in Tuscola County, Guardrail	Roadside	Barrier- metal	11	Locations	$368665	$772058	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	126	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
214235 Various Routes in the city of Detroit, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	5	Intersections	$551101	$712712	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	15,400	25-35	City or Municipal Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214237 Various Routes in the City of Detroit, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	5	Intersections	$543651	$680000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	25,620	25-30	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214241 Various Routes in the city of Inkster, Install Speed Cushions	Speed management	Traffic calming feature	48	Locations	$67402	$74891	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	150	25	City or Municipal Highway Agency	Systemic	Pedestrians	Reduce Fatalities and Serious Injuries
214242 Beech Daly Road at Five Mile Road, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$221722	$470818	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	17,400	40	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214243 Beech Daly Road at W Chicago Road, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$213006	$388210	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	21,100	40	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214244 Joy Road at Merriman Road, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$281303	$465049	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	37,100	40	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214245 Middlebelt Road at Beverly Road, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$196528	$294164	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	29,300	45	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
214551 Various Routes in St Joseph County, Pavement Markings	Roadway delineation	Longitudinal pavement markings – new	113.58	Miles	$76680	$85200	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	500	55	County Highway Agency	Systemic	Roadway Departure	Reduce Fatalities and Serious Injuries
214629 Uldriks Road from M-89 to U Drive N, Tree Removal	Roadside	Removal of fixed objects (trees, poles, etc.)	2.97	Miles	$128818	$143131	HSIP (23 U.S.C. 148)	Urban	Minor Collector	1,476	45-55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214631 Morgan Road from North Avenue to M-66, Recessed Pavement Markings	Roadway delineation	Improve retroreflectivity	1.48	Miles	$45535	$50595	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	8,721	45	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214632 Hagadorn Road at Sandhill Road, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$697007	$1955691	HSIP (23 U.S.C. 148)	Urban	Major Collector	3,357	50	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214637 Lapeer Road at Oak Road, Construct Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$732198	$1169477	HSIP (23 U.S.C. 148)	Urban	Major Collector	6,581	55	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
214639 Marshall Road from Herricksville Road to 15 1/2 Mile Road, Overlay, High Friction Surface Treatment, Rumble Strips and Signing	Roadway	Pavement surface - other	1.32	Miles	$358203	$422547	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	5,735	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214642 CR 451 at W Hawks Parkway, Horizontal Curve Improvements	Roadway	Superelevation / cross slope	0.3	Miles	$183257	$203619	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,250	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214662 Various Routes in Monroe County, Dynamic Speed Signs	Speed management	Dynamic Speed Feedback Signs	4	Locations	$152125	$169028	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	8,100	45-50	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
214663 Grand River Avenue at Buckhart Street,	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$214348	$274312	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	10,800	55	County Highway Agency	Spot	Intersections	Reduce Fatalities

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Signal Modernization															and Serious Injuries
214664 Airport Road at Wayland Drive, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	1	Intersections	$228503	$328509	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	19,659	40	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
215261 N Territorial Road from Mast Road to Webster Church Road, Left Turn Lanes, Rumble Strips and Signing	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	$635422	$1567562	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	8,868	50	County Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
215265 M Drive S from 7 Mile Road to Oak Grove Road, Tree Removal	Roadside	Removal of fixed objects (trees, poles, etc.)	1.3	Miles	$92827	$103141	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Local Road or Street	175	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
215969 S Saginaw Road from McCandlish Road to Charring Cross Drive, Center Left Turn Lane	Roadway	Roadway widening - add lane(s) along segment	0.43	Miles	$834985	$1278716	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	14,999	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
215971 Bagley Road from Golf Drive to the Clinton River Trail, Shared Use Path and Signal Modernization	Pedestrians and bicyclists	Install sidewalk	1.05	Miles	$556203	$655359	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Major Collector	3,800	35	City or Municipal Highway Agency	Spot	Pedestrians	Reduce Fatalities and Serious Injuries
215975 River Road from Beecher Road to Timber Lane Drive, Widen and High Friction Surface Treatment	Roadway	Roadway widening - curve	0.13	Miles	$269238	$370390	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	3,356	45	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
215979 Various Routes in the city of Detroit, Signal Modernization	Intersection traffic control	Modify traffic signal – modernization/replacement	4	Intersections	$280063	$311181	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	5,300	25-35	City or Municipal Highway Agency	Spot	Intersections	Reduce Fatalities and Serious Injuries
215999 T Drive N from 23 Mile Road to Monroe Road, Tree Removal	Roadside	Removal of fixed objects (trees, poles, etc.)	2.85	Miles	$79337	$88152	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Local Road or Street	220	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries

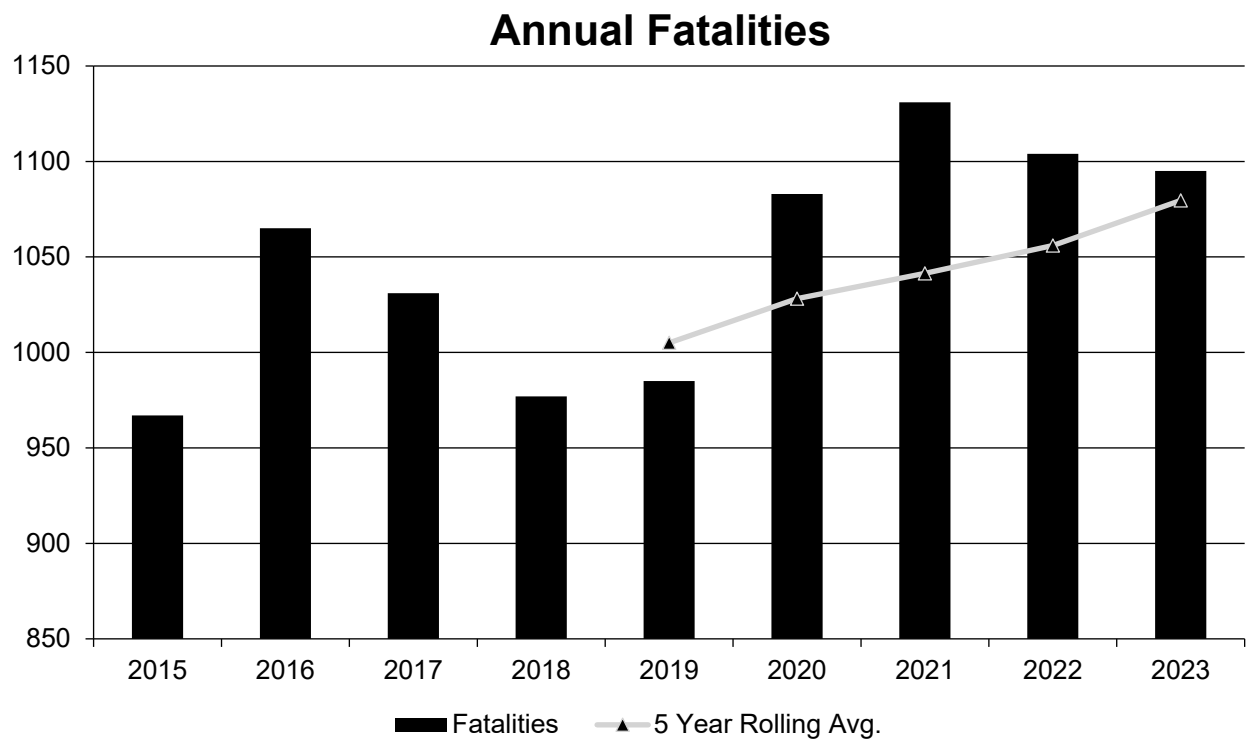
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
216036 Pinecrest Drive from Eight Mile Road to Marshfield Street, Sidewalk and Flashing Crosswalk Signs	Pedestrians and bicyclists	Install sidewalk	0.38	Miles	$180666	$270500	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Minor Arterial	8,697	30	City or Municipal Highway Agency	Spot	Pedestrians	Reduce Fatalities and Serious Injuries
216043 Clifford Street from M-24 to Marlette Road, Alignment and Turn Lane Improvements	Intersection geometry	Intersection realignment	4.05	Miles	$788064	$1461222	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	1,219	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries
217969 Lutz Road from Fairchild Road to Roys Road, Shoulder Widening and Tree Removal	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	0.99	Miles	$561860	$754150	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	3,714	55	County Highway Agency	Spot	Roadway Departure	Reduce Fatalities and Serious Injuries

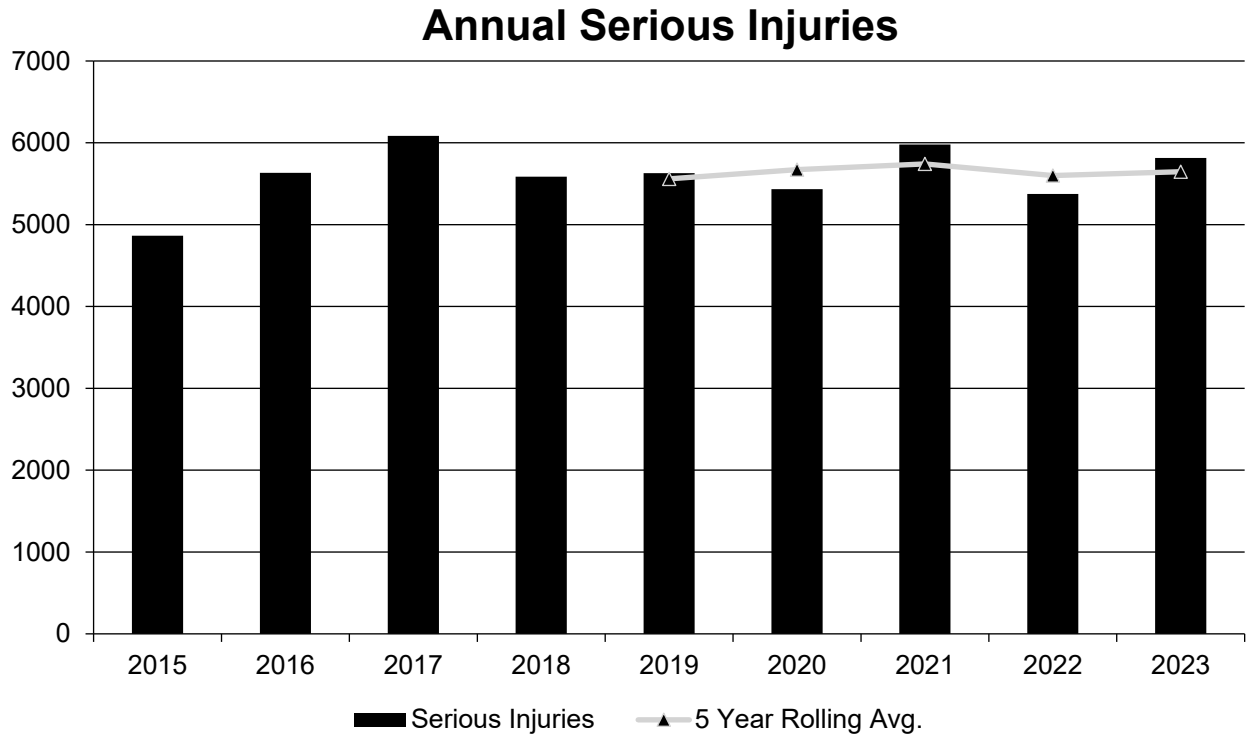
Safety Performance

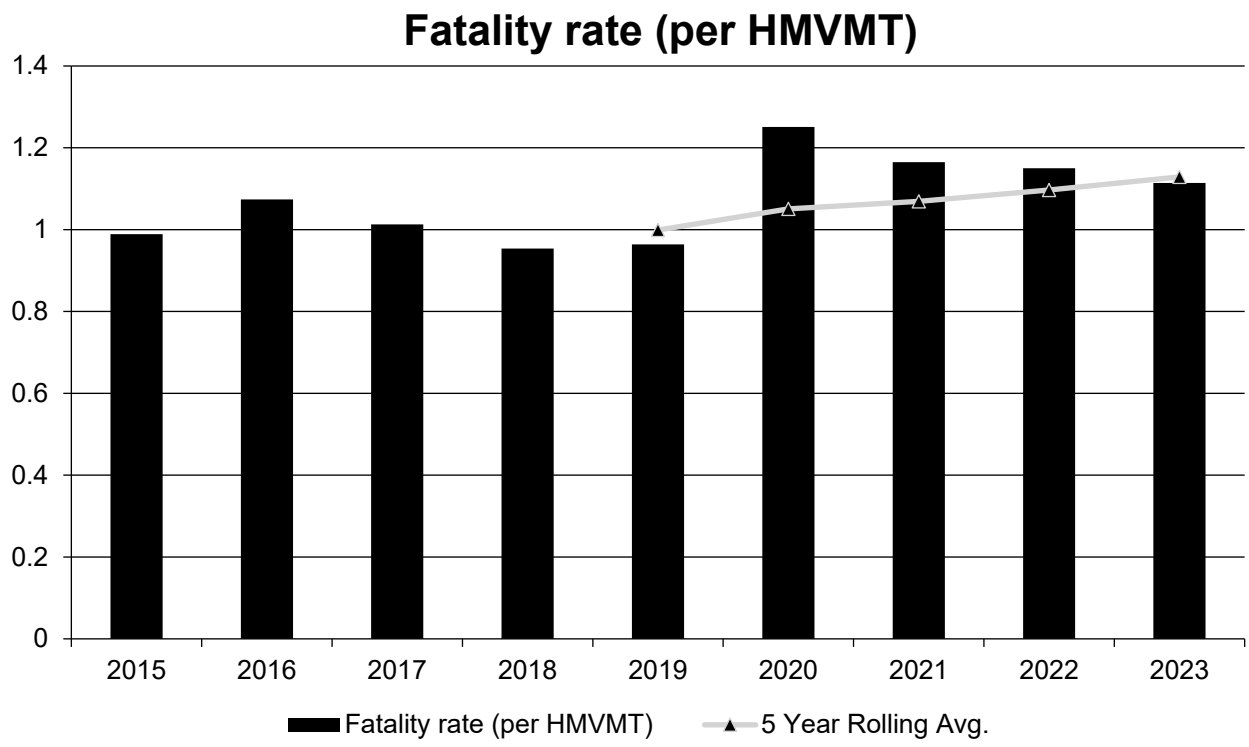
General Highway Safety Trends

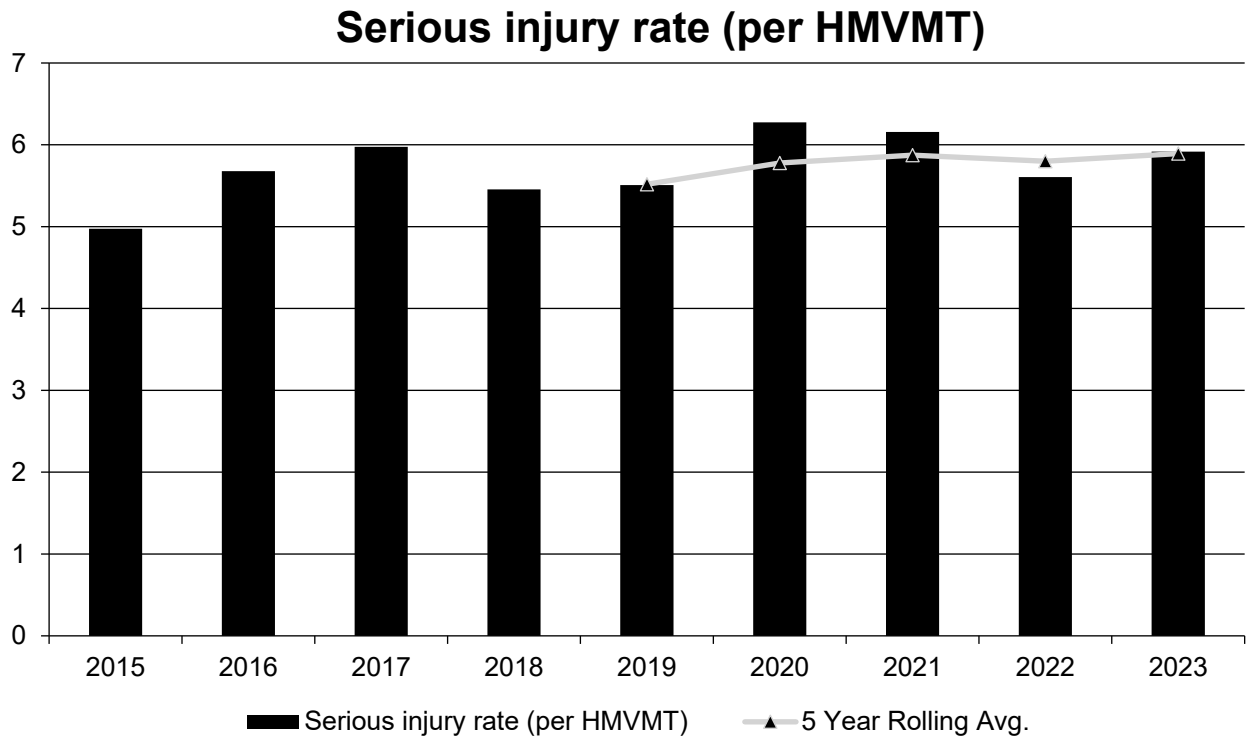
Present data showing the general highway safety trends in the State for the past five years.

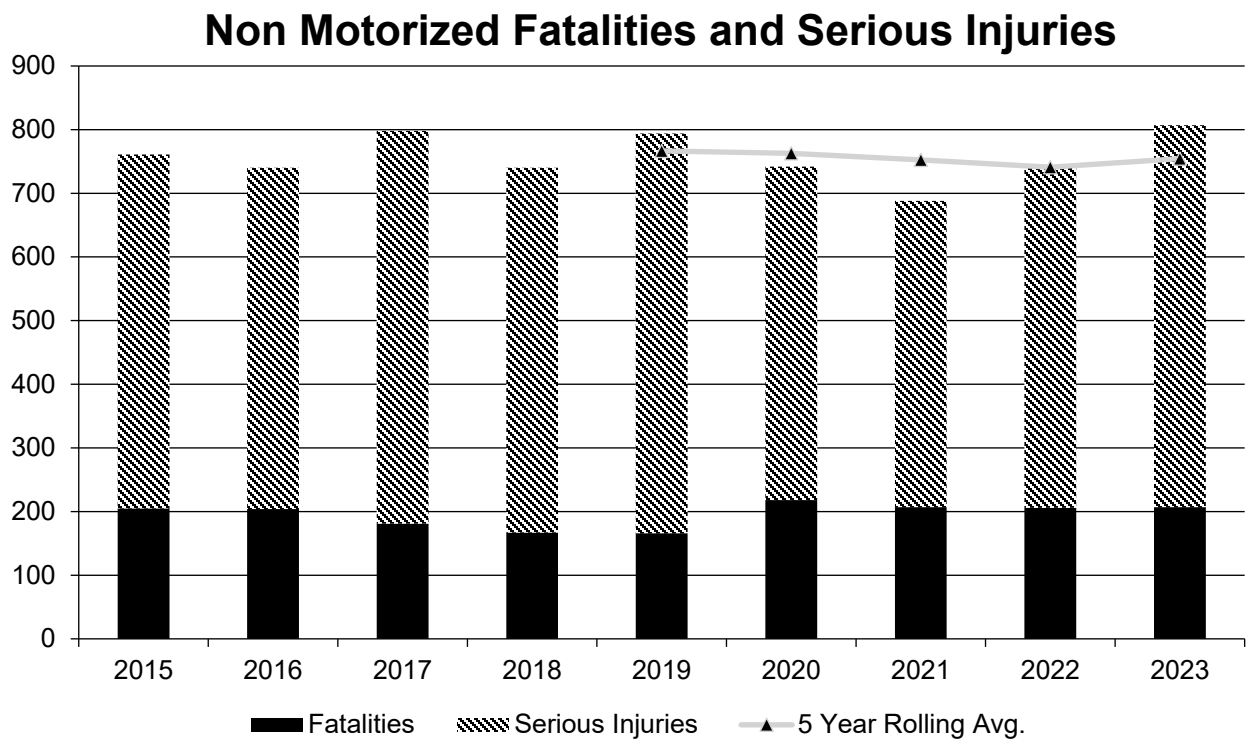
PERFORMANCE MEASURES	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fatalities	967	1,065	1,031	977	985	1,083	1,131	1,104	1,095
Serious Injuries	4,865	5,634	6,084	5,586	5,629	5,433	5,979	5,375	5,816
Fatality rate (per HMVMT)	0.989	1.074	1.013	0.954	0.964	1.251	1.165	1.150	1.114
Serious injury rate (per HMVMT)	4.974	5.679	5.976	5.455	5.508	6.274	6.158	5.606	5.917
Number non-motorized fatalities	205	204	181	167	166	218	207	206	207
Number of non-motorized serious injuries	556	536	617	573	628	524	481	535	600


Annual Fatalities
1150
1100
1050
1000
950
900
850
2015
2016
2017
2018
2019
2020
2021
2022
2023
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
7000
6000
5000
4000
3000
2000
1000
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
7
6
5
4
3
2
1
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Describe fatality data source.

State Motor Vehicle Crash Database

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

Year 2023

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	25	87.2	0.46	1.6
Rural Principal Arterial (RPA) - Other Freeways and Expressways	11.2	55.2	0.42	2.03
Rural Principal Arterial (RPA) - Other	48	212	1.12	4.96
Rural Minor Arterial	104.2	414.2	1.54	6.11
Rural Minor Collector	15	72.8	1.75	8.49
Rural Major Collector	132	615.4	1.64	7.65

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	80.6	421.4	3.67	19.12
Urban Principal Arterial (UPA) - Interstate	76.4	376.4	0.48	2.35
Urban Principal Arterial (UPA) - Other Freeways and Expressways	36.6	152.2	0.62	2.58
Urban Principal Arterial (UPA) - Other	241.6	1,290	1.49	7.94
Urban Minor Arterial	174.2	1,048.4	1.16	6.95
Urban Minor Collector	1.2	8.4	1.25	8.59
Urban Major Collector	59.8	334.2	1.23	6.9
Urban Local Road or Street	61	439.8	0.85	6.03

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				
Non-Trunkline (County, City, Local Owned Roadways)	576.6	3,196.6	1.22	6.76
Trunkline (State Owned Roadways)	426.2	2,348.4	0.8	4.39
County Highway Agency				
Town or Township Highway Agency				
City or Municipal Highway Agency				
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				
Trunkline (State Owned Roadways)				
Non-Trunkline (County, City, Local Owned Roadways)				

Provide additional discussion related to general highway safety trends.

In review of the 5-Year Rolling Average Statewide, state trunkline and local roadways, fatalities have seen an increase of 7.7 percent over the 5-year span. State trunkline fatalities had an overall increase of 7.9 percent while local roadway fatalities had an overall increase of 7.5 percent.

Serious injuries statewide have seen an increase of 1.6 percent over the 5-year rolling average. State trunkline serious injuries had an overall increase of 0.3 percent while local roadway serious injuries had an overall increase of 3.0 percent.

Regarding rates, the fatality and serious injury rates are lower on state trunkline than on local roadways. Overall, the fatality rate increased 7.7 percent while the serious injury rate increased 1.6 percent. The state trunkline saw a 7.9 percent increase in the fatality rate and a 0.3 percent serious injury rate increase. The local roadways saw a 7.5 percent fatality rate increase and a 3.0 percent serious injury rate increase.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2025 Targets *

Number of Fatalities:1098.0

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

The SHSP establishes the goal of zero fatalities occurring on Michigan's roadways by the year 2050. This goal is the basis of the established target and uses a non-linear methodology to represent a gradual increase in fatality reduction approaching the year 2050. The non-linear approach allows time to establish strategies and changes in policy aimed at significantly reducing fatalities, as well as time for new technologies and advancements in vehicles to become more widely available. The baseline is the average of the most recent 5-year period that the actual number of fatalities is known (2019-2023) and then subsequent years are reduced at a gradually increasing rate to achieve zero by 2050. The target is an average of the 2021-2025 annual fatalities (actual for 2021-2023, projected based on the described methodology for 2024-2025).

Number of Serious Injuries:5770.1

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

The SHSP establishes the goal of zero serious injuries occurring on Michigan's roadways by the year 2050. This goal is the basis of the established target and uses a non-linear methodology to represent a gradual increase in serious injury reduction approaching the year 2050. The non-linear approach allows time to establish strategies and changes in policy aimed at significantly reducing serious injuries, as well as time for new technologies and advancements in vehicles to become more widely available. The baseline is the average of the most recent 5-year period that the actual number of serious injuries is known (2019-2023) and then subsequent years are reduced at a gradually increasing rate to achieve zero by 2050. The target is an average of the 2021-2025 annual serious injuries (actual for 2021-2023, projected based on the described methodology for 2024-2025).

Fatality Rate:1.113

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

VMT values are known for CYs 2021-2023 and have been projected for CYs 2024 and 2025. The rate is determined by dividing the established 2021-2025 Number of Fatalities target by the 2021-2025 VMT. This methodology is consistent with the SHSP and its goal of zero fatalities occurring on Michigan roadways by the year 2050.

Serious Injury Rate:5.850

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

VMT values are known for CYs 2021-2023 and have been projected for CYs 2024 and 2025. The rate is determined by dividing the established 2021-2025 Number of Serious Injuries target by the 2021-2025 VMT. This methodology is consistent with the SHSP and its goal of zero serious injuries occurring on Michigan roadways by the year 2050.

Total Number of Non-Motorized Fatalities and Serious Injuries:728.3

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

The SHSP establishes the goal of zero fatalities and serious injuries occurring on Michigan's roadways by the year 2050, including those involving non-motorized road users. This goal is the basis of the established target and uses a non-linear methodology to represent a gradual increase in non-motorized fatality and serious injury reduction approaching the year 2050. The non-linear approach allows time to establish strategies and changes in policy aimed at significantly reducing non-motorized fatalities and serious injuries. The baseline is the average of the most recent 5-year period that the actual number of non-motorized fatalities and serious injuries is known (2019-2023) and then subsequent years are reduced at a gradually increasing rate to achieve zero by 2050. The target is an average of the 2021-2025 annual non-motorized fatalities and serious injuries (actual for 2021-2023, projected based on the described methodology for 2024-2025).

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

The Michigan DOT collaborated with the Michigan Office of Highway Safety Planning (OHSP) to establish the safety performance targets for Michigan, although the requirement for identical targets for Number of Fatalities, Number of Serious Injuries, and Fatality Rate was waived for 2025. This collaboration included meetings with the University of Michigan Transportation Research Institute (UMTRI) to understand and consider predicted fatality and serious injury values produced by their change model, but ultimately the targets were established based on the SHSP goal of zero fatalities and serious injuries by 2050. MDOT also met with MPOs to build support for the proposed target setting methodology.

The OSHP is Michigan’s SHSO and is a division within the Michigan Department of State Police. The Director of the OHSP serves as the chair to the Governor's Traffic Safety Advisory Commission (GTSAC) in Michigan.

Does the State want to report additional optional targets?

No

N/A

Describe progress toward meeting the State's 2023 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	1105.6	1079.6
Number of Serious Injuries	5909.2	5646.4
Fatality Rate	1.136	1.129
Serious Injury Rate	6.058	5.893
Non-Motorized Fatalities and Serious Injuries	743.4	754.4

Based on Targets vs Actual, Michigan will preliminarily meet the majority of the performance targets.

Applicability of Special Rules

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

Yes

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

Yes

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	2017	2018	2019	2020	2021	2022	2023
Number of Older Driver and Pedestrian Fatalities	155	159	159	181	206	195	221
Number of Older Driver and Pedestrian Serious Injuries	558	509	574	464	515	598	649

Data has been updated with 2023 crash data information based on the State of Michigan Crash database.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Other-Decrease of both fatal and serious injuries on a five-year rolling average

MDOT is focusing on projects that affect the roadway networks in large areas including:

· Non-infrastructure – training and workforce development, traffic studies, data analysis

· Advance technology and ITS – Wrong-way driving detection, dynamic message signs, etc.

· Alignment – horizontal and vertical alignment, superelevation

· Interchange design – interchange improvements

· Intersection geometry – auxiliary lanes, geometry improvements

· Intersection traffic control – flasher install, conversion to roundabout, signal modernization, intersection upgrades

· Pedestrian and bicyclist – median and refuge areas, sidewalks, crosswalks, pedestrian signal improvements, electronic devices for peds/bikes (RRFBs, PHBs, etc.)

· Roadside – barrier install (cable, concrete, metal), drainage and grading improvements, roadside object removal

· Roadway – access management, high friction pavement surface, roadway narrowing/widening, rumble/mumble strips

· Roadway delineation – delineators, pavement markings, retroreflectivity improvements

· Roadway signs and traffic control – curve warning signs, signing upgrades and/or replacement

· Shoulder treatments – shoulder paving, shoulder widening

· Speed management – radar speed signs

· Lighting – Intersections, pedestrian crossings, lighting improvements

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

MDOT incorporates FHWA's proven safety countermeasures and strategies. Each countermeasure addresses at least one safety focus area (speed management, intersections, roadway departures, or pedestrians/bicyclists) while others are crosscutting strategies that address multiple safety focus areas (such as lighting, LRSP, RSA, and pavement friction management). These safety measures have been proven to

effectively reduce roadway fatalities and serious injuries on all types of roadways and support MDOT's mission of applying the SSA to achieve TZD on Michigan roads.

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

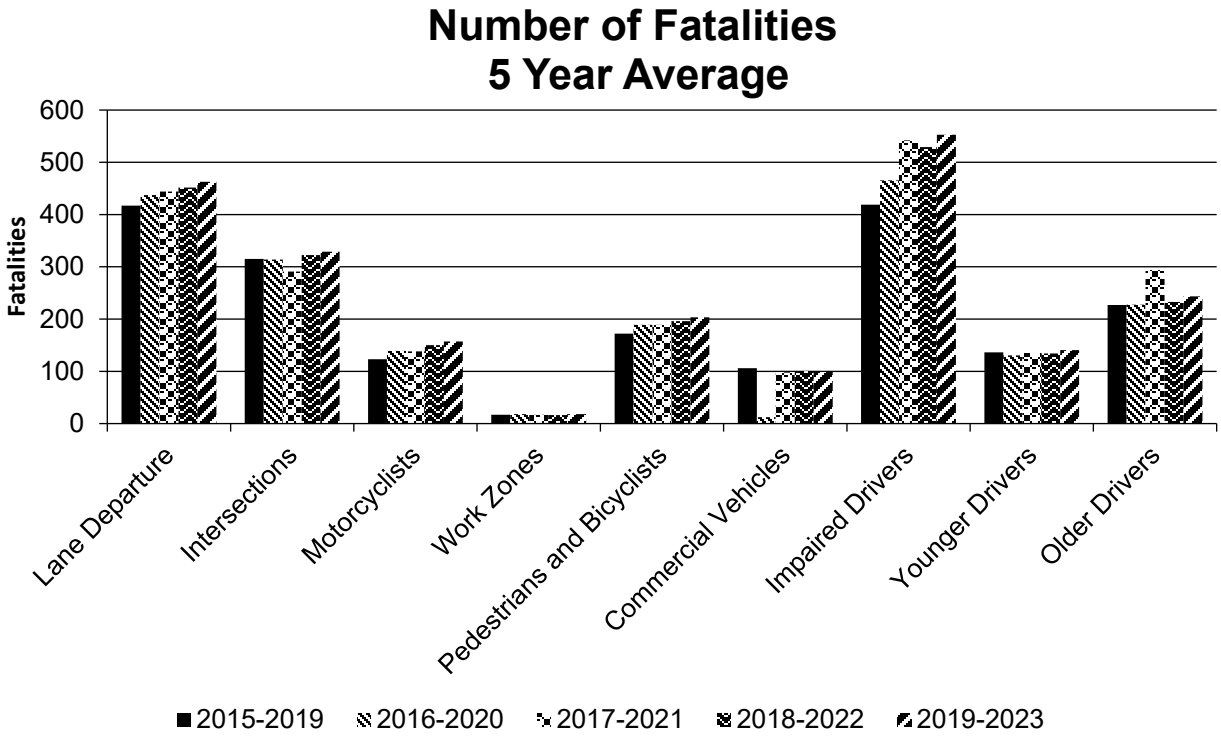
- # RSAs completed
- Increased awareness of safety and data-driven process
- Increased focus on local road safety
- Other-Before and After Studies
- Other-Additional Systemic Treatments based on crash data

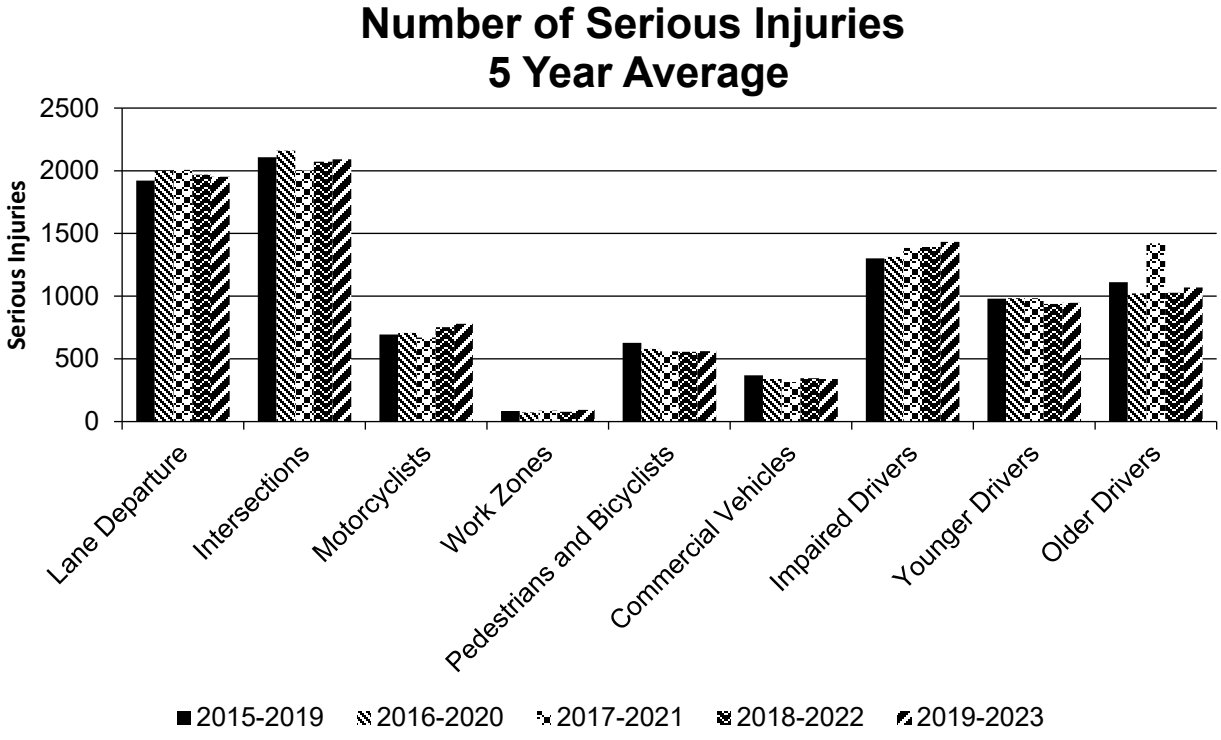
Effectiveness of Groupings or Similar Types of Improvements

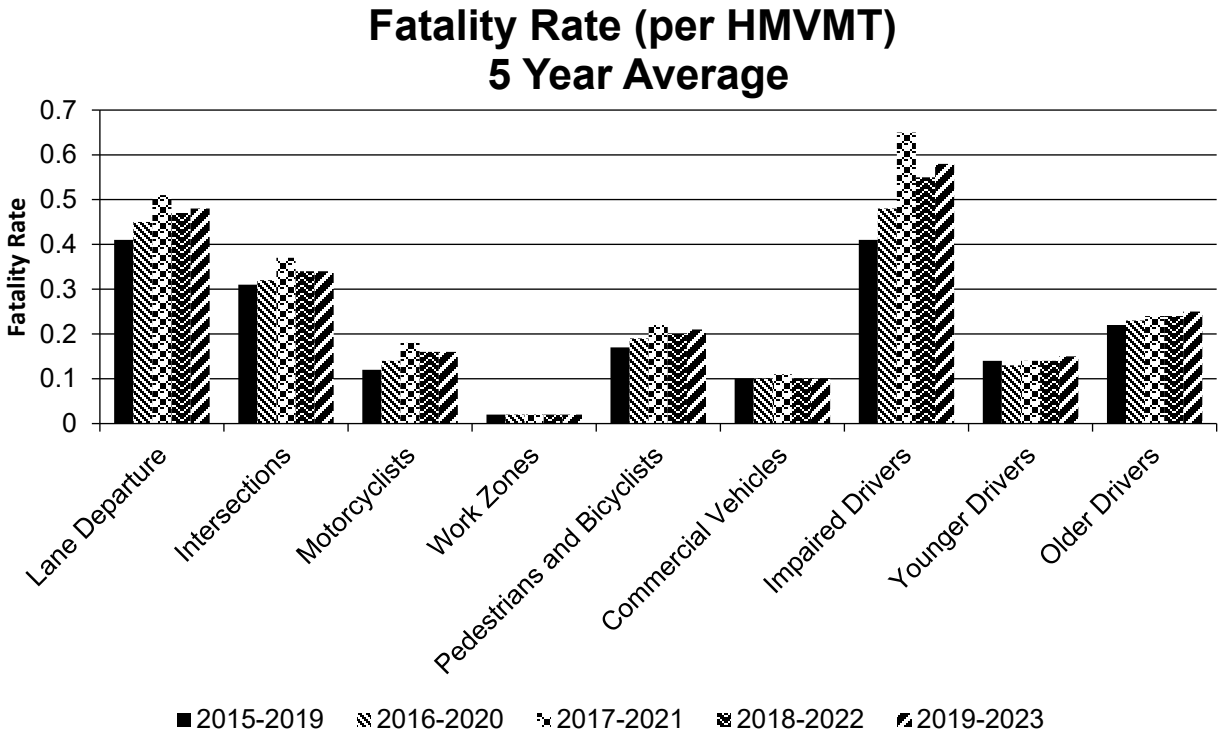
Present and describe trends in SHSP emphasis area performance measures.

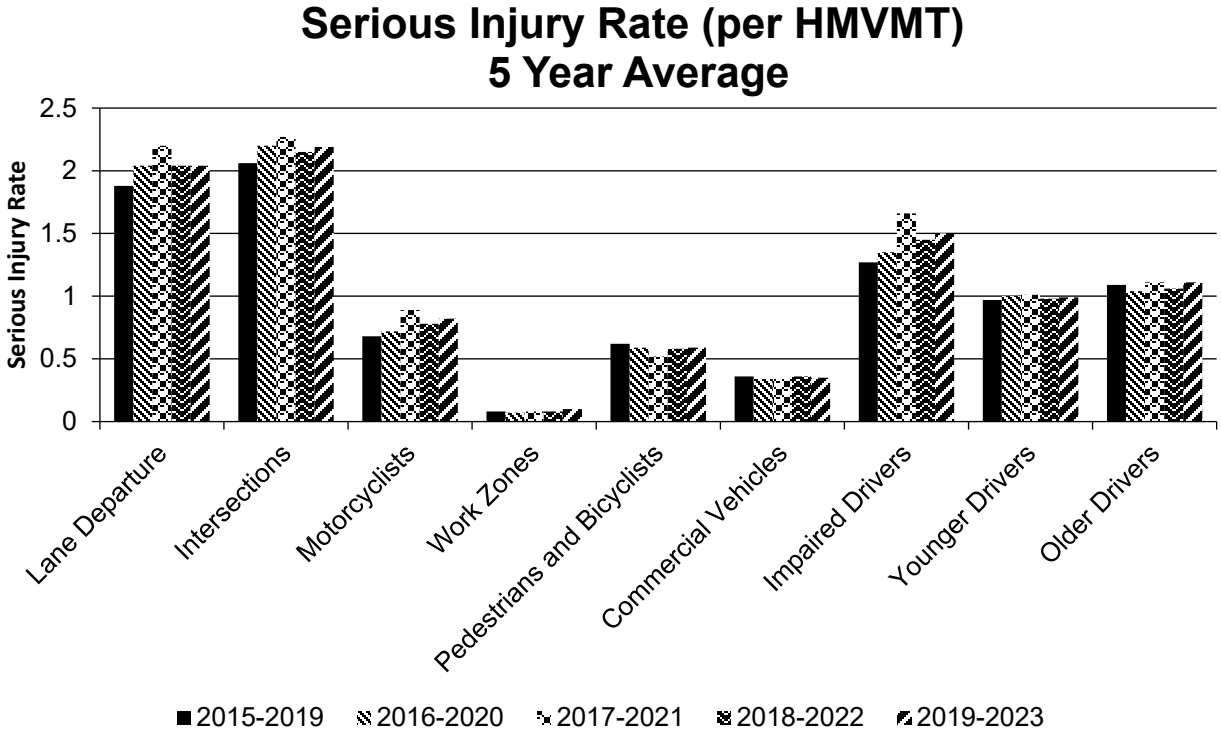
Year 2023

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	Run-off-road	462.8	1,952.6	0.48	2.04
Intersections	Intersections	328.8	2,091.4	0.34	2.19
Motorcyclists	All	157.2	779.8	0.16	0.82
Work Zones	All	18	92.8	0.02	0.1
Pedestrians and Bicyclists	All	203.2	561.4	0.21	0.59
Commercial Vehicles	All	98.6	339.4	0.1	0.35
Impaired Drivers	All	552.8	1,432.8	0.58	1.5
Younger Drivers	All	140.6	947.2	0.15	0.99
Older Drivers	All	243.6	1,069.8	0.25	1.11


Number of Fatalities
5 Year Average
Fatalities
600
500
400
300
200
100
0
Lane Departure
Intersections
Motorcyclists
Work Zones
Pedestrians and Bicyclists
Commercial Vehicles
Impaired Drivers
Younger Drivers
Older Drivers
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023


Number of Serious Injuries
5 Year Average
Serious Injuries
2500
2000
1500
1000
500
0
Lane Departure
Intersections
Motorcyclists
Work Zones
Pedestrians and Bicyclists
Commercial Vehicles
Impaired Drivers
Younger Drivers
Older Drivers
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023





The Michigan SHSP updated the age of the Younger Drivers category in the 2019-2022 SHSP from 16-24 years old to 15-20 years old. The data for that category has been updated accordingly with this report.

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

No

MDOT did not during the reporting period. Speed feedback signs and safety messages on DMS were evaluated in 2021. Roundabouts were evaluated in 2023 and showed various results such as converting conventional intersections to roundabouts was shown to significantly increase total crashes and significantly reduce fatal and injury crashes. With that being said, intersections that experience a larger proportion of fatal and injury crashes present the best candidate locations for conversion to roundabouts. In general, the crash cost savings from the reduction in more severe crashes tend to significantly outweigh the increase in lower-cost property-damage-only crashes. However, these differences should be considered on a case-by-case basis. Additional results were also noted in the Roundabout study. Non-motorized crossing enhancements along higher speed corridors were evaluated in 2023 as well. The study identified high crash locations, from statewide crash data recorded between the beginning of 2009 the end of 2020. These data were analyzed by severity, area type (rural vs urban), lighting conditions, and location of crash (intersection vs midblock). Pedestrian crashes and bicycle crashes were analyzed separately. Heat maps were generated using ArcGIS software, followed by identification of high-crash sites. Most crashes along higher speed roads occurred in clusters along corridors where these roads transitioned through urban and suburban locations. The risk of daytime and nighttime crashes also varied across these sites. Examining crashes that involved a fatality (K) or an incapacitating injury (A) or K&A crashes at each site revealed that 70% occurred at night. The report provides a method of using a cost benefit analysis to determine whether to install a particular countermeasure on a higher speed road. The results show the minimum number of non-motorized crashes that justify installation of a specific countermeasure.

Research is currently ongoing for the evaluation of lighting practices at crosswalks, sinusoidal shoulder corrugations and the impacts of Covid on traffic crashes and safety targets.

Project Effectiveness

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

MDOT has made sinusoidal corrugations standard for non-freeway shoulders, an option for centerline and edgeline on non-freeways based on certain criteria, and need further investigation and discussion on freeway shoulders.

Section 6.05.11 (Corrugations in Shoulders and Pavement) of the Road Design Manual was rewritten and includes additional installations and criteria for rumble/mumble strips.

MDOT continues to widen lane lanes to 6 inches on state trunkline. This is expected to be completed by 2024.

The Local Agency Program is in process of completing a before and after study for the FY2018 Local HSIP and HRRR programs and can report on findings in the future.

Compliance Assessment

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

03/13/2023

What are the years being covered by the current SHSP?

From: 2023 To: 2026

When does the State anticipate completing its next SHSP update?

2027

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

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

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT	Segment Identifier (12) [12]	100	100					100	100	100	100
	Route Number (8) [8]	95.81	0.07								
	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]	99.9	95.9					32.7	61.41		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100	100	100
	End Point Segment Descriptor (11) [11]	100	100					100	100	100	100
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]										
	Functional Class (19) [19]	100	100					100	100	100	100
	Median Type (54) [55]	45.35	32.36								

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	99.99								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	100		
	Average Annual Daily Traffic (79) [81]	99.79	99.79					99.8	99.8		
	AADT Year (80) [82]	39	18								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120) [110]			100	100						
	Location Identifier for Road 1 Crossing Point (122) [112]			100	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			99.89	99.89						
	Intersection/Junction Geometry (126) [116]			0.01	30.28						
	Intersection/Junction Traffic Control (131) [131]			83.71	47.91						
	AADT for Each Intersecting Road (79) [81]			39	18						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]			100	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					100	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]					85.71	100				
	Roadway Type at End Ramp Terminal (199) [189]					83.34	100				
	Interchange Type (182) [172]					99.51	100				
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					26.32	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Percent Complete):		**87.77**	**80.34**	**77.83**	**74.51**	**90.44**	**100.00**	**92.50**	**95.69**	**100.00**	**100.00**

*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.

· MDOT is expected to receive 100% of the MIRE FDE surface data from a vendor deriving the data from aerial imagery. The vendor is funded by a NHTSA grant for collecting MIRE FDE surface type.

· Misc MIRE FDE data gaps may be filled by local agencies that have jurisdiction over the route using tools within a local/state asset management software called Roadsoft.

· A current SPR funded project is in the approval process to contract a vendor to supply street view imagery at data gaps for intersection traffic control.

· In-house staff and Roadsoft staff will continue to derive and populate data from various MDOT databases, GIS models, and manual population of the MDOT Roads & Highways geospatial database.

Optional Attachments

Program Structure:

2023 SAFETY Section CFP Letter.pdf
FY 2023 LAP Safety (HSIP and HRRR) Call Letter.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.