# INDIANA

# HIGHWAY SAFETY IMPROVEMENT PROGRAM

## 2024 ANNUAL REPORT

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# Disclaimer

## *Protection of Data from Discovery Admission into Evidence*

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section[HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 407 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

# Executive Summary

As required under 23 U.S.C. § 148(h), the following is the annual report to the Federal Highway Administration (FHWA) from the Indiana Department of Transportation (INDOT) for federal fiscal year (FFY) 2024. The content of this report combines information regarding the implementation status of the Highway Safety Improvement Program (HSIP) and associated sub-programs including the High-Risk Rural Roads Program (HRRRP) and the applicable Section 164-Hazard Elimination (164-HE) penalty Transfer funds. This HSIP report, does not include the annual Rail/Highway Crossing Safety report as required under 23 U.S.C. § 130(g). The current FHWA Online Reporting Tool (ORT) system requires that the status of the Rail/Highway Crossing Safety Program be submitted as a separate report.

The focus of the annual HSIP report centers on development and implementation of the core federal aid safety program and associated safety spending in Indiana for Federal Fiscal Year (FFY) 2024, beginning October 1, 2023, and ending on September 30, 2024. In addition to the core safety programs, this report discusses the ongoing evolution of the INDOT asset management program mechanism for setting spending priorities for all projects under INDOT jurisdiction.

Crash Performance and Methodology: The number of reported motor vehicle crash fatalities decreased from 949 (FARS) in calendar year 2022 to 928 (ARIES) in 2023, which represents a decrease of 2.21% from the previous year. The 5-year rolling average continued an upward trend by an increase of 1.53%. The early estimate for 2023 vehicle miles of travel indicates the yearly fatality rate increased by 4.03%. The estimated 5-year average rate of fatalities per one hundred million vehicle miles of travel (HMVMT) decreased by 0.46% due to the lower number of fatalities in 2023.

In 2023, the count of Suspected Serious Injuries (SSI) decreased to 3468 while the SSI number for 2022 was 3923. This indicates a one-year decrease of 11.6%. The 5-year average SSI number rose by 1.51%.

It’s noteworthy that the rise in SSI count and rate is in part tied to a data discontinuity due to a change in SSI reporting procedures that occurred in 2020 and continued through 2022 when FHWA certified the Indiana crash records system adoption of the 7 injury nature types listed in the Model Minimum Uniform Crash Criteria (MMUCC) The improved accuracy in SSI reporting is being realized as most Indiana police agencies have transitioned to the revised crash reporting software as described below.

The definition used for reporting traffic safety performance measures was established in the MMUCC. The change compelled Indiana to determine a method for direct counting of SSI individuals according to the scale of "K" for Killed, "A" for SSI injury, "B" for reported injury, "C" for possible injury, and "O" for only property damage (KABCO). Starting partially in 2020, changes made in the 6th revision of the Indiana Automated Records Information Exchange System version 6 (ARIES 6), containing Indiana's electronic crash records database, herein referred to as AIRIES 6 allows INDOT to directly count officer’s subjective selection of Class A injuries by counting those individuals with one of the 7 FHWA defined injury types, from a list of 15 possible injury types, herein called injury natures.

In June of 2022 FHWA certified Indiana’s new method of directly counting suspected serious injuries as compliant with the reporting requirement. Between 2014 and 2019, an interim methodology for estimating SSI was in use due to a lack of injury nature data. The method utilized an adjustment factor for all injuries as a proxy for missing injury nature types as described in the response to question 30. Indiana received approval from FHWA to use the factor 7.2% of all non-fatal injuries as the interim method until changes were completed in the ARIES crash database allowing a direct count.

In the latter part of 2019 new data elements were in place in the ARIES officer’s crash reporting system that would allow for a specific count of MMUCC compliant data. The estimation method still comprised the first two

years of data in the 5-year rolling average for 2022. Both online and in-person training of all sworn Indiana police officers in use of the new crash reporting tool (ARIES 6) is now completed as of 12/31/23.

It must be noted that conclusions regarding suspected serious injury trends are difficult to draw from the 2020 through 2022 data. Police agencies need time to change policies and require training in the new crash reporting procedure that was slowed by the COVID pandemic. As a result, the training, and the change over by police agencies continued until December 31, 2023, when the old reporting system was shut off.

The shift in crash severity witnessed in 2020 and 2021 is difficult to explain on the basis of the change in methodology alone. During the Covid pandemic in 2020 and 2021, other as yet undetermined factors associated with the pandemic had a large influence on crash and injury severity outcomes. Further research into the interaction of these factors influence on driver risk choice is needed to understand how travel conditions and driver reactions have changed.

HSIP Obligation Budget: INDOT is currently increasing efforts to obligate all available federal safety program dollars. All projects approved for funding in HSIP and the Section 164-HE are required to address at least one of the emphasis areas defined in the Indiana Strategic Highway Safety Plan (SHSP). The total expected obligation of federal program funds for safety improvements, from the HSIP is $84.13 million. The planned HSIP obligation total is greater than the final FFY 2024 $61.13 million apportionment of HSIP funds.

Indiana is also under a Section 164-HE transfer that apportioned $26.75 million that must be obligated before the end of each fiscal year. After the 12.5% split of funds to Indiana’s official Traffic Safety Office for alcohol programs the INDOT share of the apportionment is $23.4 million. Obligation of the 164-HE funds by the end of the fiscal year is a higher priority compared to normal HSIP funds. INDOT has obligated the full apportioned amount in FY 2024.

HSIP Project Funding, Selection and Prioritization: The selection and prioritization of all safety projects on roads under INDOT jurisdiction utilize the INDOT Asset Management Process. The documentation that describes INDOT’s countermeasure selection methodology originally took place in September of 2008 with the submission of the FFY 2008 HSIP/HRRRP Report. While numerous refinements to the asset management program have taken place, the underlying methodology has not changed. For roads under INDOT jurisdiction, regardless of funding program, the established selection process for safety projects prioritizes locations of highest need in terms of reducing the severity and frequency of serious crash outcomes. The goal for all safety projects is to select the most appropriate and cost-effective countermeasures available. The INDOT Traffic Safety Office (TRAFFIC SAFETY OFFICE) ensures that each candidate safety project has a cost-effective choice of proposed solution, eligibility for HSIP funding is determined, and the relative priority of the candidate project need is established. All safety program projects address one or more of the emphasis areas enumerated in the Indiana SHSP.

Guiding the selection of projects on local jurisdiction roads, the document titled Highway Safety Improvement Program Local Project Selection Guidance, was issued on December 1, 2010, and updated on March 20, 2014. Also, Special Rules for Eligibility of Highway Safety Improvement Projects, issued August 1, 2013, described the selection methodology for local HSIP projects. INDOT has engaged with multiple partner agencies and groups to produce Indiana's first Vulnerable Road Users (VRU) Assessment. The goal is to subsequently revise the HSIP Local Project Selection Guidance.

INDOT fiscal policy is to make one-third of its total FHWA apportionment from HSIP available to local public agencies for safety projects on local system roads. Individual Metropolitan Planning Organizations (MPO), receive annual apportionments of obligation authority and a predetermined amount of obligation authority is also set aside for the use of rural public highway agencies. See question 24 for the exact amount obligated for local improvements in FY 24. The INDOT Local Project Selection Document provides local agencies guidance on the structure and content of applications for HSIP project funding.

In addition, the Hazard Elimination Program for Local Roads, and Streets (HELPERS) program based at the Indiana INLTAP is tasked with providing training and advise to local agencies and assistance to rural roadway agencies with data management, analysis, and RSA facilitation. INDOT also maintains a web-based information source on the various state safety initiatives to assist users in determining the best countermeasures for deployment to achieve effective safety improvement projects. Information regarding local safety programs is also accessible at: https//www.in.gov/indot/traffic-safety-office,or INDOT: Traffic Safety Office

In 2024 INDOT revised its listing of HSIP eligible systemic project types due to recognition that many local agencies often seek to deploy multiple countermeasures. The revision gathers countermeasures that are typically constructed together in projects for efficient eligibility findings and project approval. The list now comprises 24 individual project work type groupings as eligible for systemic HSIP funding. The Program Methodology section of this report contains a list of the safety program categories that these systemic countermeasures address.

New systemic programs are planned for deployment in 2023 and beyond. These include enhanced wrong way warning systems, high friction surface treatments for loop and other short radius curved ramps, and new or upgraded linear sidewalks parallel to existing roadways. The sidewalk systemic work type was introduced as the result of the IIJA and the subsequent FHWA finding that allows HSIP eligibility.

# Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

# Program Structure

## *Program Administration*

### Describe the general structure of the HSIP in the State.

The HSIP in Indiana provides for infrastructure safety improvements on both state system roads and local roads. However, the local HSIP program has a somewhat different structure from the state system program.

State Highway System program: The INDOT Traffic Safety Office is part of the Traffic Engineering Division. Traffic Safety Office leads INDOT's coordinated efforts to identify locations with elevated safety needs, plan infrastructure improvements, manage safety assets to prioritize and program traffic safety improvement projects on the Indiana State system of highways. Traffic Safety Office works with each of INDOT's six district offices, as well as the divisions of Design, Technical Planning, Local Public Agency & Grant Administration, Capital Asset Management Project Finance, and the other Traffic Engineering Offices.

To facilitate identification of potential safety improvement projects, Traffic Safety Office conducts an annual network wide safety screening process to identify possible locations that appear to experience higher than nominal safety risk. Traffic Safety also gathers input from various internal and external groups regarding any locations of concern. The principal internal partners that provide key input are the Maintenance and Technical Services Divisions including the Traffic Engineering offices in each district. After refinement of data records, analysis of target locations leads to identification of candidate locations for safety interventions that include both spot and systemic safety improvements.

In the areas of project prioritization/programming, the Manager of the Traffic Safety Office acts as the chair to the INDOT Traffic Safety Asset Management (TSAM) Team tasked with an annual process that prioritizes all proposed safety improvement projects located on the INDOT system of highways. The Traffic Safety Office and the six INDOT district traffic engineering offices act as voting members of the team. For fiscal year 2027, a new sidewalk and ADA facility program budgeted at $20 million per year was added to the INDOT safety program. To assist with coordinated programming of pedestrian safety needs, the INDOT Bicycle and Pedestrian Planning Coordinator was added as a member of the TSAM team for the sidewalk subprogram.

The Program Management Group (PMG) consists of senior division directors. The PMG provides finance coordination between INDOT's other asset teams and with executive management while the Traffic Engineering Division coordinates with the districts Technical Services Divisions regarding project programming and any significant changes to estimated project cost or scope. The TSAM Team acts to deliberate the relative need and priority of proposed traffic safety projects on INDOT managed roadways. The overall budgeting of obligation authority for safety projects on both the state and local road systems is coordinated with the Division of Budget and Project Accounting.

Project design is conducted by the INDOT's Highway Design Division, and each project is managed by an assigned project manager utilizing the Scheduling Project Management System. Final evaluation of project safety performance is conducted by the Traffic Safety Office in the fourth year following project construction.

Local Roads Safety Program: In the State of Indiana, Local Public Agencies (LPAs) operate and maintain all local public roads. At the inception of the INDOT safety program under SAFTEA-LU a policy was determined by the Finance Business Unit to make a portion of INDOT's total annual apportionment of HSIP funding available to local public agencies for safety projects on local system roads. An annual apportionment of obligation authority is assigned to each Metropolitan Planning Organization (MPO) serving Group 1 and Group 2 urban areas. A standardized population formula is used to determine the assigned funding made available to individual MPOs. For public agencies in rural (non MPO areas) the aforementioned population formula is also used to determine the total amount of the HSIP funding allotted for projects located in rural areas. Rules have been established allowing LPAs to apply to INDOT for determination of project eligibility to utilize HSIP funds dedicated for local agency use.

To assist in the selection of local HSIP projects, guidance and outreach efforts are routinely made by INDOT and by the Indiana Local Technical Assistance Program (INLTAP). INDOT's guidance to LPAs advocates the value of low-cost systemic safety improvements to proactively address the risk of severe crashes on their entire roadway system, along with the treatment of locations with high risk of frequent severe crashes.

INDOT sponsors an ongoing program with INLTAP called the Hazard Elimination Project for Local Roads and Streets (HELPERS) Program. The HELPERS Program coordinates with rural planning organizations (RPOs) as well as rural counties, cities, and towns to assist them in identifying, analyzing, and prioritizing their safety improvement needs. The HELPERS Program advises LPAs regarding management of safety risks and assists rural area LPAs in submitting project level funding proposals to INDOT for determination of HSIP project eligibility.

The INDOT Traffic Safety Office makes a determination of eligibility for all applications that seek to utilize HSIP funding. The Traffic Safety Office reviews all safety improvement project proposals for compliance with HSIP eligibility requirements as defined in Indiana's Strategic Highway Safety Plan. Eligible local projects are recommended to the INDOT Division of LPA & Grant Administration for programming approval and inclusion in the STIP and relevant TIP document. The LPA & Grants Division develops an interagency agreement with the relevant LPA to guide each project's development. The relevant INDOT district then assigns a project manager to coordinate development of the project design.

Regarding internal coordination of local safety project design and contract preparation, technical review of local agency design plans is conducted by the Highway Design Division, while contract letting is conducted by the INDOT Construction Management Division.

In addition, Traffic Safety Office consults with Design and Maintenance Divisions regarding new safety improvement design practices and the Traffic Administration Office, regarding new Standards and Specifications. Traffic Safety Office also coordinates with the Research Division regarding the approval of safety related research efforts under the Joint Transportation Research Project (JTRP) and to plan implementation of successful research products.

## Where is HSIP staff located within the State DOT?

Operations

The INDOT Traffic Safety Office is located within the Traffic Engineering Division and is in turn part of the Transportation Systems and Operations business Unit. The primary functions of the Traffic Safety Office are planning, prioritization and analysis in support of the HSIP in the state of Indiana.

## How are HSIP funds allocated in a State?

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

HSIP Funds for use on state system highways are allocated statewide via INDOT's Asset Management Process as described in the response under Question 3. INDOT typically programs 33% of HSIP funds assigned for the state roadway network to program systemic safety improvement projects.

Local Roads HSIP Funds are allocated regionally to MPOs via a population formula and to rural areas by an INLTAP managed assistance program.

Analysis of crash data related to SHSP Emphasis Areas informs selection and programming of various systemic safety improvement projects.

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

INDOT Traffic Safety Office coordinates implementation of the Indiana Strategic Highway Safety Plan (SHSP) with state and local agencies and interested stakeholders as well as the FHWA Indiana Division Office. Principal SHSP partners include the Indiana Criminal Justice Institute which houses the Indiana State Highway Safety Office and administers the Indiana Fatality Analysis Reporting System. The Indiana State Police houses Indiana's Electronic Vehicle Crash Records System and provides access to state and local agencies using the Automated Records Information Exchange System (ARIES). The Indiana MPO Council has input on all relevant safety issues, including issues associated with vulnerable road users and equity and with the development of statewide plans such as the SHSP and the VRU report. Other external partners include but are not limited to the Indiana Bureau of Motor-vehicles, Indiana Department of Health, Indiana Department of Education, Indiana Local Technical Assistance Program (INLTAP), and various Indiana county highway departments as well as other Indiana local agencies and groups.

Regarding planning of local safety programs and performance target setting, INDOT Traffic Safety Office coordinates with Indiana's 14 Metropolitan Planning Organizations through the MPO Council. To assist in coordination with rural planning organizations (RPOs) and rural local agencies, INDOT has established the Hazard Elimination Project for Local Roads and Streets (HELPERS) within the Indiana Local Technical Assistance Program (INLTAP). The HELPERS program helps guide small agencies in developing HSIP eligible safety projects.

Since 2019, in a joint effort with FHWA, INDOT has encouraged local government agencies and MPOs to prepare Local Road Safety Plans and/or Safety Action Plans. Many counties, MPOs and local governments have now done so, or are in the process of developing these plans. The SS4A program has directly funded over 30 Safety Action Plans around the state.

INDOT Traffic Safety Office also partners with the Indiana Joint Transportation Research Program (JTRP) in the development of Indiana-specific safety planning analysis tools and assessing safety countermeasures new to INDOT and its local partners.

INDOT Traffic Safety Office provides information to local agency staff and consultants regarding new technical tools and changing methodologies through presentations made at various conferences during the year such as the annual Purdue University Road School and their annual Civil Engineering Professional Development Seminar as well as other organized events.

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

- Design
- Districts/Regions
- Local Aid Programs Office/Division
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Research

## Describe coordination with internal partners.

The INDOT Traffic Safety Office leads INDOT's coordinated efforts to identify locations with safety needs, plan improvements, prioritize and program traffic safety improvement projects on the Indiana State system of highways. The traffic Safety Office works with each of INDOT's district offices, as well as the divisions of Design, Planning, Traffic Engineering, LPA & Grant Administration, Capital Asset Management Office, and Budget Divisions.

To identify potential safety improvement projects, Traffic Safety Office gathers input from various internal and external groups. The principal internal partners are District Maintenance Division, Technical Services Division, and Traffic Engineering Offices that provide key input on road safety assessments.

In the areas of finance, budget and project prioritization/programming, the Manager of Traffic Safety Office acts as the chair to the INDOT Traffic Safety Asset Management Team (TSAM) to prioritize all proposed safety projects located on the INDOT system of highways. The six INDOT district traffic engineering offices, the INDOT bike/Ped Coordinator, along with a single member of Traffic Safety Office act as the TSAM voting group. The TSAM Team acts to deliberate the relative need and priority of proposed traffic safety projects on INDOT managed roadways. The approval of the recommended list of projects by fiscal year and the allocation of proposed obligation authority for all asset programs including safety is under authority of the Program Management Group. Budgeting of obligation authority for safety projects on both the state and local road systems is coordinated with the Division of Budget and Project Accounting.

For TSAM deliberated/approved safety projects on the state highway system, the relevant INDOT district office is responsible for project programming and entry of the project into the State Transportation Improvement Plan (STIP) and any relevant local Transportation Improvement Plan (TIP). The six district's team members coordinate the approved list of selected projects with their respective district Funds Managers to facilitate programming. The districts also manage design, permitting and construction of projects in coordination with INDOT Design and Construction Divisions, via a project manager assigned to the project to coordinate all project development tasks.

Regarding internal coordination of local safety projects, the Traffic Safety Office performs review of all proposed projects for compliance with eligibility requirements as defined in Indiana's Strategic Highway Safety Plan (SHSP). Eligible projects are recommended to the INDOT Division of LPA & Grant Administration for funding approval and inclusion in the STIP and relevant TIP document. The LPA & Grants Division also develops an interagency agreement with the LPA to guide project development. The relevant INDOT district then assigns a project manager to coordinate development of the construction project.

In addition, the Traffic Safety Office consults with Design and Maintenance Divisions regarding new safety improvement design practices and the Office of Traffic Administration, regarding new Standards and Specifications. Traffic Safety Office also coordinates with the Research Division regarding the approval of

safety related research efforts under the Joint Transportation Research Project (JTRP) and to plan implementation of successful research products.

## Identify which external partners are involved with HSIP planning.

- Academia/University
- Governors Highway Safety Office
- Law Enforcement Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-Various County Engineers

INDOT Traffic Safety Office coordinates the SHSP with numerous state and local agencies, MPO Council and other stakeholders. Two other SHSP partners are the Indiana Criminal Justice Institute which houses the Indiana State Highway Safety Office (SHSO) as well as Indiana Fatal Accident Reporting System (FARS) office and the Indiana State Police and their data management vendor LexisNexis, which manages the State's crash database.

The Traffic Safety Office also partners with the Indiana Joint Transportation Research Program (JTRP) in the development of calibrated safety planning analysis tools for INDOT and its local partners. The Purdue University Center for Road Safety works with the Traffic Safety Office under the JTRP structure to produce an annual Network Safety Screen Process that provides preliminary substantive versus nominal crash risk assessment of each intersection and road segment on the INDOT roadway network.

Regarding planning of local safety programs and performance target setting, INDOT Traffic Safety Office primarily coordinates with MPOs and the INLTAP program - Hazard Elimination Project for Local Roads and Streets (HELPERS). The HELPERS Program in turn coordinates with rural planning organizations (RPOs) and rural local agencies to help guide them develop HSIP eligible safety projects.

## Describe coordination with external partners.

INDOT Traffic Safety Office coordinates implementation of the Indiana Strategic Highway Safety Plan (SHSP) with state and local agencies and interested stakeholders as well as the FHWA Indiana Division Office. Principal SHSP partners include the Indiana Criminal Justice Institute and the Indiana State Police. The Indiana MPO Council also has input on all relevant safety issues. Other external partners include but are not limited to the Indiana Bureau of Motor-vehicles, Indiana Department of Health, Indiana Department of Education, Indiana Local Technical Assistance Program (INLTAP), and various Indiana county highway departments as well as other Indiana local agencies and groups.

Regarding planning of local safety programs and performance target setting, INDOT Traffic Safety Office coordinates with Indiana's 14 Metropolitan Planning Organizations through the MPO Council. To assist in coordination with rural planning organizations (RPOs) and rural local agencies, INDOT has established the Hazard Elimination Project for Local Roads and Streets (HELPERS) within the Indiana Local Technical Assistance Program (INLTAP). The HELPERS program helps guide small agencies in developing HSIP eligible safety projects.

The INDOT Office of Traffic Safety, in coordination with HELPERS, district offices, and the FHWA safety engineer, has made presentations at seven INDOT led safety summit meetings and to the MPO Council to encourage cities, counties and MPOs to consider safety in their areas and to develop Safety Action Plans.

INDOT Traffic Safety Office also partners with the Indiana Joint Transportation Research Program (JTRP) in the development of Indiana-specific safety planning analysis tools and assessing safety countermeasures new to INDOT and its local partners.

INDOT Traffic Safety Office provides information to local agency staff and consultants regarding new technical tools and changing methodologies through presentations made at various conferences during the year such as the annual Purdue University Road School and their annual Civil Engineering Professional Development Seminar as well as other organized events.

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

In response to the increased HSIP apportionments under the Bi-partisan Infrastructure Law, INDOT has committed to increase the obligation of funds to construct worthy safety improvement projects. The number of systemic improvement types has been expanded along with expanded selection of hot spot safety improvement projects. Also, a new Sidewalk Improvement Program has been created for future fiscal years. The new sidewalk program is intended to provide a means of constructing upgraded or new sidewalks as part of roadway improvements projects or as standalone projects. The program includes funding for HSIP funded crosswalk improvements and associated ADA compliant ramps using a risk and equity scoring method to assist in selection of locations along state highways.

Indiana’s policy is to provide a share of HSIP funds apportionment to local agencies, resulting in opportunity to combat severe crash risk on both urban and rural local roads. In addition to long standing systemic pedestrian safety work types, INDOT has shared its sidewalk project selection methodology with the Indiana MPO council to encourage increased local efforts to address pedestrian safety needs.

Regarding the process used by INDOT to conduct HSIP eligibility review for proposed local safety projects; urban LPAs must first submit to their local Metropolitan Planning Organizations (MPOs) for preliminary project selection and funding prioritization. Rural group 3 and group 4 LPAs are asked to first submit their proposed projects to the INLTAP HELPERS Program for compliance review, prior to INDOT determination of eligibility for HSIP funding.

INDOT Traffic Safety Office determines eligibility in accordance with the Indiana Strategic Highway Safety Plan's delineated safety emphasis areas as well as the project work types defined in the HSIP Local Project Selection Guidance documents. When an HSIP eligible local project is approved for programming by the Division of LPA and Grant Administration, that division provides oversight of project agreements between INDOT and the LPA to govern project development. The LPA and Grant Administration Division also supports the programming of safety projects by administering inclusion of projects on Local and State Transportation Improvement Plans and authorizing funding obligation by fiscal year and monitoring progress of plan development and construction contract letting. Once a project is programmed in Active status in the INDOT Scheduling Project Management System, the INDOT district office assigns a project manager to coordinate the design and environmental documentation with the project sponsor agency, designer, and various INDOT Divisions and offices as well as monitor progress in order to bring the project to a scheduled construction contract letting.

All project plans, construction documents and estimates are reviewed by the INDOT Highway Design & Technical Support Division. Contract letting is administered by the INDOT Construction Management Division.

## *Program Methodology*

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

Yes

INDOT doesn't have a singular manual, but it has published documents on file with the FHWA Indiana Division Office that provide policies and guidance to staff and partner agencies including:

· Business Rules governing the conduct of the Traffic Safety Asset Management process for state system safety improvement project selection and methodology for scoring and prioritization of candidate projects including HSIP assets.

· Guidance to local public agencies regarding safety program planning and management of local safety project selection, listing of approved systemic safety improvement work types, and the process to apply for candidate project HSIP eligibility determination is posted on the INDOT website for public access.

### Select the programs that are administered under the HSIP.

- Bicycle Safety
- Horizontal Curve
- Intersection
- Local Safety
- Median Barrier
- Pedestrian Safety
- Roadway Departure
- Sign Replacement And Improvement
- Other-Centerline and Edgeline Rumble Stripes
- Other-Traffic Signal Visibility Improvement

Various sub-programs are aligned to address SHSP emphasis areas but may overlap regarding target crash types that are addressed. For example, the Intersection safety subprogram encompasses all forms of intersection crash types for signalized, stop controlled and alternative design intersections while the program titled "Other, Traffic Signal Visibility" has a specific focus on replacement and adjustments to traffic signal heads to improve their visibility to drivers.

Note that Indiana was not subject to the High-Risk Road or the 65 and over Driver and Pedestrian special rules in fiscal year 2024. Indiana was under the Vulnerable Road User Special Rule for 2024.

## Program: Bicycle Safety

### *Date of Program Methodology:7/29/2015*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

**Crashes**

- All crashes
- Fatal and serious injury crashes only

**Exposure**

- Traffic
- Volume

**Roadway**

- Other-Roadway and/or shoulder Width potental for Road Diet

### *What project identification methodology was used for this program?*

- Crash frequency
- Probability of specific crash types

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

Yes

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

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval. The VRU Assessment will revise local HSIP project scoring rules.

### *How are projects under this program advanced for implementation?*

- 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:50
Available funding:50

Most Bicycle Safety projects are identified and proposed for HSIP funding both by INDOT district offices and by local agencies as part of their vulnerable road user program planning due to concern that exposure to motor vehicles increases probability of bike involved crashes. Selection of road segments are often the result of data analysis efforts by an MPO or INLTAP HELPERS. Projects proposed by INDOT are prioritized by the Traffic Safety Office and the relevant INDOT district offices during the annual asset management process. Typically bike lanes are installed as part of road diets either by reallocation of travel and auxiliary turn lanes and/or by elimination of on-street parking.

## Program: Horizontal Curve

### *Date of Program Methodology:7/29/2015*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

| Crashes | Exposure | Roadway |
|---|---|---|
| • Fatal and serious injury crashes only | • Traffic<br>• Volume | • Other-Roadway and/or shoulder Width potental for Road Diet |

### *What project identification methodology was used for this program?*

- Crash frequency
- Probability of specific crash types

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

Yes

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

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval.

### *How are projects under this program advanced for implementation?*

- 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:50
Available funding:50

Horizontal Curve Safety projects on the State's Highway network are primarily identified by annual network safety screening of previous crash history but may also be identified from citizen input. Typically, the curved road sections are depicted graphically on a heat map and by listing with crash risk indexes Likely candidates for improvement projects are prioritized by the relevant INDOT district office according to risk for future lane

departure crashes. Projects are identified to the Traffic Safety Asset Team under the budgeted amount for that district's systemic HSIP funding allotment.

Local agencies may identify local road curves as part of individual spot improvement or systemic curve safety projects. The INLTAP HELPERS Program often assists county highway agencies in determining road segments at elevated risk of crashes. Rural public agency projects are prioritized by INDOT while MPOs prioritize proposed projects within their planning areas. Counties that have a road segment identified in a Local Road Safety Plan or other action plan are given a high priority. Typically, enhanced warning devices and pavement markings are installed. Safety Edge is part of INDOT standards for new pavement and resurfacing and is recommended to local agencies. High Friction Surface Treatment may also be included where existing friction or pavement is lower than acceptable. Less frequently, new guardrail installations may be constructed to meet roadside safety standards.

## Program: Intersection

### *Date of Program Methodology:10/1/2010*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

**Crashes**

- All crashes
- Fatal and serious injury crashes only

**Exposure**

- Volume

**Roadway**

- Other-roadway conditions and sight distance

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions of specific crash types
- 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?*

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval.

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted factors addressing safety need, intersection geometry and cost effectivness:50
Total Relative Weight:100

Intersection Safety addresses crashes associated with vehicle conflict points at intersections or other locations where vehicles frequently make turning movements. Projects may consist of either site specific “Spot” safety improvements involving addition of turn lanes or reconfiguration of an entire intersection to construct roundabout, reduced conflict, or other innovative designs. However, the majority of intersections are treated with lower cost systemic safety improvements including un-signalized intersection visibility features for two-way stop-controlled intersections, increased visibility of stop signs or traffic signal heads as described below, or construction of Access Control medians and islands. INDOT is also engaged with Purdue University Center for Road Safety in a study to assess recently installed intersection Conflict Warning Systems (CWS) at a number of intersections. If found to be practical and effective CWS may become an approved systemic work type. Also, one county highway agency installed the first conflict warning system in Indiana about 7 years ago.

Intersections on the State Highway network are typically identified by INDOT’s annual network safety screening process, but local road intersections are identified by citizen input or known land use developments that are determined to increase exposure to crash risk. State network projects are proposed for programming by the INDOT district offices to the Traffic Safety Asset Team for prioritization according to a project scoring methodology that rates various factors including relative future crash risk, and cost effectiveness of the proposed countermeasures.

Local agencies identify intersection safety improvements for spot improvement projects. Some local agencies utilize low-cost systemic intersection safety countermeasures that can include oversize signs, enhances special markings or flashing beacons. Rural local agency projects are prioritized by INDOT while MPOs prioritize proposed projects within their planning areas.

## Program: Local Safety

### *Date of Program Methodology:10/1/2010*

### *What is the justification for this program?*

- Other-Designated split of HSIP Apportionment

### *What is the funding approach for this program?*

Other-Competes with other local projects

### *What data types were used in the program methodology?*

**Crashes**

- All crashes
- Fatal and serious injury crashes only

**Exposure**

- Volume

**Roadway**

- Horizontal curvature
- Roadside features
- Other-Geometric Features, marking and signs

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions of specific crash types
- 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?*

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval. State Roads are not addressed in this Sub-Program.

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted scoring based on safety need and cost effectivness:50
Total Relative Weight:100

All local sponsored projects are identified and proposed for HSIP funding by local agencies. The majority of local project proposals are in urban areas and are therefore most often prioritized by MPOs. The INLTAP HELPERS Program typically assists rural local agencies and rural planning agencies RPOs in identifying appropriate safety improvement projects and conducting road safety assessments. Local agencies then submit applications for candidate projects to receive HSIP funding eligibility that is determined by the INDOT Traffic

Safety Office. Priority for setting the contract fiscal year is determined by the INDOT Division of Local Public Agencies and Grants along with the relevant INDOT district office.

## Program: Median Barrier

### *Date of Program Methodology:10/1/2010*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

| Crashes | Exposure | Roadway |
|---|---|---|
| • Fatal and serious injury crashes only | • Volume | • Median width<br>• Functional classification |

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions of specific crash types
- 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?*

- 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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted ranking factors including safety need, roadway geometry and cost effectivness:50

Total Relative Weight:100

Median Barrier projects are conducted under this sub program to reduce the severity of cross median crashes on high-speed highways. While available for systemic installation on local roads, the majority of projects in this sub-program are cable barrier systems that are constructed on state network highways that have depressed grass medians. Per INDOT Standards, cable barriers require adequate width to accommodate the larger deflections that can occur when struck by large commercial vehicles. Medians that are narrower than 40 feet wide may need to be treated with two faced steel guardrails.

On INDOT system highways, project identification and prioritization are conducted by INDOT Traffic Safety Office and district traffic engineering offices. Local agencies may also use HSIP funding for construction of median barrier systemic projects, but to date this has not happened.

## Program: Pedestrian Safety

### *Date of Program Methodology:10/1/2010*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

**Crashes**

- All crashes
- Fatal and serious injury crashes only

**Exposure**

- Traffic
- Volume

**Roadway**

- Median width
- Roadside features
- Other-Geometrics features and land use

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions of specific crash types
- 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?*

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval.

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted factors using safety need and cost effectivness:50
Total Relative Weight:100

Pedestrian safety projects are identified and proposed for HSIP funding both by INDOT and by local agencies as part of their Vulnerable Road Users non-motorized program planning due to exposure probability and are most often prioritized by MPOs. Projects proposed by rural local agencies or by INDOT are prioritized by the Traffic Safety Office and the relevant INDOT district office. Typically, crosswalks, curb ramps and connecting sidewalks, median refuge areas and/or hybrid beacons or RRFBs are installed as the primary countermeasures. INDOT also programs projects to enhance pedestrian safety and meet ADA requirements using HSIP or other funds.

## Program: Roadway Departure

### *Date of Program Methodology:10/1/2010*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

**Crashes**

- All crashes
- Fatal and serious injury crashes only

**Exposure**

- Volume

**Roadway**

- Horizontal curvature
- Roadside features

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions of specific crash types
- 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?*

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval.

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted factors based on safety need and cost effectivness:50
Total Relative Weight:100

Roadway Departure crashes result in the largest number of fatal and severe injury outcomes on most rural road systems. For this reason, projects may employ one or multiple countermeasures that can consist of aforementioned cable barrier systems installed on depressed grass medians, centerline and edge-line rumble stripes described below, enhanced pavement marking and signs, correction of curve superelevation, placement of high friction surface treatment on curves, as well as INDOT's standard deployment of safety edge as part if it's agency wide paving program. In addition, site specific curve realignment projects may be constructed where adequate sight distance can't be achieved by other means. All of the above countermeasures are eligible for HSIP funding for both state and local agency project construction.

## Program: Sign Replacement And Improvement

### *Date of Program Methodology:10/1/2010*

### *What is the justification for this program?*

- Other-Targeted to improve local road safety

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

| Crashes | Exposure | Roadway |
|---|---|---|

- All crashes
- Fatal and serious injury crashes only
- Lane miles
- Horizontal curvature
- Roadside features
- Other-Geometric Features

### *What project identification methodology was used for this program?*

- Crash frequency
- Other-Retroreflectivity of Existing Signs
- Relative severity index

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

Yes

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

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval. INDOT network highways are addressed under the INDOT maintenance program and are not under the safety program.

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:100
Total Relative Weight:100

Sign Replacement projects to upgrade the condition and retro-reflectivity of regulatory and warning signs are exclusively local agency sponsored safety improvements since state network roadway signs are part of the INDOT sign maintenance program. On rural road systems proposed projects are typically identified by local agencies due to deteriorated condition or lack of retro-reflectivity of their regulatory and warning signs. The HELPERS program lends out retro-reflectometers by request to local agencies if testing is desired, however sign reflectance degradation is typically identified by observation.

Rural public agency projects are prioritized by INDOT while MPOs prioritize proposed projects within their planning areas. Each local agency is required to conduct a geocoded inventory of their existing signs and commit to ongoing maintenance of the replaced signs.

## Program: Other-Centerline and Edgeline Rumble Stripes

### *Date of Program Methodology:10/1/2012*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

**Crashes**

- All crashes
- Fatal and serious injury crashes only

**Exposure**

- Traffic

**Roadway**

- Median width
- Other-Paved Shoulder Width

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions 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?*

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval. State INDOT network highways are addressed under the INDOT roadway asset program and are not under the safety program.

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted factors using safety need and cost effectivness:50
Total Relative Weight:100

Center and Edge-line Rumble Stripe improvements are predominantly produced by INDOT as part of pavement preservation although the systemic program is available to local agencies.

Center and edgeline rumble stripe safety improvement projects may be applied as a retrofit on existing pavements when the need is determined to supersede the paving schedule. For most rumble stripe installation, the INDOT Pavement Division is supplied with heat maps of road segments with higher incidence of head on and sideswipe crashes. The decision to include centerline and or edgeline rumble is determined through coordination between the district paving and traffic engineers.

Local agencies may also apply for HSIP eligibly to mill rumble stripes although this option is rarely exercised on high-speed rural local roads. It's hoped that more local rumble stripe projects will result from efforts to increase the use of Local Safety plans.

## Program: Other-Traffic Signal Visibility Improvement

### *Date of Program Methodology:10/1/2012*

### *What is the justification for this program?*

- Addresses SHSP priority or emphasis area

### *What is the funding approach for this program?*

Competes with all projects

### *What data types were used in the program methodology?*

| Crashes | Exposure | Roadway |
|---|---|---|
| • All crashes<br>• Fatal and serious injury crashes only | • Traffic | • Other-Signalized Intersections |

### *What project identification methodology was used for this program?*

- Crash frequency
- Excess proportions 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?*

No

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

Local agencies identify project needs and submit eligibility requests to INDOT for approval.

### *How are projects under this program advanced for implementation?*

- Competitive application process

### *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).*

**Relative Weight in Scoring**

Cost Effectiveness:50
Other-Weighted factors using safety need and cost effectivness:50
Total Relative Weight:100

Traffic Signal Visibility is a systemic improvement type. Projects are a subset of the Intersection Safety program. State highway signalized intersections are identified by annual network safety screening. The primary countermeasure is the installation of high contrast traffic signal heads with backing plates and reflective strips, however left turn lanes may also include installation of 4 section signal heads with flashing yellow arrow for permitted phasing where an engineering study has found that to be appropriate. The four section signal heads also allow the capability to program protected only and protected/permitted phases according to traffic demand and safety need by time of day or pedestrian demand.

### What percentage of HSIP funds address systemic improvements?

35.7

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

- Add/Upgrade/Modify/Remove Traffic Signal
- High friction surface treatment
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Other-Pedestrian Curb Ramps and Crosswalks
- Other-Slotted Left Turns
- Rumble Strips
- Upgrade Guard Rails

The program goal for the INDOT safety program is to obligate approximately 33% of available HSIP funds on systemic improvement work types on an annual basis. Actual obligations for systemic projects may vary year to year due to project production factors and diversion of projects for obligation under the Section 164-HE Penalty Transfer. In Federal Fiscal Year 2024, 35.7% of the safety obligations went towards systemic type projects.

Note: Safety Edge has been an INDOT paving standard since 2012 but does not contribute to HSIP spending. Also, most centerline and edge line rumble stripe construction is also performed as part of INDOT's paving program, not using HSIP funds.

## What process is used to identify potential countermeasures?

- Crash data analysis
- Engineering Study
- Road Safety Assessment
- Stakeholder input

A Road Safety Assessment (RSA) is typically used to determine eligibility for site specific "spot" improvement needs. An RSA report may identify either eligible "near term" improvements that may be constructed with available systemic safety funds and / or may identify more capital intense spot improvement projects that require longer term project programming and significant design effort before deployment. In some cases, both approaches are used to mitigate crash risk in the intervening time while a larger scale project is developed for contract letting.

Various means are used to identify road segments for application of systemic safety improvement types. These means include use of network safety planning software and mapping of crash types over multi-year periods to define areas in greater need for particular safety investments.

## Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

INDOT has several initiatives that fall under the connected vehicle and ITS umbrellas. Most of these initiatives are not a part of the HSIP program at this time. The INDOT traffic management centers use many technologies to improve traffic efficiency and safety in real time such as connected signals, traffic speed monitoring equipment, traffic cameras, ramp metering and more recently automated video speed enforcement in work zones. Although these initiatives improve safety, they are covered under other programs other than HSIP.

INDOT is also involved in several research projects that aim to use connected vehicle data to evaluate the statewide system of segments and intersections for real time and aggregate data on intersection mobility performance, segment mobility performance, hard braking and lane departures, speeds, incident detection and other performance measures.

The HSIP program has been involved in several ITS hardware instillations in recent years. Two recent examples are ramp warning systems to detect wrong way entry onto freeways and intersection conflict warning systems at rural two way stop intersections.

INDOT does not prioritize HSIP funding for ITS and connected vehicle initiatives specifically, but does consider these strategies when evaluating potential solutions for complicated traffic safety needs. Most of these strategies are funded through other programs at this time.

## 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.

INDOT has developed data driven analysis tools the Roadway Hazard Analysis Tool (RoadHAT) and Safety Network Improvement Program (SNIP) that are similar/equivalent to the HSM, These tools follow HSM methodology, calibrated for the State of Indiana and support data driven decision making under the HSIP. The INDOT process was developed prior to release of the Highway Safety Manual (HSM) and makes extensive use of crash cost to categorize future crash risk by consideration of a crash severity index along with a crash frequency index. Indiana has a set of Indiana calibrated Crash Reduction Factors (CRFs) in RoadHAT 4.1 and Safety Performance Functions (SPFs) in SNIP. INDOT recommends to users of the state level software tools to consult the CMF Clearinghouse to determine appropriate CRFs for all countermeasures not currently calibrated for Indiana roadways. Indiana does not currently use the AASHTO-Ware Safety software tool.

INDOT designers can use IHSDM for safety analysis of selected major projects and for analysis of design exceptions when appropriate. Calibration of SPFs for IHSDM and INDOT Safety analysis tools was completed by Purdue Center for Road Safety to support IHSDM analysis.

## Describe program methodology practices that have changed since the last reporting period.

Results of the 2023 VRU Assessment including project scoring strategies have been incorporated in the current SHSP and will be applied in succeeding fiscal years.

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

INDOT seeks to achieve a balance between obligations of apportioned HSIP funds towards implementation of systemic and site-specific safety improvements on INDOT roadways. The process is oriented toward mitigation of severe outcome crash risk at those intersections, ramps, or road segments that experience an elevated history of severe crash outcomes. Project identification methods include conducting annual network wide analysis to identify both specific “spot” locations with elevated crash risks and corridors with high potential for severe crashes that may be mitigated by deployment of one or more systemic improvement.

Candidate locations on INDOT highways are subject to an initial engineering review process equivalent to a road safety assessment (RSA) to identify safety needs and appropriate cost-effective countermeasures. The INDOT Traffic Safety Office conducts these reviews with support of the INDOT district Technical Services Division offices.

The Asset Management process that is used to prioritize programming of traffic safety projects on INDOT system roads requires selection and prioritization of a fiscally constrained program of projects for each state fiscal year. The Traffic Safety Asset Management (TSAM) Team is chaired by the Traffic Safety Office manager and consists of a voting representative from Traffic Safety Office and the six INDOT District Traffic Engineers. Each year the TSAM team meets to deliberate the prioritization and select candidate projects for INDOT Program Management Group (PMG) approval, including both spot and systemic safety improvements. The goal is production of cost constrained lists of safety improvement projects that are programmed for construction in each year of the ongoing 5-year asset planning window.

A uniform scoring/prioritization procedure is utilized on INDOT highways to provide project proposals with weighted scores that consider history of crashes and their severity, traffic volume and road inventory data as well as consideration of cost effectiveness of the proposed solution. Project scoring procedures are reviewed and adjusted by TSAM committee vote each year prior to collecting and scoring candidate projects for the next fiscal year asset management cycle.

No uniform set of criteria can fully assess the relative intensity of safety needs in every case, the candidate project prioritization process also considers un-scored factors that may influence future crash risk by way of safety asset committee deliberation. The TSAM team reviews and deliberates the relative merits of each proposed project and assigns a priority grade for a targeted fiscal year of construction. A resulting suite of proposed projects is then forwarded to an executive finance team called the Program Management Group (PMG). The PMG considers the requested funding level in context of other asset team proposals and projected revenue level for the target year. The Program Management Group then allocates an available obligation limitation level for the overall INDOT safety program for the target construction year.

A Change Management process exists for existing projects that may be used by project design managers and program funding managers throughout each project’s design/environmental development phase to provide consideration of any proposed changes to individual project intent, budget, or scheduled construction fiscal year. The Traffic Safety Office manager was assigned authority as the the safety asset chair to concur with or deny proposed changes to safety asset project scope, cost, or construction year under INDOT's Change Management process along with the managers over design and financial supervision.

The INDOT Traffic Safety Office makes all eligibility determinations for HSIP funding. The necessary information is provided by local public agencies via Road Safety Audit (RSA) reports and is used by the Traffic Safety Office to determine eligibility. A typical application for spot improvement proposals consists of a Road Safety Assessment (RSA) report, cost effectiveness analysis and a commitment to the project submitted by the relevant local officials. An exception to the aforementioned application package is an INDOT provided HSIP application form that provides the necessary eligibility information for a predetermined list of systemic safety project types. Therefore, application for eligibility to produce systemic safety improvements is streamlined to facilitate the selection of known proactive safety improvements.

Regarding programming of safety projects on the local road system, individual LPAs may propose projects for HSIP funding by conducting a data driven safety needs analysis through three methods. First a project may be identified for HSIP Eligibility review by means of a published local Safety Action Plan where the necessary data analysis has been completed. The other two methods rely on the type of regional planning system existing in the proposed project area. Proposed projects found to be HSIP eligible by the INDOT Traffic Safety Office that are located in areas within a metropolitan planning organization (MPO) must be selected and prioritized by the relevant MPO prior to project approval by the INDOT LPA and Grants Division. Rural LPAs are asked to first work with the INLTAP HELPERS Program that acts to advise the LPA and any local Regional Planning Organization (RPO) regarding safety risk identification and safety improvement priorities for that area. The HELPERS Program staff can pre-screen applications for compliance with federal and state regulations. The HELPERS Program also provides outreach with valuable data analysis services and can advise the LPAs regarding best practices to achieve improved traffic safety. HELPERS can assist local governments as they conduct RSAs using appropriate procedures and provides a listing of individuals who are trained and willing to participate on local road RSA teams. The HELPERS program also provides training and outreach on best practices for safety planning and maintenance practices available to all LPAs in the state.

# Project Implementation

## *Funds Programmed*

### Reporting period for HSIP funding.

Federal Fiscal Year

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

| FUNDING CATEGORY | PROGRAMMED | OBLIGATED | % OBLIGATED/PROGRAMMED |
|---|---|---|---|
| **HSIP (23 U.S.C. 148)** | $50,670,858 | $83,998,111 | 165.77% |
| **HRRR Special Rule (23 U.S.C. 148(g)(1))** | $443,651 | $0 | 0% |
| **VRU Safety Special Rule (23 U.S.C. 148(g)(3))** | $10,123,431 | $11,047,523 | 109.13% |
| **Penalty Funds (23 U.S.C. 154)** | $0 | $0 | 0% |
| **Penalty Funds (23 U.S.C. 164)** | $10,576,036 | $23,406,443 | 221.32% |
| **RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))** | $0 | $0 | 0% |
| **Other Federal-aid Funds (i.e. STBG, NHPP)** | $11,600,234 | $0 | 0% |
| **State and Local Funds** | $17,496,965 | $0 | 0% |
| **Totals** | $100,911,175 | $118,452,077 | 117.38% |

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

22%

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

$29,799,797

INDOT is constrained to share a total not to exceed 25% of all combined federal aid with local agencies. The INDOT allocation for local safety projects is normally 22% of the annual HSIP apportionment. The addition of two new federal programs in the IIJA, that INDOT also shares with local agencies caused a reduction in the percentage of HSIP funds allocated for local agency use from 33% to the current 22%.

The obligation for local safety projects in FFY 2024 is expected to total $29,799,797. The obligation of funds for local projects is expected to be 23.66% of the total expected HSIP obligations.

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

$558,298

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

$558,298

The following MPOs utilized HSIP funds for UPWP activities in FY 2024.

Anderson MPO - $55,000

Evansville MPO - $100,000

Fort Wayne MPO - $75,380

MACOG MPO - $90,000

Additionally, HSIP funds were used for the Indiana HELPERS program. This program exists to assist the local governments in Indiana with safety analysis and safety planning. HELPERS also performs training on numerous safety related topics for local practitioners to better understand best practices.

HELPERS - $237,918

Between the two uses of non-infrastructure HSIP funds a total of $558,298 was obligated.

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

$22,841,484

## 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

In FFY 2024 INDOT has not transferred any fund apportionments from the HSIP, per the Project Accounting and Finance Division. An estimated $22,841,484 is planned to be transferred into HSIP from other programs.

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

It’s clear that cost effectiveness and risk of fatal and suspected serious injuries are to be considered in project selection decisions; however, guidance has not been developed that defines the risk of future crashes for several systemic improvement types, therefore guidance that includes anticipated cost effectiveness methodologies for various systemic countermeasure types would be helpful. The determination of project eligibility to utilize HSIP funds in a cost-effective manner is typically based on history of crashes over a defined multi-year period. However, under changing traffic demand and operational conditions crash history is not always the most suitable indicator of future crash risk. In addition, the predictive functions contained in the Highway Safety Manual, while helpful in this regard, are still somewhat limited in the range of specific situations that may be predicted. As a result, obligations for safety improvement project types that are seemingly promising candidates for HSIP funding may not be prioritized above other countermeasures when strictly adhering to traditional cost effectiveness criteria. Limited guidance regarding the application of risk

factors relative to cost effectiveness can have the effect of stifling innovation toward acceptance of new types of crash countermeasures. Improved guidance by FHWA regarding alternative methods for assessment of future traffic safety risk possibly by further development of the Safe Systems Approach would be a welcome feature in assessing the value of new technologies for systemic countermeasure applications.

Under the Indiana Crash Database, the definition of a Class “A” Suspected Serious Injury has replaced the older definition of “incapacitating injury” and is once again a subjective choice by the reporting officer and is dependent on training of officers. The training and deployment of the new ARIES 6 crash reporting system was complete at the end of calendar 2023 but ongoing consistency in severity reporting will be an important factor in maintaining a quality crash database.

Indiana is currently subject to a rollout of the ARIES 6 officer reporting system that will continue until the entire 5-year average of reported serious injury data is populated with officer collected data per the requirements of the MMUCC. The use of ARIES 6 reporting by all Indiana police agencies is required and will allow complete counts of SSI outcomes by 2028. The Indiana Traffic Records Coordinating Committee (TRCC) Working Group continues to meet and discuss methods of complying with the MMUCC guidelines while maintaining the overall goal of making the officers’ tasks at a crash scene as rapid, accurate and consistent as possible. In the meantime, for the earlier years of the 5-years INDOT has to rely on the previous method of estimated annual suspected serious injury counts from the crash database. The time needed for the more accurate direct SSI count data to populate the 5-year averages is an impediment to making the most accurate selection of future HSIP programmed projects.

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

In 2022 Indiana revised its *Strategic Highway Safety Plan* (SHSP). The new SHSP follows the FHWA Safe System Approach, including the selection of emphasis areas:*Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care*. The overall objective for each emphasis area is to meet the Indiana Vision, Mission, and ultimate goal of eliminating fatalities and serious injuries. Each emphasis area addresses multiple data driven strategies with subject specific objectives to reduce motor vehicle crashes resulting in fatalities and serious injuries. At the same time, INDOT feels that maintaining flexibility in the SHSP is valuable to help address any emerging technologies, countermeasures, and analysis methodologies in the coming years.

In order to measure progress, the strategies have established interim goal objectives that strive to meet target values by 2042 not to exceed 550 fatalities and 1975 suspected serious injuries per 5-year rolling average. As a result, there are a number of action items enumerated for each strategy contained in the SHSP Appendix. The list of action items is too long to enumerate here, so the reader is directed to read the 2022 Indiana SHSP.

Indiana has completed revisions to the crash record system data dictionary and officer's crash reporting manual to use the FHWA defined Injury Nature definitions and has been certified compliant by FHWA. The newer definition is expected to render a more accurate count of class “A” suspected serious injuries if officers are trained and utilize those choices judiciously.

In 2016 FHWA gave notice that the MMUCC 4th Edition guidelines requiring the term “Suspected Serious Injury” be equivalent to the “A” injury classification under the KABCO scale. In the latter half of 2019, Indiana’s electronic reporting tool was redefined to classify an incapacitating injury as a subjective choice by the reporting officer from the definition of all injured persons “Transported from the Scene”. This change was undertaken as part of the introduction of the FHWA mandated seven “injury nature” definitions that now classify suspected serious injuries. The revised classification rule deadline of April 15, 2019, was too short a time for the Indiana TRCC to revise the officer’s electronic crash reporting software *ARIES* to accommodate new data elements into the state’s electronic vehicle crash database. Therefore, Indiana was judged to be out of

compliance. After changes were completed to the Indiana Crash Data system manual and Data Dictionary, in June of 2022, FHWA certified that Indiana's crash reporting system is in compliance with the MMUCC.

The MMUCC guidelines require officers untrained in emergency medicine to determine a level of trauma to the victim. This is accomplished by selection of an injury nature from a list of possible injuries. Officers that are not medically trained may consider this to be a difficult task due to the need to concentrate on managing the crash site and gathering evidence while emergency medical personnel typically manage the care and assessment of injured persons. Since injury assessment is not an officer's primary duty at a crash scene, accurate injury data is a risk unless good communication between emergency medical technicians and reporting officers is consistently achieved. Reporting practices have become a key element of statewide officer retraining as part of the adoption of the new ARIES 6 officer reporting software.

INDOT is engaged in a phased rollout of the officer reported injury nature data. This data is being collected under ARIES version 6 which was adopted statewide on 12/31/23. Until the entire 5-year average of serious injury data is populated with officer collected data per the requirements of the MMUCC an estimation of injury severity will need to be utilized for the calculation of 5-year averages. It is expected that by the end of 2027, there will be 5 concurrent years of injury severity data available for use. The Indiana TRCC Working Group will continue to meet and discuss methods of complying with the MMUCC guidelines while maintaining the overall goal of making the officers' tasks at a crash scene as rapid, accurate and consistent as possible. In the meantime, INDOT continues to use a previously approved method to estimate annual suspected serious injury counts for the earlier portion to calculate the 5-year averages from the crash database.

INDOT administers an Asset Management program to budget and program all INDOT's highway infrastructure capital investments. The Asset Management system provides a means to budget for a prioritized and cost constrained list of safety improvement projects that improves INDOT's ability to select and construct high value safety improvements. Candidate safety projects undergo weighted scoring that emphasizes the need to address high severity crash locations with the construction of cost-effective crash countermeasures. Budgeting for INDOT jurisdiction roadways occurs five years into the future. Spot improvement projects commonly require this amount of time for the environmental, design and land acquisition development.

Projects that construct systemic improvement types are also budgeted five years into the future, however selection of systemic projects and programing typically occurs between 18 to 30 months prior to the construction year.

Annual reservation of the HSIP allocation for INDOT Roads is made to ensure that systemic safety improvements are constructed. The safety needs analysis conducted by the Traffic Safety Asset Management Team for both spot and systemic safety project proposals serve to validate increased awareness of and priority for increased investment in traffic safety.

## *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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1400005 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $3906414 | $4380271 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other Freeways & Expressways | 21,200 | 55 | State Highway Agency | Spot | Intersections | Create an alternate intersection design |
| 1600701 | Intersection geometry | Intersection realignment | 1 | Intersections | $2473297 | $3245646 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 10,439 | 50 | State Highway Agency | Spot | Intersections | Increase sight Distance |
| 1700098 | Intersection geometry | Intersection realignment | 1 | Intersections | $1131294 | $1310708 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 7,336 | 55 | State Highway Agency | Spot | Intersections | Increase sight Distance |
| 1700717 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $2190266 | $2678264 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 16,299 | 20-35 | State Highway Agency | Spot | Intersections | Create an alternate intersection design |
| 1702823 | Pedestrians and bicyclists | Pedestrians and bicyclists – other | 102 | Numbers | $757029 | $2965308 | VRU Safety Special Rule (23 U.S.C. 148(g)(3)) | Urban | Local Road or Street | 0 | 30 | City or Municipal Highway Agency | Systemic | Pedestrians | Light and enhance sidewalks |
| 1800040 | Access management | Change in access - close or restrict existing access | 1 | Intersections | $835503 | $928337 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 12,486 | 40 | State Highway Agency | Spot | Intersections | Access Control |
| 1800202 | Intersection traffic control | Modify control – new traffic signal | 1 | Intersections | $646305 | $896616 | HSIP (23 U.S.C. 148) | Urban | Minor Arterial | 5,550 | 45 | State Highway Agency | Spot | Intersections | New Traffic Signal |
| 1800211 | Intersection geometry | Intersection realignment | 1 | Intersections | $373493 | $414992 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 20,694 | 35 | State Highway Agency | Spot | Intersections | Realign Intersection Approaches |
| 1800223 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $4409659 | $5323917 | Penalty Funds (23 U.S.C. 164) | Urban | Principal Arterial-Other | 16,400 | 55 | State Highway Agency | Spot | Intersections | Create an alternate intersection design |
| 1800225 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $4245943 | $4721201 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 8,372 | 55 | State Highway Agency | Spot | Intersections | Add Turn Lanes |
| 1802805 | Intersection traffic control | Modify control – Modern Roundabout | 1 | Intersections | $2515579 | $2795088 | HSIP (23 U.S.C. 148) | Urban | Minor Arterial | 12,943 | 50 | State Highway Agency | Spot | Intersections | Construct Roundabout |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1802923 | Pedestrians and bicyclists | ADA curb ramps | 61 | Ramps | $782715 | $1184639 | VRU Safety Special Rule (23 U.S.C. 148(g)(3)) | Urban | Local Road or Street | 0 | 20 | City or Municipal Highway Agency | Systemic | Pedestrians | ADA Ramp Construction |
| 1900138 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $2100012 | $2356485 | HSIP (23 U.S.C. 148) | Rural | Minor Arterial | 12,500 | 55 | State Highway Agency | Spot | Intersections | Create an alternate intersection design |
| 1900146 | Access management | Change in access - close or restrict existing access | 1 | Intersections | $633856 | $875259 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 24,402 | 45 | State Highway Agency | Spot | Intersections | Remove Vehicular Access |
| 1900148 | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 1 | Intersections | $31860 | $35400 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 22,769 | 55 | State Highway Agency | Systemic | Intersections | Signal Visibility |
| 1900151 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $324835 | $372756 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 12,374 | 40 | State Highway Agency | Spot | Intersections | Slotted Left Turn Lanes |
| 1900157 | Access management | Change in access - close or restrict existing access | 5.5 | Miles | $12292929 | $14714696 | HSIP (23 U.S.C. 148) | Urban | Minor Arterial | 51,880 | 40-45 | State Highway Agency | Systemic | Intersections | Close Median |
| 1900258 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $1855454 | $2062758 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other Freeways & Expressways | 43,200 | 50 | State Highway Agency | Spot | Intersections | Improve standard intersection |
| 1900260 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $1758390 | $1954910 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other Freeways & Expressways | 43,200 | 50 | State Highway Agency | Spot | Intersections | Create an alternate intersection design |
| 1900264 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $1175363 | $1310531 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other Freeways & Expressways | 43,200 | 50 | State Highway Agency | Spot | Intersections | Improve standard intersection |
| 1900268 | Access management | Change in access - close or restrict existing access | 1 | Intersections | $591718 | $665464 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other Freeways & Expressways | 60,390 | 50 | State Highway Agency | Spot | Intersections | Create Right In/Right Out Intersection |
| 1900449 | Pedestrians and bicyclists | Install sidewalk | 0.2 | Miles | $5494000 | $6861632 | VRU Safety Special Rule (23 U.S.C. 148(g)(3)) | Urban | Local Road or Street | 6,380 | 35 | City or Municipal Highway Agency | Spot | Bicyclists | Widen Bridge to Install Sidewalk |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1900493 | Pedestrians and bicyclists | Pedestrian beacons | 7 | Crosswalks | $239400 | $275573 | VRU Safety Special Rule (23 U.S.C. 148(g)(3)) | Urban | Principal Arterial-Other | 5,500 | 40 | City or Municipal Highway Agency | Spot | Pedestrians | Install RRFB |
| 1901672 | Intersection traffic control | Modify control – Modern Roundabout | 1 | Intersections | $1586754 | $2046500 | HSIP (23 U.S.C. 148) | Urban | Minor Arterial | 5,623 | 35 | City or Municipal Highway Agency | Spot | Intersections | Construct Roundabout |
| 1901701 | Roadside | Barrier end treatments (crash cushions, terminals) | 50 | Locations | $451798 | $451798 | Penalty Funds (23 U.S.C. 164) | Rural | Multiple/Varies | 5,500 | 55 | State Highway Agency | Systemic | Roadway Departure | Upgrade GR End Treatments |
| 1901791 | Roadway delineation | Raised pavement markers | 30000 | Numbers | $574942 | $638824 | HSIP (23 U.S.C. 148) | Multiple/Varies | Multiple/Varies | 7,500 | 55 | State Highway Agency | Systemic | Lane Departure | RPM Refurbishment |
| 1901957 | Pedestrians and bicyclists | ADA curb ramps | 75 | Ramps | $976348 | $982720 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 8,200 | 35 | City or Municipal Highway Agency | Systemic | Pedestrians | ADA Ramp Construction |
| 1902013 | Roadway | Pavement surface – high friction surface | 3 | Locations | $308948 | $343276 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 7,500 | 55 | State Highway Agency | Systemic | Roadway Departure | High Friction Surface |
| 1902014 | Intersection geometry | Add/modify auxiliary lanes | 8 | Intersections | $2711388 | $3109009 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 5,500 | 50 | State Highway Agency | Systemic | Intersections | Add auxillary Turn Lanes |
| 1902016 | Roadway delineation | Raised pavement markers | 30265 | Numbers | $610912 | $678791 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 6,500 | 55 | State Highway Agency | Systemic | Lane Departure | RPM Refurbishment |
| 1902023 | Access management | Change in access - close or restrict existing access | 0.1 | Miles | $820305 | $911450 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 20,694 | 35 | State Highway Agency | Systemic | Intersections | Install Raised Center Curb |
| 1902188 | Roadway delineation | Raised pavement markers | 6000 | Numbers | $215464 | $239404 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 6,750 | 55 | State Highway Agency | Systemic | Roadway Departure | RPM Refurbishment |
| 1902885 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $1057325 | $1304701 | Penalty Funds (23 U.S.C. 164) | Urban | Principal Arterial-Other | 13,490 | 45 | State Highway Agency | Spot | Intersections | Construct a Green T Int |
| 2001179 | Roadside | Barrier- metal | 1.16 | Miles | $440674 | $589074 | HRRR Special Rule (23 U.S.C. 148(g)(1)) | Rural | Major Collector | 9,720 | 55 | State Highway Agency | Spot | Roadway Departure | Install Steel Guard Rail |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001519 | Pedestrians and bicyclists | ADA curb ramps | 46 | Ramps | $1060762 | $1562915 | VRU Safety Special Rule (23 U.S.C. 148(g)(3)) | Urban | Multiple/Varies | 10,250 | 35 | State Highway Agency | Systemic | Pedestrians | ADA Ramp Construction |
| 2001657 | Pedestrians and bicyclists | ADA curb ramps | 93 | Ramps | $1732177 | $1924642 | VRU Safety Special Rule (23 U.S.C. 148(g)(3)) | Urban | Minor Arterial | 8,967 | 30 | State Highway Agency | Systemic | Pedestrians | ADA Ramp Construction |
| 2002525 | Lighting | Interchange lighting | 9 | Interchanges | $3384990 | $3740690 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Interstate | 4,500 | 55 | State Highway Agency | Systemic | Intersections | Install Interchange Lighting |
| 2100041 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $681199 | $756887 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other Freeways & Expressways | 20,985 | 55 | State Highway Agency | Spot | Intersections | Construct RCI |
| 2100161 | Roadside | Barrier end treatments (crash cushions, terminals) | 6 | Locations | $1114791 | $1679737 | HSIP (23 U.S.C. 148) | Rural | Minor Collector | 3,751 | 50 | State Highway Agency | Systemic | Roadway Departure | Upgrade GR End Treatments |
| 2101170 | Access management | Change in access - close or restrict existing access | 0.14 | Miles | $349661 | $439112 | HSIP (23 U.S.C. 148) | Urban | Minor Arterial | 11,791 | 40 | State Highway Agency | Spot | Intersections | Access Control |
| 2200114 | Intersection traffic control | Modify control – Modern Roundabout | 1 | Intersections | $2035125 | $2261250 | HSIP (23 U.S.C. 148) | Urban | Minor Arterial | 16,930 | 30 | City or Municipal Highway Agency | Spot | Intersections | Construct Roundabout |
| 2201283 | Roadway delineation | Longitudinal pavement markings – new | 38.72 | Miles | $827699 | $919666 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 23,500 | 45-55 | State Highway Agency | Systemic | Lane Departure | New Longitudinal Pavement Markings |
| 2300651 | Roadway delineation | Raised pavement markers | 12450 | Numbers | $269999 | $269999 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 10,500 | 55 | State Highway Agency | Systemic | Roadway Departure | RPM Refurbishment |
| 2101725 | Roadway signs and traffic control | Sign sheeting - upgrade or replacement | 4326 | Signs | $1347028 | $1509748 | Penalty Funds (23 U.S.C. 164) | Rural | Local Road or Street | 8,500 | 45-55 | County Highway Agency | Systemic | Roadway Departure | Sign Visibility |
| 2201134 | Lighting | Interchange lighting | 1 | Interchanges | $1436590 | $2556211 | Penalty Funds (23 U.S.C. 164) | Rural | Principal Arterial-Interstate | 19,000 | 70 | State Highway Agency | Spot | Intersections | Install Interchange Lighting |
| 2100136 | Lighting | Interchange lighting | 6 | Locations | $1514500 | $2556211 | Penalty Funds (23 U.S.C. 164) | Rural | Principal Arterial-Interstate | 20,500 | 70 | State Highway Agency | Spot | Intersections | Repair Interchange Lighting |

| PROJECT NAME | IMPROVEMENT CATEGORY | SUBCATEGORY | OUTPUTS | OUTPUT TYPE | HSIP PROJECT COST($) | TOTAL PROJECT COST($) | FUNDING CATEGORY | LAND USE/AREA TYPE | FUNCTIONAL CLASSIFICATION | AADT | SPEED OR SPEED RANGE | OWNERSHIP | METHOD FOR SITE SELECTION | SHSP EMPHASIS AREA | SHSP STRATEGY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1900262 | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 1 | Intersections | $1535723 | $1707501 | HSIP (23 U.S.C. 148) | Urban | Principal Arterial-Other | 47,500 | 50 | State Highway Agency | Spot | Intersections | Construct RCI |
| 2001534 | Intersection geometry | Add/modify auxiliary lanes | 15 | Intersections | $1949506 | $5729849 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 26,900 | 45-55 | State Highway Agency | Systemic | Intersections | Slotted Left Turn Lanes |
| 1700209 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $2206525 | $2801084 | HSIP (23 U.S.C. 148) | Rural | Minor Arterial | 13,940 | 35 | State Highway Agency | Spot | Intersections | Create left turn lane |
| 1800009 | Pedestrians and bicyclists | On road bicycle lane | 0.5 | Miles | $2609627 | $2823627 | Penalty Funds (23 U.S.C. 164) | Rural | Principal Arterial-Other | 5,500 | 35 | State Highway Agency | Systemic | Pedestrians | Create Bicycle Lane |
| 1702943 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $2625665 | $4307393 | HSIP (23 U.S.C. 148) | Rural | Minor Arterial | 12,600 | 45 | State Highway Agency | Spot | Intersections | Opposing left turn lanes |
| 1702989 | Intersection traffic control | Modify control – Modern Roundabout | 1 | Intersections | $2902442 | $3767168 | HSIP (23 U.S.C. 148) | Rural | Principal Arterial-Other | 5,970 | 55 | State Highway Agency | Spot | Intersections | Construct Roundabout |
| 1900118 | Intersection geometry | Add/modify auxiliary lanes | 1 | Intersections | $3274000 | $3741000 | Penalty Funds (23 U.S.C. 164) | Urban | Minor Arterial | 20,160 | 50 | State Highway Agency | Spot | Intersections | Create Left turn lane |
| 1900838 | Railroad grade crossings | Grade crossing elimination | 1 | Miles | $4081174 | $9097999 | HSIP (23 U.S.C. 148) | Rural | Local Road or Street | 2,202 | 60 | County Highway Agency | Spot | Intersections | Realign Roadway |

Depending on contract award date some of the listed projects may be under Advance Construction (AC). All of these projects are identified for transfer to HSIP status on or before October 1, 2024. The above list of projects represents projects which were programmed for federal fiscal year 2025. In addition to these projects, there are several which were programmed for earlier years but continued to have obligations into federal fiscal year 2025. These projects are numerous and are not listed in the above table. For information on these other projects, please see prior year's HSIP reports.

A complete accounting of safety obligations for federal fiscal year 2025 are included here:

1.) Total PE spending: $22.4M

2.) Total Utility and Right of Way Spending: $4.5M

3.) Total spent on Planning: $0.604M

4.) Total construction cost spent on above list of projects: $67.16M

5.) Total spent on projects from other fiscal years: $30.7M

6.) Amount of de-obligations: -$5.4M

7.) Total Obligations for Federal Fiscal Year 2025 (Sum of lines 1-6): $119.96M

This amount is an estimate as this number tends to fluctuate slightly as we approach the end of the federal fiscal year. For future HSIP reports, the state intends to move to calendar year reporting to avoid some of the complication associated with completing the HSIP report prior to the end of the reporting period.

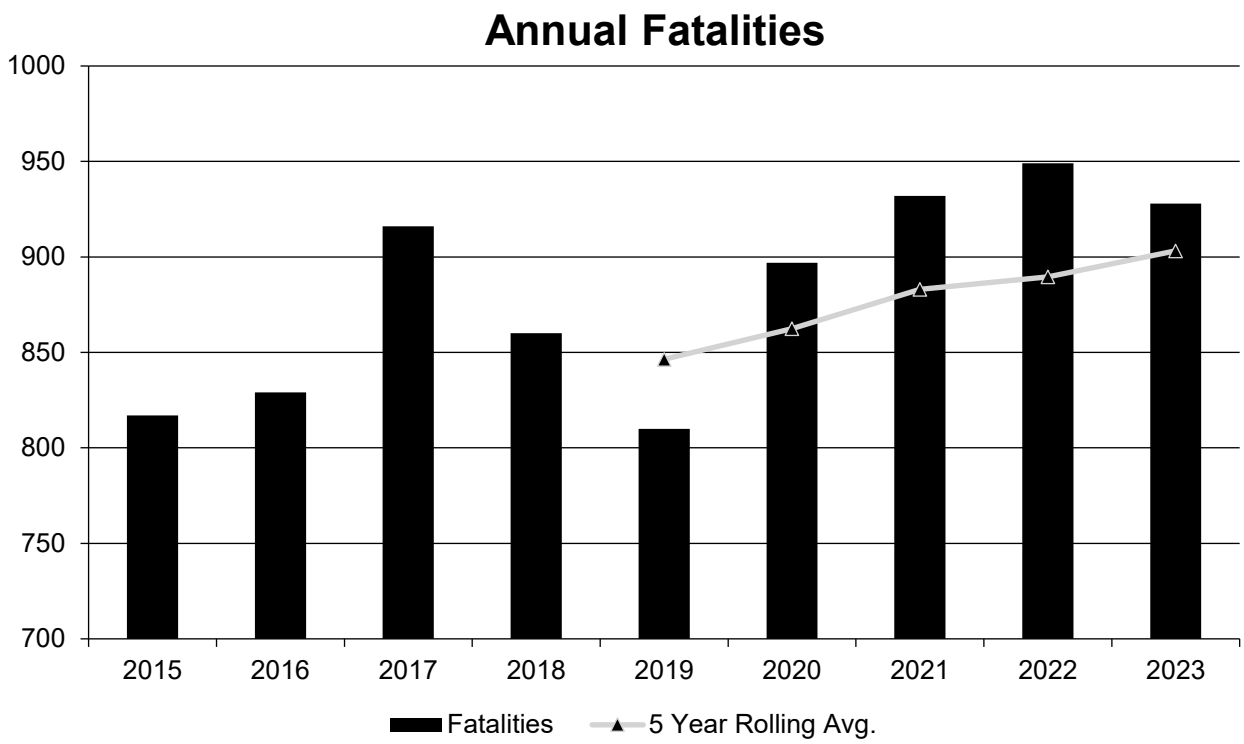
Projects with the Improvement Category of Non-infrastructure consist of improvements to traffic safety data systems or traffic safety planning efforts. Metropolitan planning organizations undertake safety planning as part of their annual Unified Planning Work Programs. HSIP funding is also used for non-infrastructure safety planning in rural areas by funding the operations of the Hazard Elimination Program for Existing Roads and Streets (HELPERS) Program managed by the Indiana Local Technical Assistance Program.

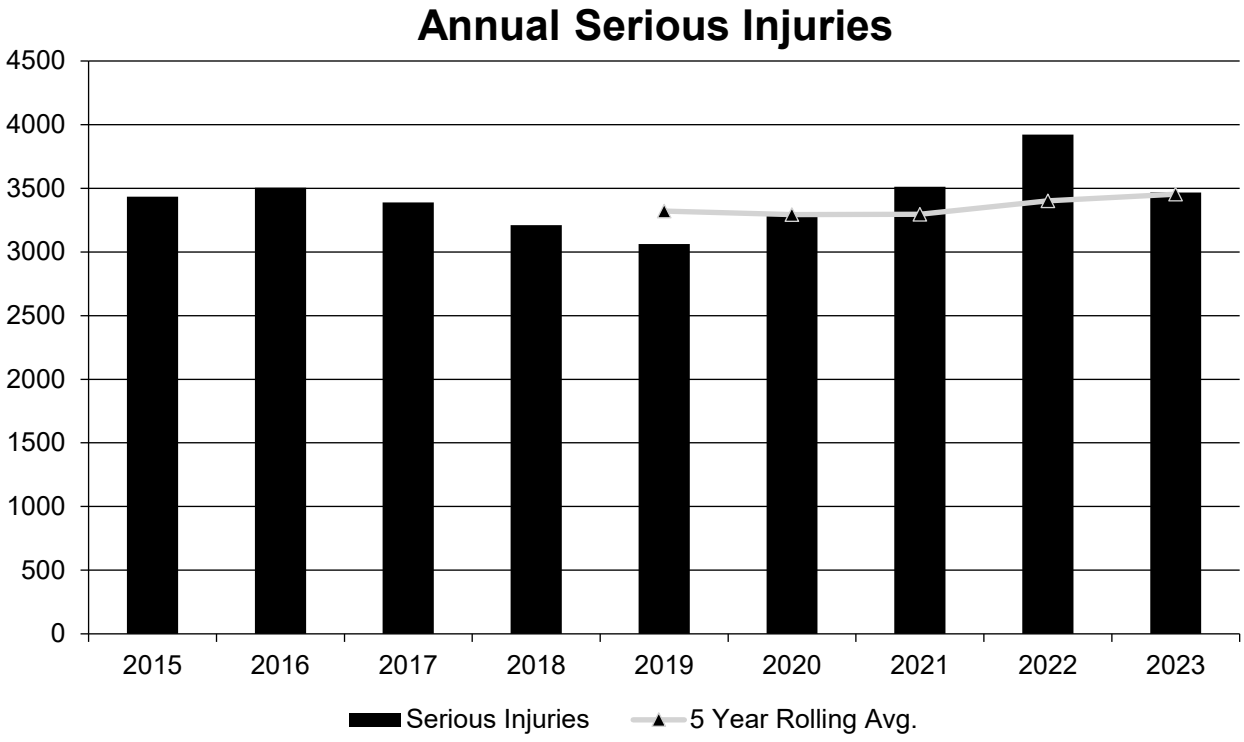
# Safety Performance

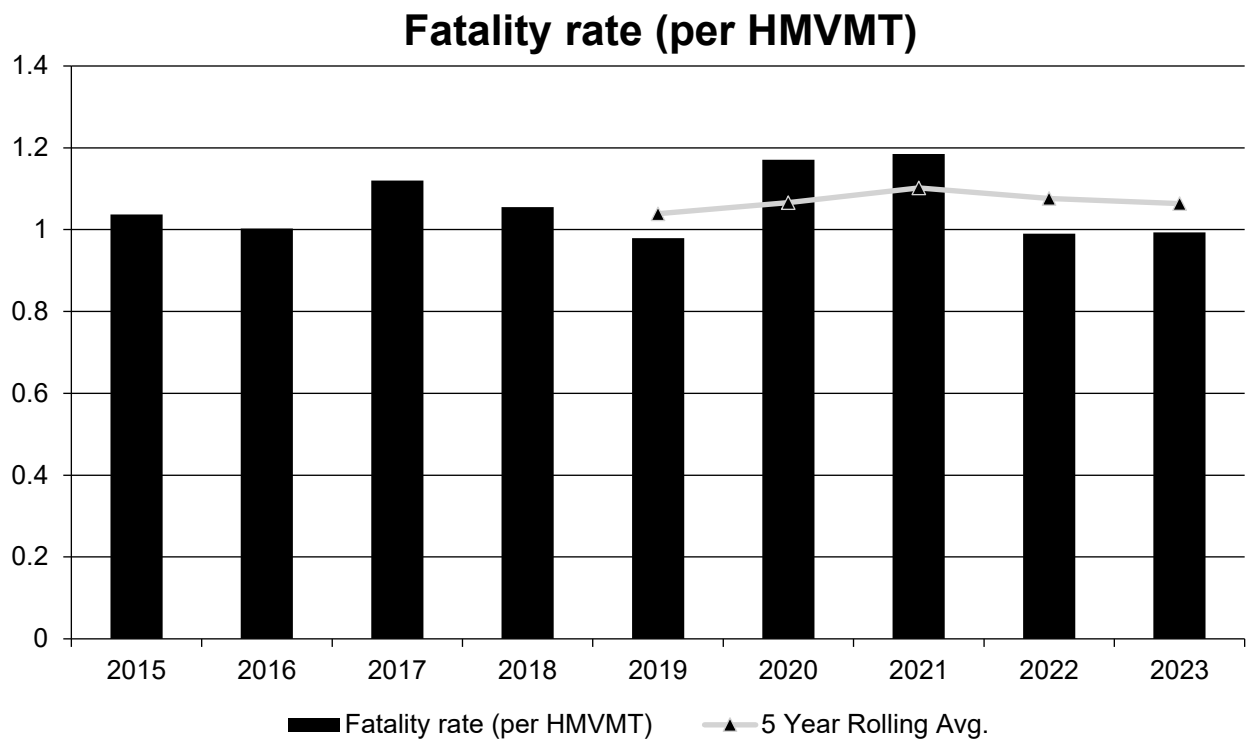
## *General Highway Safety Trends*

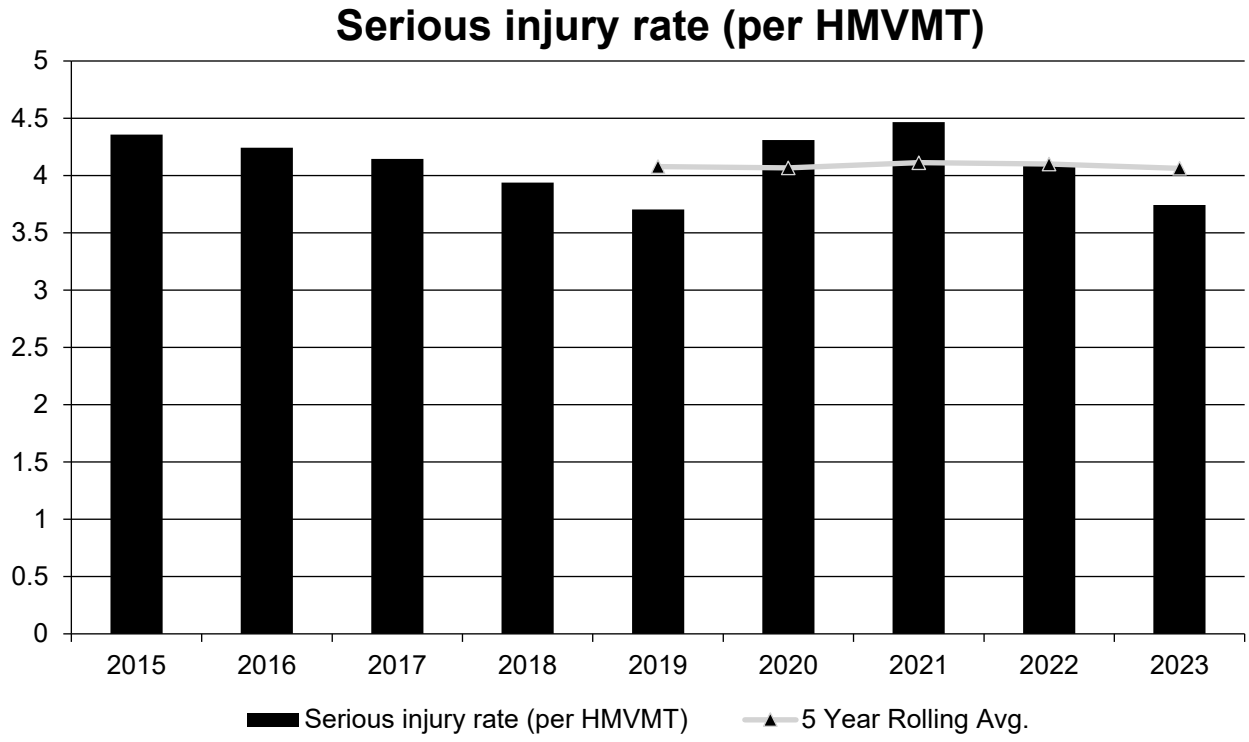
### Present data showing the general highway safety trends in the State for the past five years.

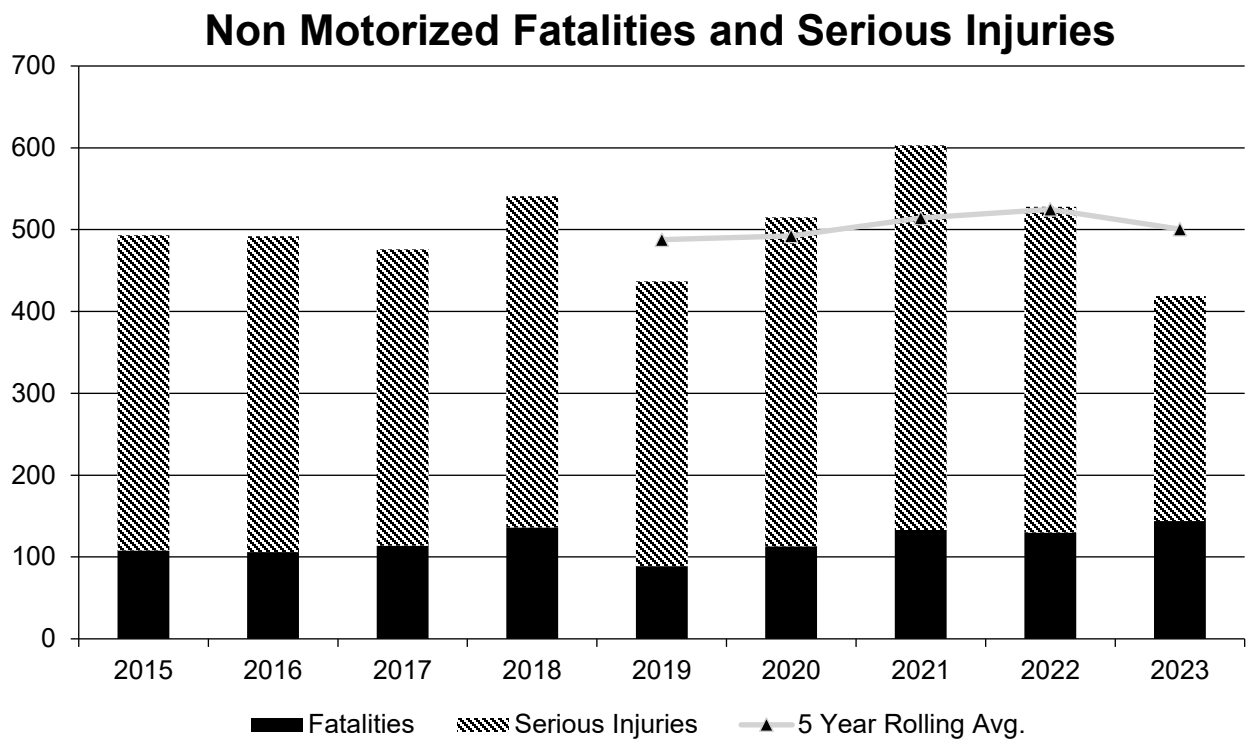
| PERFORMANCE MEASURES | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| Fatalities | 817 | 829 | 916 | 860 | 810 | 897 | 932 | 949 | 928 |
| Serious Injuries | 3,434 | 3,505 | 3,388 | 3,210 | 3,062 | 3,302 | 3,513 | 3,923 | 3,468 |
| Fatality rate (per HMVMT) | 1.037 | 1.003 | 1.120 | 1.055 | 0.979 | 1.171 | 1.185 | 0.990 | 0.993 |
| Serious injury rate (per HMVMT) | 4.357 | 4.243 | 4.145 | 3.938 | 3.704 | 4.310 | 4.467 | 4.092 | 3.743 |
| Number non-motorized fatalities | 108 | 106 | 114 | 136 | 89 | 113 | 133 | 130 | 144 |
| Number of non-motorized serious injuries | 385 | 386 | 362 | 405 | 348 | 402 | 470 | 398 | 275 |


Annual Fatalities
1000
950
900
850
800
750
700
2015
2016
2017
2018
2019
2020
2021
2022
2023
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
4500
4000
3500
3000
2500
2000
1500
1000
500
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)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
Serious injury rate (per HMVMT)
5 Year Rolling Avg.




FARS data was used for years through 2022. ARIES data was used for the 2023 year.

## Describe fatality data source.

FARS

Data from the Fatal Accident Reporting System and the state crash database was utilized according to the most complete dataset for the given year as follows:

FARS Final Report File for the preceding years through 2022,
FARS Annual Report File for the year 2022 and earlier Website location:
https://cdan.nhtsa.gov/SASStoredProcess/guest

Indiana State Police ARIES Crash Reporting System for the year 2023

## 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 | 58 | 138 | 0.7 | 1.66 |
| Rural Principal Arterial (RPA) - Other Freeways and Expressways | | | | |
| Rural Principal Arterial (RPA) - Other | 98 | 245 | 1.9 | 4.73 |
| Rural Minor Arterial | 88 | 264 | 2.88 | 8.64 |
| Rural Minor Collector | 33 | 121 | 1.65 | 6.03 |
| Rural Major Collector | 121 | 398 | 2.36 | 7.78 |
| Rural Local Road or Street | 96 | 326 | 1.79 | 6.11 |
| Urban Principal Arterial (UPA) - Interstate | 49 | 180 | 0.44 | 1.62 |
| Urban Principal Arterial (UPA) - Other Freeways and Expressways | 24 | 46 | 1.57 | 3.01 |
| Urban Principal Arterial (UPA) - Other | 128 | 547 | 1.25 | 5.37 |
| Urban Minor Arterial | 97 | 496 | 1.19 | 6.09 |
| Urban Minor Collector | 6 | 31 | | |
| Urban Major Collector | 46 | 219 | 0.9 | 4.27 |
| Urban Local Road or Street | 66 | 300 | 0.44 | 2.01 |

**Year 2023**

| 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 | 450.54 | 1,373.73 | 1.1 | 3.39 |
| County Highway Agency | 222.86 | 787.67 | 1.16 | 4.1 |
| Town or Township Highway Agency | | | | |
| City or Municipal Highway Agency | 217.2 | 920.02 | 1.01 | 4.31 |
| 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 | | | | |

Data Tables for 5-year averages from 2019 through 2023 have been adjusted for FHWA approved VMT data through 2022 and state estimated VMT for 2023.

The ARIES 6.0 Indiana Officers Crash Reporting Tool was created by a vendor working under contract to the crash database owner agency, the Indiana State Police (ISP). In late 2019, the crash database vendor added a requirement that the officer select among a list of injury nature definitions for each person injured. In April of 2021, a review by FHWA found and adjusted the injury nature definitions to comply with the descriptions contained in the MMUCC 4th and 5th Editions. In June of 2022 a further FHWA review of Indiana's new procedure for counting suspected serious injuries found that the Indiana Crash Data Dictionary and ARIES User Manual for crash reporting is in compliance with the injury descriptions contained in the current edition of

the MMUCC. Prior to this review, definitions for the injury natures were in place but the descriptions of some injury natures were determined to allow for possible misinterpretation by officers.

The ARIES 6 version of the officers reporting tool contains the corrected definitions of FHWA compliant injury nature types in the data dictionary and reporting software. ARIES 6 is in use by the Indiana State Police and multiple county sheriffs' departments. ARIES 6 is currently in the process of being deployed and training is ongoing in use of the new features. The training and deployment process will be ongoing until all Indiana law enforcement agencies have installed and are using the new reporting tool. All Indiana police agencies are expected to complete the conversion to ARIES 6 before the end of 2024.

INDOT is using a phased rollout of officer's reported subjective injury nature (type) data over the following years until the entire 5-year average of serious injury data is populated with officer collected data per the requirements of the MMUCC 4th and 5th Editions. However, in order to begin reporting suspected serious injuries according to current requirements, INDOT decided to begin a direct count of suspected serious injuries starting with the 2020 ARIES data. It was determined by INDOT that that the changes made in late 2019 were adequate to begin the transition to directly count suspected serious injuries for reporting most responses in the 2022 HSIP report. However, because the use of the FHWA mandated definitions were revised in 2022 and the full roll-out of the ARIES 6 reporting tool was completed on December 31, 2023, it may prove necessary to revise reported 2020 through 2023 counts and rates of suspected serious injuries in future reporting years until 2024-2028 averaged data is reported.

## *Safety Performance Targets*

### Safety Performance Targets

## Calendar Year 2025 Targets *

### *Number of Fatalities:812.4*

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

The Indiana SHSP, as approved by the governor, lists a straight line target of 2% reduction in fatal and serious injury crashes per year. The baseline year for this reduction is the 5 year average value for 2021. INDOT will be using this straight line reduction as a target for each performance measure for each year that the SHSP is active in order to align with the goals set out in the SHSP.

### *Number of Serious Injuries:3031.9*

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

The Indiana SHSP, as approved by the governor, lists a straight line target of 2% reduction in fatal and serious injury crashes per year. The baseline year for this reduction is the 5 year average value for 2021. INDOT will be using this straight line reduction as a target for each performance measure for each year that the SHSP is active in order to align with the goals set out in the SHSP.

### *Fatality Rate:1.009*

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

The Indiana SHSP, as approved by the governor, lists a straight line target of 2% reduction in fatal and serious injury crashes per year. The baseline year for this reduction is the 5 year average value for 2021. INDOT will

be using this straight line reduction as a target for each performance measure for each year that the SHSP is active in order to align with the goals set out in the SHSP.

### *Serious Injury Rate:3.402*

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

The Indiana SHSP, as approved by the governor, lists a straight line target of 2% reduction in fatal and serious injury crashes per year. The baseline year for this reduction is the 5 year average value for 2021. INDOT will be using this straight line reduction as a target for each performance measure for each year that the SHSP is active in order to align with the goals set out in the SHSP.

### *Total Number of Non-Motorized Fatalities and Serious Injuries:363.4*

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

The Indiana SHSP, as approved by the governor, lists a straight line target of 2% reduction in fatal and serious injury crashes per year. The baseline year for this reduction is the 5 year average value for 2021. INDOT will be using this straight line reduction as a target for each performance measure for each year that the SHSP is active in order to align with the goals set out in the SHSP.

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

Following the promulgation of the IIJA rules requiring a goal-based method for setting the Safety Performance Measure 1 (PM1) Targets, the INDOT Traffic Safety Office engaged with the Indiana Criminal Justice Institute (ICJI), home to the official State Highways Safety Office. The two agencies agreed that over the succeeding three years that the annual targets reported to NHTSA by ICJI in the Highway Safety Plan would reflect 2% annual decreased targets in compliance with the stated goal in the Indiana SHSP. INDOT will set annual targets to seek similar 2% reductions in the 5-year average targets when feasible. Both the annual targets for ICJI and a 5-year average was produced. Unfortunately, due to a rising trend in fatalities and smaller reductions in serious injuries experienced by Indiana over the last few years, the calculated 5-year averages target setting procedure exceed the baseline values established by the 2023 reported performance targets. Therefore, goal-based targets were set.

The IIJA established that states shall not exceed the safety performance baseline values established in the prior year (2023), therefore INDOT solicited a partnership group of Contributing/Consulting/Advisory Agencies and Organizations to coordinate setting the 5 safety performance targets for 2025. In the spring of 2024, the Traffic Safety Performance Target Setting Team held meetings with the MPO council and the Indiana Criminal Justice Institute (State Traffic Safety Office) in-order to revise the procedure for calculation of the succeeding year’s required annual safety performance targets. The team ultimately agreed that the prior year’s procedures could not produce 5-year rolling average values that adhere to the IIJA requirement to not exceed the prior year targets. The result is that lower safety performance targets were set in accordance with a 2% annual reduction starting with the peak value contained in the Indiana Strategic Highway Safety Plan.

The Indiana Traffic Safety Performance Target Setting Team consists of the following organizations:

Indiana Department of Transportation, Traffic Safety Office

Indiana Criminal Justice Institute, Traffic Safety and Research Divisions, (SHSO), and representation of Law Enforcement and Emergency Services.

Indiana Metropolitan Planning Organization Council – Executive Director Task group

Federal Highway Administration, Indiana Division

Local Technical Assistance Program – HELPERS Program

### Does the State want to report additional optional targets?

No

Indiana does not choose to report on additional optional targets at this time.

### 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** | 894.2 | 903.2 |
| **Number of Serious Injuries** | 3348.1 | 3453.6 |
| **Fatality Rate** | 1.088 | 1.064 |
| **Serious Injury Rate** | 4.068 | 4.063 |
| **Non-Motorized Fatalities and Serious Injuries** | 399.6 | 500.4 |

For target year 2023, INDOT estimates that Indiana did not meet any of the 5 PM 1 Safety Performance Targets. As INDOT shifts from a target setting method that was predictive and data driven towards a target setting method that is aspirational and decreasing, as required by the Bi-partisan Infrastructure Law, we expect to struggle to meet any of the targets for the first few years. The speed of the capital program means that most positive changes that we make now will not have a measurable impact for a number of years down the line. In addition to capital program, INDOT has taken steps to implement safety improvements via maintenance forces over the next two years in an initiative we have termed Rapid Deployment. These low-cost systemic type improvements are intended to impact safety today rather than waiting for large scale improvements tomorrow.

Much of the country, including Indiana, has been seeing an increase in fatalities on our roadways in recent years. Although we know that the state will struggle to meet the aggressive targets that have been set by the governor, we intend to use these targets as inspiration to continue to look for creative and drastic methods to improve safety in the state for all road users.

## *Applicability of Special Rules*

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

No

Regarding the HRRR Special Rule requirement for Indiana, in FFY 2022 INDOT does not fall under the HRRR Special Rule.

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

Yes

Regarding the VRU Special Rule, based on 2021 crash data FHWA determined Indiana to be subject to the VRU Special Rule for federal fiscal year 2024.

## 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 | 135 | 122 | 126 | 111 | 104 | 140 | 152 |
| Number of Older Driver and Pedestrian Serious Injuries | 289 | 294 | 260 | 259 | 292 | 294 | 264 |

# Evaluation

## *Program Effectiveness*

### How does the State measure effectiveness of the HSIP?

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

Per Indiana's Strategic Highway Safety Plan, INDOT's goal is the reduction of fatalities and serious injuries on all state and local public roadways in accordance with Toward Zero Deaths. In this regard, INDOT monitors the number and rate of fatal and serious injury crash events and casualties in determining progress of the safety program and HSIP programmed obligations.

For the purpose of this 2% reduction per year, 2021 was selected as the initial baseline in the SHSP. Therefore each year will have a goal of an additional 2% straight line reduction from the prior year's goal such that there is a consistent and continually decreasing target for fatal and serious injuries due to motor vehicle crashes in the state.

INDOT's goal is to work towards achieving an expected reduction of at least 2% per year of severe crashes on public roads through the design lives of the projects constructed in FFY 2024. Essentially the goal over time is the overall cost-effectiveness (C-E) of the program; that is, the relationship of dollars invested to expected severe crashes reduced. The program effectiveness is measured in two parts, program specific and general effectiveness.

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

First, regarding the program specific effectiveness, the average benefit/cost ratio for all safety projects completed in 2020 and analyzed for MOE for this report is 60.56, indicating that the program was very cost effective overall.

Second, economic effectiveness of Indiana's safety program is also measured against the change in fatal and serious injury outcomes of crashes. This measure had a negative outcome in 2023. The 5-year average frequency of fatalities increased by 1.5% over 2022. The 5-year average frequency of suspected serious injuries rose from 3306.4 in 2022 to 3338.8 in 2023, a 0.98% rise. Changes to both fatality and SSI frequencies are of concern.

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

- # RSAs completed
- HSIP Obligations
- Increased focus on local road safety
- More systemic programs
- Organizational change
- Other-Total Federal Safety Obligations

There are other, not-direct methods for evaluating the success of the INDOT safety program. These include the following:

Number of Road Safety Audits completed.

In a Road Safety Audit, a multi-disciplinary team visits a site of concern and evaluates both the crash history and the field conditions of the site and makes recommendations for improvement. RSAs are an extremely important tool for safety professionals to be on-site, evaluating the performance of the system from the perspective of the user. In calendar year 2023, 23 RSAs were performed by the INDOT central office safety team and the HELPERS team performed an additional 25 formal and informal RSAs on locally controlled roadways. Additional RSAs were performed directly by district and local agency staff and were not captured in this total.

HSIP Obligations

While the spending of funds on safety does not solely measure the safety impact on the program, it is an important metric to show that the funds intended for safety are actually going to safety specific projects. As discussed earlier in this report, the state has exceeded the required HSIP obligation amount for FY 2024.

Increased Focus on Local Road Safety

About 50% of the severe crashes occur on the locally controlled roadway network in Indiana each year. The INDOT safety effort alone is not enough to orchestrate improvements on the many thousand miles of locally controlled roadway without the local government taking ownership of safety in their community. Therefore, an increased focus on safety by local governments is imperative to reaching the goal of a 2% reduction in severe crashes each year. INDOT and the HELPERS program have been working to meet with local governments throughout the year, namely through the 7 safety summits, to encourage them to become more engaged on the safety topic, to apply for safety funding through the INDOT administered HSIP program or through federal grants such as the SS4A program, and to create a local road safety plan.

More Systemic Programs

Since many fatality and severe injury crashes occur "randomly" scattered across a wide network, rarely reappearing in the same location twice, a safety program which is solely focused on spot improvement will fail to address a large portion of the fatal crashes that occur on the network each year. By ensuring that there is a significant focus on systemic and corridor based improvements along with systematic improvements through changes to project design criteria, the safety program can maintain a proper focus on these disparate crashes. INDOT aims to obligate 33% of HSIP funds each year towards these types of improvements.

Organizational Changes

The safety program makes up a very small percentage of the overall transportation funding in the state each year. These funds alone will not be able to demonstrably turn the tide or resist the momentum of many decades of poor safety performance on Indiana's roadways. There needs to be a change in the priorities of the entire transportation profession to create a focus on safety that deviates from the status quo of just "following standards to achieve safety" or "leaving safety to the HSIP program". The commissioner of INDOT, in recognition of this fact has mandated that every INDOT employee have highway safety on their yearly goal plan and that they be able to articulate how the work that they are doing improves the safety performance of the State's highway network for all users.

Other - Total Federal Safety Obligations

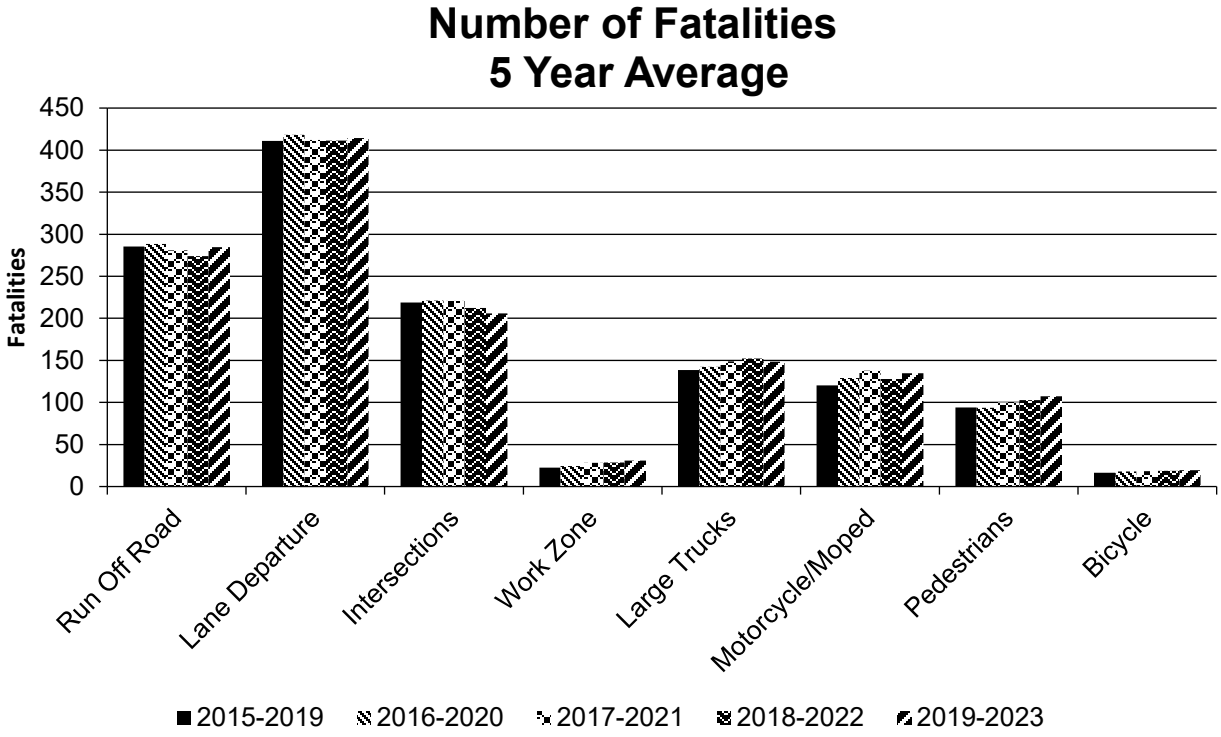
As noted above, the small amount of funds that are set aside by the federal government for highway safety in Indiana will not be enough to reach the ambitious goal of reversing the trend of an ever increasing number of people killed on public roadways in Indiana each year. More funds must be made available for safety if the program can be expected to be effective in reducing severe crashes in the state. The leadership at INDOT is aware of this and has set a budget for safety at INDOT that is in excess of the minimum amount required by the federal government.

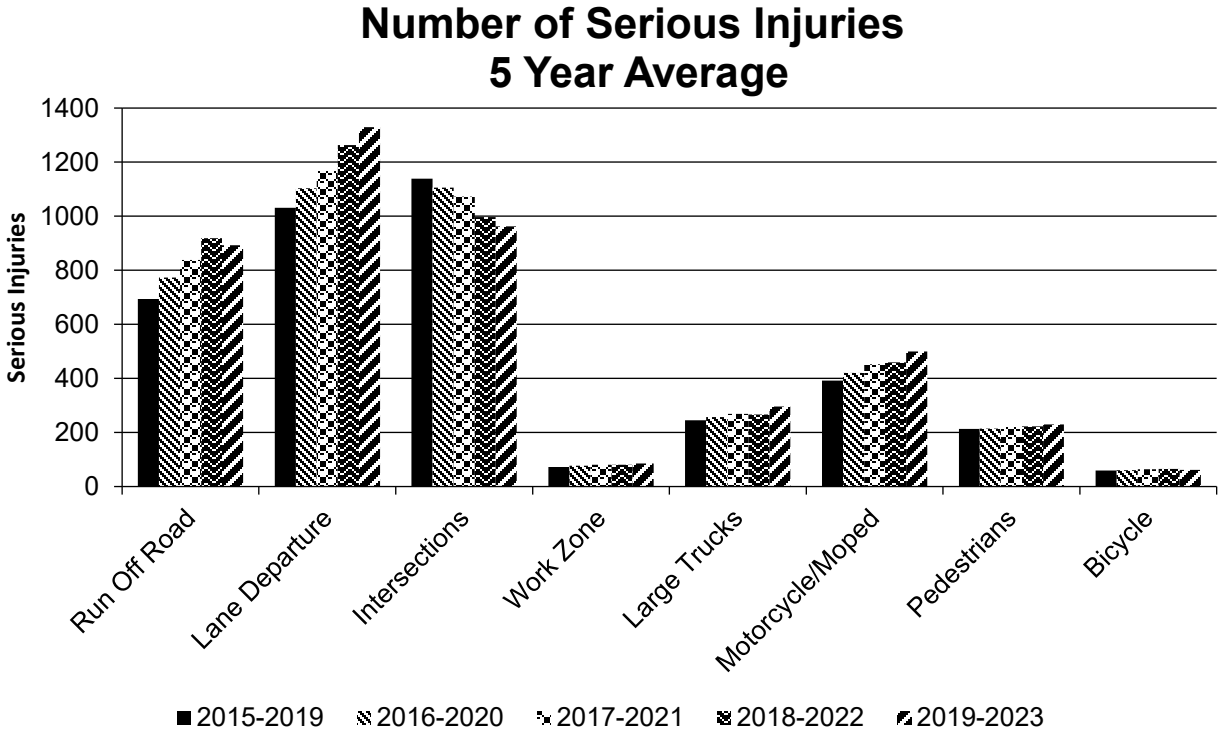
## *Effectiveness of Groupings or Similar Types of Improvements*

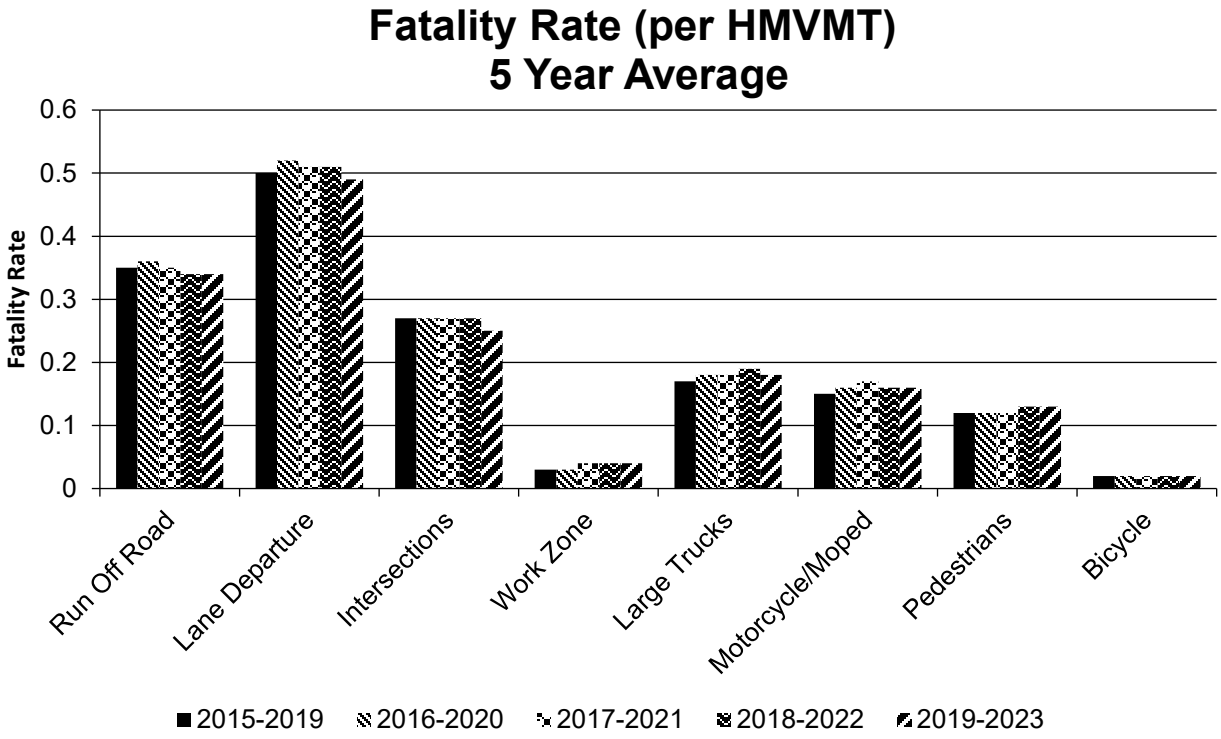
### Present and describe trends in SHSP emphasis area performance measures.

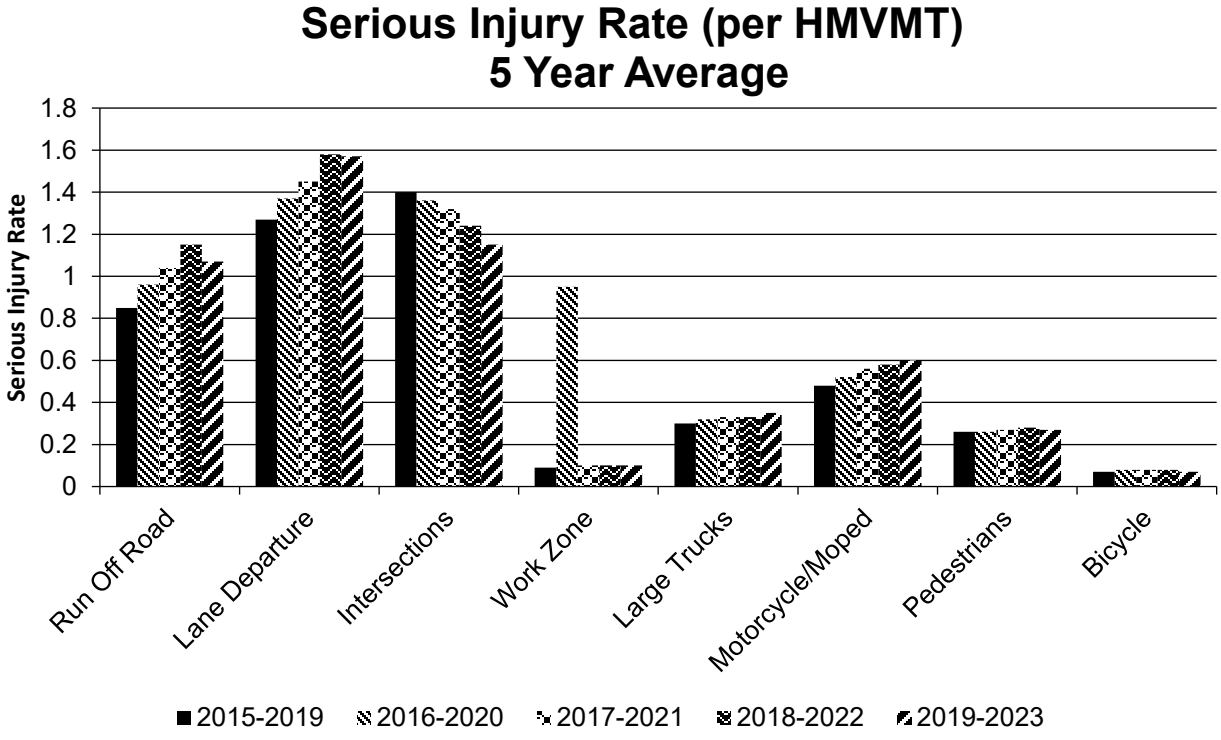
**Year 2023**

| 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) |
|---|---|---|---|---|---|
| Run Off Road | Run-off-road | 284.8 | 892.7 | 0.34 | 1.07 |
| Lane Departure | Sideswipe | 414.4 | 1,328.8 | 0.49 | 1.57 |
| Intersections | Intersections | 205.8 | 962.7 | 0.25 | 1.15 |
| Work Zone | Other (define) | 30.8 | 85.7 | 0.04 | 0.1 |
| Large Trucks | Truck-related | 148.6 | 295.9 | 0.18 | 0.35 |
| Motorcycle/Moped | Other (define) | 134.6 | 499.2 | 0.16 | 0.6 |
| Pedestrians | Vehicle/pedestrian | 107.2 | 230.1 | 0.13 | 0.27 |
| Bicycle | Vehicle/bicycle | 19.4 | 61.5 | 0.02 | 0.07 |


Number of Fatalities
5 Year Average
Fatalities
450
400
350
300
250
200
150
100
50
0
Run Off Road
Lane Departure
Intersections
Work Zone
Large Trucks
Motorcycle/Moped
Pedestrians
Bicycle
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023


Number of Serious Injuries
5 Year Average
Serious Injuries
1400
1200
1000
800
600
400
200
0
Run Off Road
Lane Departure
Intersections
Work Zone
Large Trucks
Motorcycle/Moped
Pedestrians
Bicycle
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023




Targeted Crash Type for Work Zone is crashes that occurred in work zones or in backups from work zones.

Targeted Crash Type for Motorcycle/Moped is crashes that involved at least one motor driven cycle.

## *Project Effectiveness*

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

| LOCATION | FUNCTIONAL CLASS | IMPROVEMENT CATEGORY | IMPROVEMENT TYPE | PDO BEFORE | PDO AFTER | FATALITY BEFORE | FATALITY AFTER | SERIOUS INJURY BEFORE | SERIOUS INJURY AFTER | ALL OTHER INJURY BEFORE | ALL OTHER INJURY AFTER | TOTAL BEFORE | TOTAL AFTER | EVALUATION RESULTS (BENEFIT/COST RATIO) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1172175 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 99.00 | 110.00 | | | 11.00 | 3.00 | 14.00 | 28.00 | 124.00 | 141.00 | 445.57 |
| 1296911 | Urban Principal Arterial (UPA) - Other | Intersection geometry | Add/modify auxiliary lanes | 222.00 | 191.00 | | | 7.00 | 4.00 | 19.00 | 20.00 | 248.00 | 215.00 | 35.63 |
| 1296847 | Rural Minor Arterial | Intersection traffic control | Modify control – Modern Roundabout | 19.00 | 28.00 | | | 3.00 | 1.00 | | 5.00 | 22.00 | 34.00 | 10.70 |
| 1297947 | Rural Principal Arterial (RPA) - Interstate | Roadside | Barrier – cable | 94.00 | 82.00 | | | 5.00 | 7.00 | 12.00 | 12.00 | 111.00 | 101.00 | -14.16 |
| 1702854 | Rural Principal Arterial (RPA) - Other | Pedestrians and bicyclists | ADA curb ramps | 1.00 | | | | | 1.00 | | 2.00 | 1.00 | 3.00 | -136.23 |
| 1006624 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify control – new traffic signal | 85.00 | 62.00 | | | 13.00 | 4.00 | 6.00 | 8.00 | 104.00 | 74.00 | 326.84 |
| 1298316 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify control – new traffic signal | 20.00 | 20.00 | | | 5.00 | 3.00 | 3.00 | | 28.00 | 23.00 | 52.46 |
| 1592620 | Rural Minor Arterial | Intersection geometry | Add/modify auxiliary lanes | 22.00 | 14.00 | | | 3.00 | 2.00 | 1.00 | 1.00 | 26.00 | 17.00 | 18.26 |
| 1500323 | Urban Principal Arterial (UPA) - Other | Pedestrians and bicyclists | Medians and pedestrian refuge areas | 12.00 | 37.00 | | | 1.00 | 1.00 | | | 13.00 | 38.00 | -12.78 |
| 1700406 | Urban Principal Arterial (UPA) - Interstate | Roadway signs and traffic control | Roadway signs (including post) - new or updated | 342.00 | 221.00 | | 2.00 | 21.00 | 4.00 | 16.00 | 35.00 | 379.00 | 262.00 | 185.39 |
| 1601834 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 157.00 | 133.00 | 1.00 | 1.00 | 10.00 | 28.00 | 28.00 | 18.00 | 196.00 | 180.00 | -1079.86 |

| LOCATION | FUNCTIONAL CLASS | IMPROVEMENT CATEGORY | IMPROVEMENT TYPE | PDO BEFORE | PDO AFTER | FATALITY BEFORE | FATALITY AFTER | SERIOUS INJURY BEFORE | SERIOUS INJURY AFTER | ALL OTHER INJURY BEFORE | ALL OTHER INJURY AFTER | TOTAL BEFORE | TOTAL AFTER | EVALUATION RESULTS (BENEFIT/COST RATIO) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1601835 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 327.00 | 428.00 | | 1.00 | 14.00 | 31.00 | 53.00 | 46.00 | 394.00 | 506.00 | -879.42 |
| 1702082 | Rural Principal Arterial (RPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 18.00 | 3.00 | | | 8.00 | 1.00 | 3.00 | | 29.00 | 4.00 | 2909.83 |
| 1800876 | Rural Principal Arterial (RPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 9.00 | 2.00 | | | | | | | 9.00 | 2.00 | 3.77 |
| 1800877 | Rural Principal Arterial (RPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 9.00 | 14.00 | | | | 1.00 | 2.00 | 1.00 | 11.00 | 16.00 | -78.54 |
| 1800879 | Rural Principal Arterial (RPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 3.00 | 13.00 | | | | | | 1.00 | 3.00 | 14.00 | -45.45 |
| 1800880 | Rural Principal Arterial (RPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 6.00 | 4.00 | | | | | 2.00 | | 8.00 | 4.00 | 64.24 |
| 1500337 | Urban Local Road or Street | Intersection geometry | Intersection geometry - other | 12.00 | 11.00 | | | | | 2.00 | 5.00 | 14.00 | 16.00 | -32.48 |
| 1500337 | Urban Local Road or Street | Intersection geometry | Intersection geometry - other | 9.00 | 10.00 | | | | | 1.00 | 4.00 | 10.00 | 14.00 | -38.60 |
| 1401030 | Urban Major Collector | Intersection geometry | Add/modify auxiliary lanes | 3.00 | 6.00 | | | | | 1.00 | 2.00 | 4.00 | 8.00 | -2.86 |
| 1592152 | Urban Principal Arterial (UPA) - Other | Access management | Access management - other | 29.00 | 16.00 | | | 5.00 | 1.00 | 3.00 | 2.00 | 37.00 | 19.00 | 43.85 |
| 1801599 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 1316.00 | 1474.00 | | | 16.00 | 7.00 | 44.00 | 37.00 | 1376.00 | 1518.00 | 1796.56 |
| 1700316 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 101285.00 | 123090.00 | 42.00 | 46.00 | 1802.00 | 812.00 | 3958.00 | 3818.00 | 107087.00 | 127766.00 | 9804.12 |
| 1701173 | Urban Principal Arterial (UPA) - Other | Roadway delineation | Longitudinal pavement markings – new | 241.00 | 102.00 | | | 17.00 | 1.00 | 17.00 | 4.00 | 275.00 | 107.00 | 829.05 |

| LOCATION | FUNCTIONAL CLASS | IMPROVEMENT CATEGORY | IMPROVEMENT TYPE | PDO BEFORE | PDO AFTER | FATALITY BEFORE | FATALITY AFTER | SERIOUS INJURY BEFORE | SERIOUS INJURY AFTER | ALL OTHER INJURY BEFORE | ALL OTHER INJURY AFTER | TOTAL BEFORE | TOTAL AFTER | EVALUATION RESULTS (BENEFIT/COST RATIO) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1801954 | Rural Minor Arterial | Pedestrians and bicyclists | ADA curb ramps | 2.00 | | | | 1.00 | | | | 3.00 | | 251.89 |
| 1172299 | Rural Principal Arterial (RPA) - Other | Intersection geometry | Add/modify auxiliary lanes | 147.00 | 40.00 | | | 6.00 | | 2.00 | 2.00 | 155.00 | 42.00 | 73.72 |
| 1401282 | Urban Local Road or Street | Intersection geometry | Add/modify auxiliary lanes | 6.00 | 6.00 | | | | | | | 6.00 | 6.00 | 0.00 |
| 1401849 | Rural Principal Arterial (RPA) - Other | Intersection geometry | Innovative Intersection (e.g. MUT, RCUT, QR) | 9.00 | 1.00 | 1.00 | | 5.00 | | | 1.00 | 15.00 | 2.00 | 66.01 |
| 1801583 | Urban Major Collector | Intersection traffic control | Modify traffic signal – modernization/replacement | 14.00 | 13.00 | | | 4.00 | 3.00 | 6.00 | 1.00 | 24.00 | 17.00 | 79.52 |
| 1801600 | Urban Major Collector | Intersection traffic control | Modify traffic signal – modernization/replacement | 22.00 | 18.00 | | | 5.00 | | 4.00 | 2.00 | 31.00 | 20.00 | 252.78 |
| 1601726 | Urban Local Road or Street | Pedestrians and bicyclists | Pedestrian beacons | 22.00 | 18.00 | | | 1.00 | 2.00 | | | 23.00 | 20.00 | -240.91 |
| 1601728 | Urban Local Road or Street | Roadway signs and traffic control | Sign sheeting - upgrade or replacement | 21.00 | 17.00 | | | 4.00 | | 2.00 | 1.00 | 27.00 | 18.00 | 6649.51 |
| 1801234 | Rural Principal Arterial (RPA) - Other | Pedestrians and bicyclists | ADA curb ramps | | | | | | | | | | | 0.00 |
| 1801835 | Rural Local Road or Street | Intersection traffic control | Modify traffic signal – modernization/replacement | 122.00 | 150.00 | 2.00 | 1.00 | 29.00 | 18.00 | 53.00 | 24.00 | 206.00 | 193.00 | 3138.28 |
| 1802786 | Rural Local Road or Street | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 661.00 | 390.00 | 3.00 | 1.00 | 57.00 | 54.00 | 95.00 | 70.00 | 816.00 | 515.00 | 579.72 |
| 1700979 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – modernization/replacement | 150.00 | 100.00 | | | 17.00 | 14.00 | 23.00 | 9.00 | 190.00 | 123.00 | 1281.77 |
| 1702224 | Urban Principal Arterial (UPA) - Other | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 711.00 | 661.00 | 2.00 | 1.00 | 78.00 | 85.00 | 132.00 | 38.00 | 923.00 | 785.00 | 534.49 |
| 1702216 | Urban Minor Arterial | Intersection traffic control | Modify traffic signal – modernization/replacement | 897.00 | 662.00 | 4.00 | 2.00 | 64.00 | 41.00 | 125.00 | 109.00 | 1090.00 | 814.00 | 392.31 |
| 1700321 | Rural Local Road or Street | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 6.00 | 3.00 | | | | 1.00 | | | 6.00 | 4.00 | -183.24 |

| LOCATION | FUNCTIONAL CLASS | IMPROVEMENT CATEGORY | IMPROVEMENT TYPE | PDO BEFORE | PDO AFTER | FATALITY BEFORE | FATALITY AFTER | SERIOUS INJURY BEFORE | SERIOUS INJURY AFTER | ALL OTHER INJURY BEFORE | ALL OTHER INJURY AFTER | TOTAL BEFORE | TOTAL AFTER | EVALUATION RESULTS (BENEFIT/COST RATIO) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1602164 | Rural Local Road or Street | Intersection traffic control | Modify traffic signal – add backplates with retroreflective borders | 76.00 | 34.00 | | | 2.00 | 2.00 | 7.00 | 2.00 | 85.00 | 38.00 | 70.06 |
| 1500003 | Urban Principal Arterial (UPA) - Interstate | Roadside | Barrier- metal | 45.00 | 35.00 | 2.00 | | 26.00 | 6.00 | 44.00 | 15.00 | 117.00 | 56.00 | 985.45 |
| 1500024 | Rural Principal Arterial (RPA) - Other | Intersection geometry | Add/modify auxiliary lanes | 6.00 | 6.00 | | | 2.00 | | 4.00 | 6.00 | 12.00 | 12.00 | 29.89 |
| 1601009 | Urban Principal Arterial (UPA) - Other | Intersection geometry | Add/modify auxiliary lanes | 536.00 | 200.00 | | | 4.00 | 5.00 | 21.00 | 3.00 | 561.00 | 208.00 | 2530.85 |
| 1006199 | Urban Principal Arterial (UPA) - Other | Roadway delineation | Longitudinal pavement markings – new | 185.00 | 164.00 | | | 1.00 | 3.00 | 5.00 | 7.00 | 191.00 | 174.00 | -14.81 |
| 1400963 | Urban Local Road or Street | Access management | Access management - other | 82.00 | 118.00 | | | 2.00 | | 6.00 | 3.00 | 90.00 | 121.00 | 51.58 |
| 1400963 | Urban Local Road or Street | Access management | Access management - other | 82.00 | 118.00 | | | 2.00 | | 6.00 | 3.00 | 90.00 | 121.00 | 51.58 |
| 1382614 | Rural Principal Arterial (RPA) - Other | Intersection geometry | Intersection geometry - other | 41.00 | 47.00 | | | 2.00 | | 1.00 | 2.00 | 44.00 | 49.00 | 117.91 |
| 0810280 | Urban Local Road or Street | Roadside | Barrier end treatments (crash cushions, terminals) | 408.00 | 115.00 | | 2.00 | 28.00 | 9.00 | 26.00 | 28.00 | 462.00 | 154.00 | 27.84 |
| 1400709 | Urban Local Road or Street | Intersection geometry | Add/modify auxiliary lanes | 172.00 | 45.00 | | | 12.00 | 2.00 | 40.00 | 2.00 | 224.00 | 49.00 | 250.34 |
| 1500431 | Rural Local Road or Street | Roadside | Barrier end treatments (crash cushions, terminals) | 5.00 | 4.00 | | | 4.00 | | 2.00 | | 11.00 | 4.00 | 265.67 |
| 1601727 | Urban Local Road or Street | Pedestrians and bicyclists | Rapid Rectangular Flashing Beacons (RRFB) | 43.00 | 38.00 | | | 2.00 | | 2.00 | 6.00 | 47.00 | 44.00 | 979.57 |

Safety projects which have been constructed and open to traffic for at least 3 calendar years were evaluated to compare the crashes before the project was implemented to the crashes after the project had been completed. This comparison is only a simple before and after analysis and does not take into account statistical significance, Empirical Bayes, changes in AADT, or control sites. The Evaluation result entered is the simple Benefit/Cost ratio. The benefits in this case are the crashes which are theoretically prevented by installing the project and the costs are the costs to install the project. A result of 1.0 or above would mean that the benefits outweigh the costs. A ratio from 0.0 to 1.0 would indicate that the costs outweigh the benefits and a results of less than 0.0 would indicate that there were no benefits, or that crashes were worse after the completion of the project.

## Compliance Assessment

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

11/22/2022

### What are the years being covered by the current SHSP?

From: 2017 To: 2028

### When does the State anticipate completing its next SHSP update?

2027

The Indiana Strategic Highway Safety Plan (SHSP) is in compliance with the FHWA Safe Systems Approach and provides strategies for Education, Enforcement, Engineering, and Emergency Services. The six principals of the safe systems approach are:

Death and Serious Injuries are Unacceptable
Humans Make Mistakes
Humans Are Vulnerable
Responsibility is Shared
Safety is Proactive
Redundancy is Crucial

The emphasis areas are: Safe Roads, Safe Road Users, Safe Vehicles, Safe Speeds, and Post Crash Care.

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

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

| ROAD TYPE | *MIRE NAME (MIRE NO.) | NON LOCAL PAVED ROADS - SEGMENT | | NON LOCAL PAVED ROADS - INTERSECTION | | NON LOCAL PAVED ROADS - RAMPS | | LOCAL PAVED ROADS | | UNPAVED ROADS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | STATE | NON-STATE | STATE | NON-STATE | STATE | NON-STATE | STATE | NON-STATE | STATE | NON-STATE |
| ROADWAY SEGMENT | Segment Identifier (12) [12] | 100 | 100 | | | | | 100 | 100 | 100 | 100 |
| | Route Number (8) [8] | 100 | 100 | | | | | | | | |
| | Route/Street Name (9) [9] | 100 | 100 | | | | | | | | |
| | Federal Aid/Route Type (21) [21] | 100 | 100 | | | | | | | | |
| | Rural/Urban Designation (20) [20] | 100 | 100 | | | | | 100 | 100 | | |
| | Surface Type (23) [24] | 100 | 100 | | | | | 100 | 100 | | |
| | Begin Point Segment Descriptor (10) [10] | 100 | 100 | | | | | 100 | 100 | 100 | 100 |

| 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 |
| | End Point Segment Descriptor (11) [11] | 100 | 100 | | | | | 100 | 100 | 100 | 100 |
| | Segment Length (13) [13] | 100 | 100 | | | | | | | | |
| | Direction of Inventory (18) [18] | 100 | 100 | | | | | | | | |
| | Functional Class (19) [19] | 100 | 100 | | | | | 100 | 100 | 100 | 100 |
| | Median Type (54) [55] | 100 | 100 | | | | | | | | |
| | Access Control (22) [23] | 100 | 100 | | | | | | | | |
| | One/Two Way Operations (91) [93] | 100 | 100 | | | | | | | | |
| | Number of Through Lanes (31) [32] | 100 | 100 | | | | | 100 | 100 | | |
| | Average Annual Daily Traffic (79) [81] | 100 | 100 | | | | | 100 | 100 | | |
| | AADT Year (80) [82] | 100 | 100 | | | | | | | | |
| | Type of Governmental Ownership (4) [4] | 100 | 100 | | | | | 100 | 100 | 100 | 100 |
| **INTERSECTION** | Unique Junction Identifier (120) [110] | | | 100 | 100 | | | | | | |
| | Location Identifier for Road 1 Crossing Point (122) [112] | | | 100 | 100 | | | | | | |
| | Location Identifier for Road 2 Crossing Point (123) [113] | | | 100 | 100 | | | | | | |
| | Intersection/Junction Geometry (126) [116] | | | 100 | 100 | | | | | | |
| | Intersection/Junction Traffic Control (131) [131] | | | 100 | 100 | | | | | | |

| 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 |
| | AADT for Each Intersecting Road (79) [81] | | | 100 | 100 | | | | | | |
| | AADT Year (80) [82] | | | 100 | 100 | | | | | | |
| | Unique Approach Identifier (139) [129] | | | 100 | 100 | | | | | | |
| INTERCHANGE/RAMP | Unique Interchange Identifier (178) [168] | | | | | 100 | 100 | | | | |
| | Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187] | | | | | 100 | 100 | | | | |
| | Location Identifier for Roadway at Ending Ramp Terminal (201) [191] | | | | | 100 | 100 | | | | |
| | Ramp Length (187) [177] | | | | | 100 | 100 | | | | |
| | Roadway Type at Beginning of Ramp Terminal (195) [185] | | | | | 100 | 100 | | | | |
| | Roadway Type at End Ramp Terminal (199) [189] | | | | | 100 | 100 | | | | |
| | Interchange Type (182) [172] | | | | | 100 | 100 | | | | |
| | Ramp AADT (191) [181] | | | | | 100 | 100 | | | | |
| | Year of Ramp AADT (192) [182] | | | | | 100 | 100 | | | | |
| | Functional Class (19) [19] | | | | | 100 | 100 | | | | |
| | Type of Governmental Ownership (4) [4] | | | | | 100 | 100 | | | | |
| **Totals (Average Percent Complete):** | | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** |

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

Efforts have been taken in the past year to create a GIS layer of all intersections on the state system with traffic control type and other data elements. The collection of AADT for local roads has also been completed. The MIRE FDE collection effort for Indiana has been completed.

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

The effort to meet the requirements to have complete access to the MIRE FDE on all public roads has been completed.

## Optional Attachments

Program Structure:

TSAM Business Rules (Rev. Sep 2024) (1).pdf
TrafficSafety_SpecialRulesforHSIPEligibility_2013.pdf
Project Implementation:

Updated Q29 Project Listing Template_09-23-2024.xlsm
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.