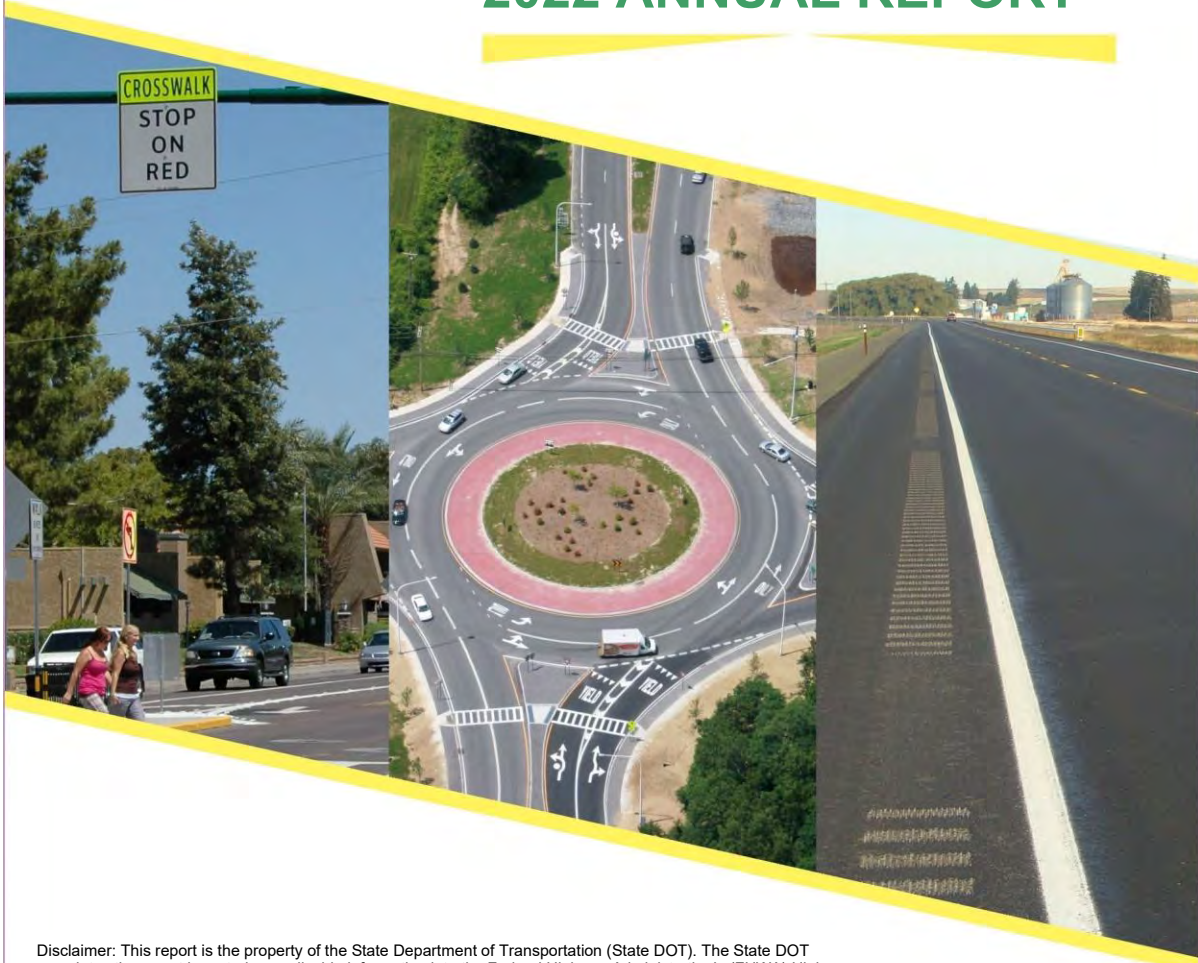


# OREGON

## HIGHWAY SAFETY IMPROVEMENT PROGRAM 2022 ANNUAL REPORT



Disclaimer: This report is the property of the State Department of Transportation (State DOT). The State DOT completes the report by entering applicable information into the Federal Highway Administration's (FHWA) Highway Safety Improvement Program (HSIP) online reporting tool. Once the State DOT completes the report pertaining to its State, it coordinates with its respective FHWA Division Office to ensure the report meets all legislative and regulatory requirements. FHWA's Headquarters Office of Safety then downloads the State's finalized report and posts it to the website (<https://highways.dot.gov/safety/hsip/reporting>) as required by law (23 U.S.C. 148(h)(3)(A)).

Photo source: Federal Highway Administration

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## **Disclaimer**

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

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

23 U.S.C. 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

Improving highway safety has long been a national goal, articulated through all major federal highway legislation. The Highway Safety Improvement Program (HSIP) is a federal program designed to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The primary goal of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state owned roads and tribal roads. It requires a data-driven and strategic approach to improving highway safety on all public roads that focuses on performance.

The HSIP is a core federal-aid program under the Fixing America's Surface Transportation (FAST) Act that went into effect in December, 2015. The FAST Act, which replaced the Moving Ahead for Progress in the 21st Century Act (MAP-21), largely maintained the program structure of the HSIP with slight increases in funding and a change that disallows HSIP funds to be transferred to and used for educational and enforcement type activities. The HSIP funds are primarily intended for infrastructure improvement projects. Non-infrastructure highway safety improvements such as education and enforcement programs are administered by the ODOT Transportation Safety Office (TSO), and are typically funded through the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration (FHWA), or state funds.

The Oregon Department of Transportation (ODOT) administers the federally-funded Highway Safety Improvement Program (HSIP) to implement safety projects. ODOT developed the All Roads Transportation Safety (ARTS) Program to achieve the goals of the HSIP using a data-driven, jurisdictionally-blind process. The majority of the funding for the ARTS Program comes from the Highway Safety Improvement Program (HSIP).

The ARTS Program is a statewide application based competitive process. Projects are ranked or prioritized based on an ODOT-approved prioritization method such as Benefit-Cost Ratio. Through the ARTS program, projects on all public roads in Oregon, regardless of roadway ownership, compete for HSIP funding.

The ARTS program principal guidelines include:

- The program goal is to reduce fatal and serious injury crashes.
- The program must include all public roads.
- The program is data-driven and blind to jurisdiction.
- The process will be overseen by ODOT regions.
- Both "hot spot" methodology and systemic methodology will be used.
- Only proven countermeasures from the ODOT Crash Reduction Factor list will be used.

For purposes of programming Highway Safety funds in the Statewide Transportation Improvement Program (STIP), all highway safety infrastructure improvement projects shall follow these guidelines.

FHWA recently completed a comprehensive review to evaluate the policies, procedures, and achievements of Oregon's All Roads Transportation Safety Program, funded by HSIP funds. The review was done in partnership with ODOT and involved a series of structured interviews with ODOT and local agency staff involved with the program. In addition, technical analyses of crash data, safety screening, and countermeasures were included. The team also performed a comprehensive review of legislation, policies and

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procedures, and institutional relationships. In addition, the team assessed how safety issues are identified and countermeasures are developed and chosen. This culminated with a look at how individual and bundled projects were developed and delivered.

The review confirmed that there were key strengths of the program, including a concentration of efforts on fatal and serious injury crashes, a well-documented and historically strong network screening process, strong project development and selection process that aligned with other transportation projects through a statewide delivery process, inclusion of local agencies in the program to ensure fair consideration of safety needs throughout the system, and a flexible organizational structure within ODOT that accounted for differences within the state and with local agencies yet still created a sound structure for the program. In addition, the six key actions below, which are already top priorities for ODOT, were identified to ensure a data-driven program that reduces fatalities and serious injuries.

1. Improve processes for collecting and processing crash data so data can be available for analysis in a timelier manner.
2. Strengthen the analyses used for network screening, individual site analysis, and countermeasure selection.
3. Ensure the knowledge and skills evidenced in the ARTS program are fully engaged with transportation safety plans in the state, both those carried out by ODOT and those carried out by other agencies.
4. Streamline the safety project delivery processes to more rapidly deliver effective safety countermeasures.
5. Address funding gaps in the program (both addressing the size of projects and state and non-state projects) to ensure the full span of safety countermeasures with the best benefit-cost ratios can be delivered.
6. Develop comprehensive program and project metrics to monitor the effectiveness of the ARTS program and safety countermeasures.

## 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 objective of the ARTS Program is to select the best safety projects using a jurisdictionally blind and data-driven approach to significantly reduce the occurrence of fatalities and serious injuries on all roads in the state. A data-driven approach uses crash data, risk factors, or other data supported methods to identify the best possible locations to achieve the greatest benefits. The ARTS Program is intended to address safety needs on all public roads in Oregon. About half of the fatal and serious injury crashes in the state occur on non-state roadways. By working collaboratively with local road jurisdictions (cities, counties, MPOs, and tribes) ODOT can expect to increase awareness of safety on all roads, promote best practices for infrastructure safety, complement behavioral safety efforts, and focus limited resources to reduce fatal and serious injury crashes in the State of Oregon.

ARTS Safety projects are selected using multiple tools. One of the main tools is the Safety Priority Index System (SPIS) that was developed in 1986 by the Oregon Department of Transportation (ODOT) for flagging potential safety problems. SPIS includes all public roads in Oregon (not just state highways) - the system includes both a component that produces Annual SPIS reports for both On-State Roadways (State Highways only) and Off-state Roadways (non-State Highways).

On state highways, project selection and identification is done at the region level using crash data, the Safety Priority Index System (SPIS), and safety implementation plans. At the local agency level, ODOT provides consultant services at no charge to support project selection therefore, projects can be selected based on local priorities or through consultant support using tools such as SPIS and the systemic safety plans. Oregon DOT primarily uses SPIS which is a flagging tool to assist Region Traffic Investigators in identifying high crash locations to investigate and determine if there are appropriate safety countermeasures that can be implemented within a safety project to eliminate or reduce fatal or serious injury crashes.

While many highway projects incorporate design features or elements that relate to highway safety, such as updating guardrail or improving intersection channelization, signing, and pavement markings, the projects are not aimed at correcting or improving hazardous road locations or features and thus could not be qualified for HSIP funds. The appropriate use of HSIP funds is only for locations or corridors where a known problem exists as indicated by location-specific data on fatalities and serious injuries, and/or where it is determined that the specific project can with confidence produce a measurable and significant reduction in such fatalities or serious injuries. To achieve the maximum benefit, the focus of the ARTS Program is on cost-effective use of the funds allocated for safety improvements addressing fatal and serious injury crashes. The general program guidelines are as follows:

- All projects shall address specific safety problems that contribute to fatal and serious injury crashes.

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- All projects shall use only countermeasures from the ODOT approved countermeasure list.
- Only the most recent available five years of ODOT reported crashes shall be used for crash analysis.
- Projects shall be prioritized based on ODOT approved prioritization method such as Benefit-Cost Ratio.
- ODOT Regions will be responsible for developing and delivering projects.

The ARTS Program has two components – a hotspot component and a systemic component. The hotspot approach is the traditional approach used in safety analysis (ODOT uses a program called SPIS), in which 'hotspot' locations are identified based on crash history and appropriate countermeasures are implemented to reduce crashes. Hotspot projects typically focus on a particular location (for example, an intersection or a short segment of a roadway) that may have multiple causes to address. For the ARTS Program, a hotspot location is defined as a location that has at least one fatal or serious injury crash within the last five years.

The systemic approach identifies a few proven low-cost countermeasures that can be widely implemented and then applies the countermeasures where there is evidence that they would be most useful. The HSIP places a significant emphasis on the systemic approach, which has been proven to successfully reduce the occurrences of fatal and serious injury crashes. The systemic component of the ARTS Program has been further divided into three emphasis areas – roadway departure, intersection, and pedestrian/bicycle. Based on Oregon data, these three emphasis areas accounted for approximately 85% of the fatal and serious injury crashes in the state.

The systemic approach originally used Section 164 penalty funds allocated to the Safety Program, but under the ARTS Program the systemic approach has been moved into the mainstream safety program equal with the hotspot approach

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

Other-Traffic-Roadway Engineering Section

The Oregon Department of Transportation Traffic Roadway Section (TRS) manages the overall ARTS program structure. Projects are selected and prioritized at the region level.

### **How are HSIP funds allocated in a State?**

- SHSP Emphasis Area Data

The funds for ARTS program are split to each region based on the proportion of fatal and serious injury crashes occurring in the region on all public roads in most recent five years. Funds are then further split between state and local agencies, 49% for state and 51% for local. While not always achievable, regions are encouraged to target 50% of their overall funding on Hot Spot projects and 50% on Systemic projects. Specifically, for systemic projects, the funding split plan is 50% for roadway departure crashes, 35% for intersection crashes, and 15% for pedestrian and bicycle crashes.

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

The State's annual safety performance targets represent an important step in helping States work toward the ultimate goal of eliminating traffic fatalities and serious injuries. About half of the fatal and serious injury crashes in the state occur on local (non-state) roadways. By working collaboratively with local road jurisdictions (cities, counties, MPOs, and tribes) ODOT can expect to increase awareness of safety on all roads, promote best practices for infrastructure safety, complement behavioral safety efforts, and focus limited resources to reduce fatal and serious injury crashes in the State of Oregon.

In order to deliver the All Roads Transportation Safety (ARTS) program effectively, ODOT provides consultant outreach services to support Local Agency and Tribal project selection. These services are provided to local jurisdictions and tribes at no charge. The consultant helps facilitate outreach meetings in each region as well as with tribes to make them aware of ARTS timelines. In addition the consultant helps prepare local crash data summary reports that include:

- Number and location of fatal crashes
- Number and location of serious injury crashes
- Number and location of roadway departure, intersection, and bicycle and pedestrian crashes
- Number and location of older (greater than or equal to age 65) driver and older pedestrian crashes
- Number and location of younger (less than or equal to age 20) drivers crashes
- Fatal and serious injury crash patterns (predominant crash types, high-crash intersections, high-crash segments, and predominant contributing factors, etc.)
- All severity crash patterns (predominant crash types, high-crash intersections, high-crash segments, and predominant contributing factors, etc.)
- Summary of bicycle and pedestrian crashes by location

The existing crash data reports, SPIS lists, and safety implementation plans (Roadway Departure, Intersection, and Pedestrian and Bike Implementation Plans) and other sources as necessary are used to help identify and prepare ARTS safety projects.

Lastly, in an effort to better understand the challenges and barriers to participating in the ARTS program, ODOT conducts a two-part local agency survey (an online stakeholder survey and one-on-one interviews with local agencies that did not submit an application for funding). Responses help provide recommendations for facilitating improvements in future rounds of the ARTS program as well as evaluating the usefulness of existing methods and tools in the ARTS decision-making process. A total of 42 respondents completed the survey, representing 28 cities, 13 counties, and one (1) tribe covering all five regions.

- Of the 15 local agencies that answered the question related to consultant support, 11 agencies utilized the free consultant support for one or more aspects of the application process. All comments regarding the usefulness of the consultant support were positive, with multiple respondents indicating the consultant support was vital to developing successful projects and conducting technical analysis.
- Of the 21 responding local agencies that did not submit an application in 2020, over half (12 agencies) indicated limited staff capacity as the primary barrier to participating in ARTS. Other barriers included a lack of



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notable safety concerns (five (5) agencies), local agency project ideas did not meet ARTS requirements (five (5) agencies), the local match was too high (five (5) agencies), the \$500K minimum project size was not practical (three (3) agencies), and the application process was too complicated (one (1) agency).

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

- Design
- Districts/Regions
- Governors Highway Safety Office
- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Highway Safety Engineering Committee (HSEC)
- Other-Traffic Safety Office (TSO)

### **Describe coordination with internal partners.**

ODOT established a Highway Safety Engineering Committee (HSEC) on February 18, 2005. The HSEC provides operational decisions for the Safety Management System within ODOT and provides advice and recommendations to Highway Leadership Team as well as other leadership teams within ODOT regarding funding issues or major safety policy matters. The committee is comprised of individuals with a mix of expertise within the Department. Members of the committee represent the Transportation Safety Division, Region and Headquarters Traffic, Region Technical Centers, Transportation Development (Planning), Maintenance, Federal Highway, Transportation Safety, Association of Oregon Counties, and Roadway Section. The purpose of the committee is to provide a leadership forum to enhance, strategize, coordinate, and direct the engineering/infrastructure related highway safety activities for the Department including the ARTS program.

HSEC meetings scheduled in 2020 and 2021 were canceled because of COVID, scheduling conflicts and lack of agenda items. Towards the end of 2020, we were in the midst of the ARTS season (planning for the project selection and outreach) and we wanted a more ODOT centric group to discuss how we would solicit projects so that we would be able to talk openly about issues. We instituted the ARTS subgroup, which met monthly during the ARTS cycle and functioned much like an ODOT version of HSEC. Since a majority of the topics between ARTS and HSEC were very similar, we did not find much value in repeating the same topics for the HSEC when we're in the middle of the ARTS cycle. Before we reschedule future meetings, we want to take some time to revisit the mission and vision for the committee to address:

- Better defining the purpose and need for the HSEC- what does this group do differently than the ARTS subcommittee.
- Is the committee a decision making committee or information sharing?
- Expanding the group to get more city and county representation

In addition to HSEC, the Traffic Operations and Standards Team (TOAST) was established to provide statewide policy and procedure leadership for traffic engineering related issues. This team involves a mix of internal and external (FHWA, local jurisdictions) partners and often covers safety topics.

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

- Academia/University
- FHWA
- Law Enforcement Agency
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency

**Describe coordination with external partners.**

ODOT Region Traffic offices work closely with external partners in determining appropriate safety projects to fund in Oregon to reduce fatal and serious injuries crashes.

· At the planning level, external partners are involved through the SHSP process as stakeholders in the strategic planning document that defines Oregon’s emerging trends & challenges on traffic safety and identify actions to address safety needs.

· At the project selection level, ODOT Traffic-Roadway Section (TRS) and Region Traffic offices conduct outreach meetings with local agencies interested in submitting proposed ARTS safety projects for funding consideration. In addition, ODOT provides consultant services at no charge to help support local jurisdictions. ODOT TRS also works closely with representatives from FHWA and the ODOT Transportation Safety Office (TSO) to assure coordination between HSIP and the SHSP which identifies Oregon’s policies and strategies to eliminate fatalities and serious injuries.

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

Oregon DOT recently updated several tools and spreadsheets supporting the ARTS program:

- ARTS application form: (<https://www.oregon.gov/odot/Forms/2ODOT/7345159.pdf> )
- CRF appendix: (<https://www.oregon.gov/odot/Engineering/ARTS/CRF-Appendix.pdf>)
- Countermeasure Search Tool (<https://www.oregon.gov/odot/Engineering/Pages/ARTS.aspx>)

Oregon DOT recently updated their Pedestrian and Bicycle Safety Implementation Plan. The update followed the seven-step systemic safety process outlined in *NCHRP Research Report 893: Systemic Pedestrian Safety Analysis*. While *NCHRP Research Report 893* provides a framework for evaluating systemic pedestrian safety, the approach was adapted to evaluate systemic bicycle safety in addition to pedestrian analysis.

[https://www.oregon.gov/odot/Engineering/Docs\\_TrafficEng/Bike-Ped-Safety-Implementation-Plan.pdf](https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/Bike-Ped-Safety-Implementation-Plan.pdf) .

Oregon DOT recently updated the Safety Investigations Manual (SIM) and SIM worksheet and this update has been posted online. This Provides assistance to traffic investigators with highway safety project screening and evaluation. Though the content of this manual is targeted for use within ODOT, the procedures outlined within the document could be easily adapted by local jurisdictions for similar safety assessments.

[https://www.oregon.gov/odot/Engineering/Docs\\_TrafficEng/Safety-Investigation-Manual.pdf](https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/Safety-Investigation-Manual.pdf)

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Oregon DOT recently updated the SPIS to reflect 2019 crash data

- State Highway reports: <https://www.oregon.gov/odot/Engineering/Pages/SPIS-Reports-On-State.aspx>
- Local road reports: <https://www.oregon.gov/odot/Engineering/Pages/SPIS-Reports-Off-State.aspx>

Presenting unambiguous and meaningful crash data statistics is a critical need for both state and local agencies. To accomplish this, Oregon DOT partnered with the University of Portland to develop a methodology, in R, that utilizes state crash data and has the ability to generate output (graphics and data tables) that can be used to support local safety action plans. Oregon DOT continues to seek opportunities to develop local Safety plans for counties.

Oregon DOT recently collaborated with Oregon State University to determine if the typology of heavy vehicle involved crashes differ at traffic signals and roundabouts in such a way that it should be considered in the selection process for intersection control in Oregon.

### ***Program Methodology***

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

Yes

Yes, ODOT currently has an HSIP Manual available on our website. This manual is currently being updated.

File Name: ODOT Highway Safety Improvement Program (HSIP) Guide

· Oregon DOT Safety:

<https://www.oregon.gov/ODOT/Engineering/Pages/Highway-Safety.aspx>

· All Roads Transportation Safety (ARTS) program:  
<http://www.oregon.gov/ODOT/Engineering/Pages/ARTS.aspx> .

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

- Bicycle Safety
- HRRR
- Intersection
- Pedestrian Safety
- Roadway Departure

### **Program: Bicycle Safety**

***Date of Program Methodology:2/1/2014***

***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?***

<b>Crashes</b>	<b>Exposure</b>	<b>Roadway</b>
<ul style="list-style-type: none"><li>• Fatal and serious injury crashes only</li></ul>	<ul style="list-style-type: none"><li>• Volume</li><li>• Population</li><li>• Other-Risk Factors</li></ul>	<ul style="list-style-type: none"><li>• Functional classification</li><li>• Roadside features</li><li>• Other-Risk Factors</li></ul>

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

- Other-Cost Effectiveness for Bike/Peds
- Other-Ped and Bicycle Safety Implementation Plan

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

Yes

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

Yes

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

- Competitive application process

***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

Cost Effectiveness:100

**Program: HRRR**

***Date of Program Methodology:9/1/2017***

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

- Addresses SHSP priority or emphasis area

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

Competes with all projects

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

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### Crashes

- Fatal and serious injury crashes only

### Exposure

- Volume
- Population

### Roadway

- Horizontal curvature
- Functional classification
- Roadside features

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

- Crash frequency
- Crash rate
- Other-Crash Severity

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

Yes

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

Yes

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

- Competitive application process

***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:100

### **Program: Intersection**

***Date of Program Methodology:6/1/2012***

### ***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

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- Fatal and serious injury crashes only
- Volume
- Horizontal curvature
- Functional classification
- Roadside features

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

- Crash frequency
- Crash rate
- Other-Crash Severity
- Other-Intersection Safety Implementation Plan

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

Yes

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

Yes

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

- Competitive application process

***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:100

### **Program: Pedestrian Safety**

***Date of Program Methodology:2/1/2014***

### ***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

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- Fatal and serious injury crashes only
- Volume
- Population
- Functional classification
- Roadside features

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

- Other-Cost Effectiveness for Bike/Peds
- Other-Ped and Bicycle Safety Implementation Plan

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

Yes

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

Yes

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

- Competitive application process

**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

Cost Effectiveness:100

**Program: Roadway Departure**

**Date of Program Methodology:2/1/2017**

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

- Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes

- Fatal and serious injury crashes only

Exposure

- Volume

Roadway

- Functional classification
- Roadside features

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

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- Other-Cost Effectiveness for Bike/Peds
- Other-Crash Severity
- Other-Roadway Departure Safety
- Other-Roadway Departure Safety Implementation Plan

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

Yes

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

Yes

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

- Competitive application process

***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**

Cost Effectiveness:100

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

50

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

- Add/Upgrade/Modify/Remove Traffic Signal
- Cable Median Barriers
- Clear Zone Improvements
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- Rumble Strips
- Safety Edge
- Traffic Control Device Rehabilitation
- Upgrade Guard Rails
- Wrong way driving treatments

I've checked the box for HFST (not sure why it was unchecked), we fund systemic improvements such as this treatment with our HSIP funds. Treatments such as HFST maybe a potential solution for locations experiencing an overrepresentation of wet crashes.



## **What process is used to identify potential countermeasures?**

- Crash data analysis
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Stakeholder input
- Other-Region Traffic Investigator's investigate the top 5% Safety Priority Index System (SPIS) each year and identify potential cost effective countermeasures.

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

Yes

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

ODOT's All Roads Transportation Safety (ARTS) program includes several ITS technologies as potential countermeasures, especially curve and intersection warning systems and variable speed signs.

Oregon is in the formative stages of developing connected vehicle technologies .

Intelligent Transportation Systems (ITS) connected vehicles website  
<https://www.oregon.gov/odot/Programs/Pages/Connected-Vehicles.aspx>

Automated Vehicles website <https://www.oregon.gov/odot/Programs/Pages/CAV.aspx>

## **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.**

ODOT is implementing HSM methods and approaches to support HSIP efforts.

· The Safety Priority Index System (SPIS) tool is an example of an HSM sliding window application, which is one of the three principle screening methods in the HSM. SPIS calculates a score for qualifying 0.10-mile segments of roadways (statewide) based on the frequency, rate and severity of crashes occurring within each segment over a three-year period.

· In ARTS, for Pedestrian and Bicycle safety project prioritization, we use the cost-effectiveness index (CEI) analysis tool outlined in the HSM. Rather than comparing the economic value of the crash reductions to the project cost, cost-effectiveness analysis compares the project cost to the reduction in one fatal and serious injury crash. The lower the CEI value of a project, the higher it will rank in the prioritized list.

· The HSM predictive spreadsheets have been updated to include Oregon specific calibration factors. While these crash predictive models are not used for systemic analysis, they are used for project analysis where SPFs are available.

· ODOT piloted the AASHTOWare Safety Analytics software earlier this year [ZJ1] . Some of the features and functions we were interested in learning more about include:

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- o The ability to query multiple years of crash data to identify crash trends by crash type, severity, and geometric features statewide.
- o Hands-on experience to determine if the ability to query and export selected crash data is self-guiding, if the dashboard is intuitive, and how insightful the graphs and data displays are.
- o Accessibility and functionality for local jurisdictions- how easy is it for local jurisdictions to access the data and develop trends based on boundaries.
- Our ODOT Transportation Planning Analysis (TPAU) unit has incorporated several methodologies and tools into the Analysis Procedures Manual (APM), such as the critical crash rate and the excess proportion of specific crash type calculators.

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

The All Roads Transportation Safety Program (ARTS) is a statewide safety program that addresses safety for all public roads in the state of Oregon. The primary objective of the ARTS Program is to use data-driven safety methods to select the best projects to reduce fatalities and serious injuries on all public roads in the state. The program is a competitive program with a focus on implementation of low-cost and proven safety countermeasures. It is supported through federal and state funds based on the federal Highway Safety Improvement Program (HSIP). HSIP adopts a data-driven approach that uses crash data, risk factors, and other supported methods to identify the best possible locations to achieve the greatest benefits.

The third round of the ARTS project selection began in the fall of 2020 and extended through the spring of 2021. During this period, projects were selected for the Statewide Transportation Improvement Program (STIP), which will be delivered in years 2025 through 2027.

ODOT uses two different methods for selecting projects – traditional ‘Hotspot’ method and ‘Systemic’ method. ODOT regions are encouraged to spend at least half of the funding for Systemic projects. These two methods are designed to select the most cost-effective projects among all public roads in Oregon to reduce as many fatal and serious injury crashes as possible with available funds. The 2014 – 2018 crash data was used to support applications for this round of ARTS. The following tools and safety plans were helpful in safety project identification:

- Safety Priority Index System (SPIS):

<https://www.oregon.gov/ODOT/Engineering/Pages/Highway-Safety.aspx>

- Oregon Adjustable Safety Index System (OASIS): <https://zigzag.odot.state.or.us/oasisapp/OasisTool.aspx>

- Systemic Roadway Departure Plan:

<https://www.oregon.gov/odot/Engineering/Pages/Roadway-Departures.aspx>

- Systemic Intersection Safety Plan:

<https://www.oregon.gov/odot/Engineering/Pages/Intersection-Safety.aspx>

- Systemic Pedestrian and Bicycle Plan: [https://www.oregon.gov/odot/Engineering/Docs\\_TrafficEng/Bike-Ped-Safety-Implementation-Plan.pdf](https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/Bike-Ped-Safety-Implementation-Plan.pdf)

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- Addressing Oregon's Rise in Deaths and Serious Injuries for Senior Drivers and Pedestrians:

<https://www.oregon.gov/odot/Programs/ResearchDocuments/SPR828Final.pdf>

For the STIP period, 2025 through 2027, approximately \$30 million per year was programmed through the ARTS program. Funds were allocated to each ODOT region based on the proportion of fatalities and serious injuries that occurred within the region during the last five years of available crash data. The region allocations during the last round of ARTS funding was approximately:

- Region 1 (32%),
- Region 2 (37%),
- Region 3 (14%),
- Region 4 (10%), and
- Region 5 (6%)

The ARTS FAQ is available at this link: [https://www.oregon.gov/odot/Engineering/Docs\\_TrafficEng/ARTS\\_Key-Facts.pdf](https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/ARTS_Key-Facts.pdf)

## Project Implementation

### *Funds Programmed*

#### Reporting period for HSIP funding.

State Fiscal Year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$38,205,909	\$38,205,909	100%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$2,440,120	\$2,440,120	100%
Penalty Funds (23 U.S.C. 154)	\$0	\$0	0%
Penalty Funds (23 U.S.C. 164)	\$12,501,939	\$12,501,939	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$0	\$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$0	\$0	0%
<b>Totals</b>	<b>\$53,147,968</b>	<b>\$53,147,968</b>	<b>100%</b>

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

7%

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

0%

The 50/50 split is our target-

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

\$218,000

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

\$218,000

Oregon has often collaborated with our partners on increased enforcement (including automated enforcement) and other strategies such as education campaigns which are very successful. Because HSIP funds in the

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amount of \$218,000 per year were used for roadway departure enforcement through the Transportation Safety Office (TSO).

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

0%

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

0%

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

While Oregon DOT has had much success, we still face challenges with obligating HSIP funds to appropriate safety projects.

- Local jurisdictions' participation in the ARTS program:

§ Local jurisdictions typically submit small projects (~\$500,000); however, these projects are less cost effective because of the project delivery constraints of the federal process. It would be helpful if FHWA reduces requirements for project development and oversight for Safety projects under a certain size (for example, less than \$500,000) in order to facilitate delivery.

§ HSIP requires a 10% match so smaller jurisdictions often do not have the funding to support larger safety projects. It would be helpful if FHWA updated the countermeasures and project types that are fully reimbursable to include more countermeasures specific to vulnerable users and to make all local agency projects fully reimbursable.

- Non-infrastructure program

- Oregon has often collaborated with our partners on increased enforcement (including automated enforcement) and other strategies such as education campaigns which are very successful. Because this was previously not allowed under the HSIP program, other funds in the amount of \$218,000 per year were used for roadway departure enforcement through the Transportation Safety Office (TSO).

- Getting safety projects programmed and built in an appropriate time frame:

§ Consider ARTS project delivery improvements (master agreement, uniform data, etc.) to improve delivery of non-State projects such as developing master intergovernmental agreements for ARTS projects or otherwise group projects to deliver under single Intergovernmental Agreement (IGA) [ZJ1] .

§ Identify opportunities to program safety projects earlier in the STIP

§ Explore opportunities for Public Interest Finding with FHWA for use of state-forces to construct certain low-cost safety countermeasures.

§ Explore potential peer exchange opportunities of other states that use other methods to fund maintenance forces with the HSIP funds.

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§ Examine efforts to use IDIQ (indefinite delivery/indefinite quantity) for contracting and delivering low-cost safety treatments. This approach appears to use federal funds to deliver low-cost safety improvements in a more rapid deployment of measures. This may be a more efficient way to deliver some more traditional STIP fixes.

§ Continue to support the use of the State Funded Local Projects (SFLP) program for ARTS applications on non-state roads.

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

Several challenges we've come up against include:

- Several challenges we've come up against include:
  - Resources and estimating safety project costs (during COVID),
  - Encouraging tribes and local jurisdictions to participate in the ARTS program
  - Programming and constructing projects in a timely fashion, especially local safety projects.
  - Small dollar safety projects (less than \$500k) where the administration costs overrides the project costs. Some Regions have bundled safety projects where practical to reduce administration costs.
  - Increase on project cost from inflation

**General Listing of Projects**

List the projects obligated using HSIP funds for the reporting period.

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 21230, US20/OR201 (Burns to Ontario)	Intersection traffic control	Modify control – Modern Roundabout	1	Project	\$3000000	\$16724610	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Intersection
KN: 21878, I-84: Baker Valley Variable Speed Limit upgrades	Speed management	Variable speed limits	1	Project	\$271436	\$2195218	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0		State Highway Agency	Systemic	Speed Management	Speed Management
KN: 21894, Malheur and Harney traffic signal safety improvements	Intersection traffic control	Modify control – other	1	Project	\$258449	\$1573718	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		County Highway Agency	Systemic	Intersections	Intersection
KN: 21898, Baker & Union traffic signal safety improvements	Intersection traffic control	Modify control – other	1	Project	\$163010	\$2144515	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		County Highway Agency	Systemic	Intersections	Intersection
KN: 22069, US395: Baggett Lane safety improvements	Intersection traffic control	Modify control – Modern Roundabout	1	Project	\$600000	\$600000	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Intersections	Intersection
KN: 22383, OR86: Guardrail Upgrades Final Phase	Roadside	Barrier - other	1	Project	\$311000	\$5392000	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 20074, Region 4 ARTS	Roadway delineation	Roadway delineation - other	1	Project	\$1662883	\$2760835	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 20074, Region 4 ARTS	Roadway delineation	Roadway delineation - other	1	Project	\$225000	\$2760835	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 20011, US20 - Cooley Rd	Intersection traffic control	Modify control – Modern Roundabout	1	Project	\$1621764	\$23594101	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Intersection

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 20256, OR140 at OR66 Intersection Improvements	Intersection traffic control	Modify control – new traffic signal	1	Project	\$5276398	\$6511198	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Intersections	Intersection
KN: 21655, ARTS Intersection Upgrades	Intersection traffic control	Intersection traffic control - other	1	Project	\$280000	\$1213959	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Intersection
KN: 21667, US20: Ward / Hamby Rd. Intersection	Intersection traffic control	Modify control – Modern Roundabout	1	Project	\$50000	\$6517585	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Intersections	Intersection
KN: 22302, US20: Conifer Blvd to Merloy Ave	Roadway	Rumble strips – other	1	Project	\$825000	\$9978076	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 20169, Commercial St: Oxford St SE to Madrona Ave SE (Salem)	Pedestrians and bicyclists	On road bicycle lane	1	Project	\$59558	\$1692758	Penalty Funds (23 U.S.C. 164)	Urban	Principal Arterial-Other	0		City Municipal Highway Agency or	Systemic	Bicyclists	Pedestrian and Bicycle
KN: 20204, Broadway Street at Pine Street	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1	Project	\$858400	\$1615471	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		City Municipal Highway Agency or	Systemic	Bicyclists	Pedestrian and Bicycle
KN: 20206, River Rd at Irving Rd	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	\$1644700	\$3038344	Penalty Funds (23 U.S.C. 164)	Urban	Principal Arterial-Other	0		City Municipal Highway Agency or	Systemic	Bicyclists	Pedestrian and Bicycle
KN: 18751, OR99E	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	\$765326	\$11341528	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	0		Town Township Highway Agency or	Spot	Pedestrians	Pedestrian and Bicycle
KN: 20220, City of Salem Local Road Signal Enhancement	Intersection traffic control	Intersection traffic control - other	1	Project	\$1360700	\$1506800	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		Town Township Highway Agency or	Systemic	Intersections	Intersection
KN: 21374, OR99w Orrs/Clow Corner	Intersection traffic control	Modify control – Modern Roundabout	1	Project	\$300000	\$10500000	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	0		State Highway Agency	Spot	Intersections	Intersection



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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 21560, SE Cruickshank Rd	Intersection traffic control	Modify control – Modern Roundabout	1	Project	\$30000	\$1957900	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Intersection
KN: 21572, OR99EB- D St. to Union St.	Pedestrians and bicyclists	On road bicycle lane	1	Project	\$531000	\$2385800	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Systemic	Bicyclists	Pedestrian and Bicycle
KN: 22509, Roadside Barrier Upgrades (OR6)	Roadside	Barrier - other	1	Project	\$1867593	\$10890272	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 22511, Roadside Barrier Upgrades (OR211)	Roadside	Barrier - other	1	Project	\$501456	\$2298953	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 21573, City of Eugene Signal Improvements	Intersection traffic control	Intersection traffic control - other	1	Project	\$258900	\$1108300	Penalty Funds (23 U.S.C. 164)	Multiple/Varies	Multiple/Varies	0		City or Municipal Highway Agency	Systemic	Intersections	Intersection
KN: 20166, Variable Message and Curve Warning	Roadway signs and traffic control	Curve-related warning signs and flashers	1	Project	\$1500000	\$7194656	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 20339, East Systemic Signals and Illumination	Intersection traffic control	Intersection traffic control - other	1	Project	\$1791042	\$5137775	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Intersection
KN: 22562, I5 Smith and Sexton Pass	Roadway signs and traffic control	Curve-related warning signs and flashers	1	Project	\$50000	\$2550000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 21717, Rogue Valley Intersection	Intersection traffic control	Intersection traffic control - other	1	Project	\$220000	\$1215000	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Intersections	Intersection
KN: 21635, SE Flavel St at 72nd	Intersection traffic control	Intersection traffic control - other	1	Project	\$178000	\$1020365	Penalty Funds (23 U.S.C. 164)	Urban	Major Collector	0		City or Municipal Highway Agency	Spot	Intersections	Intersection

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 20335, Central Systemic Signals and Illumination	Intersection traffic control	Intersection traffic control - other	1	Project	\$5009213	\$6559022	Penalty Funds (23 U.S.C. 164)	Urban	Principal Arterial-Other	0		City or Municipal Highway Agency	Systemic	Intersections	Intersection
KN: 20242, OR99	Roadway	Roadway - other	1	Project	\$4917579	\$7583121	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Intersection
KN: 22520, Dover to Bear Lane	Intersection geometry	Intersection geometry - other	1	Project	\$650000	\$4725000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Intersection
KN: 21615, Washington County Bike/Ped	Pedestrians and bicyclists	On road bicycle lane	1	Project	\$40000	\$2873572	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Intersection
KN: 20209, OR126B at 54th	Intersection traffic control	Intersection traffic control - other	1	Project	\$63500	\$2140400	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		City or Municipal Highway Agency	Spot	Intersections	Intersection
KN: 20185, OR99	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1	Project	\$2043194	\$5675607	Penalty Funds (23 U.S.C. 164)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Pedestrians	Pedestrian and Bicycle
KN: 18476, Roadside Barrier Upgrades	Roadside	Barrier - other	1	Project	\$10029958	\$10029958	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure
KN: 18974, OR8- SW 192nd to SW 110th	Intersection traffic control	Intersection traffic control - other	1	Project	\$3426395	\$6206891	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Systemic	Intersections	Intersection
KN: 20191, Pedestrian Bridge	Pedestrians and bicyclists	Pedestrians and bicyclists - other	1	Project	\$911227	\$1438640	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Pedestrians	Pedestrian and Bicycle
KN: 21408, OR99	Intersection traffic control	Intersection traffic control - other	1	Project	\$169000	\$1568000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Intersection
KN: 21716, OR140	Intersection traffic control	Intersection traffic control - other	1	Project	\$1360000	\$1814000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Intersection
KN: 21729, Crater lake Signal Improvements	Intersection traffic control	Intersection traffic control - other	1	Project	\$2026608	\$2026608	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		City or Municipal Highway Agency	Systemic	Intersections	Intersection

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 22511, OR34	Roadside	Barrier - other	1	Project	\$460000	\$2298953	HSIP (23 U.S.C. 148)	Multiple/Varies	Minor Arterial	0		State Highway Agency	Systemic	Roadway Departure	Roadway Departure

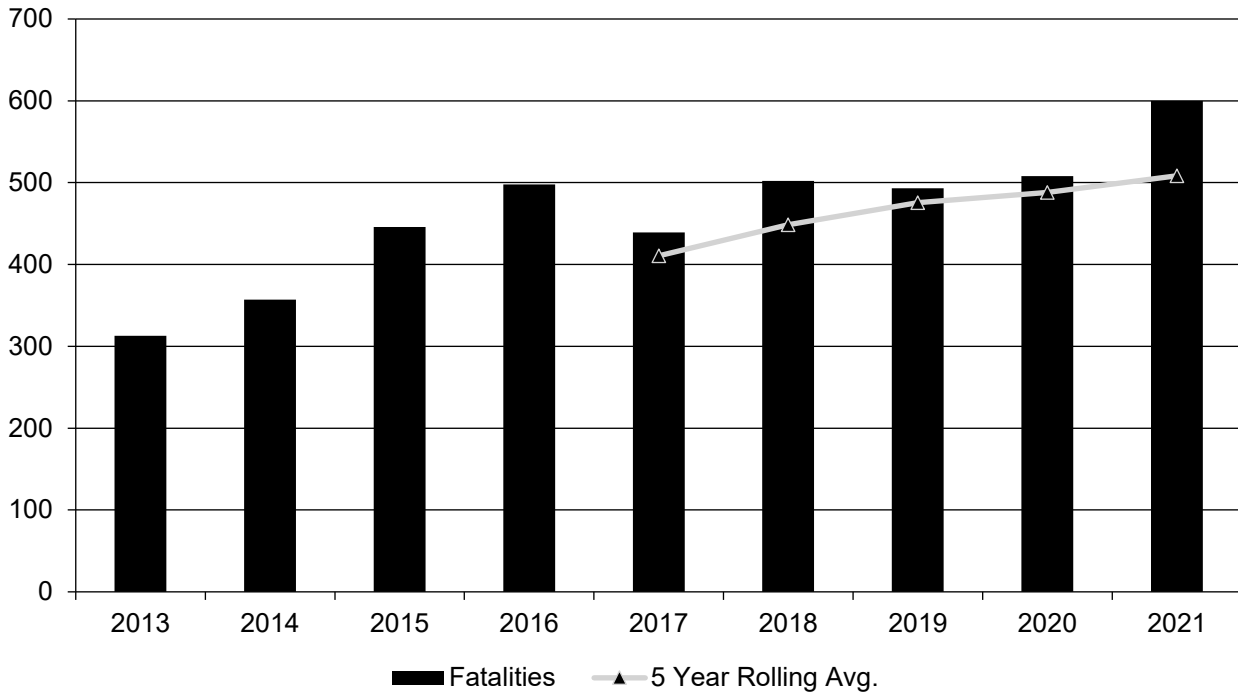
## Safety Performance

### *General Highway Safety Trends*

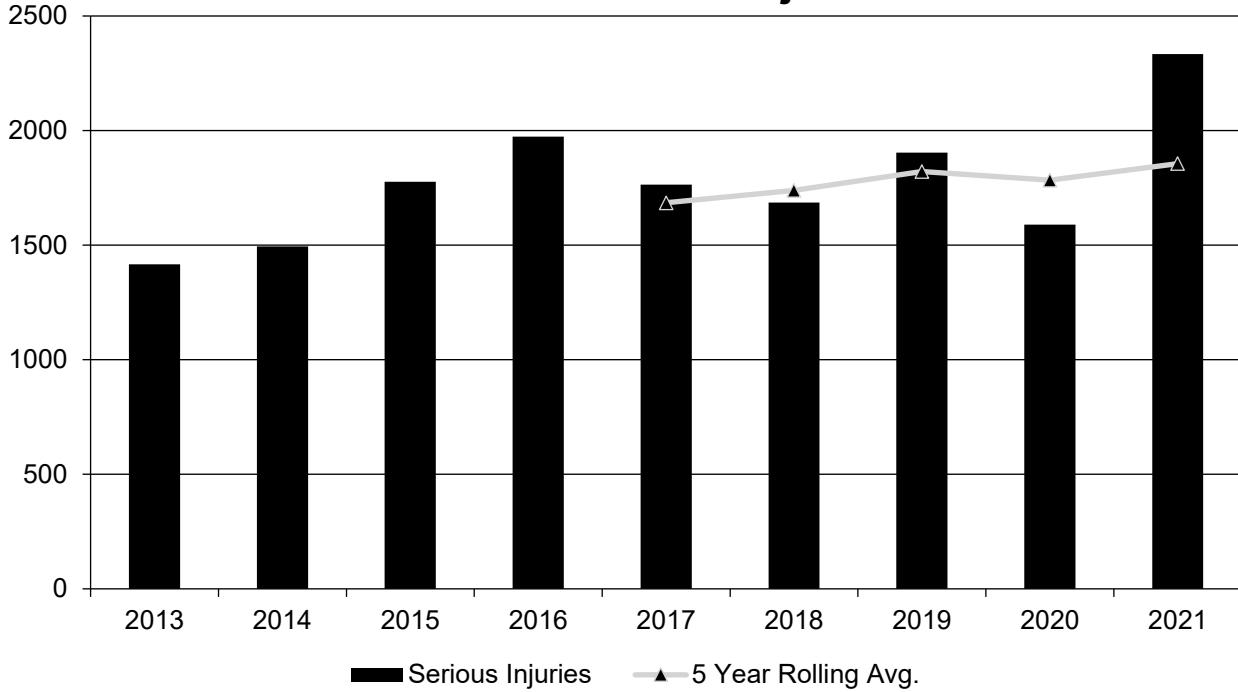
Present data showing the general highway safety trends in the State for the past five years.

<b>PERFORMANCE MEASURES</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Fatalities	313	357	446	498	439	502	493	508	600
Serious Injuries	1,416	1,495	1,777	1,973	1,764	1,686	1,904	1,590	2,334
Fatality rate (per HMVMT)	0.930	1.030	1.240	1.360	1.190	1.360	1.370	1.570	1.630
Serious injury rate (per HMVMT)	4.200	4.320	4.940	5.370	4.800	4.580	5.290	4.920	6.330
Number non-motorized fatalities	55	64	82	84	83	88	97	92	110
Number of non-motorized serious injuries	165	177	186	196	168	161	157	169	161
PDO Crashes	26,228	26,716	26,025	29,317	28,926	21,977	22,640	18,338	0

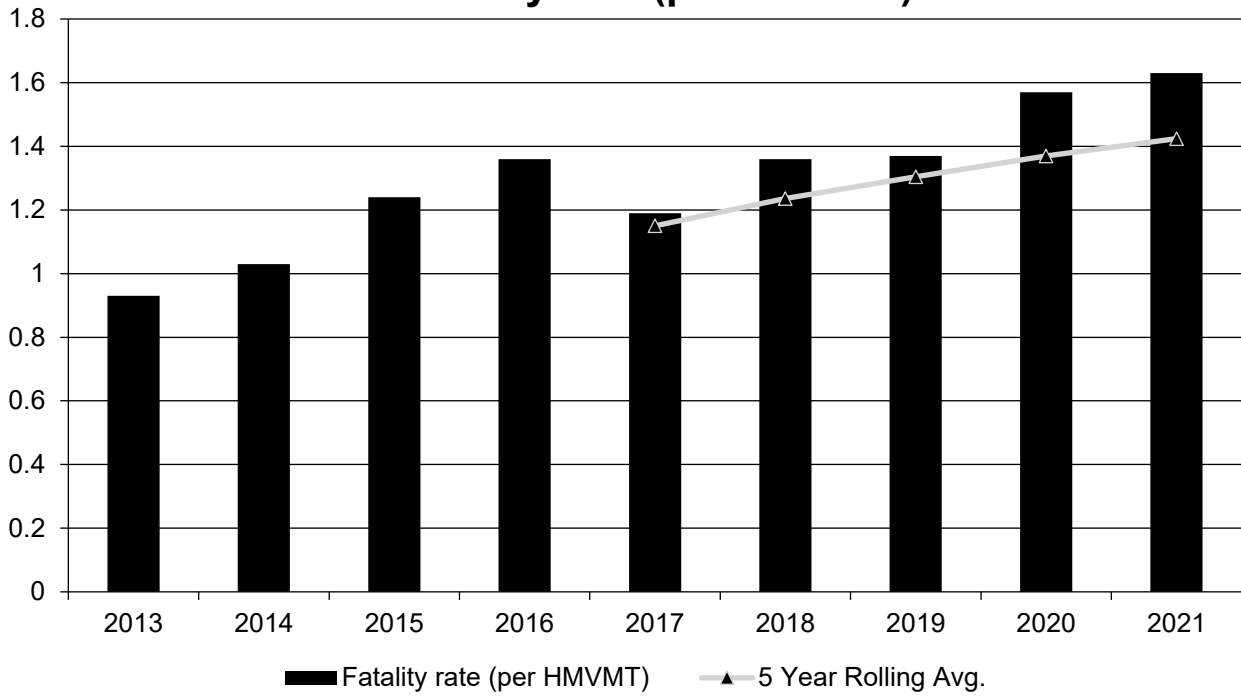
### Annual Fatalities



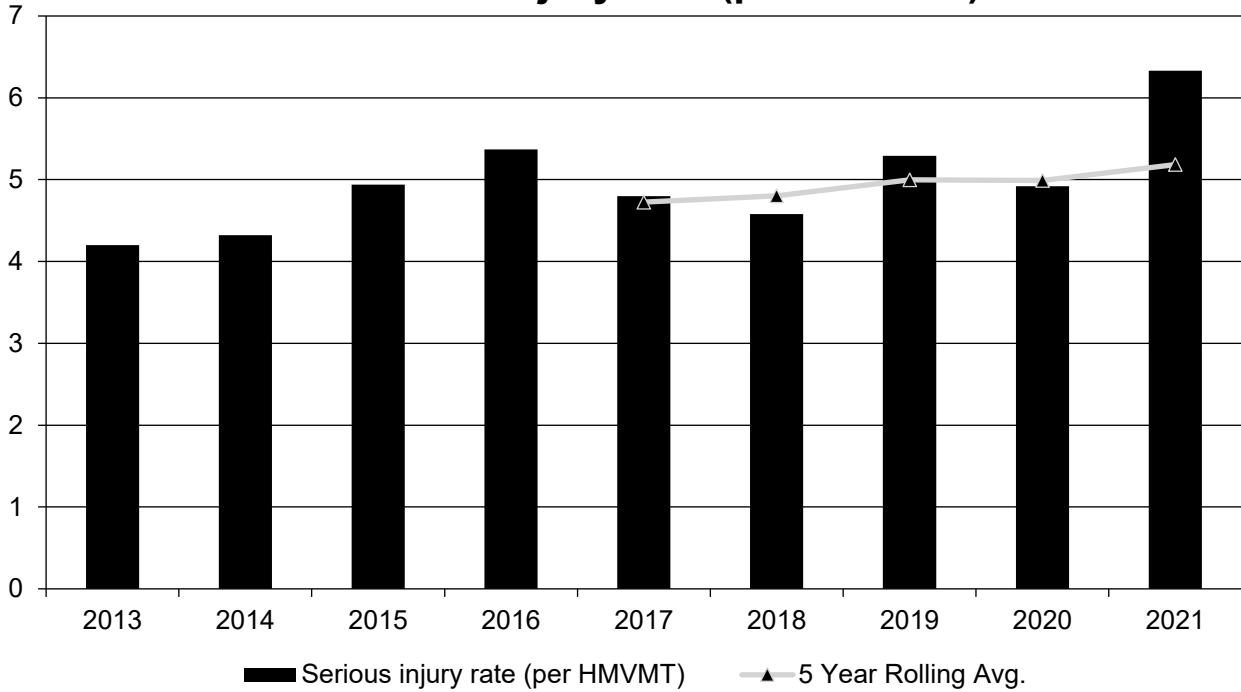
### Annual Serious Injuries



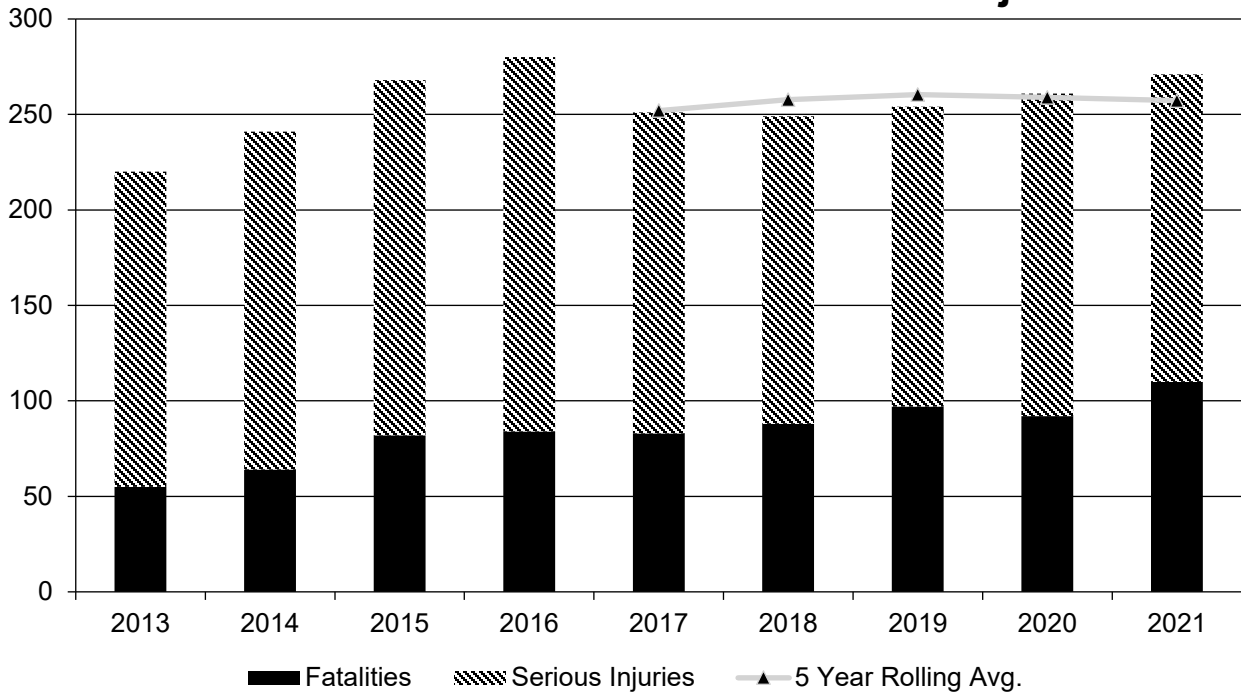
### Fatality rate (per HMVMT)



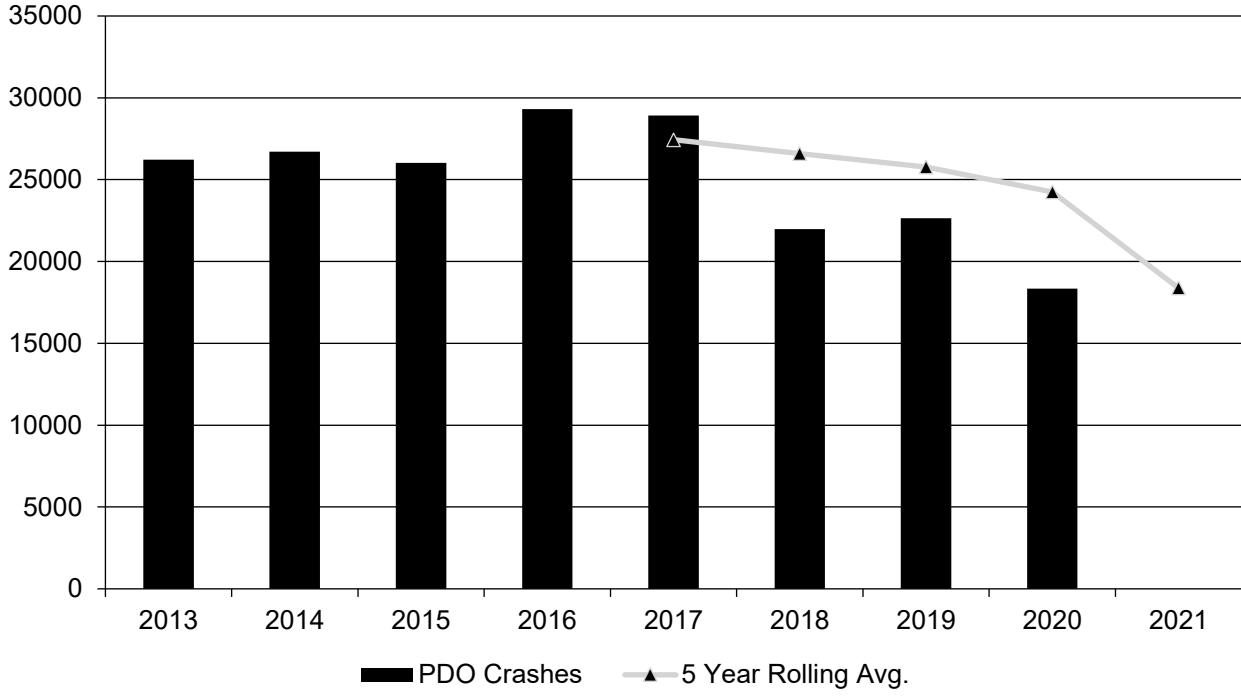
### Serious injury rate (per HMVMT)



### Non Motorized Fatalities and Serious Injuries



### PDO Crashes



PDO crashes for 2021 have not been completed yet.

**Describe fatality data source.**

FARS

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

Year 2021

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	19	49.4	0.47	1.06
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	106.6	245.6	2.51	5.75
Rural Minor Arterial	57.8	160.4	3.1	8.63
Rural Minor Collector	19	55	3.13	9.31
Rural Major Collector	59.4	181.4	3.09	9.31
Rural Local Road or Street	24	56	2.31	4.87
Urban Principal Arterial (UPA) - Interstate	23.8	86.6	0.43	1.55
Urban Principal Arterial (UPA) - Other Freeways and Expressways	4.2	32	0.29	2.22
Urban Principal Arterial (UPA) - Other	98.8	439.4	1.79	7.9
Urban Minor Arterial	52	309.4	1.21	7.16
Urban Minor Collector	3.2	12.2	1.16	4.46
Urban Major Collector	31	160.8	1.15	5.96
Urban Local Road or Street	9.6	67.4	0.49	3.47



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Year 2021

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	296.4	904.4		
County Highway Agency	128.8	403.6		
Town or Township Highway Agency				
City or Municipal Highway Agency	83.2	547.6		
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				

**Provide additional discussion related to general highway safety trends.**

Multiple changes have been observed in the past several years that have affected the statewide safety trends in Oregon.

· Since the outbreak of the COVID-19 pandemic, many changes in driving behaviors have been reported. A study by Insurance Institute of Highway Safety (IIHS) shows that empty roads in 2020 spurred drivers to drive with high speed. National statistics also show that this behavior remains even as traffic volumes return to pre-pandemic levels.

## 2022 Oregon Highway Safety Improvement Program

- Oregon, like the rest of the nation, experienced tenuous times related to the pandemic and its negative effects on employment, health, and society in general. Law enforcement resources are still more stretched than usual, with a higher number of officers retiring or leaving the profession, and a shrinking recruitment pool.
- Our public safety partners, including law enforcement officers, have been tasked with stepping in to conduct more emergency and community response due to the pandemic; as well as significant political and social unrest in Oregon's urban cities since summer of 2020 that continue (although in less frequency). The resources that the police normally dedicate to traffic patrol were already challenged, and prior levels of traffic safety enforcement were not maintained in 2020 nor in 2021 due to reassignment to needed community support and other duties. Drivers are becoming accustomed to the new normal and vehicle travel has returned back to pre-pandemic levels. In Oregon, a total of 36.8 billion vehicle mileage travelled (VMT) was reported for year 2021, a 14% increase from year 2020. The 2021 VMT is even 2% higher than that for year 2019.
- Several factors affected the traffic fatality numbers in 2020 and in 2021, including continued increases in crashes involving impairment, increases in crashes flagged for speed, and the reduced number of traffic law enforcement resources available. Fatal crashes involving impairment from poly-substances (alcohol plus drugs); excessive speed; and/or not wearing a safety belt are the most common causes of a motor vehicle fatality in Oregon.
- In Oregon, between 2017 and 2021 (2021 data is preliminary and subject to change) more than half (51%) of fatalities and serious injuries occurred on city and county roads. Specifically, more than half of pedestrian and bicyclist involved fatalities and serious injuries are occurred local roads.
- Statewide, between 2017 and 2021 (2021 data is preliminary and subject to change), fatal and serious injury crashes have been steadily increasing. In addition,
  - o 42% of all fatal and serious injury crashes were flagged as roadway departure. The preliminary 2021 data shows a 28% increase (over 2020 data) in roadway departure over the 2020 crash totals.
  - o 35% of all fatal and serious injury crashes occurred at or were related to an intersection. The preliminary 2021 data reflects a 44% increase (over 2020 data) in intersection crashes. This increase is largely in urban areas.
  - o 14% of all fatal and serious injury crashes involved a motorcycle. The preliminary 2021 data reflects a 36% increase (over 2020 data) in crashes involving a motorcycle.
  - o 13% of crashes were not flagged as roadway departure, intersection or pedestrian and bicycle involved. The preliminary 2021 data reflects a 71% increase (over 2020 data) in these crashes.
- ODOT's continues to employ a multi-pronged approach to reduce fatal and serious injury crashes. Reducing the number of traffic crashes is the primary strategy to reduce fatalities and serious traffic injuries. However, when a crash does occur, reducing the injury severity becomes the secondary strategy which is influenced in three ways: infrastructure work implementing design practices to mitigate structural safety risks; providing education and outreach programs utilized statewide, and specifically in identified problem locations; and through timely emergency medical services at the scene and in transport to trauma centers.

## ***Safety Performance Targets***

### **Safety Performance Targets**

#### **Calendar Year 2023 Targets \***

***Number of Fatalities:488.0***

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

The TSAP is the framework for engaging residents, stakeholders, employers, planners, engineers, enforcement agencies, emergency medical service providers, and others across the state to improve transportation safety in Oregon. The 2023 targets (S-Curve trend line) are established by meeting with a multi-disciplinary working group (MPO's, City, Counties) to review the most recent crash data (2016-2020), assess progress achieved, and confirm the target setting approach and new targets for the next year which are approved by the Oregon Traffic Safety Committee (OTSC).

***Number of Serious Injuries:1783.0***

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

The TSAP is the framework for engaging residents, stakeholders, employers, planners, engineers, enforcement agencies, emergency medical service providers, and others across the state to improve transportation safety in Oregon. The 2023 targets (S-Curve trend line) are established by meeting with a multi-disciplinary working group (MPO's, City, Counties) to review the most recent crash data (2016-2020), assess progress achieved, and confirm the target setting approach and new targets for the next year which are approved by the Oregon Traffic Safety Committee (OTSC).

***Fatality Rate:1.370***

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

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***Serious Injury Rate:4.990***

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

The TSAP is the framework for engaging residents, stakeholders, employers, planners, engineers, enforcement agencies, emergency medical service providers, and others across the state to improve transportation safety in Oregon. The 2023 targets (S-Curve trend line) are established by meeting with a multi-disciplinary working group (MPO's, City, Counties) to review the most recent crash data (2016-2020), assess

## 2022 Oregon Highway Safety Improvement Program

progress achieved, and confirm the target setting approach and new targets for the next year which are approved by the Oregon Traffic Safety Committee (OTSC).

### ***Total Number of Non-Motorized Fatalities and Serious Injuries:259.0***

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

The TSAP is the framework for engaging residents, stakeholders, employers, planners, engineers, enforcement agencies, emergency medical service providers, and others across the state to improve transportation safety in Oregon. The 2023 targets (S-Curve trend line) are established by meeting with a multi-disciplinary working group (MPO's, City, Counties) to review the most recent crash data (2016-2020), assess progress achieved, and confirm the target setting approach and new targets for the next year which are approved by the Oregon Traffic Safety Committee (OTSC).

The S-Curve forecast was developed assuming the most recent five-year average number of crashes may be relatively flat in the near future; start to decline in a few years in recognition of different programs of the plan being implemented and potential benefits of connected and/or automated vehicles; and flatten out again in the future as it becomes more difficult to address the remaining fatalities.

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

The 2021 TSAP update was designed to be a limited and focused revision to the 2016 plan. The overall

TSAP vision, goals, policies, and Emphasis Areas stayed the same. Identification of emerging safety needs (via stakeholder feedback and safety data analysis) resulted in edits throughout the TSAP and modifications to the Emphasis Area actions planned for the next 5 years.

During the 2021 TSAP update, ODOT and other safety stakeholders decided that instead of a single 5-year update of the Safety Performance Measures' targets, Oregon would adopt an annual update process to review the federal requirements to determine the state's safety performance targets.

ODOT Traffic-Roadway Section coordinated with the ODOT Traffic Safety Office and stakeholders from MPO's, City and County agencies early in 2022 to establish the 2023 targets for all five performance measures. The safety performance targets were calculated with four different methods: straight line to zero by 2035, three percent reduction per year, S-curve, and 2016 TSAP tend. The values calculated with the S-curve method were selected as the safety performance targets for year 2023.

Collectively these stakeholders have the opportunity to improve Oregon's transportation system and save lives by integrating safety into all aspects of planning, programming, project development, operations, and maintenance. Not only is the system improved with responsive investments targeting specific safety issues, the transportation system also is improved by investing in projects, programs, and policies that proactively save lives and prevent injuries. The annual HSIP performance targets were developed and agreed upon by a multidisciplinary working group (including a representative of an MPO). While the COVID-19 pandemic response limited the ability for in-person public outreach, the public was engaged at key points on the project.

The following coordination and outreach opportunities were provided for the 2021 TSAP update:

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- 29 Outreach meetings with a variety of leadership teams and transportation safety advisory committees were conducted
- 10 Stakeholder interviews with Oregon safety stakeholders across the 4 E's were conducted to solicit feedback on the 2021 TSAP and implementation progress
- 2 Fact sheets (English/Spanish) were developed to introduce the 2021 TSAP update and provide mid-project progress reports
- 1 Online survey to learn about public perceptions of safety
- 2 Online stakeholder workshops and performance measure meetings

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

No

**Describe progress toward meeting the State's 2022 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.**

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	306.0	508.4
Number of Serious Injuries	1274.0	1855.6
Fatality Rate	0.730	1.424
Serious Injury Rate	3.780	5.184
Non-Motorized Fatalities and Serious Injuries	200.0	257.2

Oregon recognizes that eliminating traffic deaths and serious injuries will require time and significant effort by multiple disciplines and we face several challenges regarding why the State's 2021 Safety Performance Targets are not being met. While Oregon's Performance Targets were adopted before our current rising crash trends began, we continue to strive towards those goals of reducing Fatal and Serious crashes. We are confident that were we not applying proven countermeasures as consistently as we are, our current crash trends would be even higher (project level evaluations has shown that the projects implemented under HSIP funding have improved the locations where invested). In addition, increases in VMT, distracted driving issues, an increased in speed related crashes, a limited presence of law enforcement officers due to budget cuts and an increase in people moving to Oregon have also contributed to increasing fatal and serious injury crashes.

Below is a link to the current TSAP: [https://www.oregon.gov/odot/Safety/Documents/2021\\_Oregon\\_TSAP.pdf](https://www.oregon.gov/odot/Safety/Documents/2021_Oregon_TSAP.pdf)

### ***Applicability of Special Rules***

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

Yes

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Oregon was flagged for the High Risk Rural Roads (HRRR) Special Rule and obligated, in FY 2023, an amount equal to at least 200 percent of its FY 2009 high-risk rural roads set-aside in the amount of \$2,440,120.

### **Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.**

<b>PERFORMANCE MEASURES</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Number of Older Driver and Pedestrian Fatalities	68	86	67	102	99	84	110
Number of Older Driver and Pedestrian Serious Injuries	197	232	219	206	238	193	294

\*Older Driver and Pedestrian Fatalities data source: Fatality Analysis Reporting System (FARS)

\*\*Older Driver and Pedestrian Serious Injuries data source: ODOT Statewide Crash Data System (CDS)

## Evaluation

### *Program Effectiveness*

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

- Benefit/Cost Ratio
- Change in fatalities and serious injuries
- Other-Fatal free days

In Oregon, the HSIP program is the biggest contributor of funds the All Roads Transportation Safety (ARTS) program, an application-based program funding to address safety concerns on all public roadways within the State of Oregon. The ARTS Program is designed to address safety needs on all public roads in Oregon by collaborating with local road jurisdictions. With the ARTS program, the Oregon Department of Transportation can expect to:

- Increase awareness of safety on all roads;
- Promote best practices for infrastructure safety;
- Compliment behavioral safety efforts; and
- Focus limited resources to reduce fatal and serious injury crashes in the state of Oregon by selecting projects with the highest benefit/cost ratio.

The ARTS program is data-driven to achieve the greatest benefits in crash reduction and should be blind to jurisdiction. Detailed information for ARTS program can be found at this link:  
<https://www.oregon.gov/odot/Engineering/Pages/ARTS.aspx>

The ARTS program includes hotspot projects as well as systemic projects for roadway departure, intersection, and pedestrian and bicycle crashes. Hotspot, systemic roadway departure and systemic intersection projects are evaluated based on a benefit-cost ratio, while systemic pedestrian and bicycle projects are evaluated based on a cost effectiveness index (CEI). Project level evaluations has shown that the projects implemented under HSIP funding have improved the locations where invested.

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

Historically Oregon's fatalities and serious injuries were trending downwards until 2013. However, since 2013, Oregon has been experiencing an upward trend which has also been experienced across the country. Project level evaluations has shown that the projects implemented under HSIP funding have improved the locations where safety funds have been invested.

Below is a link to the 2021 ODOT ARTS Program Summary Report:

<https://www.oregon.gov/odot/Engineering/ARTS/2021-ARTS-Summary-Report.pdf>

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

- HSIP Obligations
- Increased awareness of safety and data-driven process
- Increased focus on local road safety
- More systemic programs
- Policy change

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

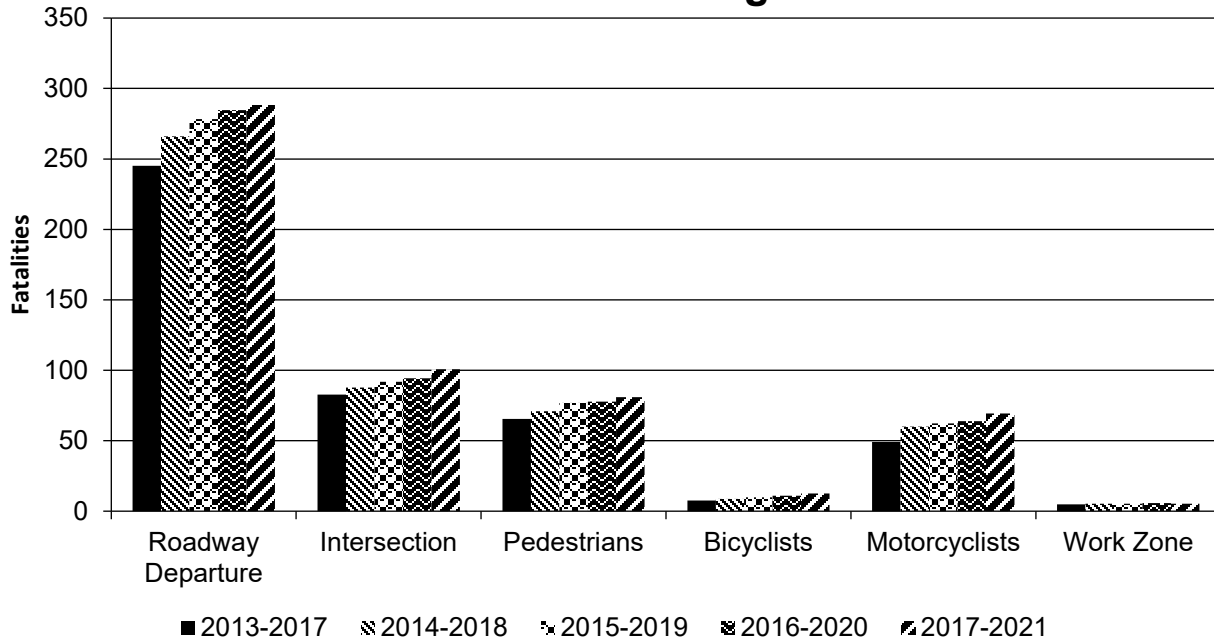
**Present and describe trends in SHSP emphasis area performance measures.**

**Year 2021**

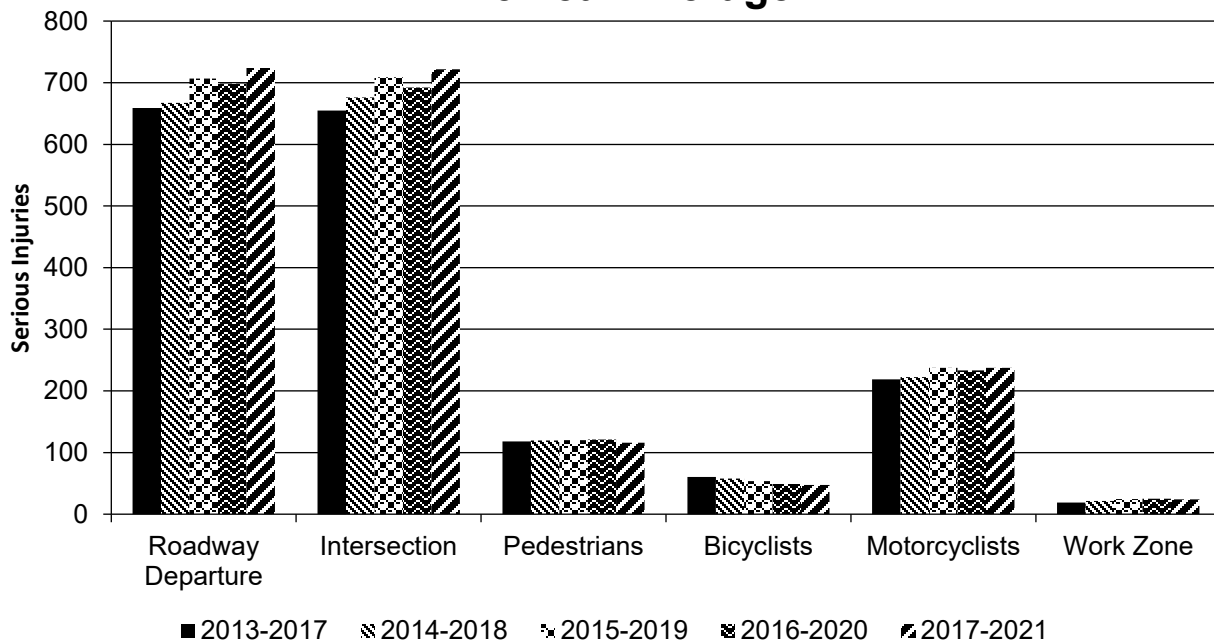
<b>SHSP Emphasis Area</b>	<b>Targeted Crash Type</b>	<b>Number Fatalities (5-yr avg)</b>	<b>of</b>	<b>Number Serious Injuries (5-yr avg)</b>	<b>of</b>	<b>Fatality Rate (per HMVMT) (5-yr avg)</b>	<b>Serious Injury Rate (per HMVMT) (5-yr avg)</b>
Roadway Departure		288.4		723.8		0.81	2.03
Intersection		100.8		722		0.32	2.27
Pedestrians		81		116		0.3	0.42
Bicyclists		12.6		47.2		0.05	0.18
Motorcyclists		69.4		237.6		0.28	0.95
Work Zone		5.2		24.2		0.02	0.11



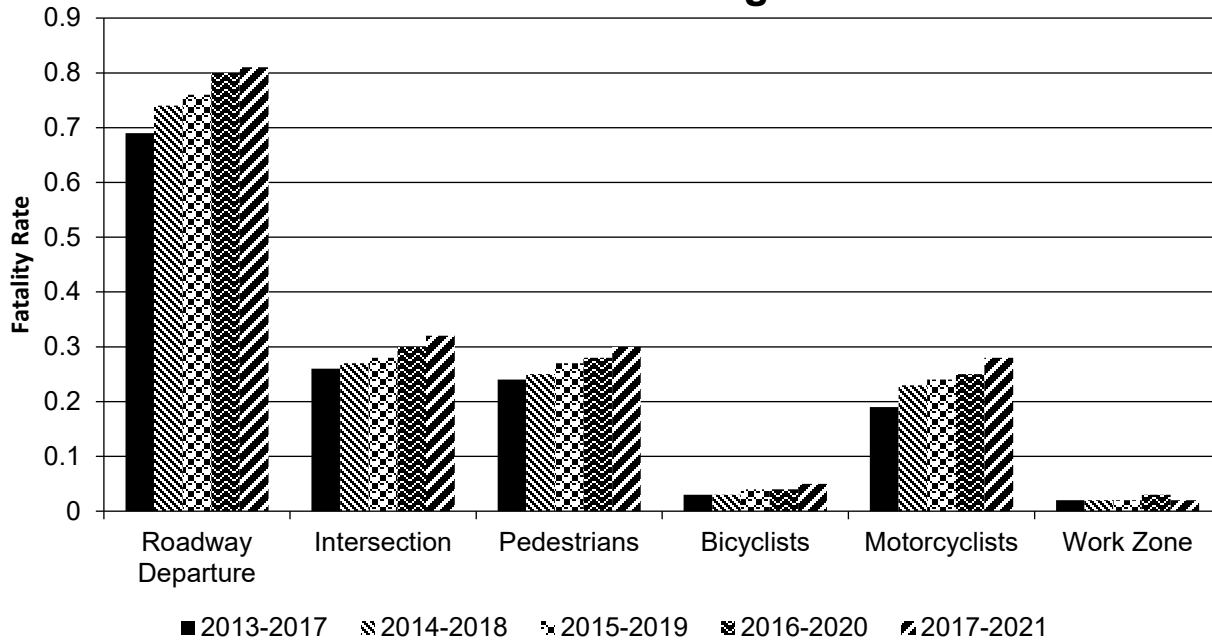
### Number of Fatalities 5 Year Average



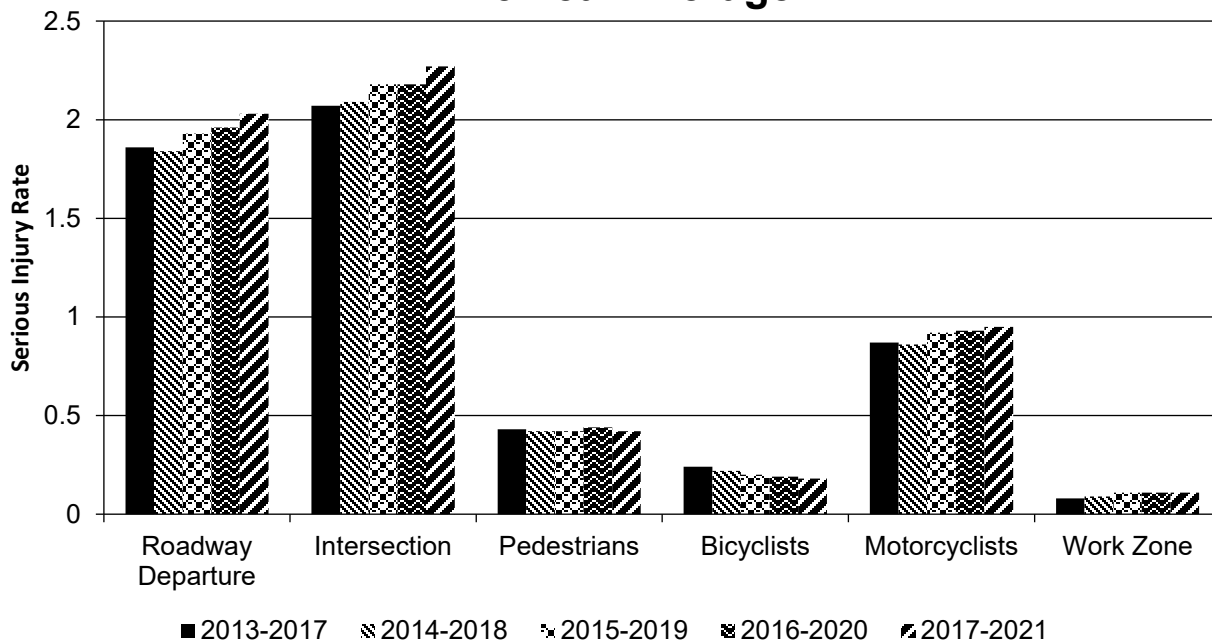
### Number of Serious Injuries 5 Year Average



### Fatality Rate (per HMVMT) 5 Year Average



### Serious Injury Rate (per HMVMT) 5 Year Average



All rates calculated using statewide VMT values

**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)
KN: 16239, US20 @ Barclay	Rural Principal Arterial (RPA) - Other	Intersection traffic control	Modify control – Modern Roundabout	15.00	9.00	1.00	1.00	1.00	1.00	15.00	16.00	32.00	27.00	
KN: 18022, Foster Road Streetscape: SE 50th - 92nd Ave	Urban Minor Arterial	Pedestrians and bicyclists	Pedestrians and bicyclists – other	158.00	34.00	1.00		7.00	2.00	162.00	55.00	328.00	91.00	
KN: 18023, Burgard/Lombard @ North Time Oil Road intersection	Urban Minor Arterial	Pedestrians and bicyclists	Pedestrians and bicyclists – other	14.00	20.00	1.00		1.00	3.00	15.00	13.00	31.00	36.00	
KN: 18677, Green Springs Intch-K Falls/Malin Hwy	Urban Principal Arterial (UPA) - Other	Interchange design	Interchange improvements	36.00	14.00	3.00		1.00	4.00	38.00	25.00	78.00	43.00	
KN: 18679, Sunriver Interchange - OR31	Rural Principal Arterial (RPA) - Other	Interchange design	Interchange improvements	81.00	58.00	7.00	3.00	12.00	2.00	92.00	56.00	192.00	119.00	
KN: 18681, Jack Lake Rd - Pine St	Rural Principal Arterial (RPA) - Other	Roadway delineation	Roadway delineation - other	27.00	27.00	1.00	1.00	2.00	2.00	15.00	13.00	45.00	43.00	
KN: 18682, US26 Jct - NW 10th St	Rural Principal Arterial (RPA) - Other	Roadway delineation	Roadway delineation - other	14.00	2.00			1.00	3.00	6.00	2.00	21.00	7.00	
KN: 18789, OR213 at S Union Mills Rd	Rural Minor Arterial	Roadside	Roadside - other	4.00	7.00					5.00	5.00	9.00	12.00	
KN: 18795, US26 (Powell Blvd): SE 20th - SE 34th	Urban Principal Arterial (UPA) - Other	Pedestrians and bicyclists	Pedestrians and bicyclists – other	95.00	10.00	1.00	1.00	8.00	1.00	104.00	20.00	208.00	32.00	
KN: 18903, Joseph/Wallowa Lake bike/ped improvements	Rural Principal Arterial (RPA) - Other	Pedestrians and bicyclists	Pedestrians and bicyclists – other											
KN: 18984, Region 5 curve warning signs 2016	Rural Principal Arterial (RPA) - Other	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1002.00	602.00	42.00	26.00	60.00	51.00	844.00	448.00	1948.00	1127.00	

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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)
KN: 19124, Region 4 curve warning signs	Rural Principal Arterial (RPA) - Other	Roadway signs and traffic control	Roadway signs (including post) - new or updated	205.00	163.00	9.00	5.00	28.00	10.00	227.00	132.00	469.00	310.00	
KN: 19662, OR34: Colorado Lake Drive-Denny School Road	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Intersection traffic control - other	15.00	8.00	2.00		2.00	3.00	35.00	16.00	54.00	27.00	
KN: 20671, OR207: 11th @Elm & Orchard signals	Urban Minor Arterial	Intersection traffic control	Intersection traffic control - other	26.00	5.00	1.00				38.00	8.00	65.00	13.00	

## Compliance Assessment

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

09/01/2021

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

From: 2021 To: 2026

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

2026

The current TSAP covers 5 years, October 2021 – October 2026.

**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	75	100	75
	End Point Segment Descriptor (11) [11]	100	100					100	75	100	75
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								

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ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	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			
	Average Annual Daily Traffic (79) [81]	100	100					100			
	AA DT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	90
<b>INTERSECTION</b>	Unique Junction Identifier (120) [110]										
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]										
	Intersection/Junction Traffic Control (131) [131]										
	AA DT for Each Intersecting Road (79) [81]										
	AA DT Year (80) [82]										
	Unique Approach Identifier (139) [129]										
<b>INTERCHANGE/RAMP</b>	Unique Interchange Identifier (178) [168]										

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Location Identifier for Roadway at 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]					90	60				
	Roadway Type at End Ramp Terminal (199) [189]					90	60				
	Interchange Type (182) [172]										
	Ramp AADT (191) [181]					100	90				
	Year of Ramp AADT (192) [182]					100	90				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
<b>Totals (Average Percent Complete):</b>		<b>100.00</b>	<b>100.00</b>	<b>0.00</b>	<b>0.00</b>	<b>80.00</b>	<b>72.73</b>	<b>100.00</b>	<b>72.22</b>	<b>100.00</b>	<b>88.00</b>

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

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

We are still working on establishing an intersection ID, working through the non-state road ID in Trans Info as well as an operations evaluation for the MIRE elements. All three of these effort will help us in collecting the MIRE fundamental data elements for all roads by September 30, 2026. In addition, progress is ongoing regarding incorporating local road network into TransInfo, anticipated to be in production in October of 2022.

- Spring 2022 Begin Phase 5, FDE data collection for signalized intersections on local roads
- Winter 2023 Estimated completion of Phase 5 collection of FDE
- Spring 2024 Begin Phase 6, FDE data collection for state-owned highway segments between signalized intersections state-wide

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- Winter 2024 Estimated completion of Phase 6 collection of FDE
- Spring 2025 Begin Phase 7, FDE data collection for local road segments between signalized intersections state-wide
- Winter 2026 Estimated completion of Phase 7 collection of FDE
- Spring 2027 Data maintenance cycle begins



## **Optional Attachments**

Program Structure:

Q2\_HSIP\_Report\_draft.docx

OregonDOT\_Safety\_HSIP-Guide.pdf

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

## Glossary

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

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

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

**HMVMT:** means hundred million vehicle miles traveled.

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

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

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

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

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

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

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

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

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