

# **All Roads Transportation Safety Program**

**2027-2030 STIP**

**Oregon Department of Transportation  
August 2023**

## All Roads Transportation Safety (ARTS)

### Background

The purpose of the Federal [Highway Safety Improvement Program](#) (HSIP) is to achieve a significant reduction in fatalities and serious injuries on all public roads. HSIP requires a data-driven, strategic approach to improving highway safety that focuses on performance. ODOT developed the All Roads Transportation Safety (ARTS) program to achieve the goals of the HSIP.

The ARTS Program is intended to address safety needs on all public roads in Oregon. About half the fatal and serious injuries occur on local roadways. Working collaboratively, with all road jurisdictions in Oregon increases 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. The ARTS program is data driven to achieve the greatest benefits in crash reduction. It considers safety on all roads in Oregon, regardless of jurisdiction and aims to address the most critical safety needs, whether they are on state highways, city streets, county roads, tribal roads, or other public facilities.

### Purpose

The ARTS program primarily uses federal funds from the Highway Safety Improvement Program (HSIP). The principles and purpose of ARTS and HSIP are:

- reduce fatal and serious injury crashes.
- must include all public roads.
- data driven.
- project selection is overseen by ODOT regions.
- Both traditional “hotspot” methodology and systemic methodology will be used.

### Criteria

The objective of ARTS is to significantly reduce the occurrence of fatalities and serious injuries across all Oregon roads. 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. Many highway projects incorporate design features or elements that relate to highway safety, such as updating guardrail or improvements to intersection channelization, signing and pavement markings. But 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 or risks, 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.

All projects shall:

- Address a specific safety problem contributing to fatalities and serious injuries.
- Use only proven countermeasures from the ODOT Crash Reduction Factor (CRF) List that eliminates or substantially decreases fatalities and serious injuries.
- Use ODOT Benefit Cost (B/C) method for Hotspot, systemic roadway departure and systemic intersection applications and Cost effectiveness Index (CEI) for Bicycle/Pedestrian.

- Use ODOT crash data to establish the benefit/cost ratio or the CEI (so projects can be compared fairly) which will be based on the most recent available five years of crash data.
- Be prioritized or categorized based on the benefit/cost ratio for developing the 150% list.
- Must include written support from the road jurisdiction if the project is proposed by another agency.

The traditional approach to finding potential safety projects is to analyze historical crash data to identify segments and sites with a history of high severity crashes. This methodology is called hotspot approach.

Hotspot projects shall:

- Address a location with a crash history of at least one fatal or serious injury crash at a specific location within the last five years of available crash data.

With the low number of crashes across a large geographic location, finding a crash pattern is challenging because there may not be a concentration of crashes at any one location. The systemic approach identifies a few proven low-cost measures to be widely implemented, then implements the measures where there is evidence that they would be most useful. The systemic measures have been proven to successfully reduce the occurrence of fatal and serious injury crashes. The sites may be selected from ODOT's list of priority corridors for Roadway Departure, Intersections or Pedestrian/Bicycle crashes.

Systemic Projects shall:

- Use only approved "systemic" countermeasures as listed in the CRF list.

Systemic Projects should:

- Have a history of fatal or serious injury crashes or a risk of high severity crashes.
- Preferably be selected from priority corridors within the systemic safety plans.

### **Funding**

The safety funds are split to each region based on the amount of fatalities and serious injuries occurring in the region on all public roads. Regions are encouraged to spend a minimum of 50% of their funding on systemic projects.

Systemic funding is intended to be used for Roadway Departure, Intersections and Pedestrian/Bicycle type projects. At the statewide level the split in F&A between Roadway Departure, Intersections and Ped/Bike is about 50%/34%/15% respectively. Regions will be given the flexibility to determine the appropriate splits between systemic types of projects for their regions. It is suggested:

- At least one project per year be developed for each type, if possible.
- Region splits of systemic funds for each systemic type be roughly equivalent to the proportion of F&A occurring in the region

Funding is eligible to be used for approved countermeasures, that reduce fatal and serious injury crashes, within safety projects that are prioritized through the ARTS data driven process. Safety funds may be used to include or replace elements that are necessary to satisfactorily complete the project, such as replacing non-compliant ADA ramps, replacing pavement striping that is removed or right of way, but those elements must be included in the cost of the project and part of the prioritization process. Other elements (not applicable to the safety project) may be combined with the project (i.e., culvert), but must be funded by other sources, not safety funds.

## **Process**

Both Hotspot and Systemic processes will be an application-based process. Oregon jurisdictions will be invited to submit projects for Hotspot and Systemic funding, using a large list of proven countermeasures. ODOT will provide data on Hotspots and Systemic Plans to help determine potential locations for improvement.

**For Hotspots projects** agencies will be given the opportunity to submit projects with justification that it meets the program purpose. The number of submittals should be limited because of limited funds, but ODOT will ask for submittals amounting to 300% of the funding available. Regions will categorize projects based on the project's ability to reduce fatal and serious injury crashes and the benefit/cost of the project, and finalize a draft 150% list for field scoping.

**For Systemic projects** the submittals will be for three systemic categories of funding: roadway departure, intersections, and pedestrian/bicycle. ODOT will solicit submittals amounting to about 300% of available funding. ODOT Regions will check all applications for program purpose and correctness, working with the submitting agencies when necessary in order to develop a potential list of projects. The intent is that the ODOT Regions will analyze and refine the list of submitted projects in order to prioritize the project list based on program purpose of reducing fatal and serious injuries and maximizing benefit/cost, in order to finalize a draft 150% list for field scoping.

Once the refined 150% lists are ready, all projects (both hotspot and systemic) will go through a multi-discipline assessment to verify the solution. A multi-disciplinary team, including the owner of the facility, will ensure the best countermeasure is chosen to mitigate fatal and serious injury crashes. The project will also be scoped to verify the costs and any possible barrier to implementation. A finalized list of prioritized projects can then be produced with the best solution and the best cost.

Once the list is prioritized and a final 100% list is produced ODOT regions will work with Jurisdictions to determine the delivery methods, delivering agency and timelines (applicable funding year). For projects involving local agencies, the ODOT regions will work with jurisdictions to develop an Intergovernmental Agreement. The delivering agency will be accountable for timely and fiscally responsible delivery.

## **Timing of the Process**

The process for ARTS project selection will run concurrently with the new Statewide Transportation Improvement Program (STIP) development process for the 2022-2024 STIP scheduled to begin in early 2023. The process will include three years of Safety project funding for the 2027-2030 STIP. The draft 150% STIP safety project list should be complete by June 2024.

## **Federal Match**

ODOT requires local agencies to contribute a 10% match (monetary) for safety projects. If the local agency fails to identify local matching funds, the local agency and ODOT Region staff should work together to develop a funding plan for local match subject to Highway Administrator approval.

Because of insufficient state funds, the fund exchange (state funds for federal funds) for local projects will not be available. All projects must be estimated and scoped for federal delivery for the 2027-2030 STIP.

<b>All Roads Transportation Safety (ARTS) Program</b>	
Funding subdivided to regions based on fatalities and serious injury crashes (F&A)	
Regions meet with local public agencies (LPAs) to share program purpose and goals	
Regions share data with local agencies	
<b>Hotspot Process</b>	<b>Systemic Process</b>
All agencies submit applications for hotspot funds	All agencies submit applications for systemic funds
ODOT develops draft prioritized list of projects and shares list with LPAs	ODOT develops draft prioritized lists of projects for each category of systemic areas and shares list with LPAs
ODOT analyzes and refines list	ODOT analyzes and refines lists
ODOT regions reprioritizes list by B/C	ODOT regions reprioritizes lists by B/C
ODOT shares list with LPAs	ODOT shares lists with LPAs
Finalize scoping list	Finalize scoping list
<b>Final Steps</b>	
Multi-disciplinary assessment of projects to verify solution	
Field scoping of 150% lists to verify cost	
Finalize B/C	
Finalize priority and 100% list with LPAs	
Regions and LPAs determine delivery methods and timelines	
Regions work on IGA with LPAs	
Responsible agency develops and delivers project	

**Timeline of events for ARTS (timelines for 2027-2030 STIP may vary):**

- Funding allocation for Safety from Oregon Transportation Commission (need date).
- ODOT determines funding allocations to each region (July 2023).
- Regions meet with local agencies to discuss program purpose and goals starting the fall of 2023.
- ODOT regions use ARTS process to develop project lists in collaboration with local agencies, starting in fall of 2023 to Winter of 2024.
- 150% lists developed April 2024.
- Field scoping beginning approximately June of 2024.
- Final lists for Draft STIP due November 2024 (following closely with the STIP development process for the 2027-2030 STIP).
- Follow 2027-2030 STIP process to incorporate safety projects for 2028, 2029 and 2030 (anticipated to be complete in 2025).
- Delivery timeline of individual projects dependent on schedule, funding and responsible agency (anticipate agencies will complete PS&E in the funding year).

References:

[Highway Safety Improvement Program \(HSIP\) | FHWA \(dot.gov\)](#)

[23 U.S. Code § 148 - Highway safety improvement program | U.S. Code | US Law | LII / Legal Information Institute \(cornell.edu\)](#)