

# **All Roads Transportation Safety Program**

**2021-2024 STIP**

**Oregon Department of Transportation  
January 2018**

## All Roads Transportation Safety (ARTS)

### Background

The ARTS Program is intended to address safety needs on all public roads in Oregon. About half the fatal and serious injuries occur on non-state 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 program will be *data driven* to achieve the greatest benefits in crash reduction and will be blind to jurisdiction.

### Purpose

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

- 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 traditional "hot spot" methodology and systemic methodology will be used.

### Criteria

The objective of ARTS and HSIP is to significantly reduce the occurrence of fatalities and serious injuries. 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, 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 proven countermeasures that correct or substantially improve the fatal and serious injury problem
- Use ODOT crash data to establish the Benefit/Cost ratio (so projects can be compared fairly)
- Use ODOT Benefit Cost method (or Cost effectiveness for Bicycle/Pedestrian)
- Be prioritized or categorized based on the Benefit/Cost Ratio for developing the 150% list
- Use only proven countermeasures from the approved ODOT Crash Reduction Factor list (a written process is developed for considering new measures)
- Projects must include written support from the Road Jurisdiction if the project is proposed by another agency
- Benefit Costs will be based on the most recent available three to five years of crash data

The traditional approach to safety is to identify “hot spot” locations, and then identify measures to implement by diagnosing the “hot spot”.

Hot Spot Projects shall:

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

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 Crash Reduction factors list
- Not require the acquisition of significant amounts of right of way (more than 10% of project costs), preferably no right of way
- For the Pedestrian and Bicycle Analysis, use Highway Safety Manual methods to estimate predicted crashes for pedestrians and bicycles and Cost Effectiveness to prioritize projects selection.

Systemic Projects should:

- Have a history of fatal or serious injury crashes or a risk of high severity crashes and preferably are selected from priority corridors within Systemic 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 will be required 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 40%/40%/20% respectively. Regions will be given the flexibility to determine the appropriate splits between systemic types of projects for their regions. It is suggested:

- That 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 as long as those countermeasures provide an improvement to reducing fatal and serious injury and 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 Hot Spot and Systemic processes will be an application based process. Oregon jurisdictions will be invited to submit projects for Hot Spot and Systemic funding, using a large list of proven countermeasures. ODOT will distribute data on Hot Spots and Systemic Plans to help determine potential locations for improvement.

**For Hot Spots 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 to 500% of the funding available to ensure sufficient worthwhile projects. 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, attempting to solicit submittals amounting to about 300 - 500% 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 benefit cost, in order to finalize a draft 150% list for field scoping.

Once the refined 150% lists are ready, all projects (both hot spot 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 Region's 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 2021-2024 STIP scheduled to begin in late 2017. The process will include three years of Safety project funding for the 2021-2024 STIP. The draft 150% STIP safety project list should be complete by June 2018.

## **Federal Match**

The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% match for projects. During the last round of ARTS project selection in 2015, ODOT developed a program to fund exchange state funds for federal funds to local agencies willing to deliver projects on their roads. This program was generally offered as a test concept for a limited

time, 2017-2018 projects only, due to insufficient state funds. If the legislature approves additional funding, ODOT would consider extending this program. A 7.78% match is required if the project is delivered by ODOT.

There are no guarantees that fund exchanges will continue. Local agencies should anticipate that within the next ARTS program (2021-2024 STIP) ODOT will require participating agencies to contribute match to the project. This will require local agencies to come up with the 7.78% non-federal cash match. 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.

<b>All Roads Transportation Safety (ARTS) Program</b>	
Funding subdivided to Regions based on Fatalities and Serious Injuries (F&A)	
Regions meet with Local Public Agencies (LPAs) to share program purpose and goals	
Regions share data with Local Agencies	
<b>Hot Spot Process</b>	<b>Systemic Process</b>
All Agencies submit applications for Hot Spot 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 2021-2024 STIP may vary):**

- Funding allocation for Safety from Oregon Transportation Commission
- ODOT determines funding allocations to each Region
- Regions meet with Local Agencies to discuss program purpose and goals starting early 2018.
- ODOT Regions use ARTS process to develop project lists in collaboration with local agencies, starting in Winter of 2018
- 150% lists developed May 2018
- Field scoping beginning approximately August of 2018
- Final lists for Draft STIP due November 2018 (following closely with the STIP development process for the 2021-2024 STIP).
- Follow 2021-2024 STIP process to incorporate Safety projects for 2022, 2023 and 2024 (anticipated to be complete in 2020).
- Delivery timeline of individual projects dependent on schedule, funding and responsible agency (anticipate agencies will complete PS&E in the funding year).