

Criterion Example:

**Washington State Department of Transportation
Corridor Studies**

Washington

Module: System Planning (INVEST Version 1.0)

Criterion: [SP-06 Safety Planning](#) (1-15 points)

Lead Agency: Washington State Department of Transportation (WSDOT)

Link: <http://www.wsdot.wa.gov/>

Sources: To review the sources for criterion examples, including Case Studies, please refer to the Resources tab of www.sustainablehighways.org.

Description: The Washington State Department of Transportation (WSDOT) used the INVEST System Planning module to score three completed corridor studies in the Seattle/Tacoma metropolitan area: SR 516 Corridor Study (SR 167 in Kent to SR 169 in Maple Valley), SR 520 Multi-modal Corridor Planning Study, and US 2 Everett Port / Naval Station to SR 9 Corridor Planning Study. These studies represented a variety of contexts, including the type of highway and surrounding land use, different commute patterns and availability of transit, and varying scope, schedule, budget, and stakeholder participation levels. Even though the evaluations focused on the corridor studies, as part of the scoring process, WSDOT officials also noted agency-wide efforts. For SP-06, WSDOT found that while they would have scored well on some of the scoring requirements at the agency level, they did not score as well at the corridor level due to the specificity of the scoring requirements.

Scoring Details:

Collaborate and Participate in the Development and Implementation of the State Strategic Highway Safety Plan (2/2)

WSDOT was one of the primary participants in the development of *Target Zero*, which is Washington State's Strategic Highway Safety Plan. WSDOT has completely re-tooled their safety programming along *Target Zero* policies and goals. In fact, all of the Highway Safety Executive Committee members are on the statewide committee which is updating *Target Zero*, along with WSDOT's Local Programs Director.

WSDOT is currently developing a Ten Year Strategic Investment Plan to address *Target Zero* factors, which will be released along with the revised edition of *Target Zero*. WSDOT is focused on the priorities defined by *Target Zero* in order to maximize the potential for reducing fatal and serious injury crashes. A "Safety Planning, & Programming" process is currently being developed by WSDOT's Safety Executives to identify the steps for translating *Target Zero* goals into a specific set of prioritized activities and capital projects.

The safety chapters in WSDOT's corridor studies are structured around the policies and goals of *Target Zero*. US 2 and SR 520 incorporated a safety section which discussed *Target Zero* procedure and programming, and SR 516 states the *Target Zero* policy and points the reader toward the *Target Zero* website for more details. WSDOT also identified any locations in the study area appearing on the safety priority arrays (Collision Analysis Corridors (CACs), Collision Analysis Locations (CALs), or Intersection Analysis Locations (IALs)) and incorporated those into study suggestions. All of the corridor planning studies received full credit for this requirement.

Integrate the Toward Zero Death Vision into the Agency's Vision for Transportation Planning (1/1)

Toward Zero Death is the national safety plan for highways. As previously mentioned, at the state level Washington has *Target Zero* and WSDOT was one of its primary authors. This plan actually goes a step further than *Toward Zero Death* because it addresses both fatal and serious injury collisions. All three corridor studies incorporated *Target Zero*; SR 520 and US 2 did so in more detail. All three studies also integrated quantitative safety considerations into the recommendations. WSDOT allocated 1 point for this requirement for each corridor study.

Develop a Plan that Incorporates Safety into Short- and Long-Range Transportation Planning (0/1)

This item requires safety analysis and performance measurement of all public roadways, including local roads. WSDOT does not currently analyze local roads for corridor planning studies. As a result, none of the corridor planning studies received points for this requirement.

Integrate Quantitative Safety Performance Measures into the Transportation Planning Process (0/1)

WSDOT does not include performance measurement in corridor planning studies, so no points were assigned for this requirement.

Integrate Quantitative Safety Considerations in the Selection and Evaluation of Strategies during the Transportation Planning Process (3/3)

Quantitative analysis is being used to analyze safety issues on a statewide and local basis. WSDOT has selected systemic treatments with proven effectiveness, e.g. the installation of median cable barrier and centerline rumble strips has been enormously successful. The agency has also incorporated quantitative safety analysis for different user groups.

Additionally, the safety issues of non-motorized modes received attention in all three corridor studies. Systemic safety solutions would have only been applicable in the event that any of the corridor study segments were on the Collision Analysis Corridor (or Segment) list. There were no CAC or CAS sites identified on the three corridors in question. All three planning studies received three points for this requirement.

Integrate Statistically Sound Approaches to Determine Projected Safety Performance into the Long-Range Transportation Planning Process (0/3)

This item requires “macro-level predictive models to provide a quantitative and statistically reliable forecast of crashes for a given future travel demand (using output from travel demand models), and sociodemographics,” such as PlanSafe. WSDOT uses the Highway Safety Manual/Safety Analyst methodology for safety analysis, which does not currently include future demand forecasts or socio-demographics. WSDOT does not perform long-range safety projections in general, on either a statewide or a corridor study level. Puget Sound Regional Council uses UrbanSim to calibrate land use assumptions into their travel demand model, but this is not a socio-demographic model like PlanSafe. Therefore none of the corridor studies received points for this requirement.

Collect and Maintain Data (Safety and Non-Crash Information) for the Public Roadway System to Incorporate Safety into the Long-Range Transportation Planning Process (0/4)

WSDOT is active on the Washington State Traffic Records Committee, but this requirement does not translate to a corridor level study. WSDOT is also not currently using GIS applications on local networks. The agency uses GIS to analyze safety on state facilities, but not for all public roads. Additionally, WSDOT is working with other agencies in the state, as a member of the Washington Traffic Safety Commission Data Integration Committee, on joining data across agency datasets. However, this is done on a statewide basis only and not at a corridor planning level. Thus, as part of the INVEST evaluation, all of the corridor studies received zero points for this requirement.

Sustainability Improvements: After completing the INVEST evaluation, WSDOT proposed numerous recommendations to improve the integration of safety planning into corridor studies. These included:

- Addressing safety planning on all public roadways in the corridor, not just state facilities.
- Considering whether corridor studies should include quantitative safety performance measures and projected safety performance.
- Considering whether to use GIS for safety analysis at the corridor level as well as the statewide level.
- Having a uniform, consistent, single source of safety data and analysis to help in creating future corridor reports.
- Expanding “vulnerable user” tracking. For example, tracking could include people with disabilities, as well as those who are involved in safety situations that do not involve a vehicle (such as between a pedestrian and a cyclist, or the tipping over of a wheelchair due to curbcut slope or uneven pavement).
- Incorporating use of the Highway Safety Manual/Safety Analyst macro-predictive models to forecast crashes for a given level of travel demand when available.
- Considering the use of macro-predictive models (such as PlanSafe) to reliably forecast crashes based on socio-demographic changes in the population.