Teton Pass vehicle arrestor system



How the sites were evaluated

To evaluate the effectiveness of an arrestor, a select set of criteria was developed. Each site was reviewed and scored by how beneficial the site was per the specific criteria. Each criteria and its score are incorporated in a "Location Evaluation Matrix" to rank each site and determine which site is the most favorable.

1 Effective Location for Identified Hazard

Each site location was reviewed to determine if it was the best location to stop vehicles and protect bystanders. This was accomplished by gathering crash data throughout this corridor and categorizing the data into vehicles with weight in excess of 26,000 lb and whose brakes had failed. The perceived usage of an arrestor at each site, taking into account the surrounding terrain at each location, was discussed and ranked. The severity of a potential crash to the driver, community & traveling public, if an arrestor was not constructed, was taken into consideration when determining this ranking.



Maintenance Feasibility and Cost

Sites were ranked by how much time and effort maintenance personnel would be required to keep both the highway and arrestor open. Items considered were: snow removal, icing and drifting on the highway, pooling of water, stormwater runoff, available snow storage along the highway, time required to remove snow, frequency of snow events, and ability to retrieve a vehicle from arrestor.

Evaluation Matrix, weighted average

4

Environmental Impacts

An impact to wildlife and view sheds, or perceived change in character of land, was evaluated for each location. The footprint of the arrestor, and associated roadside elements, was determined and considered with this criterion. Items considered: community impacts (visual/aesthetics, noise, and access to public right-of-way), landowner impacts (temporary construction easements and/or land acquisitions), the type of land (public lands, wildlife easements, etc.), habitat displacement, collision data with wildlife, and associated challenges within the impacted area.

Evaluation Matrix, weighted average rating = 10.

The purpose of the high ranking for this criterion was because the location of the arrestor needs to be effective in reducing crashes of vehicles that lose their brakes.

rating = 6.

3

The ranking reflects the need for keeping both the highway and arrestor open.

Site Feasibility

Roadway geometrics and geological stability was considered. Construction issues associated with each site and the ability to maintain two-way traffic during construction was reviewed.

Evaluation Matrix, weighted average rating = 6.

The length of construction time impacting the traveling public was reflective with this ranking.



Evaluation Matrix, weighted average rating = 5.

This ranking reflects the consequence of how the arrestor location would impact the surrounding area.



Construction Cost

Each location was studied for how much the arrestor would cost. Topography, roadside elements, and adjustments to pathway and/or roadway alignments were included in these costs.

Evaluation Matrix, weighted average rating = 3.

This ranking takes into account the stewardship of our resources.