



## Nomination Form

### “Partnership for Environmental Excellence in Construction Management” Award

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Project Name: North of Wenatchee Wildlife Fence Stage 2

Contractor Name: R.M.Shearer, Inc.

Project Engineer: Kevin Waligorski

Date Project Accepted: 10/1/11 (Physically Complete)

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**Category of Award** (*please check one category*):

Eastern Washington Project

Western Washington Project

**Brief Overview of Nominated Project:**

This project is the third of a series of wildlife fence projects constructed in the SR 97A corridor between Rocky Reach Dam and Spencer Point. This corridor has had a high rate of wildlife collisions, with 500 recorded within the ten years prior to fence construction. The first two projects, constructed in 2009 and 2010, completed the fence from MP 206.40 to 212.10. The third project, the subject of this nomination, completed in October of 2011, constructed the fence from MP 203.15 to 206.40.

The project constructed an 8' high woven wire fence with steel posts over steep rocky terrain on the west side of highway SR 97A. The Columbia River borders the highway on the east. Fenceposts were often drilled into rock, custom designed cattle guards were constructed at road approaches, chain link fence was draped on cliff sections and other innovative measures were employed to create a barrier to prevent mule deer and bighorn sheep from getting onto the highway. Many gates have been placed in the fenceline to allow access to adjacent properties for residents, Chelan County PUD, Departments of Fish and Wildlife and Natural Resources, recreationists and hunters.

### **Description of Team's Accomplishment That Warrants This Nomination**

1. Preventative Measures: The contractor was required to submit a fire plan prior to construction and implemented the stipulations of the plan throughout the project.

In general the fence work causes little ground disturbance, but a six foot swathe along the fenceline was seeded and fertilized by hand after the fence was complete.

The contractor developed a fall protection plan for workers and was conscientious in implementing it when they were working on cliffs, rock faces or steep unstable ground.

One of the cattle guards was installed on a private road approach. The contractor, at his expense, built a temporary detour road for the homeowner to minimize his inconvenience in accessing the highway.

When the detour was removed the disturbed area was regraded and seeded.

Responsiveness during Construction: The contractor was very attentive to protecting workers from unsafe environmental conditions such as rockfall, snakebite, insect stings, and heat exhaustion. Much of the fence line crossed very steep terrain with the fence terminating in rock walls, or on the crest of cliffs. Some of the work involved working above and below cliffs studded with rocks of questionable stability. The contractor, at his expense, stationed a spotter to watch for rockfall and took other measures to minimize the risk of harm to workers. The project began in July and ran through October, spanning periods with temperatures in excess of 90 degrees. The contractor was careful to provide plenty of drinking water and monitor the state of the workers' health. The hardest work was staged during the coolest part of the days.

The contractor was consistently proactive in looking ahead at the specific challenges presented by the terrain and determining the best method of using the contract items to build the fence. When unforeseen challenges required minor changes to the contract he worked through concepts with the project inspector resolving the most practical effective solution and then presented a change to the project engineer.

2. Responsiveness during Construction (continued): This proactive approach to anticipating problems avoided delays to the progress of the job.

3. Innovative Problem Solving: The general fence design would have been fairly straightforward on level ground with decent soil. That was not the typical case for this project. Where there is soil it is thin and full of rocks. Posts were often drilled into bedrock. The fence was not a continuous barrier because the terrain is broken by sheer cliffs that are natural barriers to wildlife. The contract plans provide a variety of methods to terminate a fence in these situations but every one is unique. The contractor and project inspector were very creative in devising methods to end the fence in ways that would prevent sheep, which are notoriously nimble animals, from finding a way around.

The fence is primarily built on an easement which follows property boundaries away from the highway right of way. The terrain in general is very steep and vehicle access was impossible in some cases. The contractor used a helicopter to deliver materials to the toughest locations. In places traversing gullies and ridges standard fence construction would not provide an eight foot high barrier. For these locations the contractor came up with a plan to extend the height of the posts and wire mesh with the standard contract materials. There was an extended section of twelve foot high fence added in a location where sheep would have been able to jump from rock outcroppings over a standard eight foot fence as well. In one location chain link fence fabric was draped over a cliff which had ledges that sheep used to traverse this sheer face.

The working relationship between the contractor and WSDOT was very good throughout the project. The superintendent worked collaboratively with the project inspector in problem solving. The crews were experienced and skilled in this type of fence construction.

### **Appendices**

*(Please attach appendices, not to exceed 4 pages, representing additional pertinent information such as pictures, newspaper articles, newsletters, letters from the public, test results, etc.)*



# North Central Region US 97 A Wildlife Fence



## What was the scope of the project?

The project begins just north of Wenatchee, between Rocky Reach Dam to Spencer Canyon, on US-97A. This corridor has been identified as a high wildlife collision area. Within the project limits, there have been approximately 500 recorded collisions with wildlife in the last ten years. The project included the installation of approximately 8.95 miles of long-term custom wildlife fence, which was constructed along the west side of Highway 97-A from milepost 203.15 to 212.10. This section of the Highway has received the greatest number of vehicle collisions with deer and bighorns.

## What is the purpose of the project?

The purpose of this safety enhancement project is to improve the safety of motorists, reduce damage to vehicles, and reduce collisions with bighorn sheep and mule deer, while maintaining access to public lands through a long-term solution.

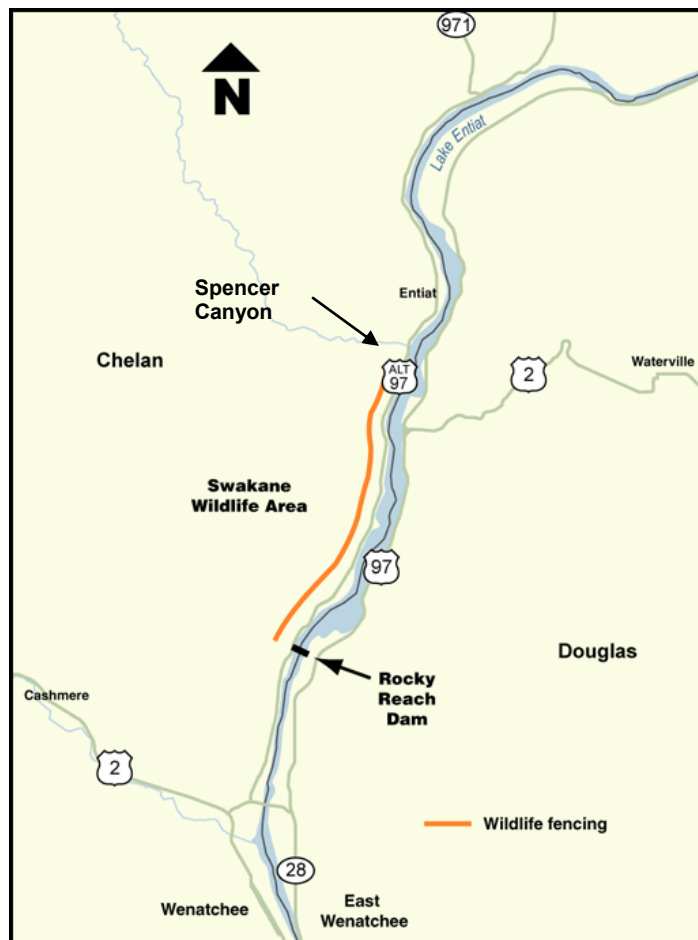
## Project Timeline

The project was divided into three phases, with two of the three phases already completed.

The first phase constructed the fence from MP 207.95 to MP 212.1. This phase was completed Nov. 2009.

The second phase constructed the fence from MP 206.4 to MP 207.95 and was completed Oct. 2010.

The third phase is currently under construction and completes the fence from M 203.15 to MP 206.4. The fence will be completed 2011.



## Funding Partners:

- Wenatchee Sportsman's Association
- Seattle Sportsmen Conservation Foundation
- Washington State, Foundation for North American Wild Sheep:
- State Farm Insurance:
- Mt. Vernon Mule Deer Foundation
- Central Washington Mule Deer Foundation
- Woodinville Mule Deer Foundation
- Washington State Bow hunters
- Washington Department of Fish & Wildlife
- WSDOT Pre-Existing Gas Tax (pre 2003 & 2005 programs)



## North Central Region US 97A Wildlife Fence



### Wildlife Fence Reduces Collisions with Deer and Sheep by 80%

The two sections of wildlife fence installed in phases one and two have drastically reduced the number of collisions with deer and sheep.

Since phase one was completed there have only been 11 vehicle/wildlife collisions (VWC) reported by maintenance within the project limits. Three of these collisions were within phase one mile post limits, two within phase two mile post limits, and the remainder in phase three mile post limits which is just now being constructed.

Prior to the fence installation this section of roadway saw an average of 40 VWC's per year. The 11 VWC's over a twenty month period equates to over an 80% reduction.

### Environmental Benefits/outcomes

- Decreased WVC's and resulting injury and property damage for the traveling public
- Increased mule deer and bighorn sheep survival supporting WDFW and Sportsman's association conservation efforts.
- Prevent orchard and landscape damage from animals.
- Reduce costs for WSDOT maintenance crews to remove carcasses.

