

NATIONAL SCENIC AREA LAND USE PERMIT

Hood River County Community Development
601 State Street
Hood River, OR 97031
Phone: (541) 387-6840 Fax: (541) 387-6873

Fee \$1,000.00
Collected by
Date Submitted

Applicant(s) Oregon Department of Transportation, Region 1
Attention: Matthew Freitag

Township: 03 North

Mailing Address 123 NW Flanders
Portland OR 97209

Range: 08 East

Section: 04

Project Address I-84, milepost 47.86 to milepost 48.00

Tax Lot: ODOT right-of-way

Phone (daytime) 503-731-4851

Acreage (impact area): 1

Zone: S-F

SMA/GMA: SMA

Owner(s) (if different)

Fire Dist ODF Protection

Mailing Address

Water Dist N/A

Irrigation Dist N/A

Phone (daytime)

Sanitation (jurisdiction) Hood River County

Access I-84

Existing Use of Parcel:

Use of Adjacent Parcels:

The existing parcel is owned by the Oregon Department of Transportation for the operation of Interstate 84.

North: Union Pacific Railroad

East: ODOT ROW, I-84

South: U.S. Mt. Hood National Forest

West: ODOT ROW, I-84

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ATTACHMENT A: NSA PRE-FILING MEETING SUMMARY NOTES

ATTACHMENT B: PRELIMINARY PLANS

ATTACHMENT C: BIOLOGICAL RESOURCES IMPACT MEMORANDUM

ATTACHMENT D: ENDANGERED SPECIES ACT DETERMINATION OF NO EFFECT

ATTACHMENT E: BIOLOGIST’S EMAIL CONCERNING WETLANDS

ATTACHMENT F: CULTURAL RESOURCES EMAIL

ATTACHMENT G: SECTION 106 PROGRAMMATIC AGREEMENT MEMORANDUM

ATTACHMENT H: FHWA AND ODOT PCE APPROVAL DOCUMENT

PROJECT DESCRIPTION

Detailed Description of Proposed use and/or Development:

The Oregon Department of Transportation (ODOT) proposes to construct a retaining wall on the northern shoulder of I-84 to stabilize the Farley Landslide located at about milepost 48.0, just east of Cascade Locks in the Columbia River Gorge. The landslide affects approximately 200 linear feet of roadway and extends approximately 250 feet to the north, downslope of the highway. The work would occur entirely within existing ODOT right-of-way, between I-84, and Union Pacific Railroad (UPRR) tracks. The proposed slope treatment will be located within the Special Management Area zoning district in a River Bottomlands landscape setting.

The proposed project will improve safety and reduce maintenance disturbances at milepost 48 by stabilizing the Farley Landslide. Some of the existing slope was built when this section of I-84 was constructed in the 1950s. Since original construction, this section of highway has experienced consistent movement, creating a slump in the highway and requiring frequent pavement repair as the landslide sporadically drops. One catastrophic collapse in 1996 resulted in a large sink hole (100 feet x 40 feet) opening in the center of I-84, shown in Figure 3. ODOT's goal is to stabilize the landslide before another catastrophic event forces I-84 closures.

The slope will be stabilized by constructing a retaining wall consisting of drilled micropiles and tieback anchors covered in shotcrete which will be pigmented to blend into the surrounding geology (see Sheet GC, Wall Plan and Elevation and Sheet GC-1, Wall Details). The proposed retaining wall will provide lateral support to the slope which will reduce the need to continually repair the section of highway and improve seismic resiliency. An existing drainage system on the south side of the highway may be damaged or may be no longer intact. To ensure the drainage system is functioning to aid in unloading the landslide as effectively as possible, the project will replace the drain pipe. The work will result in a secured slope and will not alter adjacent landforms. To allow for the flow of traffic during construction, a small amount of temporary pavement is proposed on the southern shoulder of the highway.

The wall will conform to the design guidelines of the *I-84 Corridor Strategy* (2005). The face of the wall will be colored to blend with the surrounding landscape. The wall has been designed to be visually subordinate to the natural surroundings as seen from key viewing areas (KVAs) using a combination of color camouflaging, topographic screening, and vegetative screening. Approximately 1/3 of the excavated soil and boulders from the original slope will be replaced after the wall is installed to stabilize it and blend it into surrounding topography. The replacement of material is being done to the greatest extent practicable, as the project geologist is hesitant to add too much additional weight to the slope which would contribute to the landslide that the project aims to secure. Some existing vegetation will be retained at the bottom of the slope and additional native vegetation will be planted within the disturbed areas to enhance screening opportunities.

Construction staging and temporary storage will occur offsite at two existing ODOT stockpile locations, shown below in Figure 1. The ODOT Boneyard stockpile location is outside of the NSA, approximately 3 miles west in Cascade Locks at approximately the intersection of US 30 and Wa Na Pa Street. This site is outside the Columbia Gorge National Scenic Area and therefore is not part of this permit application. The ODOT Milepost (MP) 50 Pit stockpile location is located approximately 2 miles east of the project location, just south of I-84 at approximately milepost 50. This site is located within the Columbia River Gorge National Scenic Area. Both of the proposed stockpile locations are State controlled construction staging areas that are currently in use and no further approvals are necessary to stage construction there. After construction, excavated material that is not used in the new slope configuration will be disposed of outside the NSA by the construction contractor in a manner that meets engineering requirements.

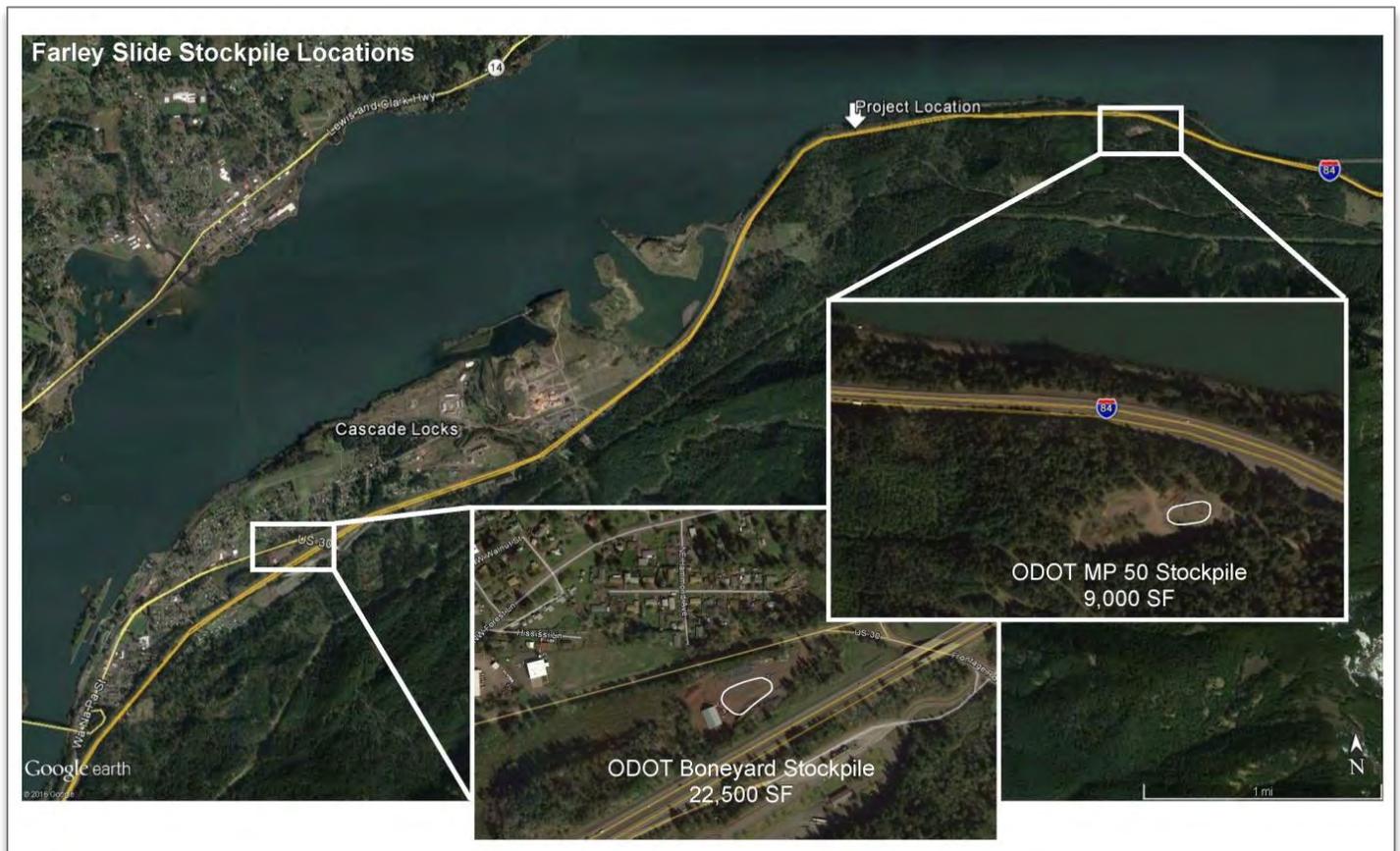


Figure 1: Existing ODOT Stockpile Locations

Footprint Size of Proposed Structures: The wall will seem to be part of the existing landform as it will stand against the steep highway embankment. The entire height of the slope from the UPRR tracks to the highway is approximately 60 feet. Including sub-grade components, the wall is 60 feet tall and is approximately 320 feet in length. Very little, if any, of the wall will be

exposed above finished grade on the southern, I-84 side of the wall as it will be against the steep highway embankment. On the northern, riverward side, 7,250 square feet of the wall will be exposed above grade. A 4-foot high dark brown v-mesh fence will be mounted on top of the retaining wall as a pedestrian fall safety measure. The wall and the fence will be aligned with the existing highway cut. Sections of the safety fence may protrude above the highway's existing guardrail by a maximum of 15 inches as visible from vehicles traveling on I-84. The project will also replace the 431 feet of the existing guardrail with I-84 compliant core-ten style.

The total area of disturbance at the project site, shown in Figure 5, is approximately 40,600 square feet (0.93 acre). This includes 29,170 square feet (0.67 acre) to construct the wall, 4,300 square feet (0.10 acre) to replace the degraded drain pipe, and 7,073 (0.16 acre) of temporary paving necessary to accommodate traffic during construction. The areas of the existing ODOT temporary stockpile locations are approximately 22,500 square feet (0.52 acre) and 9,000 square feet (0.21 acre). The Cascade Locks Boneyard location is outside the NSA and therefore not subject to NSA review. The total area of proposed stockpile locations is 31,500 square feet (0.72 acre). From April through September 2018, about 7,000 cubic yards of the 15,000 total excavated materials will be stored at these locations. The remaining will be disposed of outside of the NSA in a way that meets engineering standards. The stockpile locations are shown in Figure 1.



Figure 2: Farley Landslide Slope at Mile Post 48 on I-84



Figure 3: Large sink hole (100 feet x 40 feet) at milepost 48 resulting from 1996 collapse



Figure 4: Visibly Disturbed Existing Vegetation on Farley Landslide

Total Square Footage of Proposed Structures: The proposed retaining wall will be approximately 320 feet long.

Building Height and Number of Stories: Not applicable. No buildings are proposed.

Exterior Siding Colors: Neutral, warm, non-reflective dark brown/taupe. Stain will be incorporated into the concrete mixture before it is applied to the wall. The resulting color will be equivalent to Sherwin-Williams “Black Fox,” which is recommended for retaining walls in the *Columbia River Gorge National Scenic Area Management Plan* (as amended September 2011).

Exterior Trim Colors: Not applicable.

Exterior Roof Colors: Not applicable.

Other Exterior Colors: Not applicable.

Proposed Exterior Building Materials: Concrete.

Length, Width and Type of Roads: No new roads are proposed. The work will occur within the road prism of I-84. I-84 is an interstate highway that is approximately 78 feet wide. In the vicinity of milepost 48, I-84 has 2 eastbound travel lanes and 2 westbound travel lanes; each lane is approximately 12 feet wide. Outside shoulders are approximately 10 feet wide on each side and inside shoulders are approximately 5 feet wide.

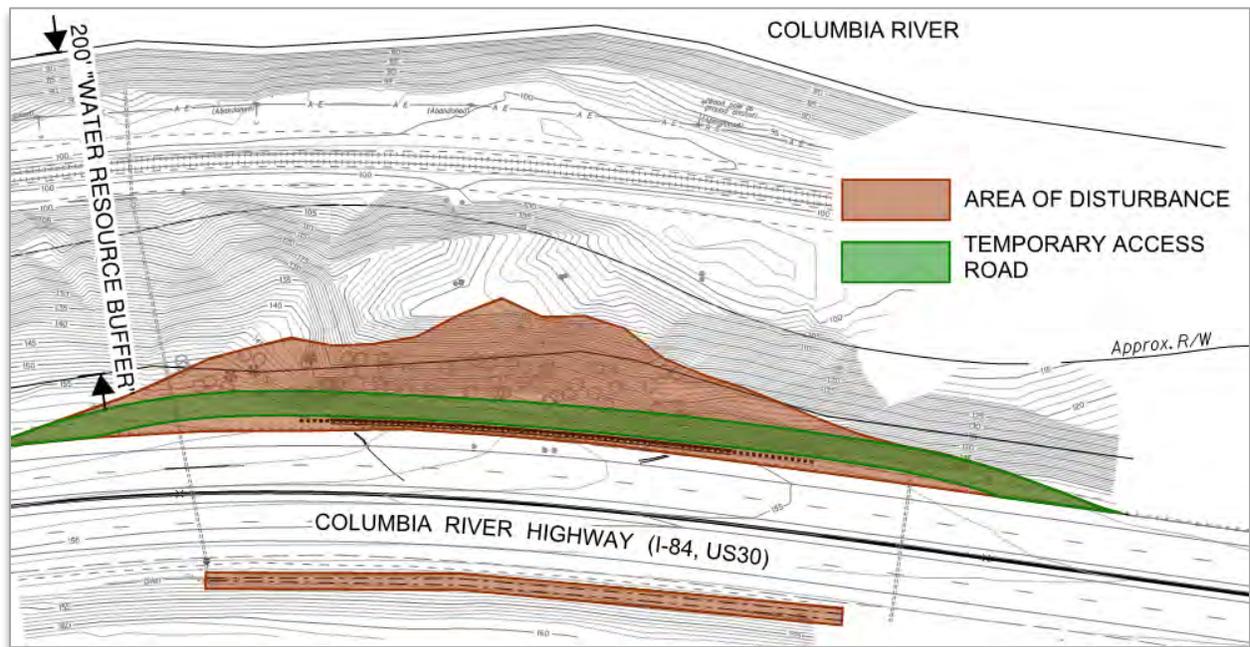


Figure 5: Approximate Limits of Project Disturbance (shown here and in the Preliminary Plans in Attachment B)

Percent Slope of Proposed Development Site: The existing slope is approximately 1:2.

Cubic Yards of Grading Activities for All Proposed Structures, including Buildings, Roads, Ditches, Etc. (L x W x H / 27 = cubic yard): 15,500 cubic yards

Amount of Vegetation to be Removed or Planted: To complete the proposed work, it will be necessary to remove approximately 43 trees greater than 10 inches in diameter at breast height (DBH). Approximately 7 percent are conifers (Douglas fir), and the remaining are deciduous (70 percent alder and 23 percent maple). See Table 1: Tree Removal Impacts. All temporarily disturbed areas will be revegetated and restored. The revegetation plan includes planting 39 trees, which will be a mix of western redcedar and Douglas fir. Other disturbed areas will be seeded with a native seed mix. Woody debris, boulders, and duff will be retained and redistributed to restore the remaining disturbed areas. See the Landscape Revegetation Plan in Attachment B on Sheets GN and GN-1.

Table 1: Tree Removal Impacts

Type	Species	Number of Trees to be Removed- Greater than 10" DBH	Number of Trees to be Removed- Less than or equal to 10" DBH	Total
Deciduous	Maple	10	13	23
	Alder	30	28	58
Conifer	Douglas Fir	3	3	6
	Total	43	44	87

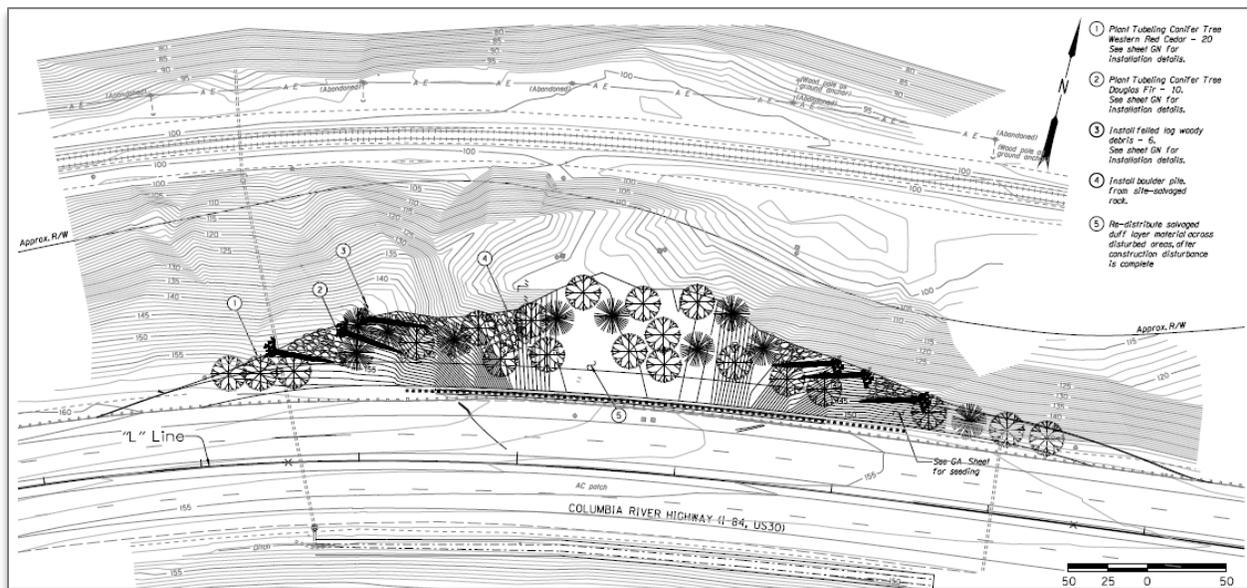


Figure 6: Proposed Revegetation on Disturbed Areas (details on Sheets GA, GN, and GN-1 in Attachment B)

KEY VIEWING AREAS

The proposed project is located in the River Bottomlands landscape setting. The project will meet the scenic standard of appearing visually subordinate to natural surroundings as seen from key viewing areas (KVAs). This section assesses the project's potential visual affects to the project site as seen from the four applicable KVAs: Dog Mountain Trail, the Columbia River, I-84, and SR-14.

DOG MOUNTAIN TRAIL KEY VIEWING AREA

Due to its distance and positioning in relation to the proposed project, Dog Mountain Trail is not considered to be an affected KVA. Dog Mountain Trail is located on the Washington side of the Columbia River, approximately 5 miles away from the project location. View of the project location from Dog Mountain is obscured by distance, existing topography and vegetation. The Columbia River and areas south of it are not visible to hikers along much of the Dog Mountain Trail as it is densely forested. If the project area were visible through a clearing in the trail, the retaining wall would not be distinguishable as a feature separate from I-84, which appears as a thin line that parallels the Columbia River.

WASHINGTON STATE ROUTE 14 KEY VIEWING AREA

The proposed project site is well screened from view of SR-14 by dense roadside vegetation or terrain. Figures 7 and 8 depict the primary viewing opportunity of the project location from SR-14. The project would not be noticeable from this viewpoint as shown in Figure 7. Elsewhere along SR-14 nearer to the slide, the views from the road are effectively blocked by roadside vegetation.



Figure 7: The primary view of the project area from SR-14.



Figure 8: SR-14 primary view photo location.

COLUMBIA RIVER KEY VIEWING AREA

Existing vegetation between the proposed area of disturbance and the Columbia River will screen the view of the proposed wall. After the work is completed, the absent row of trees that will have been removed for construction will be a noticeable change in the tree canopy. This effect will lessen over time as the trees to be planted as part of the site restoration plan become established and fill in the missing canopy. It is possible that some areas of the wall may be visible through gaps between trees, especially during the winter ‘leaf-off’ period, however the dense evergreen forest between the wall and the river is expected to provide effective screening to the extent that the wall will not be noticeable to most visitors traveling along the Columbia River. If the wall were noticed in view of the river, it is expected to easily meet the applicable scenic standard of visual subordination to the surrounding landscape as shown in Figures 9 and 10.



Figure 9: Existing conditions: view of the project area from Columbia River KVA.



Figure 10: Post-project conditions: view of the project area from Columbia River KVA.

INTERSTATE 84 KEY VIEWING AREA

The project will not be noticeable to the casual visitor traveling I-84. The proposed retaining wall itself will be completely obscured by existing topography due to its positioning against the steep highway embankment, out of the view from the highway. Portions of the 4-foot, v-mesh safety fence painted federal standard color 30099 will be installed on top of the wall and may be visible from the KVA. The highway guardrail, made of corten (or “weathering” steel), in the foreground will mostly obscure views of the safety fence. Portions of the mesh fence will be exposed for a maximum of 1.5 vertical feet above the existing highway guardrail for the length of the wall. The exposed portion of the safety fence is expected to meet the applicable scenic standard of visual subordination to the surrounding landscape.

In the short-term, the tree removal required for the wall installation will have some visual impact on the KVA. Tree removal may positively impact the view from I-84 towards the Columbia River. Views to the river from the travel corridor have been obscured by vegetation and this project may provide openings to allow travelers on I-84 a moving view of the Columbia River, especially during the winter months when deciduous trees are bare of leaves. After time, the trees planted as part of the revegetation plan will become established and the view from I-84 will return to closely resemble existing conditions

If the structure or removed vegetation is noticed by travelers on I-84, the visual impact is expected to meet the scenic standard of visual subordination to natural surroundings. Additionally, the impact would only be visible for roughly 1,000 feet, or about 10 seconds for a vehicle travelling at the speed limit of 65 miles per hour. The Figures 11 and 12 illustrate the scenic impact of the project from I-84 KVA.



Figure 11: View looking north from I-84: Existing conditions



Figure 12: View looking north from I-84: Post-construction conditions

HOOD RIVER COUNTY ZONING ORDINANCE REVIEW STANDARDS

The project location is zoned Special Management Area – Forest, S-F.

Zone & GMA/SMA	Proposed Use	Review Standards
Forest –SMA (S-F)	Section 270(2)(d) Railroad and road construction or reconstruction	Section 530 – SMA Scenic Review Criteria Section 550 – SMA Cultural Resources Review Criteria Section 600– SMA Natural Resources Review Criteria

ARTICLE 75 – NATIONAL SCENIC AREA ORDINANCE

530. Special Management Area Scenic Review Criteria

1) SMA Design Guidelines Based on Landscape Settings

a) The following guidelines apply to all lands within SMA landscape settings regardless of visibility from KVAs (includes areas seen from KVAs as well as areas not seen from KVAs):

(A) Pastoral: Pastoral areas shall retain the overall appearance of an agricultural landscape

(i) The use of plant species common to the landscape setting shall be encouraged. The use of plant species in rows, as commonly found in the landscape setting, is encouraged.

Applicant Findings: Not applicable. The proposed project is located within the River Bottomlands landscape setting.

(B) Coniferous Woodland and Oak-Pine Woodland: Woodland areas shall retain the overall appearance of a woodland landscape. New developments and land uses shall retain the overall visual character of the natural appearance of the Coniferous Woodland and Oak-Pine Woodland landscape.

(i) Buildings shall be encouraged to have a vertical overall appearance in the Coniferous Woodland landscape setting and a horizontal overall appearance in the Oak-Pine Woodland landscape setting.

- (ii) *Use of plant species native to the landscape setting shall be encouraged. Where non-native plants are used, they shall have native-appearing characteristics.*

Applicant Findings: Not applicable. The proposed project is located within the River Bottomlands landscape setting.

(C) River Bottomlands: River Bottomlands shall retain the overall visual character of a floodplain and associated islands.

- (i) *Buildings shall have an overall horizontal appearance in areas with little tree cover.*

Applicant Findings: Not applicable. There are no buildings proposed.

- (ii) *Use of plant species native to the landscape setting shall be encouraged. Where non-native plants are used, they shall have native-appearing characteristics.*

Applicant Findings: The proposed project is within the River Bottomlands landscape setting and has been designed to retain the overall visual character of a floodplain and associated islands.

The area will be revegetated to restore the disturbed area and to obscure the view of the retaining wall. Plantings will be native species that are appropriate for the River Bottomlands landscape. Proposed species include western redcedar and Douglas fir. A landscape revegetation plan, including a listing of proposed plant species, is provided in the Preliminary Plans in Attachment B (Sheet GN and Sheet GN-1).

(D) Gorge Walls, Canyonlands, and Wildlands: New developments and land uses shall retain the overall visual character of the natural-appearing landscape.

- (i) *Structures, including signs, shall have a rustic appearance, use nonreflective materials, have low contrast with the surrounding landscape, and be of a Cascadian architectural style.*
- (ii) *Temporary roads shall be promptly closed and revegetated.*
- (iii) *New utilities shall be below ground surface, where feasible.*
- (iv) *Use of plant species non-native to the Columbia River Gorge shall not be allowed.*

Applicant Findings: Not applicable. The proposed project is located within the River Bottomlands landscape setting. However, this project will meet the review criteria of this section.

2) *SMA Guidelines for Development and Uses Visible from KVAs*

(a) *The guidelines in this Section shall apply to proposed developments on sites topographically visible from key viewing areas.*

Applicant Findings: The proposed project has potential to be topographically visible from some sections of the following KVAs: Dog Mountain Trail, SR-14, Columbia River, and I-84.

(b) *New developments and land uses shall be evaluated to ensure that the required scenic standard is met and that scenic resources are not adversely affected, including cumulative effects, based on the degree of visibility from key viewing areas.*

Applicant Findings: Visual renderings of the proposed project were developed to simulate the scenic impact of the proposed retaining wall from KVAs and is included in the "Key Viewing Areas" section herein. The project will not be visually detectible to the casual visitor traveling on two of the three applicable KVAs, the Columbia River, and SR-14. This is due to the following:

- The relatively small size of the retaining wall (50 feet maximum exposed height) compared to the surrounding cliffs, some of which are more than 2,000 feet tall;
- The wall's low elevation relative to the other visible larger-scale Gorge features that are seen from these KVAs;
- Viewing distance and topography; and
- Screening by riverside vegetation.

Despite screening efforts, a portion of the top of the safety fence may be visible from I-84 since the wall will be located within the highway prism. However, since the wall is downslope from the highway and the safety fence will extend only about 15 inches above the elevation of the new highway guardrail, which will be in the foreground, it will be entirely or almost entirely obscured from the view of drivers and passengers travelling along I-84. The project would meet the standard of visual subordination to the surrounding landscape for the following reasons:

- The wall will not be visible from the highway since it will be located downslope of the highway and against the highway embankment;
- The highway guardrail will obscure most of the height of the fence that extends above the highway cut;

- Portions of the v-mesh fence that extend above the guardrail will not be more than 15 inches, will be aligned with the guardrail, and will be painted Federal Color 30099, which is consistent with the I-84 Corridor Strategy;
- No portion of the structure will extend above the average height of existing vegetation or surrounding cliffs;
- The structure has been designed to mimic the colors and textures of the surrounding landscape;
- The project's impact would only be visible from I-84 for roughly 1,000 feet, which is about 10 seconds for a vehicle traveling past the project at the posted speed limit of 65 miles per hour.

The wall has been designed to comply with the *I-84 Corridor Strategy* standards (the adopted scenic highway standards pursuant to Section 530(3)(b)). As such, the retaining wall is designed to blend in with existing roadway structures and not contrast with the surrounding setting. This is described in more detail below in response to Section 530(2)(d).

Existing development and planned development in the vicinity is relevant to the consideration of cumulative visual impacts. Existing development in the vicinity of the proposed project that presents visual impacts include I-84, the Union Pacific Railroad, Bonneville Power Authority (BPA) transmission lines, Wyeth Bench Road, and the Wyeth Campground. Planned development in the vicinity of the proposed project includes the construction of Segment D of the Historic Columbia River Highway State Trail between Lindsey Creek and Starvation Creek. The USFS staff is also considering relocating Trail 400 access from the Wyeth Campground to the proposed Wyeth Trailhead. This relocation would eliminate possible conflicts between Trail 400 users and campers, and would provide year-round access to Trail 400 (the Wyeth Campground is a seasonal facility and is gated, which precludes access to Trail 400 in the off-season). The USFS staff is considering developing the Wyeth Trailhead at a later date as an equestrian staging area to improve equestrian access to Trail 400. In addition, development of a mountain biking trail system on USFS land on the Wyeth Bench as proposed by the Port of Cascade Locks is being planned in the area north of the Wyeth Bench Road between Cascade Locks and the proposed Wyeth Trailhead. While in vicinity of the proposed landslide stabilization project, neither project would be visible from the other's location and no significant cumulative visual impacts are expected.

Other significant development in the area is not anticipated for the following reasons:

- There are no plans to modernize I-84 in the future other than to make safety improvements that will be consistent with the *I-84 Corridor Strategy*.
- The Union-Pacific Railroad is confined by its location between the Columbia River and I-84, limiting its development.

- The applicant is not aware of BPA plans that would alter the current visual effect of the transmission lines.
- There are no currently funded plans to expand Wyeth Campground.
- OPRD has identified minimal improvements for the north side of the freeway for recreation in their recent plan (*Columbia River Gorge Management Units Plan, 2015*) to improve water access to the Columbia River. These projects are unfunded and unscheduled and are not considered as important in cumulative impacts.

Due to the lack of other significant development in the vicinity, measures to minimize visual effects of the proposed project and mitigation of existing roadway features, no significant cumulative visual impacts are expected.

(c) *The required SMA scenic standards for all development and uses are summarized in the following table:*

<i>REQUIRED SMA SCENIC STANDARDS</i>		
<i>LANDSCAPE SETTING</i>	<i>LAND USE DESIGNATION</i>	<i>SCENIC STANDARD</i>
<i>Coniferous Woodland, Oak-Pine Woodland</i>	<i>Forest (National Forest Lands), Open Space</i>	<i>Not Visually Evident</i>
<i>River Bottomlands</i>	<i>Open Space</i>	<i>Not Visually Evident</i>
<i>Gorge Walls, Canyonlands, Wildlands</i>	<i>Forest, Agriculture, Public Recreation, Open Space</i>	<i>Not Visually Evident</i>
<i>Coniferous Woodland, Oak-Pine Woodland</i>	<i>Forest, Agriculture, Residential, Public Recreation</i>	<i>Visually Subordinate</i>
<i>Pastoral</i>	<i>Forest, Agriculture, Public Recreation, Open Space</i>	<i>Visually Subordinate</i>
<i>River Bottomlands</i>	<i>Forest, Agriculture, Public Recreation</i>	<i>Visually Subordinate</i>

Applicant Findings: The project is located in a Forest SMA within the River Bottomlands landscape setting. Therefore, the scenic standard in this location is “visually subordinate.”

(d) *In all landscape settings, scenic standards shall be met by blending new development with the adjacent natural landscape elements rather than with existing development.*

Applicant Findings: The proposed project is designed to blend the slope treatment into the natural landscape by maximizing retention of existing screening vegetation and existing terrain balanced with structurally necessary grading and tree removal. Cuts and fills are minimized as practicable to contain the active slide area and new native landscaping is proposed to restore disturbed ground. The wall has been designed to mimic the lines and colors of the surrounding geology. Shotcrete will be applied to the surface of the drilled micropiles and tieback anchors and form the face of the wall. A dark, warm stain will be included in the concrete mixture which will match the surrounding basalt cliffs should the face of the wall ever become visible due to destruction of surrounding vegetation resulting from an event such as a forest fire. Since the pigment will be incorporated into the concrete mixture itself, the wall would maintain its color should any of the face of the wall chip off or erode over time. The work is within the I-84 roadway prism and is designed to meet the objectives of the *I-84 Corridor Strategy* (2005). A rendering of the visual impact can be found in the Key Viewing Areas section herein.

(e) Proposed developments or land uses shall be sited to achieve the applicable scenic standard. Development shall be designed to fit the natural topography, to take advantage of landform and vegetation screening, and to minimize visible grading or other modifications of landforms, vegetation cover, and natural characteristics. When screening of development is needed to meet the scenic standard from key viewing areas, use of existing topography and vegetation shall be given priority over other means of achieving the scenic standard such as planting new vegetation or using artificial berms.

Applicant Findings: As described above, the proposed project has been sited to meet the objective of stabilizing the Farley Landslide which affects the section of I-84 which was built on top of it. The wall has been designed to achieve the scenic standard of visually subordinate to the surrounding landscape. Existing topography and vegetation will be preserved to the maximum extent practicable while still adequately serving the purpose and need of the project. Where existing vegetation cannot be retained, native vegetation will be replanted to restore the disturbed area and improve scenic qualities (see Sheet GN and Sheet GN-1).

(f) The extent and type of conditions applied to a proposed development or use to achieve the scenic standard shall be proportionate to its degree of visibility from key viewing areas.

(A) Decisions shall include written findings addressing the factors influencing the degree of visibility, including but not limited to:

(i) The amount of area of the building site exposed to key viewing areas,

Applicant Findings: Approximately 7,250 square feet of the proposed wall will be above grade and therefore potentially exposed to KVAs. Due to screening by existing topography and vegetation, the structure will not be visible from Dog Mountain Trail KVA, Columbia River KVA, or SR-14 KVA. Portions of the project will be partially visible from I-84 KVA, however the wall itself will not be visible because of its position against the steep slope of the roadway embankment, below the highway cut, which is outside the view of travelers. Portions of the 4-foot v-mesh safety fence to be installed on top of the wall will be visible from the highway at a maximum of 15 inches for the length of the wall. This will probably not be noticeable to the casual visitor traveling on the highway. The portion of the safety fence that is exposed to the I-84 KVA is expected to meet the applicable scenic standard of visual subordination. Additionally, the visual impact of the project would only be visible from I-84 for roughly 1,000 feet, which is about 10 seconds for a vehicle traveling at the posted speed limit of 65 miles per hour. The project's visual impact to views from KVAs are illustrated that section herein.

(ii) *The degree of existing vegetation providing screening,*

Applicant Findings: There is a dense, mature forest surrounding the project site. After construction, the existing screen of well-established trees will remain intact on the lower portion of the slope and will cover areas where the face of the wall is exposed above proposed finished grade, which is where the project has the greatest potential of being exposed to KVAs. The vegetation that will be retained will provide adequate screening between the project and the Columbia River KVA, and other areas north of the project area including SR-14 KVA.

(iii) *The distance from the building site to the key viewing areas from which it is visible,*

Applicant Findings: The KVA closest to the project area is the I-84 KVA since the project will be located within the highway prism. Although the project is very close to this KVA, the wall itself will not be visible because of its position against the steep slope of the roadway embankment, below the highway cut, which is outside the view of travelers. The highway guardrail in the foreground will mostly block views of the safety fence and remaining portions of the safety fence are expected to meet the scenic standard of visual subordination. The wall will be over 200 feet away from the Columbia River KVA and areas north of it and well-screened by existing vegetation.

(iv) *The number of key viewing areas from which it is visible, and*

Applicant Findings: There are four applicable KVAs, but the project area is visible only from three.

(v) *The linear distance along the key viewing areas from which the building site is visible (for linear key viewing areas, such as roads).*

Applicant Findings: The project's visual impacts on I-84 KVA would only be visible for roughly 1,000 feet, which is about 10 seconds for a vehicle traveling the posted speed limit of 65 miles per hour. The project's visual impact to views from the I-84 KVA are illustrated that section herein.

- (B) *Conditions may be applied to various elements of proposed developments to ensure they are visually subordinate to their setting as seen from key viewing areas, including but not limited to:*
 - (i) *Siting (location of development on the subject property, building orientation, and other elements),*
 - (ii) *Retention of existing vegetation,*
 - (iii) *Design (color, reflectivity, size, shape, height, architectural and design details and other elements), and*
 - (iv) *New landscaping.*

Applicant Findings: The applicant recognizes that conditions may be applied to the proposed development to achieve the scenic standards. As described above in response to Section 530(2)(c), since the project is within the I-84 roadway prism, and therefore the *I-84 Corridor Strategy* scenic standards are applicable.

- (g) *Sites approved for new development to achieve scenic standards shall be consistent with guidelines to protect wetlands, riparian corridors, sensitive plant or wildlife sites and the buffer zones of each of these natural resources, and guidelines to protect cultural resources.*

Applicant Findings: The proposed project is designed to be consistent with guidelines to protect natural and cultural resources. These guidelines are addressed in subsequent sections of this application.

- (h) *Proposed developments shall not protrude above the line of a bluff, cliff, or skyline as seen from key viewing areas.*

Applicant Findings: The proposed project will not protrude above the line of a bluff, cliff, or skyline as seen from KVAs. The top of the proposed retaining wall will be approximately aligned with the existing I-84 roadway cut. A visualization of the proposed project is provided Key Viewing Areas section herein.

- (i) *Structure height shall remain below the average tree canopy height of the natural vegetation adjacent to the structure, except if it has been demonstrated that meeting this guideline is not feasible considering the function of the structure.*

Applicant Findings: The height of the proposed retaining wall will remain well below the average tree canopy height of adjacent vegetation. The exposed face of the wall will be approximately 7,250 square feet and will appear to be part of the existing landform. The project area is within and adjacent to a mature forest on a steep slope. The top of the wall will be roughly level with the roots of neighboring trees at the same elevation on either end of the wall. Trees riverward of the proposed wall that will be retained are several feet taller than the proposed highway cut and guardrail. Since the proposed wall will be lower than the highway cut and the safety fence is at most only 15 inches higher than the guardrail, neighboring vegetation will remain much higher than the proposed structure. This is described and depicted in the I-84 KVA section herein.

(j) The following guidelines shall apply to new landscaping used to screen development from key viewing areas:

(A) New landscaping (including new earth berms) to achieve the required scenic standard from key viewing areas shall be required only when application of all other available guidelines in this chapter is not sufficient to make the development meet the scenic standard from key viewing areas. Development shall be sited to avoid the need for new landscaping wherever possible.

Applicant Findings: The proposal will require some tree removal. The disturbed area will be revegetated to restore the site. Existing vegetation and topography will screen the retaining wall from KVAs, and post-construction plantings will restore the disturbed area and improve screening from KVAs. The entire wall will be screened from the highway due to its positioning downslope of it. Areas that will be temporarily disturbed adjacent to the highway will be seeded with a native, woody seed mix to provide additional screening and improve scenic qualities. Planting is proposed north of the wall between it and the Columbia River KVA, which will block view of the face of the wall where has the most potential to be exposed (see Sheets GN and GN-1). The proposed structure is expected to meet the scenic standard for the landscape setting from applicable KVAs of visually subordinate to the surrounding natural landscape.

(B) If new landscaping is necessary to meet the required standard, existing on-site vegetative screening and other visibility factors shall be analyzed to determine the extent of new landscaping, and the size of new trees needed to achieve the standard. Any vegetation planted pursuant to this guideline shall be sized to provide sufficient screening to meet the scenic standard within five years or less from the commencement of construction.

Applicant Findings: The Landscape Revegetation Plan is provided in Attachment B (see Sheets GN and GN-1). On-site vegetation and the size of new trees needed to achieve the visually

subordinate scenic standard within five years or less from the commencement of construction has been considered in the landscape plans.

- (C) *Landscaping shall be installed as soon as practicable, and prior to project completion. Applicants and successors in interest for the subject parcel are responsible for the proper maintenance and survival of planted vegetation, and replacement of such vegetation that does not survive.*

Applicant Findings: Landscaping shall be installed as soon as practicable and prior to project completion. The applicant will assume responsibility for plant maintenance and survival/replacement.

- (D) *The Scenic Resources Implementation Handbook shall include recommended species for each landscape setting consistent with the Landscape Settings Design Guidelines in this chapter, and minimum recommended sizes of new trees planted (based on average growth rates expected for recommended species).*

Applicant Findings: The applicant has referenced the *Scenic Resources Implementation Handbook* as a guide in establishing planting plans in conjunction with the on-site plant inventory. Proposed tree species are listed on Sheet GN in Attachment B and include western redcedar and Douglas fir.

- (k) *Unless expressly exempted by other provisions in this chapter, colors of structures on sites visible from key viewing areas shall be dark earth-tones found at the specific site or the surrounding landscape. The specific colors or list of acceptable colors shall be included as a condition of approval. The Scenic Resources Implementation Handbook will include a recommended palette of colors as dark or darker than the colors in the shadows of the natural features surrounding each landscape setting*

Applicant Findings: The color of the stain that will be incorporated into the wall's concrete mixture has been selected to blend with the adjacent natural setting, consistent with the Scenic Resources Implementation Handbook, which emphasizes the use of dark earth-tone colors. The proposed wall color is a dark, warm taupe color, similar to Sherwin-Williams "Black Fox" as directed in the I-84 Corridor Strategy. The wall has been designed to mimic the surrounding Oregon basalt geology of the walls of the Columbia River Gorge.

- (l) *The exterior of structures on lands seen from key viewing areas shall be composed of non-reflective materials or materials with low reflectivity. The Scenic Resources Implementation Handbook will include a recommended list of exterior materials. These recommended materials and other materials may be deemed consistent with this guideline, including those where the specific*

application meets approval thresholds in the “Visibility and Reflectivity Matrices” in the Implementation Handbook. Continuous surfaces of glass unscreened from key viewing areas shall be limited to ensure meeting the scenic standard. Recommended square footage limitations for such surfaces will be provided for guidance in the Implementation Handbook.

Applicant Findings: The proposal would install a retaining wall constructed with a sub-grade steel anchoring system. All above-grade anchoring components will be covered in shotcrete, a concrete mixture that will be pressurized and applied to the slope using a hose and nozzle. The concrete mixture will include a warm, dark pigment that is designed to mimic surrounding geology. A short v-mesh fence will be installed on top of the retaining wall as a safety measure to reduce risk of a pedestrian falling over the steep drop. The v-mesh fence will be made of galvanized steel or another durable, rust-resistant material and will be painted Federal Color 30099, which will blend in with the natural surroundings.

(m) Any exterior lighting shall be sited, limited in intensity, shielded, or hooded in a manner that prevents lights from being highly visible from key viewing areas and from noticeably contrasting with the surrounding landscape setting, except for road lighting necessary for safety purposes.

Applicant Findings: Not applicable. No lighting is proposed as part of the project.

(n) Seasonal lighting displays shall be permitted on a temporary basis, not to exceed 3 months.

Applicant Findings: Not applicable. No seasonal lighting is proposed as part of the project.

(1) SMA Guidelines for KVA Foregrounds and Scenic Routes

(a) All new developments and land uses immediately adjacent to scenic routes shall be in conformance with state or county scenic route guidelines.

(b) Scenic highway corridor strategies shall be developed and implemented for Interstate 84 (I-84) and the Historic Columbia River Highway (HCRH). For the HCRH, this involves ongoing implementation (and possible updating) of the associated existing documents. For I-84, a new scenic corridor strategy shall be developed by the end of 2005.

(c) The goals of scenic corridor strategies shall include: 1) providing a framework for future highway improvements and management that meet Management Plan scenic guidelines and public transportation needs; and 2) creating design continuity for the highway corridor within the Scenic Area. Corridor strategies

shall, at minimum, include design guidelines (e.g. materials, conceptual designs, etc.) for typical projects that are consistent with Management Plan scenic resources provisions and an interdisciplinary, interagency project planning and development process.

Applicant Findings: The proposal involves new development immediately adjacent to I-84, which is a state scenic route. The proposed structure has been designed to conform to the *I-84 Corridor Strategy*, which is the applicable set of state scenic route guidelines.

(d) The following guidelines shall apply only to development within the immediate foregrounds of key viewing areas. Immediate foregrounds are defined as within the developed prism of a road or trail KVA or within the boundary of the developed area of KVAs such as Crown Pt. and Multnomah Falls. They shall apply in addition to applicable guidelines in Section 530(2).

Applicant Findings: The proposal is located within the immediate foreground of the I-84 KVA. As described in the previous section, the proposed project will meet the applicable scenic standards. Proposed form, colors, and building materials have been selected to blend the slope treatment with the surrounding landscape. The proposed size, location, and extent of the slope treatment are the minimum necessary to achieve the objective of improving the safety and resiliency of this section of the I-84 corridor.

(A) The proposed development shall be designed and sited to meet the applicable scenic standard from the foreground of the subject KVA. If the development cannot meet the standard, findings must be made documenting why the project cannot meet the requirements in the previous Section and why it cannot be redesigned or wholly or partly relocated to meet the scenic standard.

Applicant Findings: The proposal will meet the applicable scenic standard for the River Bottomlands landscape setting of visual subordination.

(B) Findings must evaluate the following:

- (i) The limiting factors to meeting the required scenic standard and/or applicable guidelines from the previous Section,*
- (ii) Reduction in project size;*
- (iii) Options for alternative sites for all or part of the project, considering parcel configuration and on-site topographic or vegetative screening;*

- (iv) Options for design changes including changing the design shape, configuration, color, height, or texture in order to meet the scenic standard.*
- (C) Form, line, color, texture, and design of a proposed development shall be evaluated to ensure that the development blends with its setting as seen from the foreground of key viewing areas:*
 - (i) Form and Line-Design of the development shall minimize changes to the form of the natural landscape. Development shall borrow form and line from the landscape setting and blend with the form and line of the landscape setting. Design of the development shall avoid contrasting form and line that unnecessarily call attention to the development.*
 - (ii) Color-Color shall be found in the project's surrounding landscape setting. Colors shall be chosen and repeated as needed to provide unity to the whole design.*
 - (iii) Texture-Textures borrowed from the landscape setting shall be emphasized in the design of structures. Landscape textures are generally rough, irregular, and complex rather than smooth, regular, and uniform.*
 - (iv) Design solutions shall be compatible with the natural scenic quality of the Gorge. Building materials shall be natural or natural appearing. Building materials such as concrete, steel, aluminum, or plastic shall use form, line color and texture to harmonize with the natural environment. Design shall balance all design elements into a harmonious whole, using repetition of elements and blending of elements as necessary.*

Applicant Findings: The proposed project has been designed to blend the slope treatment into the natural landscape by maximizing retention of existing screening vegetation and existing terrain balanced with structurally necessary grading and tree removal for the wall installation and proposed topography. Cuts and fills are minimized as practicable and new native landscaping is proposed to replace disturbed vegetation. The wall has been designed to mimic the lines and colors of the surrounding geology. The wall face will be structured and colored to blend with the surrounding landscape. The concrete mixture applied to the face of the wall will include a dark, warm taupe stain giving the appearance of basalt prevalent in the Columbia River Gorge. Although it will be entirely or almost entirely screened by vegetation, the proposed finished grade in front of the wall will be undulating rather than flat to blend with the surrounding topography. A rendering of the visual impact can be found in the Key Viewing Areas section herein. Additionally, employing a retaining wall minimizes the footprint required to retain the landslide within a constrained site.

- (e) *Right-of-way vegetation shall be managed to minimize visual impacts of clearing and other vegetation removal as seen from key viewing areas. Roadside vegetation management (vista clearing, planting, etc.) should enhance views from the highway.*

Applicant Findings: Removal of vegetation within the right-of-way will be necessary to construct the project. The proposal will remove the minimum amount of vegetation to construct the project. In order to construct the project, it will be necessary to remove approximately 43 trees that are greater than 10 inches DBH within the right-of-way. 39 trees will be replanted within the right-of-way; see Sheets GN and GN-1, Landscape Revegetation in Attachment B. To enhance scenic qualities and aid in erosion control immediately adjacent to the highway, the full 0.16 acre of the area disturbed for temporary paving necessary for maintaining flow of traffic during construction will be seeded with a native seed mix, see Sheet GA, Erosion Control in Attachment B.

- (f) *Screening from key viewing areas shall be encouraged for existing and required for new road maintenance, warehouse, and stockpile areas.*

Applicant Findings: No new road maintenance, warehouse, or stockpile areas are proposed. Construction staging and storage will occur offsite at two existing ODOT stockpile locations. These areas are State-controlled land that ODOT has used for staging construction activities in the past. No new uses are proposed at these locations. Both stockpile locations being considered are screened from view from I-84 by existing vegetation or topography. Located outside the NSA, the ODOT Boneyard stockpile location is approximately 3 miles west in Cascade Locks at approximately the intersection of US 30 and Wa Na Pa Street. The ODOT Milepost (MP) 50 Pit stockpile location is located approximately 2 miles east of the project location, just south of I-84 at approximately milepost 50. Both of the proposed stockpile locations are currently used for construction staging. After construction, the excavated materials that are not used in the new slope configuration will be disposed of by ODOT in a manner that meets engineering requirements. Proposed stockpile locations are shown in Figure 1.

(2) *SMA Guidelines for Areas Not Seen from KVAs*

- (a) *Unless expressly exempted by other provisions in this chapter, colors of structures on sites not visible from key viewing areas shall be earth-tones found at the specific site. The specific colors or list of acceptable colors shall be approved as a condition of approval, drawing from the recommended palette of colors included in the Scenic Resources Implementation Handbook.*

Applicant Findings: Not applicable. The site is within an area seen from KVAs.

550. Special Management Area Cultural Resource Review Criteria

- (1) *General Guidelines for Implementing the Cultural Resources Protection Process*
 - (a) *All cultural resource information shall remain confidential, according to Section 6(a)(1)(A) of the Scenic Area Act. Federal agency cultural resource information is also exempt by statute from the Freedom of Information Act under 16 USC 470aa and 36 CFR 296.18.*
 - (b) *All cultural resources surveys, evaluations, assessments, and mitigation plans shall be performed by professionals whose expertise reflects the type of cultural resources that are involved. Principal investigators shall meet the professional standards published in 36 CFR 61.*
 - (c) *The Forest Service will be responsible for performing the literature review and consultation, inventory, evaluations of significance, assessments of effect, and mitigation requirements in Section 550(4) for forest practices and National Forest System lands.*
 - (d) *New developments or land uses shall not adversely affect significant cultural resources.*
- (2) *The procedures and guidelines in Section 540 shall be used to review all proposed developments and land uses other than those on all federal lands, federally assisted projects and forest practices.*
- (3) *The procedures and guidelines in 36 CFR 800 and Section 550(4) shall be used by and federal agencies to evaluate new developments or land uses on federal lands, federally assisted projects, and forest practices.*
- (4) *The following procedures as well as the provisions in 36 CFR 800.4 for assessing potential effects to cultural resources and 36 CFR 800.5 for assessing effects to cultural resources shall be used to assess potential effects to cultural resources.*
 - (a) *Literature Review and Consultation*
 - (A) *An assessment shall be made to determine if any cultural resources listed on the National Register of Historic Places at the national, state or county level exist on or within the area of potential direct and indirect impacts.*

A search shall be made of state and county government, National Scenic Area/Forest Service and any other pertinent inventories, such as archives and photographs, to identify cultural resources, including consultation with the State Historic Preservation Office and tribal governments. State and tribal government response to the consultation request shall be allowed for 30 days.

(C) Consultation with cultural resource professionals knowledgeable about the area.

(D) A field inventory by a cultural resource professional shall be required if the Forest Service determines that a recorded or known cultural resource exists on or within the immediate vicinity of a new development or land use, including those reported in consultation with the Tribal governments.

(b) Field Inventory

(A) Tribal representatives shall be invited to participate in the field inventory.

(B) The field inventory shall consist of one or the other of the following guidelines, as determined by the cultural resource professional:

(i) Complete survey: the systematic examination of the ground surface through a controlled procedure, such as walking an area in evenly-spaced transects. A complete survey may also require techniques such as clearing of vegetation, augering or shovel probing of subsurface soils for the presence of buried cultural resources.

(ii) Sample survey: the sampling of an area to assess the potential of cultural resources within the area of proposed development or use. This technique is generally used for large or difficult to survey parcels, and is generally accomplished by a stratified random or non-stratified random sampling strategy. A parcel is either stratified by variables such as vegetation, topography or elevation, or by non-environmental factors such as a survey grid.

Under this method, statistically valid samples are selected and surveyed to indicate the probability of presence, numbers and types of cultural resources throughout the sampling strata. Depending on the results of the sample, a complete survey may or may not subsequently be recommended.

(C) A field inventory report shall be prepared, and shall include the following:

the cultural resources in the project area, and documentation of their concerns, shall be included as part of the evaluation of significance.

(F) An assessment of effect shall be required if the Forest Service determines that the inventoried cultural resources are significant.

(d) Assessment of Effect

(A) For each significant (i.e., National Register eligible) cultural resource inventoried within the area of the proposed development or change in use, assessments of effect shall be completed, using the criteria outlined in 36 CFR 800.5 ("Assessing Effects"). Evidence of consultation with tribal governments and individuals with knowledge of the cultural resources of the project area shall be included for Sections (4)(d)(B) through (4)(d)(D) below. The Forest Service shall review each determination for adequacy.

(B) If the proposed development or change in use will have "No Adverse Effect," as defined by 36 CFR 800.4, to a significant cultural resource, documentation for that finding shall be completed, following the "Documentation Standards" of 36 CFR 800.11. If the proposed development or change in use will have an effect then the criteria of adverse effect must be applied (36 CFR 800.5).

(C) If the proposed development or change in use will have an "Adverse Effect" as defined by 36 CFR 800.5 to a significant cultural resource, the type and extent of "adverse effect" upon the qualities of the property that make it eligible for the National Register shall be documented (36 CFR 800.6 "Resolution of Adverse Effects"). This documentation shall follow the process outlined under 36 CFR 800.11 ("Failure to Resolve Adverse Effects").

(D) If the "effect" appears to be beneficial (i.e., an enhancement to cultural resources), documentation shall be completed for the recommendation of that effect upon the qualities of the cultural resource that make it eligible to the National Register. This documentation shall follow the process outlined under 36 CFR 800.11 ("Documentation Standards").

(e) Mitigation

(A) If there will be an effect on cultural resources, measures shall be provided for mitigation of effects (36 CFR 800.6 "Resolution of Adverse Effects").

These measures shall address factors such as avoidance of the property through project design or modification and subsequent protection, burial under fill, data recovery excavations, or other measures which are proposed to mitigate effects.

(B) Evidence of consultation with tribal governments and individuals with knowledge of the resources to be affected, and documentation of their concerns, shall be included for all mitigation proposals.

The Forest Service shall review all mitigation proposals for adequacy.

(5) Discovery During Construction

All authorizations for new developments or land uses shall be conditioned to require the immediate notification of the Forest Service if cultural resources are discovered during construction or development.

(a) If cultural resources are discovered, particularly human bone or burials, work in the immediate area of discovery shall be suspended until a cultural resource professional can evaluate the potential significance of the discovery and recommend measures to protect and/or recover the resources.

(b) If the discovered material is suspected to be human bone or a burial, the following procedure shall be used:

(A) The applicant shall stop all work in the vicinity of the discovery.

(B) The applicant shall immediately notify the Forest Service, the applicant's cultural resource professional, the State Medical Examiner, and appropriate law enforcement agencies.

(C) The Forest Service shall notify the tribal governments if the discovery is determined to be an Indian burial or a cultural resource.

(D) A cultural resource professional shall evaluate the potential significance of the resource pursuant to Section 550(4)(c) and report the results to the Forest Service.

(c) The cultural resource review process shall be complete and work may continue if the Forest Service determines that the cultural resource is not significant. The cultural resource professional shall recommend measures to protect and/or

recover the resource pursuant to Section 550(4)(e) if the Forest Service determines that the cultural resource is significant.

Applicant Findings: ODOT Region 1 Archeologist and Tribal Liaison Tobin Bottman, M.S., R.P.A. consulted with the following entities on July 27, 2016:

- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Grand Ronde Community of Oregon
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Nez Perce Tribe
- Columbia River Gorge National Scenic Area

No responses were received and so the project was cleared for archaeology per Stipulation 4C of the 2011 PA, see the Cultural Resources Email in Attachment F.

The applicant shall immediately notify the Hood River County Planning Director, SHPO, and the Tribes in the event of the discovery of cultural resources during construction or development. The project applicant will be responsible to implement the requirements listed below should such a discovery occur:

- In the event of the discovery of cultural resources, all work on the site shall be suspended until a cultural resource professional can evaluate the potential significance of the discovery pursuant to ORS 75.550.
- If the discovered material is suspected to be human bone or a burial, the following procedure shall be used:
 - Stop all work in the vicinity of the discovery.
 - The applicant shall immediately notify the USFS, the applicant's cultural resource professional, the State Medical Examiner, and appropriate law enforcement agencies.
 - The USFS shall notify the tribal governments if the discovery is determined to be an Indian burial or a cultural resource.
 - A cultural resource professional shall evaluate the potential significance of the discovery and report the results to the USFS which shall have 30 days to comment in the report.

If the USFS determines that the cultural resource is not significant or does not respond within the 30-day response period, the cultural resource review process shall be complete and work may continue. If the USFS determines that the cultural resource is significant, the cultural resource professional shall recommend measures to protect and/or recover the resource.

600. Special Management Area Natural Resource Review Criteria

A. SMA Natural Resource Review Criteria

- (1) *All new developments and uses, as described in a site plan prepared by the applicant, shall be evaluated using the following guidelines to ensure that natural resources are protected from adverse effects. Comments from state and federal agencies shall be carefully considered. (Site plans are described in Section 080).*

- (2) *Water Resources (Wetlands, Streams, Ponds, Lakes, and Riparian Areas)*
 - (a) *All Water Resources shall, in part, be protected by establishing undisturbed buffer zones as specified in subsections (2)(a)(B)(i) and (ii) below. These buffer zones are measured horizontally from a wetland, stream, lake, or pond boundary as defined below.*

Applicant Findings: The Columbia River, north of the project area, is the single identified water resource within the area of potential impact. Its buffer zone is drawn on the general construction plan in Attachment B (Sheet 3) using a 200-foot buffer from the normal pool elevation (Bonneville Pool). The impact to the resource buffer zone is approximately 5,640 square feet (0.13 acre) of disturbance, which is the minimum area of disturbance practicable to achieve the project's goal to stabilize the riverbank. The impact is described in the Biological Resources Impact Memo (Attachment C) and depicted in the general construction plan (Attachment B, Sheet 3) and Figure 13 below.

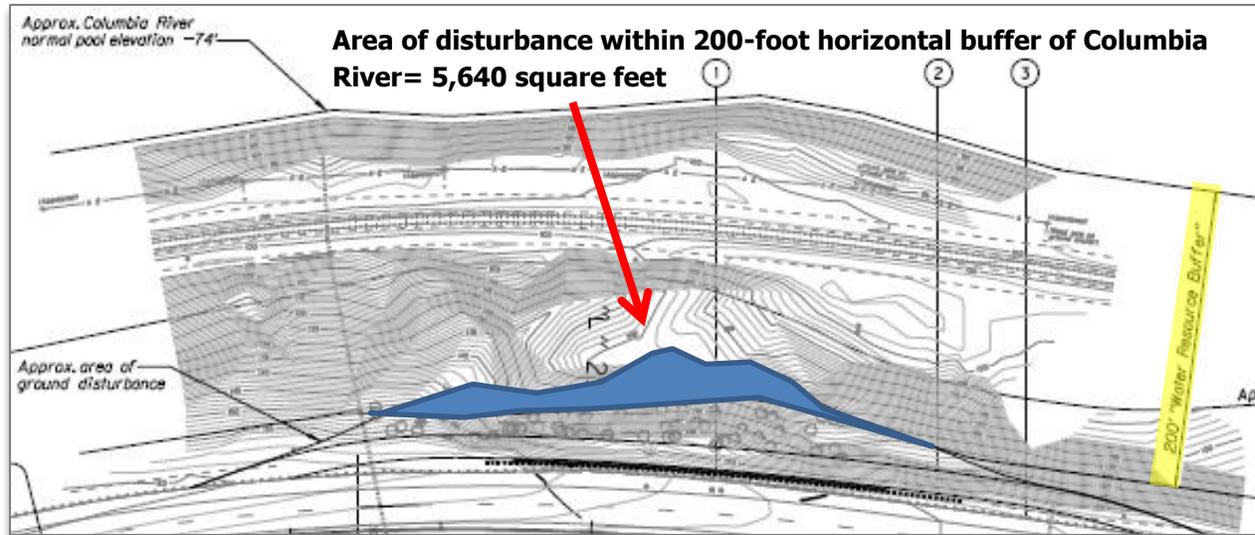


Figure 13: Approximately 5,640 square feet of disturbance is proposed within a 200-foot buffer measured horizontally from the normal pool elevation of the Columbia River. (See Attachment B, Sheet 3)

- (A) *All buffer zones shall be retained undisturbed and in their natural condition, except as permitted with a mitigation plan.*

Applicant Findings: After all practicable avoidance and minimization measures, the slope treatment will impact approximately 0.13 acre of water resource (Columbia River) buffer. This impact will be mitigated by restoration on the project site. Woody debris, boulders, and a thick layer of duff will be salvaged from the area of disturbance before the work begins and replaced as soon as is practicable. The cleared area will be replanted with plant species native to the CRGNSA as listed in the Landscape Revegetation Plan (Attachment B).

- (B) *Buffer zones shall be measured outward from the bank full flow boundary for streams, the high water mark for ponds and lakes, the normal pool elevation for the Columbia River, and the wetland delineation boundary for wetlands on a horizontal scale that is perpendicular to the wetlands, stream, pond or lake boundary. On the main stem of the Columbia River above Bonneville Dam, buffer zones shall be measured landward from the normal pool elevation of the Columbia River. The following buffer zone widths shall be required:*
- (i) *A minimum 200 foot buffer on each wetland, pond, lake, and each bank of a perennial or fish bearing stream, some of which can be intermittent.*

Applicant Findings: The normal operating range of the Bonneville Pool, is 71.5 to 76.5 feet North American Vertical Datum of 1988 (NAVD 88) as provided by United States Army Corps of Engineers (USACE) Biologist Karl Kanbergs. The normal pool elevation was determined by taking the average of the normal operating range, 74 feet NAVD 88. A 200-foot buffer was measured from this elevation. This buffer is shown on the site map in Attachment B. No other water resources are present on the project site.

- ii) *A 50-foot buffer zone along each bank of intermittent (including ephemeral), non-fish bearing streams.*

Applicant Findings: Not applicable. No ephemeral or otherwise intermittent, non-fish bearing streams were identified within the vicinity of the project (see Attachment C).

- (iii) *Maintenance, repair, reconstruction and realignment of roads and railroads within their rights-of-way shall be exempted from the wetlands and riparian guidelines upon demonstration of all of the following:*

- (I) *The wetland within the right-of-way is a drainage ditch not part of a larger wetland outside of the right-of-way.*
- (II) *The wetland is not critical habitat.*
- (III) *Proposed activities within the right-of-way would not adversely affect a wetland adjacent to the right-of-way.*

Applicant Findings: Not applicable. ODOT Region 1 Biologist Kenneth Sargent visited the project site on June 20, 2016 and found no wetlands or waters present. See Biologist's Email Concerning Wetlands in Attachment E).

- (C) *The buffer width shall be increased for the following:*

- (i) *When the channel migration zone exceeds the recommended buffer width, the buffer width shall extend to the outer edge of the channel migration zone.*
- (ii) *When the frequently flooded area exceeds the recommended riparian buffer zone width, the buffer width shall be extended to the outer edge of the frequently flooded area.*

- (iii) *When an erosion or landslide hazard area exceeds the recommended width of the buffer, the buffer width shall be extended to include the hazard area.*

Applicant Findings: No areas that meet these criteria are known to lie within the project area.

- (D) *Buffer zones can be reconfigured if a project applicant demonstrates all of the following: (1) the integrity and function of the buffer zones is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, man-made features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.*

Applicant Findings: The applicant is not proposing to reconfigure the buffer zones.

- (E) *Requests to reconfigure buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist), hired by the project applicant (1) identifies the precise location of the sensitive wildlife/plant or water resource, (2) describes the biology of the sensitive wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant and their surrounding habitat that is vital to their long-term survival or water resource and its long term function.*

Applicant Findings: The applicant is not proposing to reconfigure the buffer zones.

- (F) *The Planning Director shall submit all requests to re-configure sensitive wildlife/plant or water resource buffers to the Forest Service and the appropriate state agencies for review. All written comments shall be included in the project file. Based on the comments from the state and federal agencies, the Planning Director will make a final decision on whether the reconfigured buffer zones are justified. If the final decision contradicts the comments submitted by the federal and state agencies, the Planning Director shall justify how the opposing conclusion was reached.*

Applicant Findings: The applicant is not proposing to reconfigure the buffer zones.

- (b) *When a buffer zone is disturbed by a new use, it shall be replanted with only native plant species of the Columbia River Gorge.*

Applicant Findings: Construction will disturb approximately 0.13 acre of a water resource buffer. Temporarily disturbed areas of the buffer will be replanted with species native to the Gorge area and appropriate for the existing vegetation community. Proposed species include: western redcedar and Douglas fir. See the Landscape Revegetation Plan (Attachment B, Sheet GN and Sheet GN-1).

(c) The applicant shall be responsible for identifying all water resources and their appropriate buffers. (see above)

Applicant Findings: The water resource on site, the Columbia River, and its appropriate buffer has been identified and mapped by biological science consultants. The normal pool elevation and the 200-foot buffer are shown on the general construction plan in Attachment B (Sheet 3).

(d) Wetlands Boundaries shall be delineated using the following:

- (A) The approximate location and extent of wetlands in the Scenic Area is shown on the National Wetlands Inventory (U. S. Department of the Interior 1987). In addition, the list of hydric soils and the soil survey maps shall be used as an indicator of wetlands.*
- (B) Some wetlands may not be shown on the wetlands inventory or soil survey maps. Wetlands that are discovered by the local planning staff during an inspection of a potential project site shall be delineated and protected.*
- (C) The project applicant shall be responsible for determining the exact location of a wetlands boundary. Wetlands boundaries shall be delineated using the procedures specified in the '1987 Corps of Engineers Wetland Delineation Manual (on-line Edition)'.*
- (D) All wetlands delineations shall be conducted by a professional who has been trained to use the federal delineation procedures, such as a soil scientist, botanist, or wetlands ecologist.*

Applicant Findings: The site was surveyed by an ODOT Region 1 biologist on June 20, 2016. The survey determined that no wetlands are present within the project vicinity, see Biologist's Email in Attachment E.

(e) Stream, pond, and lake boundaries shall be delineated using the bank full flow boundary for streams and the high water mark for ponds and lakes. The project applicant shall be responsible for determining the exact location of the appropriate boundary for the water resource.

(f) The Planning Director may verify the accuracy of, and render adjustments to, a bank full flow, high water mark, normal pool elevation (for the Columbia River), or wetland boundary delineation. If the adjusted boundary is contested by the project applicant, the Planning Director shall obtain professional services, at the project applicant's expense, or ask for technical assistance from the Forest Service to render a final delineation.

Applicant Findings: The only water body in the area of potential impact is the Columbia River. The normal pool elevation for the Columbia River at this location was determined by consulting with Karl Kanbergs, a Columbia Basin expert for the USACE, who reported that the normal operating range of the Bonneville Pool is between 71.5 and 76.5 feet NAVD 88. The average of this range, 74 feet NAVD 88, was used as the starting point from which the 200-foot horizontal buffer was measured. The normal pool elevation of the Columbia River at this location is expected to be the same or very similar to the normal pool elevation of the Bonneville Pool since it is only about 6 miles upstream of the dam. There are ditches on the south side of I-84 and the railroad tracks, but they carry only stormwater and are not jurisdictional see Attachment E. The applicant acknowledges that the Planning Director may choose to verify the accuracy of these determinations.

(g) Buffer zones shall be undisturbed unless the following criteria have been satisfied:

(A) The proposed use must have no practicable alternative as determined by the practicable alternative test.

Those portions of a proposed use that have a practicable alternative will not be located in wetlands, stream, pond, lake, and riparian areas and/or their buffer zone.

Applicant Findings: The proposal involves unavoidable disturbance within a 200-foot buffer from the normal pool elevation of the Columbia River (Bonneville Pool). The proposed project does not have a practicable alternative as determined by the practicable alternative test. The purpose of the project is to stabilize a section of the I-84 embankment and there is no other location where this work could occur that would satisfy this project's purpose and need. The proposed approach includes a 60-foot high retaining wall which minimizes the overall footprint of the project within a constrained site. The project has been designed to minimize adverse impacts to site resources including water, plant and wildlife resources which are present on site. The disturbance will be limited to the minimum amount practicable to construct the project. The project has been designed to reduce impacts to scenic/visual resources and cultural resources. No wetlands are present in the vicinity of the project area, see Attachment E.

The project limits of disturbance have been reduced through careful design and construction management planning to remain completely within the existing ODOT right-of-way. The project will reduce the need for repeated disturbances which are frequently and consistently necessary to

address impacts on the road from the steadily moving landslide. In total, 0.13 acre of the Columbia River water resource buffer will be affected by the proposed slope treatment. This represents the minimum practicable to construct the project.

- (B) *Filling and draining of wetlands shall be prohibited with exceptions related to public safety or restoration/enhancement activities as permitted when all of the following criteria have been met:*
 - (i) *A documented public safety hazard exists or a restoration/enhancement project exists that would benefit the public and is corrected or achieved only by impacting the wetland in question, and*
 - (ii) *Impacts to the wetland must be the last possible documented alternative in fixing the public safety concern or completing the restoration/enhancement project, and*
 - (iii) *The proposed project minimizes the impacts to the wetland.*

Applicant Findings: Not Applicable. No wetlands will be filled or drained as part of the proposed project (see Attachment E).

- (C) *Unavoidable impacts to wetlands and aquatic and riparian areas and their buffer zones shall be offset by deliberate restoration and enhancement or creation (wetlands only) measures as required by the completion of a mitigation plan.*

Applicant Findings: The proposed project will result in a total of approximately 0.13 acre of water resource buffer impact. As discussed above, impacts to the buffer area have been minimized through project design. Mitigation for the unavoidable water resource buffer impacts will consist of restoring the disturbed area of River Bottomland forest with appropriate Gorge-specific native species. Planned restoration is detailed in the landscape revegetation plan included in Attachment B on Sheets GN and GN-1. No wetlands would be affected; see Attachment E.

(3) *Wildlife and Plants*

- (a) *Protection of sensitive wildlife/plant areas and sites shall begin when proposed new developments or uses are within 1000 ft of a sensitive wildlife/plant site and/or area.*

Sensitive Wildlife Areas and endemic plants are those areas depicted in the wildlife inventory and listed in Tables 4 and 7 in the Management Plan including all Priority Habitats listed in this Chapter. The approximate locations of sensitive

wildlife and/or plant areas and sites are shown in the wildlife and rare plant inventory.

Applicant Findings: The site was surveyed by ODOT Region 1 biologists on June 20, 2016 for sensitive wildlife, wildlife sites, and plants. No sensitive wildlife and plants were found near to the project area as described in the Biological Resources Impact Memo (Attachment C).

- (b) The Planning Director shall submit site plans (of uses that are proposed within 1,000 feet of a sensitive wildlife and/or plant area or site) for review to the Forest Service and the appropriate state agencies (Oregon Department of Fish and Wildlife for wildlife issues and by the Oregon Natural Heritage Program for plant issues).*

Applicant Findings: A Biological Resources Impact Memo (Attachment C) and an Endangered Species Act Determination of No Effect (Attachment D) for the proposed project has been prepared by qualified natural resource professionals and is available for distribution to USFS and appropriate state agencies.

- (c) The Forest Service wildlife biologists and/or botanists, in consultation with the appropriate state biologists, shall review the site plan and their field survey records. They shall:*
 - (A) Identify/verify the precise location of the wildlife and/or plant area or site,*
 - (B) Determine if a field survey will be required,*
 - (C) Determine, based on the biology and habitat requirements of the affected wildlife/plant species, if the proposed use would compromise the integrity and function of or result in adverse affects (including cumulative effects) to the wildlife or plant area or site. This would include considering the time of year when wildlife or plant species are sensitive to disturbance, such as nesting, rearing seasons, or flowering season, and*

Applicant Findings: The Biological Resources Impact Memo (Attachment C) has been prepared by ODOT Region 1 biologists. The Biological Resources Impact Memo describes the identified Natural Resources and Priority Habitats, and potential impacts to the identified resources of the proposed project. All practicable measures have been adopted and integrated into the project design and proposed construction to avoid any adverse effects, including cumulative impacts on resources. The measures are described below:

ODOT will minimize the impacts by undertaking the work once permitted, rather than after another catastrophic slide failure. This reduces the amount of potential habitat that will be affected and prevent repeated construction to remedy additional slide effects in the future. The project, including the construction techniques, has been designed to affect the smallest footprint possible, about 40,600 square feet. The disturbed area is not considered to be desirable habitat for most native wildlife species because it is isolated from surrounding habitats by I-84 to the south and UPRR to the north. The lights, noise, and danger of the vehicles traveling along the highway and railroad tracks make the project location an unlikely choice for many native wildlife species. However, the project area contains sensitive habitat features described in the Biological Resources Impact Memo in Attachment C. To conserve these habitat features, ODOT will require the construction contractor to use the following best management practices to preserve and restore sensitive habitat features to the extent that is practicable:

- Retain felled trees and other coarse woody debris. Redistribute coarse woody debris post-construction. Retain excavated boulders and redistribute as piles within the restoration area for small mammal and amphibian refuge.
- Replant with tree species congruent with existing forest community. The tree species, quantity and sizing are detailed in the Landscape Revegetation Plan (Attachment B, Sheet GN and Sheet GN-1).
- Salvage and redistribute duff across the restoration area. This will help preserve moisture and nutrients, create hide holes in rocks, and reestablish the native seed bank on site.
- Avoid disturbing nurse logs.

Discussion of Cumulative Impacts

- While the construction of the retaining wall will cause a temporary disturbance within a 200-foot buffer of the Columbia River and on land that is potential habitat for listed species, the entire area of disturbance within the buffer will be restored to existing conditions. Additionally, the project will greatly reduce the need for regularly repeated disturbance associated with roadway maintenance as the landslide continues to steadily drop the elevation of the roadway.
- The land adjacent to the project area is owned and managed by ODOT, USFS, and UPRR. The ODOT- and UPRR-managed land is associated with road and rail right-of-

ways, which usually do not contain natural resources. The USFS is committed to protecting the natural resources of the surrounding areas which will therefore not be subject to other possibly adverse uses.

- The project will not reduce the quality of stormwater runoff or ground water. The wall will contribute a negligible amount of impervious surface to the area. Replacing degraded sub-grade pipes will improve the directional flows of surface runoff and groundwater.
- The project will not impact species or habitat due to the project not including in-water work, riparian impacts, changes to impervious surfaces, and changes in noise levels that exceed the usual freeway and railroad levels.

No short-term, long-term, or cumulative adverse effects will result from the slope stabilization project. Impacts on the water resource buffer area will be mitigated by restoring the entire area of disturbance so that there is no loss in functions and value of habitat on the project site.

(D) *Delineate the undisturbed 200 ft buffer on the site plan for sensitive plants and/or the appropriate buffer for sensitive wildlife areas or sites, including nesting, roosting and perching sites.*

- i. *(i) Buffer zones can be reconfigured if a project applicant demonstrates all of the following: (1) the integrity and function of the buffer zones is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, manmade features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.*
- ii. *Requests to reduce buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist), hired by the project applicant, (1) identifies the precise location of the sensitive wildlife/plant or water resource, (2) describes the biology of the sensitive wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant and their surrounding habitat that is vital to their long-term survival or water resource and its long term function.*

The Planning Director shall submit all requests to re-configure sensitive wildlife/plant or water resource buffers to the Forest Service

and the appropriate state agencies for review. All written comments shall be included in the record of application and based on the comments from the state and federal agencies, the Planning Director will make a final decision on whether the reduced buffer zones is justified. If the final decision contradicts the comments submitted by the federal and state agencies, the Planning Director shall justify how the opposing conclusion was reached

- (i) Buffer zones can be reconfigured if a project applicant demonstrates all of the following: (1) the integrity and function of the buffer zones is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, man made features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.*
- (ii) Requests to reduce buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist), hired by the project applicant, (1) identifies the precise location of the sensitive wildlife/plant or water resource, (2) describes the biology of the sensitive wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant and their surrounding habitat that is vital to their long-term survival or water resource and its long term function.*
- (iii) The Planning Director shall submit all requests to re-configure sensitive wildlife/plant or water resource buffers to the Forest Service and the appropriate state agencies for review. All written comments shall be included in the record of application and based on the comments from the state and federal agencies, the Planning Director will make a final decision on whether the reduced buffer zones is justified. If the final decision contradicts the comments submitted by the federal and state agencies, the Planning Director shall justify how the opposing conclusion was reached*

Applicant Findings: No sensitive plants or wildlife areas were identified within 200 feet of the project area. See the Biological Memo in Attachment C. The applicant is not proposing to reconfigure or reduce the standard buffer zone.

- (d) *The Planning Director, in consultation with the State and federal wildlife biologists and/or botanists, shall use the following criteria in reviewing and evaluating the site plan to ensure that the proposed developments or uses do not compromise the integrity and function of or result in adverse effects to the wildlife or plant area or site:*
- (A) *Published guidelines regarding the protection and management of the affected wildlife/plant species. Examples include: the Oregon Department of Forestry has prepared technical papers that include management guidelines for osprey and great blue heron; the Washington Department of Fish and Wildlife has prepared similar guidelines for a variety of species, including the western pond turtle, the peregrine falcon, and the Larch Mountain salamander (Rodrick and Milner 1991).*
 - (B) *Physical characteristics of the subject parcel and vicinity, including topography and vegetation.*
 - (C) *Historic, current, and proposed uses in the vicinity of the sensitive wildlife/plant area or site.*
 - (D) *Existing condition of the wildlife/plant area or site and the surrounding habitat and the useful life of the area or site.*
 - (E) *In areas of winter range, habitat components, such as forage, and thermal cover, important to the viability of the wildlife must be maintained or, if impacts are to occur, enhancement must mitigate the impacts so as to maintain overall values and function of winter range.*
 - (F) *The site plan is consistent with the "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources" (Oregon Department of Fish and Wildlife 2000).*
 - (G) *The site plan activities coincide with periods when fish and wildlife are least sensitive to disturbance. These would include, among others, nesting and brooding periods (from nest building to fledgling of young) and those periods specified.*

- (H) *The site plan illustrates that new developments and uses, including bridges, culverts, and utility corridors, shall not interfere with fish and wildlife passage.*
- (I) *Maintain, protect, and enhance the integrity and function of Priority Habitats (such as old growth forests, talus slopes, and oak woodlands) as listed on the following Priority Habitats Table. This includes maintaining structural, species, and age diversity, maintaining connectivity within and between plant communities, and ensuring that cumulative impacts are considered in documenting integrity and function.*

PRIORITY HABITATS TABLE	
Priority Habitats	Criteria
Aspen stands	High fish and wildlife species diversity, limited availability, high vulnerability to habitat alteration.
Caves	Significant wildlife breeding habitat, limited availability, dependent species.
Old-growth forest	High fish and wildlife density, species diversity, breeding habitat, seasonal ranges, and limited and declining availability, high vulnerability.
Oregon white oak woodlands	Comparatively high fish and wildlife density, species diversity, declining availability, high vulnerability
Prairies and steppe	Comparatively high fish and wildlife density, species diversity, important breeding habitat, declining and limited availability, high vulnerability.
Riparian	High fish and wildlife density, species diversity, breeding habitat, movement corridor, high vulnerability, dependent species.
Wetlands	High species density, high species diversity, important breeding habitat and seasonal ranges, limited availability, high vulnerability.
Snags and logs	High fish and wildlife density, species diversity, limited availability, high vulnerability, dependent species.
Talus	Limited availability, unique and dependent species, high vulnerability.
Cliffs	Significant breeding habitat, limited availability, dependent species.
Dunes	Unique species habitat, limited availability, high vulnerability, dependent species.

Applicant Findings: The Biological Resources Impact Memo (Attachment C) lists priority habitat that could be in the area of potential impact. No sensitive or endangered vegetation was encountered on the site visit. Habitat features such as the boulder slope and nurse logs are potential habitat for

the Larch Mountain Salamander. However, the Larch Mountain Salamander was not encountered during the site visit and it is unlikely to be present in this location due to this site's isolation from other suitable habitat by the interstate highway.

As discussed above and in the Biological Resources Impact Memorandum (Attachment C), ODOT will minimize the impacts by undertaking the work once permitted, rather than after a catastrophic slide failure, which will reduce the amount of potential habitat to be impacted and reduce the duration of construction. The construction zone has been designed to have the smallest footprint possible. Additionally, ODOT will conserve and restore sensitive habitat features.

The project is not expected to have a long-term impact on any Larch Mountain Salamander populations or potential habitat because the impact area is relatively small, the work is discrete and short-term, and major potential habitat components will be restored to the extent that is allowed by engineering constraints.

(e) The wildlife/plant protection process may terminate if the Planning Director, in consultation with the Forest Service and state wildlife agency or Heritage program, determines (1) the sensitive wildlife area or site is not active, or (2) the proposed use is not within the buffer zones and would not compromise the integrity of the wildlife/plant area or site, and (3) the proposed use is within the buffer and could be easily moved out of the buffer by simply modifying the project proposal (site plan modifications). If the project applicant accepts these recommendations, the Planning Director shall incorporate them into the final decision and the wildlife/plant protection process may conclude.

Applicant Findings: The slope stabilization treatment and design features have been carefully developed to avoid, to the maximum extent practicable, impacts to all identified natural resources and priority habitats and their associated buffers while still meeting the project need to repair the landslide. The design represents the best alternative for the project with all practicable avoidance and measures incorporated into the design of the retaining wall.

(f) If the above measures fail to eliminate the adverse effects, the proposed project shall be prohibited, unless the project applicant can meet the Practicable Alternative Test and prepare a mitigation plan to offset the adverse effects by deliberate restoration and enhancement.

Applicant Findings: The wall design features have been carefully developed to avoid impacts to sensitive natural resources, priority habitat and associated buffers to the maximum extent practicable while still meeting the project purpose. Minimization measures have been incorporated into the design of the slope treatment. The design represents the best practicable alternative for the project. The unavoidable impacts are the least that can be achieved by all practicable avoidance and minimization measures.

The project will have 0.13 acre of unavoidable impacts to a water resource buffer zone (Columbia River). As described in the Biological Resources Impact Memo, Attachment C, and shown on the Landscape Revegetation Plan in Attachment B (Sheet GN and GN-1), preservation, restoration, and enhancement measures will be taken to replace and enhance functions of the affected portion of the buffer area in accordance with the requirements of Section 600. No impacts to threatened or endangered plant or wildlife species have been found to be likely to occur as a result of the proposed project.

(g) The Planning Director shall submit a copy of all field surveys (if completed) and mitigation plans to the Forest Service and appropriate state agencies. The Planning Director shall include all comments in the record of application and address any written comments submitted by the state and federal wildlife agency/heritage programs in the final decision.

Based on the comments from the state and federal wildlife agency/heritage program, the Planning Director shall make a final decision on whether the proposed use would be consistent with the wildlife/plant policies and guidelines. If the final decision contradicts the comments submitted by the state and federal wildlife agency/heritage program, the Planning Director shall justify how the opposing conclusion was reached.

Applicant Findings: The applicant acknowledges that the Planning Director will provide to federal and state agencies all biological research, impact assessments, and the mitigation plan prepared for the proposed project; they are attached for use.

(h) The Planning Director shall require the project applicant to revise the mitigation plan as necessary to ensure that the proposed use would not adversely affect a sensitive wildlife/plant area or site.

Applicant Findings: The applicant acknowledges that the Planning Director may require revision of the proposed mitigation plan as necessary to ensure that the proposed slope treatment will not adversely affect a sensitive wildlife/plant area or site.

(4) *Soil Productivity*

(a) Soil productivity shall be protected using the following guidelines:

(A) A description or illustration showing the mitigation measures to control soil erosion and stream sedimentation.

Applicant Findings: The Erosion Control Plan Sheet GA is included in the Draft Plans in Attachment B. Erosion control measures will include the installation of straw wattles and a construction entrance and egress. The straw wattles will be installed along the perimeter and

downslope of the project's disturbance area. The construction entrance and egress will be located on the east and west ends of the construction zone.

- (B) *New developments and land uses shall control all soil movement within the area shown on the site plan.*

Applicant Findings: All soil within the project footprint will be permanently stabilized after project completion using methods such as seeding native herbaceous groundcover, woody shrubs, and/or applying soil stabilizers to bare soil such as compost blankets.

- (C) *The soil area disturbed by new development or land uses, except for new cultivation, shall not exceed 15 percent of the project area.*

Applicant Findings: The total area of soil disturbance is approximately 40,600 square feet (0.93 acre). Disturbed soil area does not exceed 15 percent of ODOT right-of-way within the CRGNSA.

- (D) *Within 1 year of project completion, 80 percent of the project area with surface disturbance shall be established with effective native ground cover species or other soil-stabilizing methods to prevent soil erosion until the area has 80 percent vegetative cover.*

Applicant Findings: Areas temporarily disturbed by construction will be restored using a combination of installing bolder piles, woody debris, and planting native species. All remaining areas temporarily disturbed by construction will be seeded with a mix of native groundcover species including areas adjacent to the highway and on the regraded slope below. The seeding will provide effective native ground cover within one year in areas of disturbed soils to prevent erosion. The seed mix will include the following native species:

- Red columbine, *Aquileja Formosa* - wildflower
- Columbia brome, *Bromus carinatus* – grass
- California oatgrass, *Danthonia californica* – grass
- Blue wildrye, *Elymus glaucus* - grass
- Oceanspray, *Holodiscus discolor* – woody shrub
- Snowberry, *Symphoricarpos albus* –woody shrub

B. Practicable Alternative Test

- (1) *An alternative site for a proposed use shall be considered practicable if it is available and the proposed use can be undertaken on that site after taking into consideration cost, technology, logistics, and overall project purposes.*

A practicable alternative does not exist if a project applicant satisfactorily demonstrates all of the following:

- (a) *The basic purpose of the use cannot be reasonably accomplished using one or more other sites in the vicinity that would avoid or result in less adverse effects on wetlands, ponds, lakes, riparian areas, wildlife or plant areas and/or sites.*

Applicant Findings: The purpose of the project is to stabilize a landslide that has caused a drop in elevation of I-84 at milepost 48. In 1996, after severe weather events, the slide created a large sinkhole, 100 feet by 40 feet, in the middle of I-84. This project is needed to improve resiliency of the stretch of highway before another cataclysmic slide event. The retaining wall has been designed with upgrades to improve seismic resiliency which, in the event of a seismic episode, will help maintain the important transportation corridor I-84 serves as. The project will also reduce the impact of construction since it will stabilize the landslide which causes required frequently repeated maintenance on the roadway. The project is site-specific and there are no other locations where this work could be done that would effectively address the purpose and need of stabilizing the landslide. The slope treatment design was driven by an effort to minimize project impacts to natural resources.

- (b) *The basic purpose of the use cannot be reasonably accomplished by reducing its proposed size, scope, configuration, or density, or by changing the design of the use in a way that would avoid or result in less adverse effects on wetlands, ponds, lakes, riparian areas, wildlife or plant areas and/or sites.*

Applicant Findings: The project has been designed to minimize impacts to surrounding natural resources by stabilizing the slope before a slide failure which would result in a larger area of disturbance and a longer duration of disturbance than the proposed action. The proposal would also reduce the risk of closures of I-84, a major transportation corridor. The project has been designed to use the smallest footprint possible. A reduction in the size of the wall would result in a loss in safety, resiliency, and effectiveness. Additionally, sensitive habitat features, including nurse logs, felled trees and other woody debris, boulders, and duff, within the area of disturbance will be salvaged before the work begins and redistributed on the site. The disturbed area will be replanted with native species that are Gorge-specific and appropriate for the site. Direct and indirect impacts to significant natural resources and priority habitats have been minimized to the maximum extent practicable.

- (c) *Reasonable attempts were made to remove or accommodate constraints that caused a project applicant to reject alternatives to the proposed use. Such constraints include inadequate infrastructure, parcel size, and land use designations. If a land use designation or recreation intensity class is a constraint, an applicant must request a Management Plan amendment to demonstrate that practicable alternatives do not exist.*

Applicant Findings: Parcel size and land use designations are not applicable to determining the location of the retaining wall. The proposed location was selected to inhibit movement of an active landslide which is affecting a major interstate highway, I-84. The wall design and construction management plan have been modified to limit impacts on natural resources and priority habitats based on preliminary fieldwork and agency suggestions.

C. Mitigation Plan

- (1) *Mitigation Plan shall be prepared when:*
 - (a) *The proposed development or use is within a buffer zone (wetland, pond, lakes, riparian areas, wildlife or plant areas and/or sites).*
 - (b) *There is no practicable alternative (see the “practicable alternative” test).*

Applicant Findings: There is no alternative location where this work could occur that would satisfy the purpose and need of this project to stabilize the existing landslide affecting the I-84 roadway embankment at this specific location. Impacts have been avoided to the maximum extent possible, and all practicable minimization measures have been applied to both priority habitat features and the water resource buffer area. The remaining unavoidable impact is the least possible without compromising the purpose and need of the proposed project. The measures to mitigate impacts to sensitive resources and the buffer area are described in the Biological Resources Impact Memo (Attachment C) and in this section.

- (2) *In all cases, Mitigation Plans are the responsibility of the applicant and shall be prepared by an appropriate professional (botanist/ecologist for plant sites, a wildlife/fish biologist for wildlife/fish sites, and a qualified professional for water resource sites).*

Applicant Findings: Mitigation has been developed in cooperation with appropriate professionals, which include specialists in biological sciences for ODOT and a professional landscape architect for David Evans and Associates, Inc.

- (3) *The primary purpose of this information is to provide a basis for the project applicant to redesign the proposed use in a manner that protects sensitive water resources, and wildlife/plant areas and sites, that maximizes his/her development options, and that mitigates, through restoration, enhancement, and replacement measures, impacts to the water resources and/or wildlife/plant area or site and/or buffer zones.*

Applicant Findings: As discussed above, ODOT has assessed and refined design of the proposed slope treatment to minimize impacts to the Columbia River and wildlife/plant areas identified through site inspections, available species records, and consultation with ODOT biologists. As a result of these assessments, impacts to natural resources and the water resource buffer have been

minimized to the maximum extent practicable. On-site restoration of buffer and habitat area is proposed as mitigation for impacts to water resource buffer, talus, and mature forest habitat.

As described above and in the Biological Resources Impact Memo (Attachment C), the restoration will consist of salvaging woody debris, boulders, and a thick layer of duff and replacing them after construction. The area will also be replanted with native trees and seeded with native woody and herbaceous species as appropriate that are congruent with the existing forest community in the River Bottomlands landscape setting.

- (4) *The applicant shall submit the mitigation plan to the Planning Director. The Planning Director shall submit a copy of the mitigation plan to the Forest Service, and appropriate state agencies. If the final decision contradicts the comments submitted by the state and federal wildlife agency/heritage program, the Planning Director shall justify how he/she reached an opposing conclusion.*

Applicant Findings: The applicant recognizes that Hood River County will submit copies of the proposed natural resource mitigation to the USFS and appropriate state agencies. ODOT understands that Hood River County may require revision of the mitigation as necessary to ensure that the proposed slope treatment will not adversely affect a sensitive wildlife/plant area or site.

- (5) *A project applicant shall demonstrate sufficient fiscal, technical, and administrative competence to successfully execute a mitigation plan involving wetland creation.*

Applicant Findings: Not applicable—the mitigation plan does not include wetland creation.

- (6) *Mitigation plans shall include maps, photographs, and text. The text shall:
 - (a) *Describe the biology and/or function of the sensitive resources (eg. Wildlife/plant species, or wetland) that will be affected by a proposed use. An ecological assessment of the sensitive resource to be altered or destroyed and the condition of the resource that will result after restoration will be required. Reference published protection and management guidelines.**

Applicant Findings: The Biological Resources Impact Memorandum (Attachment C) describes all of the sensitive resources that will be affected by the proposed project. The resources and the amount of impact are described in the text of the report.

- (b) *Describe the physical characteristics of the subject parcel, past, present, and future uses, and the past, present, and future potential impacts to the sensitive resources. Include the size, scope, configuration, or density of new uses being proposed within the buffer zone.*

Applicant Findings: The Biological Resources Impact Memo, assesses the physical characteristics of the project site. The project area is located on the shoulder of I-84 and is within existing ODOT

right-of-way. A portion of the existing slope was constructed when this section of the highway was built in the 1950s; landslide activity has been documented since then. The proposal would install a retaining wall within the existing interstate highway prism. No new uses are proposed. Adjacent to the site is UPRR right-of-way. The existing railroad is constrained between I-84 and the Columbia River and future expansion of the railroad is unlikely. USFS-managed land is adjacent to the site on the south, is an agency committed to conserving the forest land, and so development future development in the area is not anticipated. The site experienced disturbance during construction of the interstate highway in the 1950s when the area was filled in to support the roadway. The since the disturbance involved with the original construction of the highway, native riparian forest species have recolonized the area and matured.

- (c) *Explain the techniques that will be used to protect the sensitive resources and their surrounding habitat that will not be altered or destroyed (for examples, delineation of core habitat of the sensitive wildlife/plant species and key components that are essential to maintain the long-term use and integrity of the wildlife/plant area or site).*

Applicant Findings: As explained in the Biological Resources Impact Memorandum (Attachment C), ODOT best management practices and erosion control measures will ensure that effects will not exceed the immediate project area. The project including the construction zone has been designed to use the smallest footprint possible, of which is only a small portion of available habitat in the area. In addition, ODOT will use the following best management practices via contract to preserve and restore sensitive habitat features to the extent that is practicable:

- Retain excavated boulders and redistribute as piles within the restoration area for small mammal and amphibian refuge.
- Replant with western redcedar and Douglas fir, which are species congruent with existing forest community. A professional landscape architect has determined appropriate trees, quantity, and sizing, see the Landscape Revegetation Plan in Attachment B (Sheet GN and Sheet GN-1).
- Salvage and redistribute duff across the restoration area. This will help preserve moisture and nutrients, create hide holes in rocks and reestablish the native seed bank on site.
- Avoid disturbing nurse logs.
- Retain felled trees, and other coarse woody debris. Redistribute coarse woody debris post-construction (see drawing on Sheet GN). This will provide a supply of future nurse logs.

- (d) *Show how restoration, enhancement, and replacement (creation) measures will be applied to ensure that the proposed use results in minimum feasible impacts to sensitive resources, their buffer zones, and associated habitats.*

Applicant Findings: ODOT will implement the following measures prior to, and during construction to protect sensitive resources:

- Natural resources specialists will review the proposed disturbance area prior to commencement of construction activities, and identify and flag with construction fencing or other material to protect areas of sensitive resources.
- Prior to beginning construction, a pre-construction conference will be held to review the project construction plans and a site walk-through conducted with the project team.
- All applicable erosion control measures will be in place during all phases of construction.
- All areas disturbed by construction activities will be replanted with appropriate native species prior to close-out of the construction contract.
- No construction debris, untreated construction drainage or run-off, or any other water quality impacting material will be allowed in the Columbia River during construction.
- The removed trees with root balls attached will be retained and stockpiled for use as large woody debris on this project.

- (e) *Show how the proposed restoration, enhancement, or replacement (creation) mitigation measures are NOT alternatives to avoidance. A proposed development/use must first avoid a sensitive resource, and only if this is not possible should restoration, enhancement, or creation be considered as mitigation. In reviewing mitigation plans, the local government, appropriate state agencies, and Forest Service shall critically examine all proposals to ensure that they are indeed last resort options.*

Applicant Findings: As explained above, this safety enhancement project is designed to stabilize a landslide which affects a specific section of I-84. All measures to avoid and minimize impacts to sensitive resources have been applied and are described in the “Practical Alternatives Test” section of this document.

- (7) *At a minimum, a project applicant shall provide to the Planning Director a progress report every 3-years that documents milestones, successes, problems, and contingency*

actions. Photographic monitoring stations shall be established and photographs shall be used to monitor all mitigation progress.

Applicant Findings: The proposed mitigation for buffer impacts will include post-construction monitoring that addresses the required elements as listed above. The applicant will submit monitoring reports to the County for distribution and review by the USFS at least every 3 years until documentation shows that the proposed enhancement plantings have been successfully established.

- (8) *A final monitoring report shall be submitted to the Planning Director for review upon completion of the restoration, enhancement, or replacement activity. This monitoring report shall document successes, problems encountered, resource recovery, status of any sensitive wildlife/plant species and shall demonstrate the success of restoration and/or enhancement actions. The Planning Director shall submit copies of the monitoring report to the Forest Service; who shall offer technical assistance to the Planning Director in helping to evaluate the completion of the mitigation plan. In instances where restoration and enhancement efforts have failed, the monitoring process shall be extended until the applicant satisfies the restoration and enhancement guidelines.*

Applicant Findings: The applicant will submit monitoring reports to the County for distribution and review by the USFS at least every 3 years until documentation shows that the proposed enhancement plantings have been successfully established.

- (9) *Mitigation measures to offset impacts to resources and/or buffers shall result in no net loss of water quality, natural drainage, fish/wildlife/plant habitat, and water resources by addressing the following:*
- (a) *Restoration and enhancement efforts shall be completed no later than one year after the sensitive resource or buffer zone has been altered or destroyed, or as soon thereafter as is practicable.*

Applicant Findings: Restorative planting and replacement of salvaged materials to restore the area of temporary disturbance will occur as soon as is practicable. All work is planned to be complete within one year.

- (b) *All natural vegetation within the buffer zone shall be retained to the greatest extent practicable. Appropriate protection and maintenance techniques shall be applied, such as fencing, conservation buffers, livestock management, and noxious weed control. Within five years, at least 75 percent of the replacement vegetation must survive. All plantings must be with native plant species that replicate the original vegetation community.*

Applicant Findings: The project will be constructed to retain the existing vegetation to the greatest extent practicable. Tree removal shall be minimized. Any planting of vegetation related to the approved project shall be of native species. The project proposes to restore vegetation in disturbed areas as soon as practicable. The revegetation with native ground cover of the disturbed areas shall occur within a maximum of one year after completion of the slope stabilization project. Revegetation shall be accomplished through seeding native grasses and woody shrubs and planting native trees. Replanted areas shall be monitored by the applicant to ensure the success of the revegetation. If the revegetation is not successful, the planting work shall be evaluated, and the applicant shall develop and implement alternative planting proposals until the revegetation effort is successful. All plantings will be with native plant species that are appropriate for the site conditions and are characteristic of the dominant native plant community for the River Bottomlands, riparian forest habitat type. The applicant will monitor the project area to ensure that revegetation within the project area achieves a 75% rate of survival for 5 years.

- (c) *Habitat that will be affected by either temporary or permanent uses shall be rehabilitated to a natural condition. Habitat shall be replicated in composition, structure, and function, including tree, shrub and herbaceous species, snags, pool-riffle ratios, substrata, and structures, such as large woody debris and boulders.*

Applicant Findings: The Biological Resources Impact Memo (Attachment C) and the Revegetation Plan (Attachment B, Sheet GN and Sheet GN-1) detail how priority habitat affected by the project will be preserved, replaced, and restored. Nurse logs will be protected and undisturbed when possible. Felled trees and other woody debris will be retained when appropriate for the creation of new nurse logs where existing ones cannot be preserved. Excavated boulders will be saved and reinstalled on the slope after construction to restore disturbed areas that could be possible amphibian habitat. A thick layer of duff will be removed from the area of disturbance before excavation begins. This material will be stored offsite and replaced after construction to restore the area to its natural condition. The entire area will be revegetated with native species.

- (d) *If this standard is not feasible or practical because of technical constraints, a sensitive resource of equal or greater benefit may be substituted, provided that no net loss of sensitive resource functions occurs and provided the Planning Director, in consultation with the appropriate State and Federal agency, determine that such substitution is justified.*

Applicant Findings: Not applicable. No sensitive resource substitutions are anticipated.

- (e) *Sensitive plants that will be destroyed shall be transplanted or replaced, to the maximum extent practicable. Replacement is used here to mean the establishment of a particular plant species in areas of suitable habitat not affected by new uses. Replacement may be accomplished by seeds, cuttings, or other appropriate methods.*

Replacement shall occur as close to the original plant site as practicable. The project applicant shall ensure that at least 75 percent of the replacement plants survive 3 years after the date they are planted.

Applicant Findings: Not Applicable. No sensitive plants will be impacted as no sensitive plants were found in the project area (see Attachment C, the Biological Resources Impact Memo).

(f) *Nonstructural controls and natural processes shall be used to the greatest extent practicable.*

Applicant Findings: Professional geotechnical engineers have determined that there is no practicable non-structural control that could be used to stabilize the slope at this location without compromising effectively addressing the purpose and need of the project while minimizing impacts to natural resources. Therefore, a retaining wall is proposed. Native trees, shrubs, and grasses that the project will plant will provide additional stability through natural processes.

(A) *Bridges, roads, pipeline and utility corridors, and other water crossings shall be minimized and should serve multiple purposes and properties.*

Applicant Findings: The drainage system on the south side of the highway is anticipated to be damaged or no longer intact. To ensure the drainage system is aiding to unload the landslide as effectively as possible, the project will replace the drain pipe and ensure it is intact. This drainage system serves the public benefit of a providing safer transportation facility that is more resilient against severe weather events.

(B) *Stream channels shall not be placed in culverts unless absolutely necessary for property access. Bridges are preferred for water crossings to reduce disruption to hydrologic and biologic functions. Culverts shall only be permitted if there are no practicable alternatives as demonstrated by the 'Practical Alternative Test'.*

Applicant Findings: Not applicable. No culverts are proposed.

(C) *Fish passage shall be protected from obstruction.*

Applicant Findings: Not applicable. No activities associated with the project will result in impacts to fish passage.

(D) *Restoration of fish passage should occur wherever possible.*

Applicant Findings: No permanent or temporary impacts to fish passage will occur as a result of the proposed project and no fish passage restoration is proposed.

- (E) *Show location and nature of temporary and permanent control measures that shall be applied to minimize erosion and sedimentation when riparian areas are disturbed, including slope netting, berms and ditches, tree protection, sediment barriers, infiltration systems, and culverts.*

Applicant Findings: All appropriate erosion control and sedimentation measures will be implemented as described in the ODOT Erosion Control Manual, which can be found along with an erosion control plan in Attachment B, Sheet GA.

- (F) *Groundwater and surface water quality will not be degraded by the proposed use. Natural hydrologic conditions shall be maintained, restored, or enhanced in such a manner that replicates natural conditions, including current patterns (circulation, velocity, volume, and normal water fluctuation), natural stream channel and shoreline dimensions and materials, including slope, depth, width, length, cross-Sectional profile, and gradient.*

Applicant Findings: Ground and surface water quality will not be degraded by the proposed project. The drainage system on the south side of the highway is thought to be damaged or no longer intact. To ensure the drainage system is aiding to unload the landslide as effectively as possible, the project will replace the drain pipe and ensure it is intact. This drainage system serves the public benefit of a providing safer transportation facility that is more resilient against severe weather events. After construction is completed, the areas of ground disturbance will be planted, seeded, and mulched in accordance with ODOT's Erosion Control Manual and Standard Environmental Specifications (ODOT 2005), which are available upon request.

- (G) *Those portions of a proposed use that are not water-dependent or that have a practicable alternative will be located outside of stream, pond, and lake buffer zones.*

Applicant Findings: As described previously, there is no practicable alternative for the location of the slope treatment that would have a lesser impact on the river buffer zone.

- (H) *Streambank and shoreline stability shall be maintained or restored with natural revegetation.*

Applicant Findings: A part of this project is riverbank stabilization. The existing active landslide cannot be stabilized by the installation of vegetation alone. Consequently, a retaining wall with a subgrade steel anchoring system covered in pigmented shotcrete is proposed. The stability of soil and sediments at the surface of the embankment shall additionally be maintained through minimizing the disturbance of the riverbank, by following all of the appropriate ODOT Standard Specifications related to waterways, using all appropriate erosion and sediment control best

management practices, and restoring areas that have been disturbed by construction with appropriate native plantings.

- (I) *The size of restored, enhanced, and replacement (creation) wetlands shall equal or exceed the following ratios. The first number specifies the required acreage of replacement wetlands, and the second number specifies the acreage of wetlands altered or destroyed.*

Restoration: 2: 1

Creation: 3: 1

Enhancement: 4: 1

Applicant Findings: Not Applicable. No wetland restoration, enhancement, or creation is needed as there are no direct impacts to wetlands associated with the proposed project.

- (g) *Wetland creation mitigation shall be deemed complete when the wetland is self-functioning for 5 consecutive years. Self-functioning is defined by the expected function of the wetland as written in the mitigation plan. The monitoring report shall be submitted to the local government to ensure compliance. The Forest Service, in consultation with appropriate state agencies, shall extend technical assistance to the local government to help evaluate such reports and any subsequent activities associated with compliance.*

Applicant Findings: Not Applicable. No wetland creation is proposed.

- (g) *Wetland restoration/enhancement can be mitigated successfully by donating appropriate funds to a non-profit wetland conservancy or land trust with explicit instructions that those funds are to be used specifically to purchase protection easements or fee title protection of appropriate wetlands acreage in or adjacent to the Columbia River Gorge meeting the ratios given above in guideline 600(C)(9)(f)(I). These transactions shall be explained in detail in the Mitigation Plan and shall be fully monitored and documented in the monitoring report.*

Applicant Findings: Not Applicable. No wetland restoration/enhancement is proposed.

***ATTACHMENT A — NSA PRE-FILING MEETING SUMMARY
NOTES***



DAVID EVANS
AND ASSOCIATES INC.

MEMORANDUM

DATE: April 7, 2016
TO: Matt Freitag, Oregon Department of Transportation
FROM: Natalie Warner, Planner
SUBJECT: **K18762 I-84: Farley Slide - NSA Pre-filing Meeting Summary Notes**
COPIES: Kevin Bracy, Gigi Cooper, Kristen Stallman

Hood River County Office of Community Development

April 7, 2016

Attendees: Kevin Bracy, Kristen Stallman, Eric Walker, Natalie Warner

The project site is zoned: Special Management Area- Forest (SMA-F)

The County considers the proposed project generally an, "allowable use."

The NSA review submittal is required to:

- Identify disturbance area setbacks from the Columbia River and any other **water resources** near the impact area. There is a requirement of a 200-foot buffer between water resources and any proposed disturbance.
- Include a **cultural resources** inventory report. Eric said he was unsure of the required extent of these studies, but it would likely not need to go through all levels. ODOT will produce the study.
- Include a **biological resources** report.
- Analyze **scenic impacts**. The relevant key viewing areas are: the Columbia River (from a boat) and SR 14 (from a car). There may be other key viewing areas impacted by the project, for example, Dog Mountain. It may be necessary to photograph the project site from potential key viewing areas to determine whether there is additional risk of visual impacts. The submittal will need to include a before-and-after comparison of the project. This could be done by taking a picture of the landslide and using Photoshop to animate the wall according to plans. The review standard for impacts is, "*not visually evident.*"
- Address **I-84 Corridor Strategy** design requirements.
- Include a **cumulative impacts** report which includes the combined impacts of this with other related projects, i.e. other ODOT improvements to I-84 and the Old Columbia River Highway.
- Include a **planting plan** and the number, size, percentage of species of trees to be removed
- **Erosion control plan**....etc.

No other permits will be required (e.g. building or grading permits).

Kevin asked if there are requirements for the amount of fill to be replaced around the wall once it has been constructed. Eric recommended that the project use more topographic screening rather than relying more heavily on vegetation to obscure the wall. The reason for this is there is risk of trees dying or become damaged from disease, insect infestations, fire, etc.; so more of the wall should be subgrade.

Kristen recommended:

- The height of the wall be undulating to help blend in with natural lines of the landscape,
- The land use application emphasize that the access road will be temporary,
- All materials be stored in existing, approved ODOT stockpile locations, and
- The project meet with the Friends of the Gorge early-on in the project.

Eric stated that the location of the **storage areas** should be identified in the submittal, the duration of time that the materials will be there, the amount of materials to be stored, and what BMPs will be used.

Eric was not prepared to give specific code sections to address at this point.

No changes were made to the NSA review section in the most recent Hood River zoning code update.

The NSA review period will be a minimum of 6 months, likely between 6 and 9 months.

ATTACHMENT B – PRELIMINARY PLANS

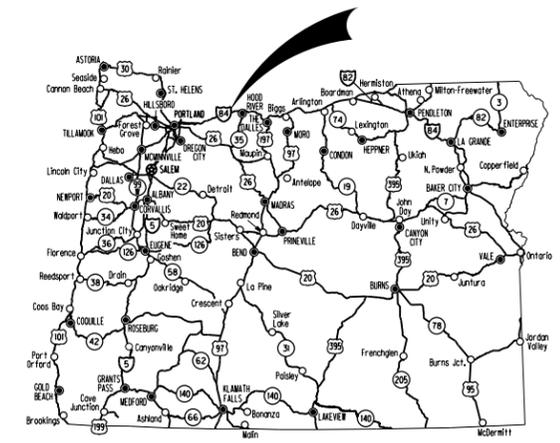
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
1A	Index Of Sheets Cont. & Std. Drg. Nos.

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT
GRADING, DRAINAGE & STRUCTURES

I-84: FARLEY SLIDE PROJECT
COLUMBIA RIVER HIGHWAY
HOOD RIVER COUNTY

JULY 2017

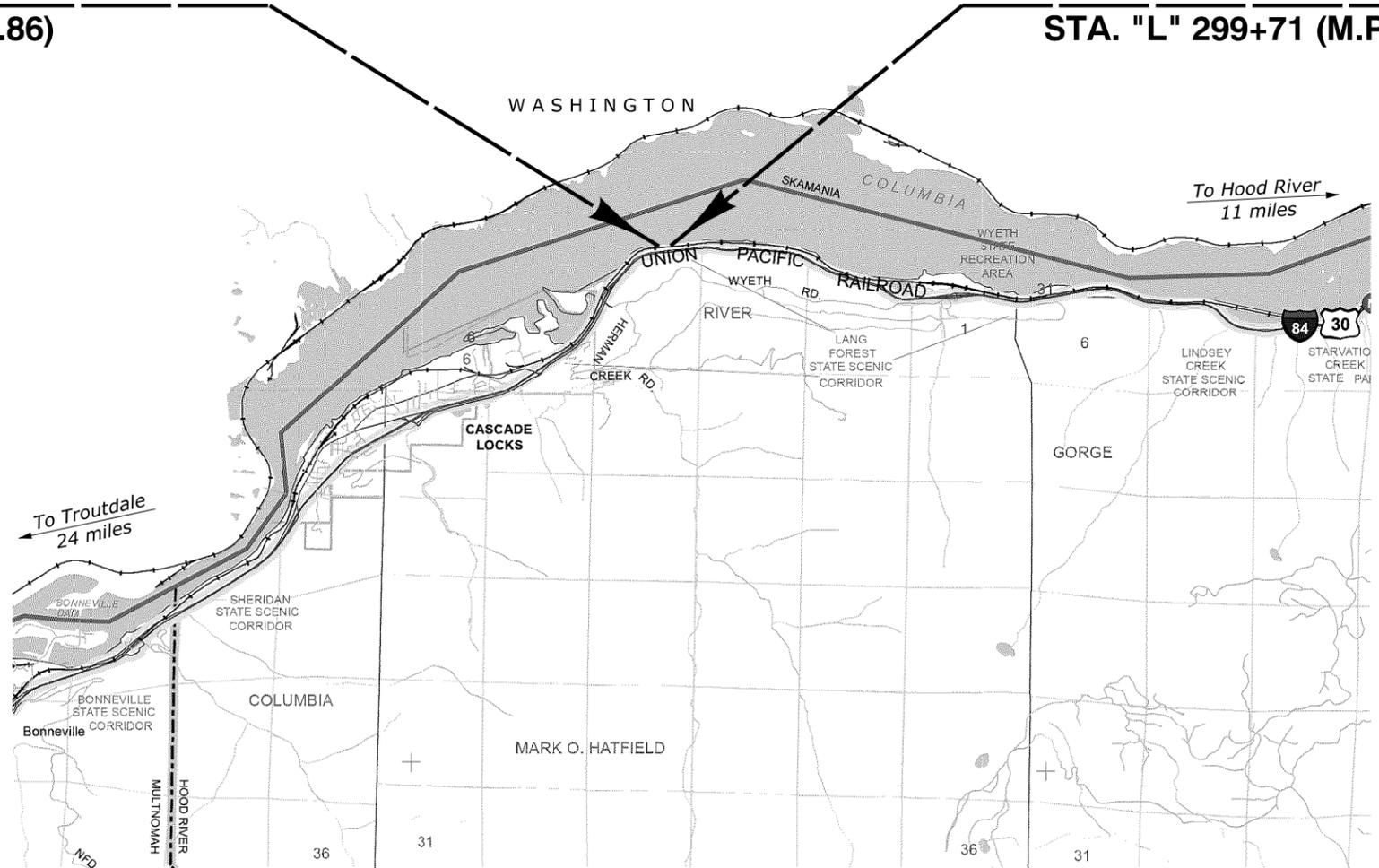


Overall Length Of Project - 0.13 Miles

ATTENTION:
Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through OAR 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Center Is (503) 232-1987.)

BEGINNING OF PROJECT
STP-S002(164)
STA. "L" 292+08 (M.P. 47.86)

END OF PROJECT
STP-S002(164)
STA. "L" 299+71 (M.P. 48.00)



- OREGON TRANSPORTATION COMMISSION**
- | | |
|--------------------|----------------------------|
| Tammy Boney | CHAIR |
| David Lohman | COMMISSIONER |
| Susan Morgan | COMMISSIONER |
| Alando Simpson | COMMISSIONER |
| Sean O'Hollaren | COMMISSIONER |
| Matthew L. Garrett | DIRECTOR OF TRANSPORTATION |

These plans were developed using ODOT design standards. Exceptions to these standards, if any, have been submitted and approved by the ODOT Chief Engineer or their delegated authority.

Approving Authority: _____
Signature & date

Print name and title

Concurrence by ODOT Chief Engineer

I-84: FARLEY SLIDE PROJECT
COLUMBIA RIVER HIGHWAY
HOOD RIVER COUNTY

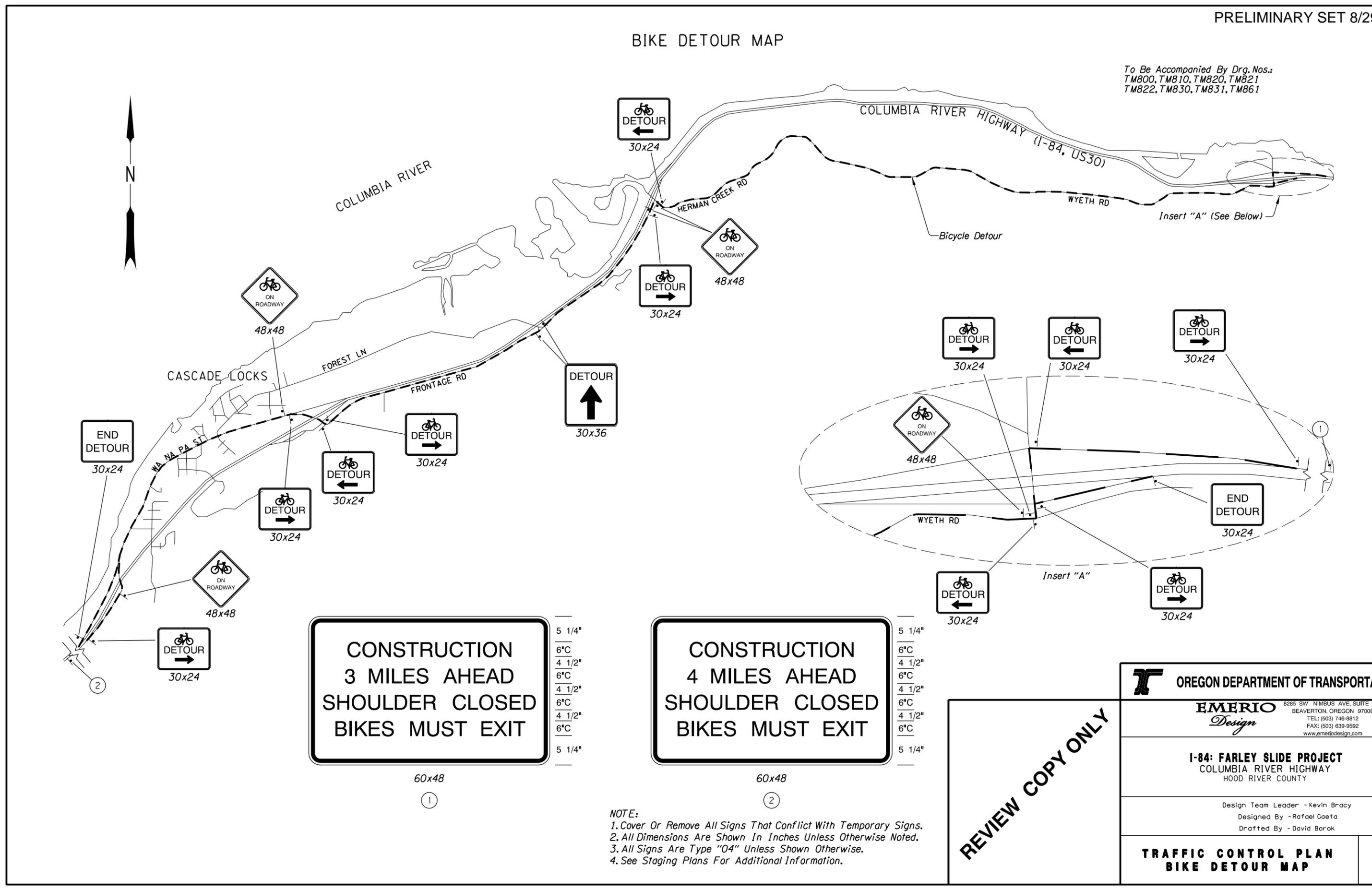
FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	STP-S002(164)	1

T. 03N., R. 08E., W.M.



BIKE DETOUR MAP

To Be Accompanied By Drg. Nos.:
TM800, TM810, TM820, TM821
TM822, TM830, TM831, TM861



**CONSTRUCTION
3 MILES AHEAD
SHOULDER CLOSED
BIKES MUST EXIT**

60x48

①

**CONSTRUCTION
4 MILES AHEAD
SHOULDER CLOSED
BIKES MUST EXIT**

60x48

②

NOTE:
 1. Cover Or Remove All Signs That Conflict With Temporary Signs.
 2. All Dimensions Are Shown In Inches Unless Otherwise Noted.
 3. All Signs Are Type "04" Unless Shown Otherwise.
 4. See Staging Plans For Additional Information.

REVIEW COPY ONLY

OREGON DEPARTMENT OF TRANSPORTATION

EMERIO Design
 8285 SW NIMBUS AVE, SUITE 180
 BEAVERTON, OREGON 97008
 TEL: (503) 746-8812
 FAX: (503) 639-9592
 www.emeriodesign.com

I-84: FARLEY SLIDE PROJECT
 COLUMBIA RIVER HIGHWAY
 HOOD RIVER COUNTY

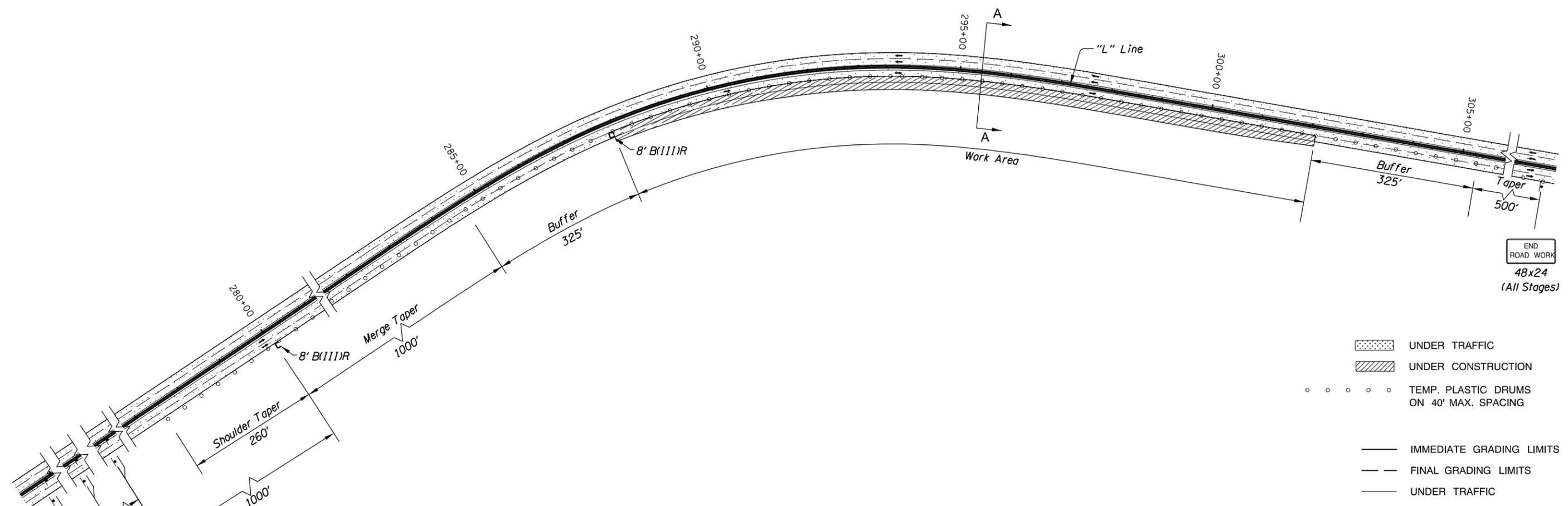
Design Team Leader - Kevin Bracy
 Designed By - Rafael Goeta
 Drafted By - David Borok

**TRAFFIC CONTROL PLAN
BIKE DETOUR MAP**

SHEET NO.
2C

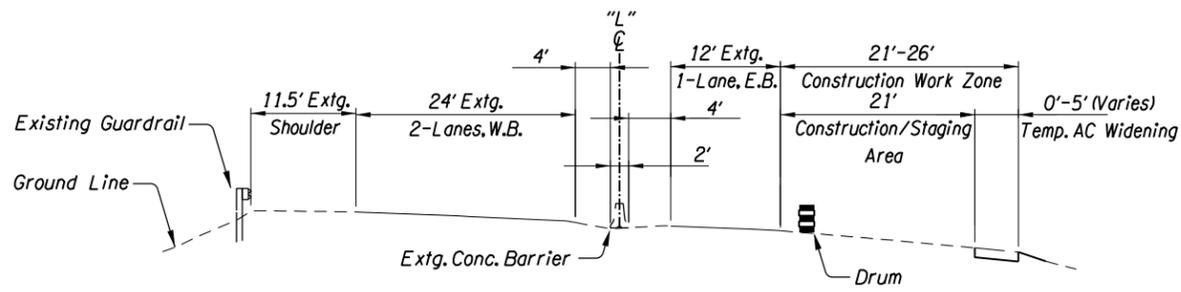
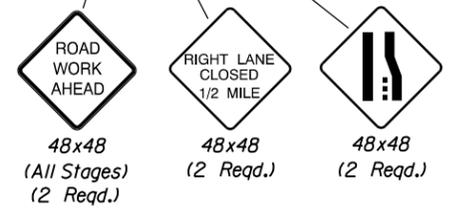
To Be Accompanied By Drg. Nos.:
 TM800, TM810, TM820, TM821
 TM822, TM830, TM831, TM861

STAGE I



END ROAD WORK
 48x24
 (All Stages)

NOTE:
 1. Cover Or Remove All Signs That Conflict With Temporary Signs.
 2. All Dimensions Are Shown In Inches Unless Otherwise Noted.
 3. All Signs Are Type "04" Unless Shown Otherwise.

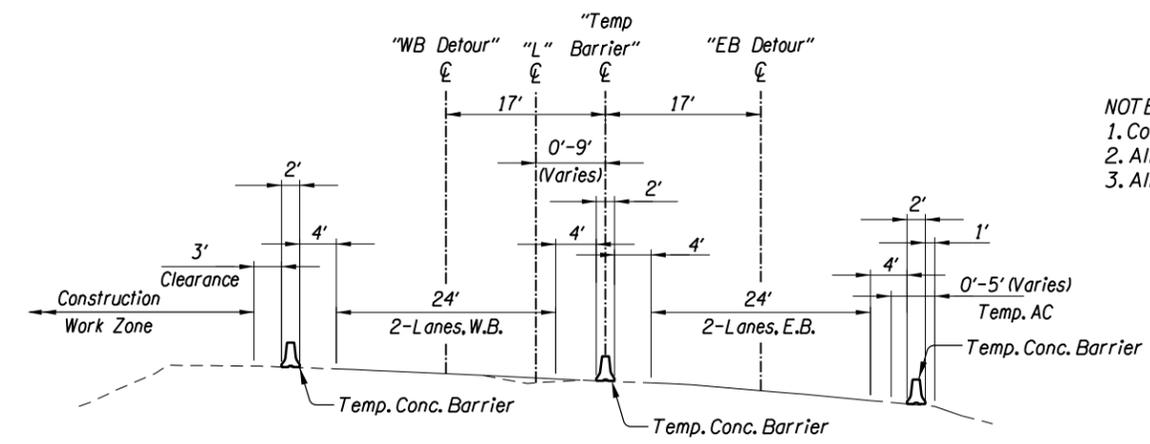
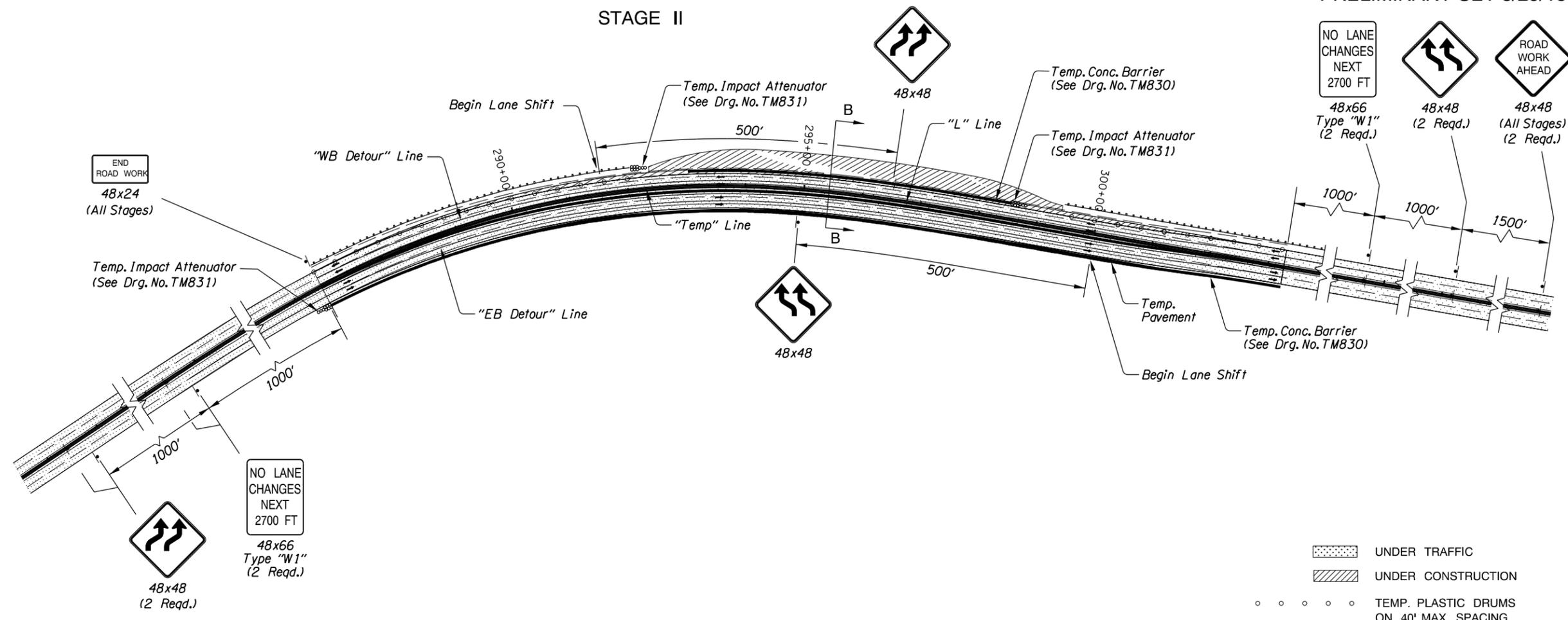


SECTION A-A

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<p>OREGON DEPARTMENT OF TRANSPORTATION</p>	
<p>EMERIO <i>Design</i></p> <p>8285 SW NIMBUS AVE, SUITE 180 BEAVERTON, OREGON 97008 TEL: (503) 746-8812 FAX: (503) 639-9592 www.emeriodesign.com</p>	
<p>I-84: FARLEY SLIDE PROJECT COLUMBIA RIVER HIGHWAY HOOD RIVER COUNTY</p>	
<p>Design Team Leader - Kevin Bracy Designed By - Rafael Gaeta Drafted By - David Borok</p>	
<p>TRAFFIC CONTROL PLAN STAGE I</p>	<p>SHEET NO. 2C-2</p>

STAGE II



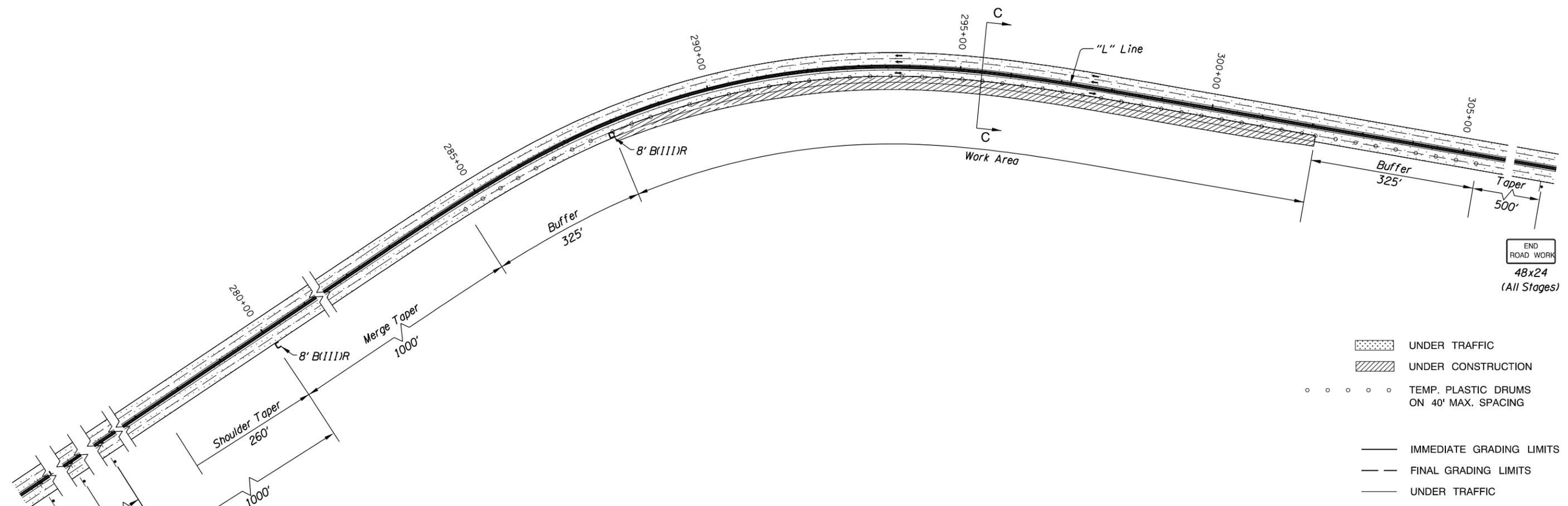
NOTE:
 1. Cover Or Remove All Signs That Conflict With Temporary Signs.
 2. All Dimensions Are Shown In Inches Unless Otherwise Noted.
 3. All Signs Are Type "04" Unless Shown Otherwise.

- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TEMP. PLASTIC DRUMS ON 40' MAX. SPACING
- IMMEDIATE GRADING LIMITS
- FINAL GRADING LIMITS
- UNDER TRAFFIC
- EXISTING GROUND
- TOP OF STAGE, TEMP. OR FINAL SURFACING

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OREGON DEPARTMENT OF TRANSPORTATION	
EMERIO <i>Design</i>	
8285 SW NIMBUS AVE, SUITE 180 BEAVERTON, OREGON 97008 TEL: (503) 746-8812 FAX: (503) 639-9592 www.emeriodesign.com	
I-84: FARLEY SLIDE PROJECT COLUMBIA RIVER HIGHWAY HOOD RIVER COUNTY	
Design Team Leader - Kevin Bracy Designed By - Rafael Gaeta Drafted By - David Borok	
TRAFFIC CONTROL PLAN STAGE II	SHEET NO. 2C-3

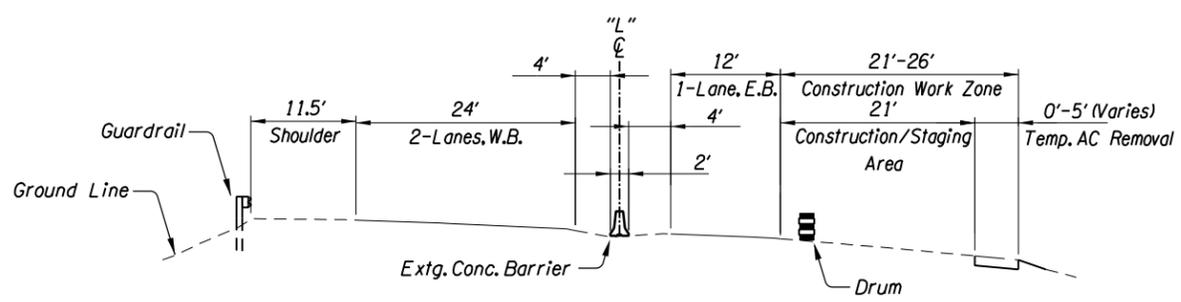
STAGE III



- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TEMP. PLASTIC DRUMS ON 40' MAX. SPACING
- IMMEDIATE GRADING LIMITS
- FINAL GRADING LIMITS
- UNDER TRAFFIC
- EXISTING GROUND
- TOP OF STAGE, TEMP. OR FINAL SURFACING

NOTE:
 1. Cover Or Remove All Signs That Conflict With Temporary Signs.
 2. All Dimensions Are Shown In Inches Unless Otherwise Noted.
 3. All Signs Are Type "04" Unless Shown Otherwise.

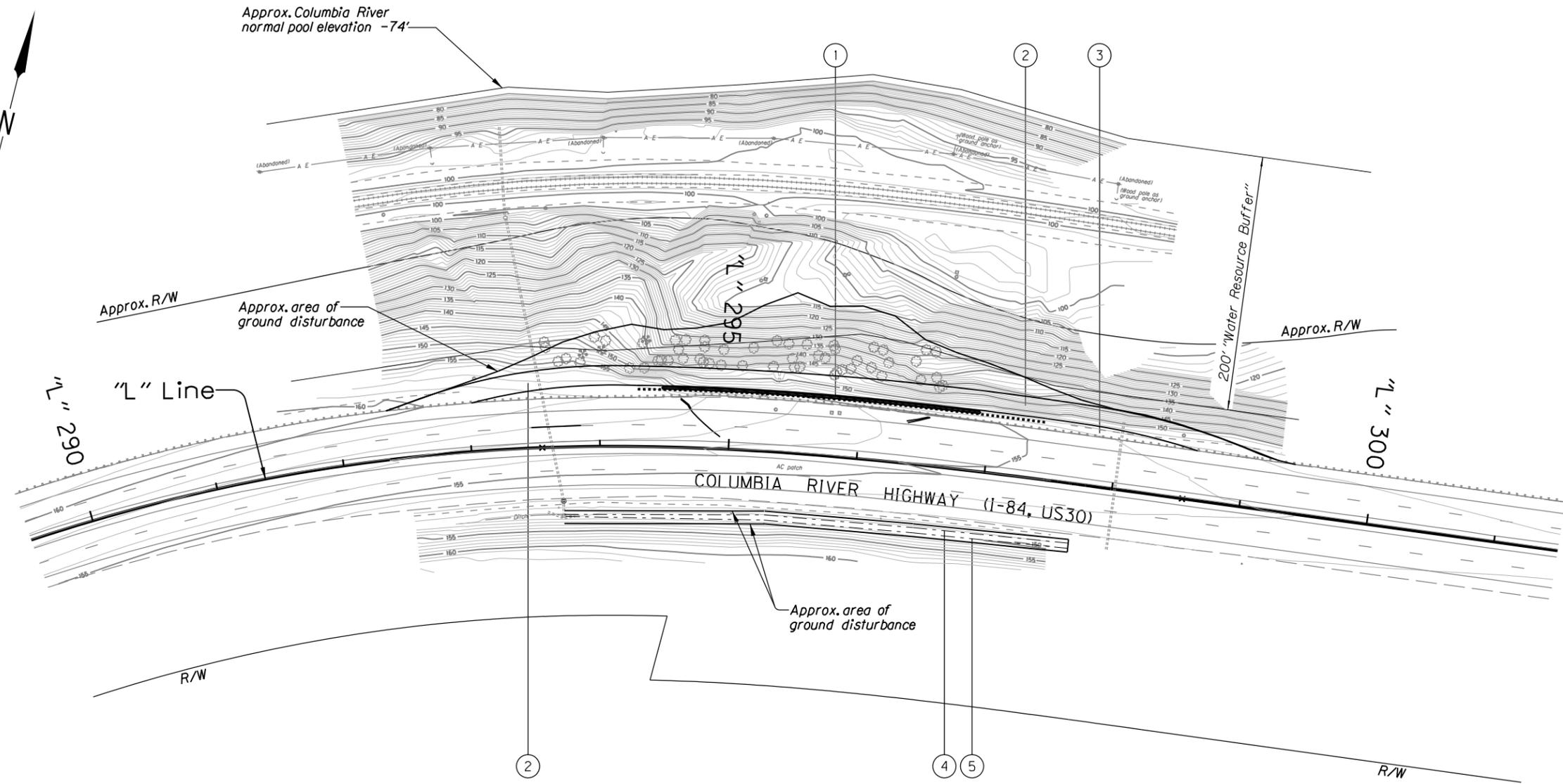
- ROAD WORK AHEAD
48x48 (All Stages) (2 Reqd.)
- RIGHT LANE CLOSED 1/2 MILE
48x48 (2 Reqd.)
- 48x48 (2 Reqd.)



SECTION C-C

REVIEW COPY ONLY

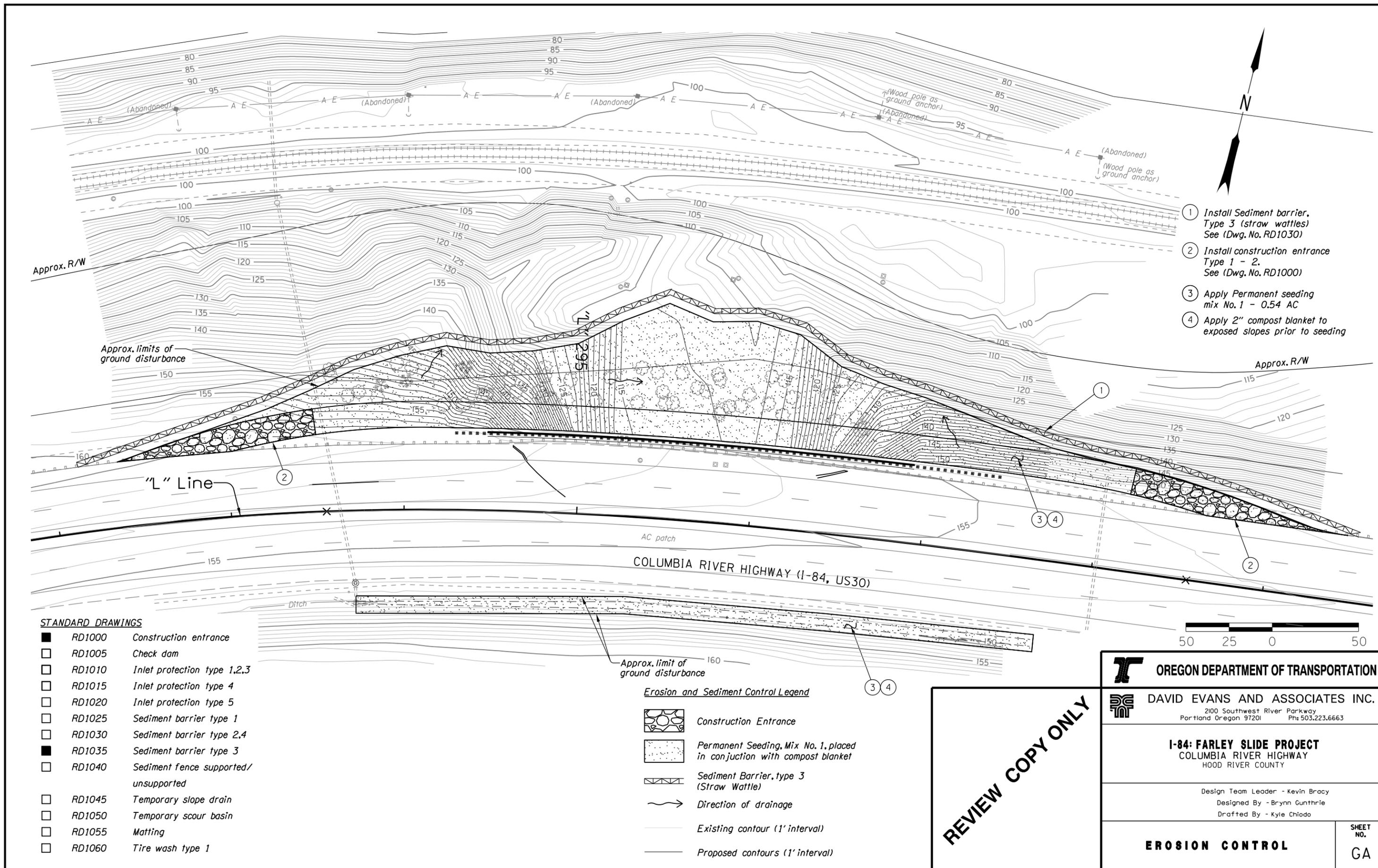
OREGON DEPARTMENT OF TRANSPORTATION	
EMERIO Design <small>6035 SW NIMBUS AVE. SUITE 100 BEAVERTON, OREGON 97008 TEL: (503) 746-8812 FAX: (503) 638-6992 www.emeriodesign.com</small>	
PROJECT SEC. PROJECT HIGHWAY PROJECT COUNTY	
Design Team Leader - Kevin Bracy Designed By - Rafael Goeta Drafted By - David Borok	
TRAFFIC CONTROL PLAN STAGE III	SHEET NO. 2C-4



- ① Structure No. XXXXX
Const. structure - XX'
(For drg. nos., see sht. 1A)
- ② Temporary work access
- ③ Sta. "L" Sta. 292+08 to Sta. "L" 299+71 Lt.
Remove extg. guardrail - 775.0'
Const. guardrail - 775.0'
(See drg. nos. RD480 and RD481)
- ④ Sta. "L" 293+71 to Sta. "L" 298+02 Rt.
Inst. 8" drain pipe - 431'
2' depth
- ⑤ Sta. "L" 293+71 to Sta. "L" 298+02 Rt.
Inst. 18" drain pipe - 431'
20' depth

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 OREGON DEPARTMENT OF TRANSPORTATION	
 DAVID EVANS AND ASSOCIATES INC. 2100 Southwest River Parkway Portland Oregon 97201 Ph: 503.223.6663	
I-84: FARLEY SLIDE PROJECT COLUMBIA RIVER HIGHWAY HOOD RIVER COUNTY	
Design Team Leader - Kevin Bracy Designed By - Molly Davis Drafted By - Mike Youngs	
GENERAL CONSTRUCTION	SHEET NO. 3



- ① Install Sediment barrier, Type 3 (straw wattles) See (Dwg. No. RD1030)
- ② Install construction entrance Type 1 - 2. See (Dwg. No. RD1000)
- ③ Apply Permanent seeding mix No. 1 - 0.54 AC
- ④ Apply 2" compost blanket to exposed slopes prior to seeding

STANDARD DRAWINGS

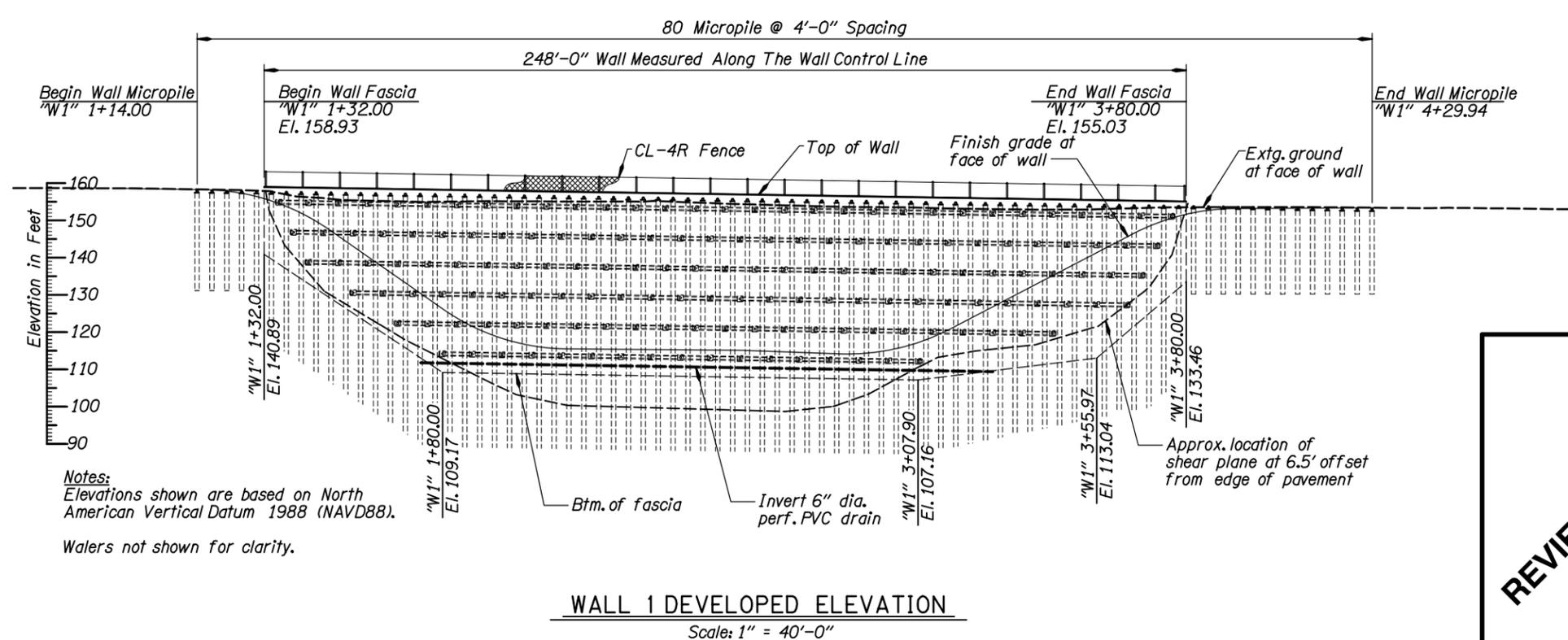
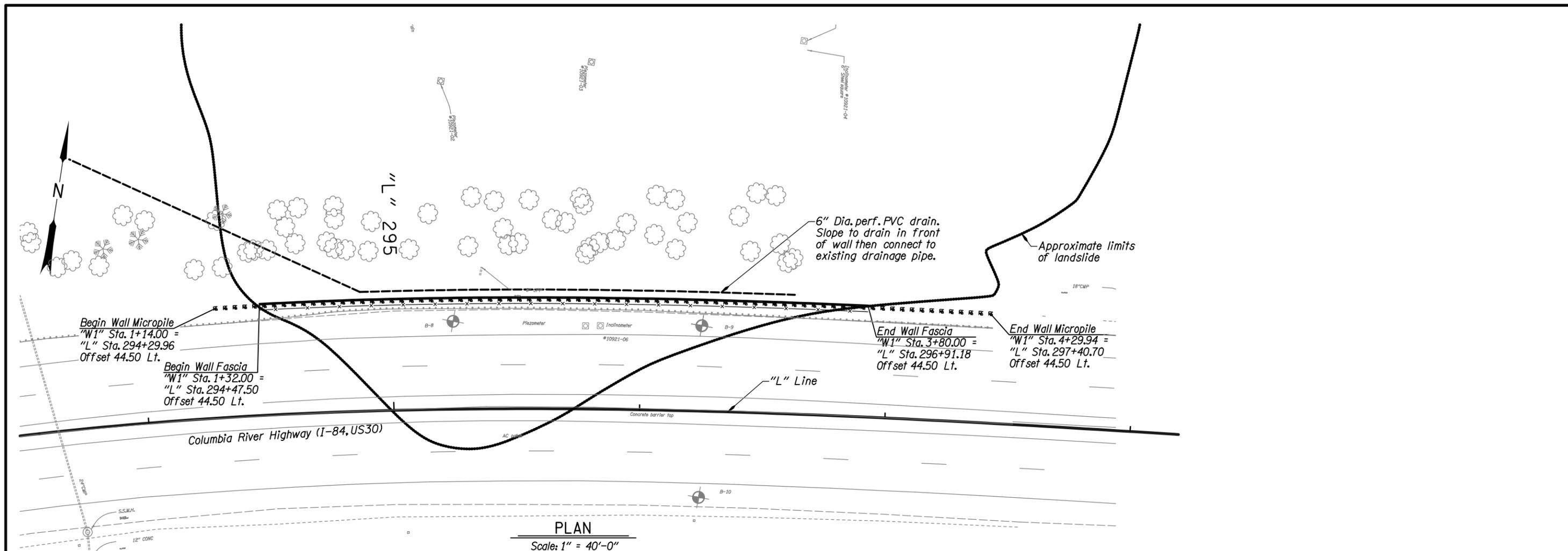
■	RD1000	Construction entrance
□	RD1005	Check dam
□	RD1010	Inlet protection type 1,2,3
□	RD1015	Inlet protection type 4
□	RD1020	Inlet protection type 5
□	RD1025	Sediment barrier type 1
□	RD1030	Sediment barrier type 2,4
■	RD1035	Sediment barrier type 3
□	RD1040	Sediment fence supported/ unsupported
□	RD1045	Temporary slope drain
□	RD1050	Temporary scour basin
□	RD1055	Matting
□	RD1060	Tire wash type 1

Erosion and Sediment Control Legend

	Construction Entrance
	Permanent Seeding, Mix No. 1, placed in conjunction with compost blanket
	Sediment Barrier, type 3 (Straw Wattle)
	Direction of drainage
	Existing contour (1' interval)
	Proposed contours (1' interval)

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DAVID EVANS AND ASSOCIATES INC. 2100 Southwest River Parkway Portland Oregon 97201 Ph: 503.223.6663	
I-84: FARLEY SLIDE PROJECT COLUMBIA RIVER HIGHWAY HOOD RIVER COUNTY	
Design Team Leader - Kevin Bracy Designed By - Brynn Gunthrie Drafted By - Kyle Chiodo	
EROSION CONTROL	SHEET NO. GA



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OREGON DEPARTMENT OF TRANSPORTATION	
DAVID EVANS AND ASSOCIATES INC. 2100 Southwest River Parkway Portland Oregon 97201 Ph: 503.223.6663	
I-84: FARLEY SLIDE PROJECT COLUMBIA RIVER HIGHWAY HOOD RIVER COUNTY	
Reviewed By - Terry Stones Designed By - Andrew Walker Drafted By - Jim Culpepper	
WALL PLAN AND ELEVATION	
SHEET NO. GC	

GENERAL NOTES:

Provide all materials and preform all work according to the 2015 Oregon Standard Specifications for Construction.

For Geotechnical design and construction parameters, refer to Final Geotechnical Report prepared by GRI.

This structure has been designed in accordance with the requirements of the 2014 AASHTO LRFD Bridge Design Specifications. Wall is designed for 200 psf live load surcharge.

Channel section shall be ASTM A36 and all other structural steel shall conform to AASHTO specifications A709, Grade 50 (ASTM A709, Grade 50), except as noted.

Produce welds according to the latest edition of AWS D1.5 Bridge Welding Code.

The contractor shall be responsible at all times to maintain all drilled holes free from sloughing or caving of surrounding soil.

The wall design assumes a free draining condition above the elevation of the existing ground. Maintain a free draining condition at all times.

Care shall be taken while back filling around permanent ground anchor

MICROPILE NOTES:

Use permanent steel pipe casing with minimum yield strength of 80 ksi for micropiles.

Install micropiles a minimum of 20 feet beyond the slide shear plane.

Minimum grout strength for filling micropiles is 3000 psi.

Use reinforcing bar conforming to specification noted above for central bar reinforcement.

TIEBACK ANCHOR NOTES:

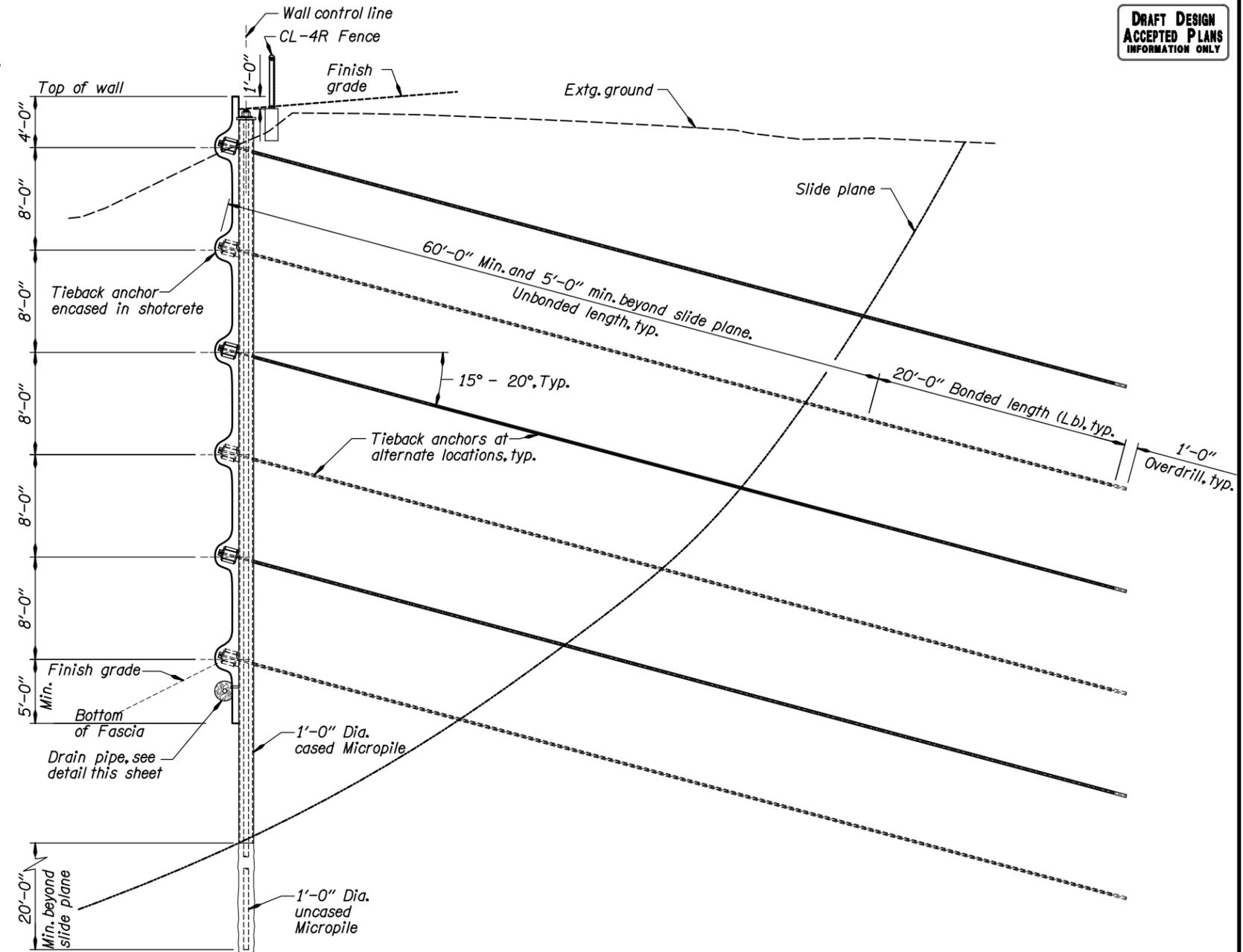
Epoxy grout of tieback anchors will not be permitted.

Bond length shall be located outside of the "Unbonded Zone".

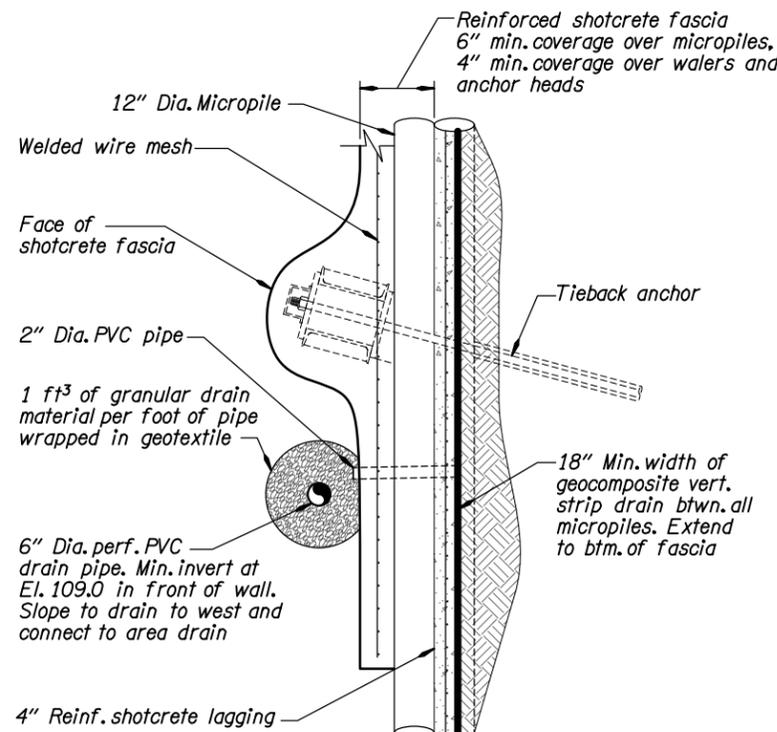
All tieback anchors shall be proof tested to at least 133% of the design load in accordance with Special Provisions. Tieback lock-off load shall be the design load. In addition, two anchors shall be performance tested per Special Provisions. Tiebacks shall be sized such that anchor stress during proof loading is limited to 80% Specified Minimum Ultimate Tensile Strength.

Permanent ground anchor lock off load = 80 percent of factored design load.

Provide centralizers on tieback anchors so that the tiebacks are grouted concentric with augured holes.



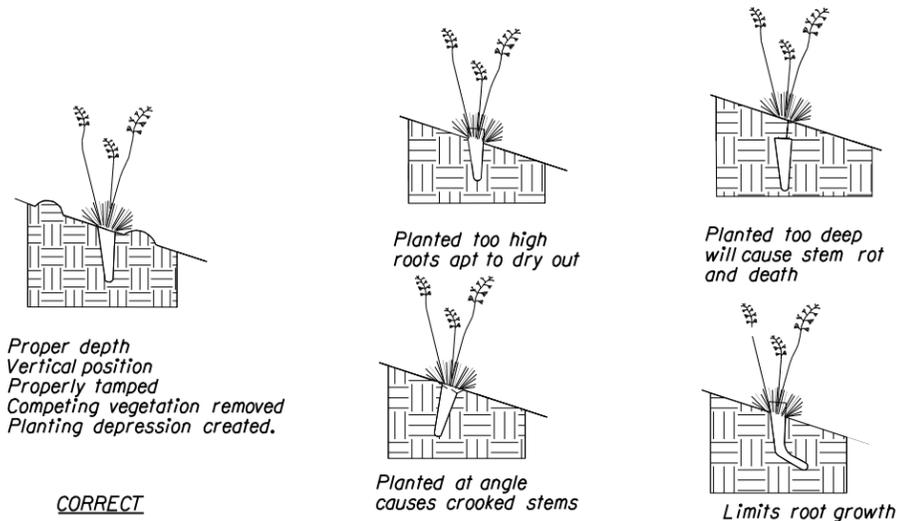
TYPICAL SECTION
No Scale



DRAIN PIPE DETAIL
Scale: 3/8" = 1'-0"

REVIEW COPY ONLY

OREGON DEPARTMENT OF TRANSPORTATION	
DAVID EVANS AND ASSOCIATES INC. 2100 Southwest River Parkway Portland Oregon 97201 Ph: 503.223.6663	
I-84: FARLEY SLIDE PROJECT COLUMBIA RIVER HIGHWAY HOOD RIVER COUNTY	
Reviewed By - Terry Stones Designed By - Andrew Walker Drafted By - Jim Culpepper	
WALL DETAILS	SHEET NO. GC-2



Proper depth
Vertical position
Properly tamped
Competing vegetation removed
Planting depression created.

CORRECT

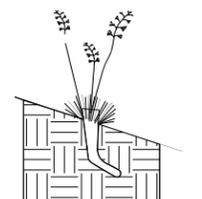
Planted too high
roots apt to dry out



Planted at angle
causes crooked stems

INCORRECT

Planted too deep
will cause stem rot
and death

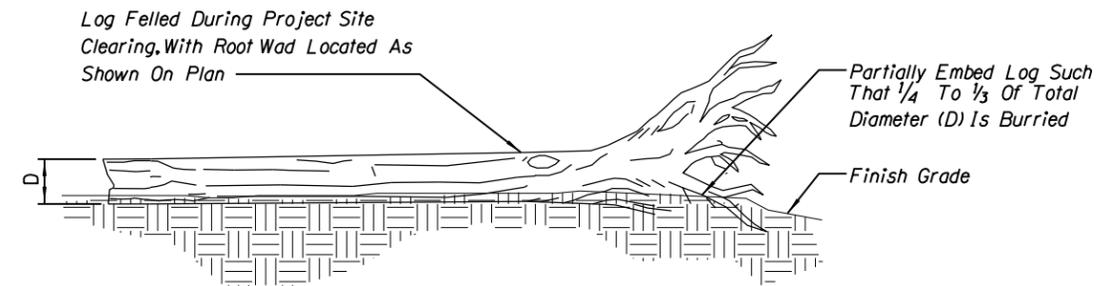


Limits root growth

20 CUBIC INCH TUBELING INSTALLATION

PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME / COMMON NAME	QUANTITY	SIZE AND NOTES	SPACING
	<i>Thuja plicata</i> / western red cedar	20	20 - cubic inch tubing	As Shown
	<i>Pseudotsuga menziesii</i> / Douglas fir	10	20 - cubic inch tubing	As Shown



Log Felled During Project Site
Clearing, With Root Wad Located As
Shown On Plan

Partially Embed Log Such
That $\frac{1}{4}$ To $\frac{1}{3}$ Of Total
Diameter (D) Is Buried

Finish Grade

Note:

Placement Of Log And Root Wad Is To Be Field Located By
Engineer. Construction Techniques Must Be Used To Minimize
Impacts To Existing Vegetation During Installation.

FELLED LOG WOODY DEBRIS

REVIEW COPY ONLY

OREGON DEPARTMENT OF TRANSPORTATION

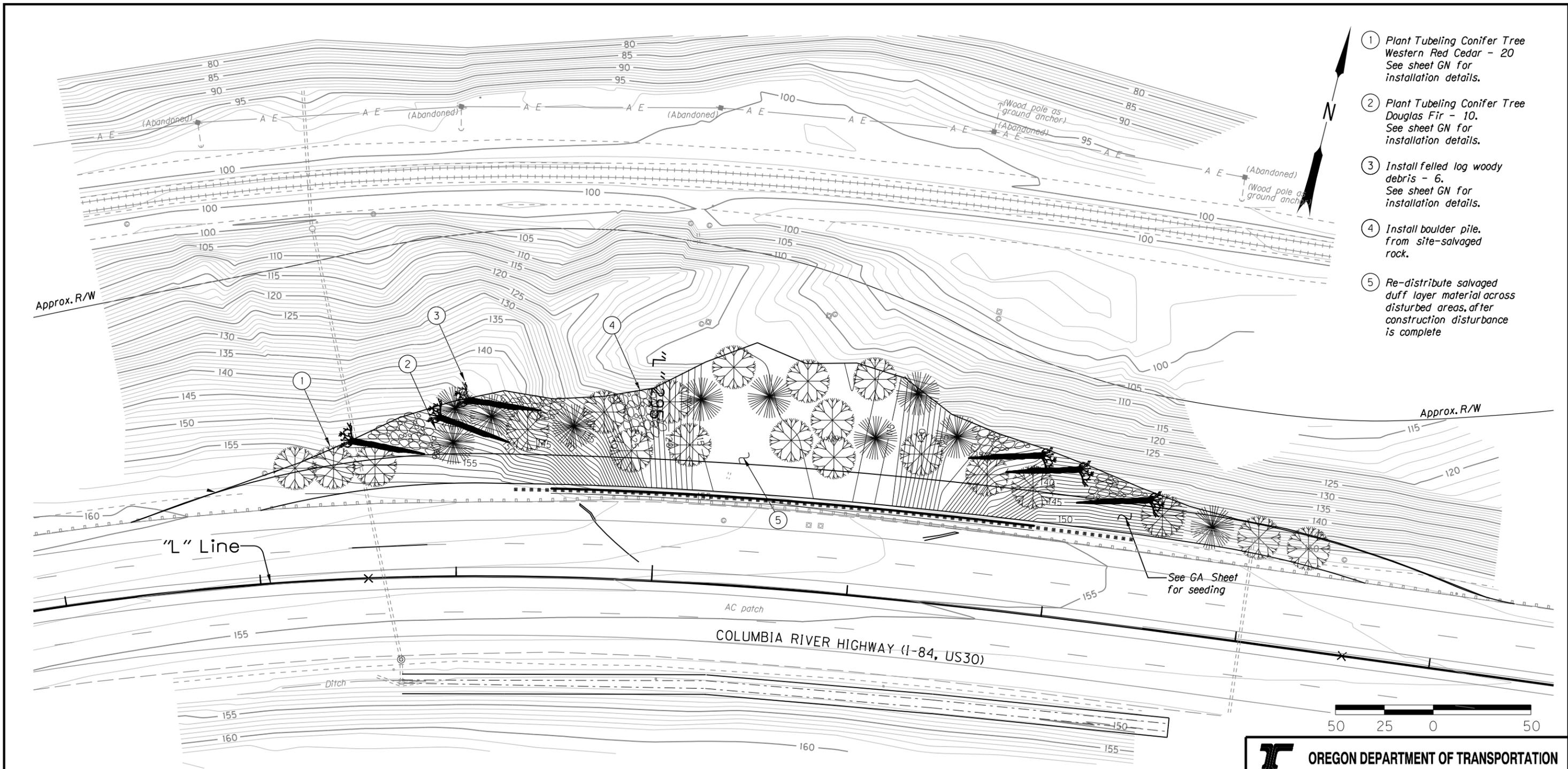
DAVID EVANS AND ASSOCIATES INC.
2100 Southwest River Parkway
Portland Oregon 97201 Ph: 503.223.6663

I-84: FARLEY SLIDE PROJECT
COLUMBIA RIVER HIGHWAY
HOOD RIVER COUNTY

Design Team Leader - Kevin Bracy
Designed By - Brynn Gunthrie
Drafted By - Kyle Chiodo

**LANDSCAPE REVEGETATION
DETAILS**

SHEET
NO.
GN



- ① Plant Tubeling Conifer Tree
Western Red Cedar - 20
See sheet GN for installation details.
- ② Plant Tubeling Conifer Tree
Douglas Fir - 10.
See sheet GN for installation details.
- ③ Install felled log woody debris - 6.
See sheet GN for installation details.
- ④ Install boulder pile.
from site-salvaged rock.
- ⑤ Re-distribute salvaged duff layer across disturbed areas, after construction disturbance is complete

REVIEW COPY ONLY

OREGON DEPARTMENT OF TRANSPORTATION

DAVID EVANS AND ASSOCIATES INC.
2100 Southwest River Parkway
Portland Oregon 97201 Ph: 503.223.6663

I-84: FARLEY SLIDE PROJECT
COLUMBIA RIVER HIGHWAY
HOOD RIVER COUNTY

Design Team Leader - Kevin Bracy
Designed By - Brynn Gunthrie
Drafted By - Kyle Chiodo

LANDSCAPE REVEGETATION PLAN

SHEET NO.
GN-1

***ATTACHMENT C — BIOLOGICAL RESOURCES IMPACT
MEMORANDUM***



Oregon

Kate Brown, Governor

**Department of
Transportation**

Region 1 Headquarters
123 NW Flanders St
Portland, OR 97209-4012
Phone: (503)731-8200
Fax: (503) 731-8259

August 9, 2016

To: Matt Freitag, ODOT Region 1 Project Team Leader

From: Ben White, ODOT Region 1 Biologist

RE: Biological Resources Impact Memo
I84: Farley Slide Key Number: 18762
Hood River County, Oregon

The following Biological Resources report satisfies ODOT's requirement to address potential effects on the Columbia River Gorge National Scenic Area designated species for the land-use permit application administered by Hood River County. The safety improvement project is located on I-84, approximately 15 miles west of Hood River at mile-post (MP) 48, in Hood River County. The work will occur adjacent to the north shoulder within ODOT right-of-way (ROW) and a small portion of the south ROW. It is classified as a Special Management Area (SMA) in the Columbia River Gorge Management Plan (US Forest Service 1999). The report addresses species and resources only identified in the USFS Region 6 Sensitive Species (2015) as cited in the management plan.

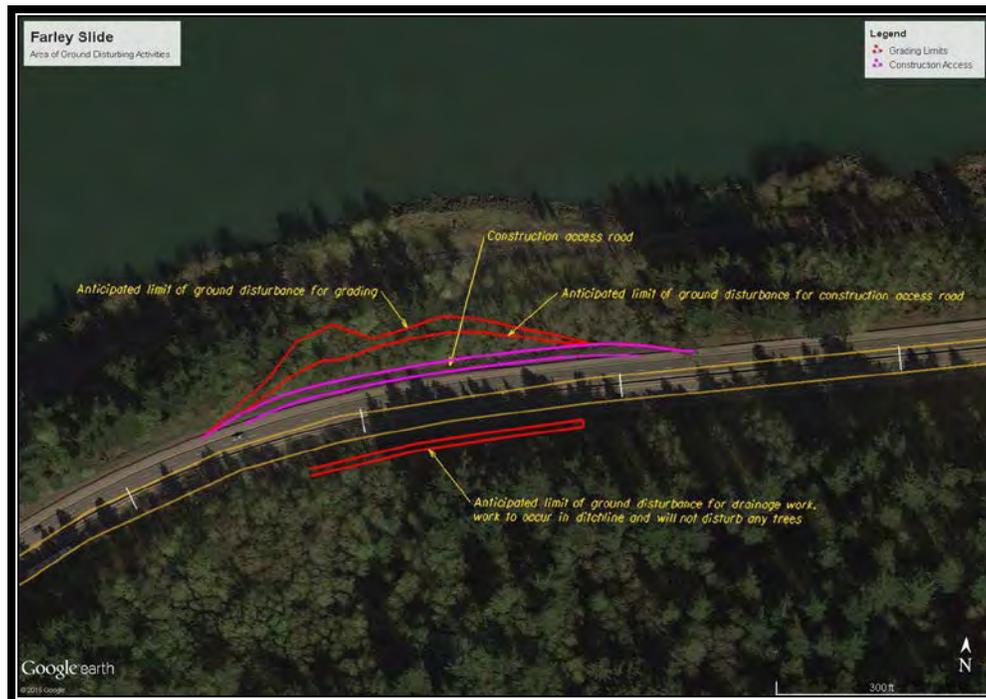


Figure 1. Project Location Map and API

Project Scope and Area

The proposed project will improve safety and reduce maintenance disturbances at MP 48 by stabilizing the Farley Slide area. The slide area has a history of consistent movement creating a slump in the highway that must be addressed every year, including a catastrophic collapse in 1996 resulting in a large sink hole (100ft x 40ft) opening in the center of I-84. ODOT will stabilize the slide before another catastrophic event forces I-84 closures. Stabilization requires tree removal, 0.79 acres of excavation to an approximate depth of 40-ft, and the installation of drilled micro-pile and tie-back wall.

Construction staging and storage will occur offsite, approx. 1.25 miles to the west at disturbed industrial land owned by the Port of Cascade Locks. After construction, the project area would be restored to the extent practicable and allowable under engineering requirements.



Figure 2. Representative photos of habitat within slide area looking northwest (left) and northeast (right)

Sensitive Species and Available Habitat

The project is located within a slow moving land slide located north of I-84 (MP 48) and south the railroad. The surrounding habitat is a steeply sloped mature forest. The over story is dominated by red alder (*Alnus rubra*) and big-leaf maple (*Acer macrophyllum*). To a lesser extent the stand also includes Oregon ash (*Fraxinus latifolia*) and Douglas fir (*Pseudotsuga menziesii*). The shrub layer is dominated red alder, vine maple (*Acer circinatum*), with indian plum (*Oelmeria cerasiformis*) and common snowberry (*Symphoricarpos albus*) being present. Finally, the vegetative layer was dominated by sword fern (*Polystichum munitum*), False Solomon's seal (*Smilacina racemose*) and stinging nettle (*Urtica dioica*).

Though the area is isolated from the surrounding forest by I-84, it contains several sensitive habitat features including nurse logs and downed timber, and a mature forested boulder slope. These features have the potential to provide habitat for several sensitive species found in the Columbia River Gorge (Table 1). This assessment is based on potential species distribution and habitat availability. A June 20, 2016 site visit did not locate any sensitive, or federally threatened or endangered species within the project. Potential habitat was located for the Larch Mountain salamander, (*Plethodon larselli*, LMS) though no individuals were seen. Fish presence is precluded due to the lack of in water work.

A July 1, 2016 review of the Oregon Biodiversity Index Center (ORBIC) records (GIS) lacked sensitive species occurrences within 1000ft of the project area. The nearest record was for the Larch Mountain Salamander (LMS), approximately 0.33 miles south of the project. The last sighting was recorded in 1992 along Wyeth Road.

The next closest record is for a purple martin (*Pogne subis*) nest box colony on wood pilings. The record is from 1998 and lists 27 pairs of breeding purple martins located approximately 0.75 miles west of the site in the Columbia River.

The only terrestrial federally threatened species in this part of the gorge is the Northern Spotted owl (*Strix occidentalis caurina*). The nearest recorded nest location is approximately 1.3 miles south of the project location.

Table 1. List of USFS Region 6 Forester Special Status Species with potential habitat within the project API.

Species	Status (Fed/OR/FS)	Habitat Potentially Impacted
Avian		
Northern spotted owl (<i>Strix occidentalis caurina</i>)	FT/ST/FT	Old growth / mature conifer dominant forests
Purple Martin (<i>Progne subis</i>)	-/CR/SEN	Forest edges, cavity nesters, manmade bird houses
Amphibians		
Larch Mountain Salamander (<i>Plethodon larselli</i>)	-SV/SEN	Talus slopes, moist forests with duff and nurse logs
Vascular Plants		
Cold-water corydalis (<i>Corydalis aquae-gelidae</i>)	-/SC/SEN	Closed Conifer/deciduous riparian forests. In or adjacent to cold flowing water.
Krushea (<i>Streptopus streptopoides</i>)	-/-/SEN	Moist forested sites
Violet suksdorfia (<i>Suksdorfia violacea</i>)	-/-/SEN	Vernal, east side forests.

Fed: (-) = no special status, FE = federally endangered, FT = federally threatened, FC = federal candidate. OR State: (-) = no special status, SE = state endangered, ST = state threatened, SC = state candidate, SV = state vulnerable. USFS: (-) = no special status, FE = federally endangered, FT = federally threatened, SEN = USFS Region 6 sensitive species.

Potential Impacts

A June 20, 2016 site survey was completed for species that either had recorded occurrences or habitat within the general area. Neither sensitive nor endangered floras were encountered. Several vertebrate species are also known to occur in the general area including the Northern Spotted owl and the Larch Mountain Salamander. The site does not include any large old growth conifers/ nor large snags and therefore it is not anticipated that Northern Spotted owl will be impacted. Construction noise levels are

not expected to exceed current levels due to the project's location between the highway and the railroad. Lastly, ODOT best management practices (BMPs) and erosion control measures will ensure that effects will not exceed the immediate project area.

Potential LMS habitat was found, including habitat features such as nurse logs and the boulder slope. The onsite habitat is approximately 0.33 miles from the nearest known salamander occurrence and does not match the preferred habitat associations of all nearest LMS occurrences (small angular talus slopes versus large forested boulder slope). LMS are not likely to be found onsite due to the habitat and isolation from other suitable locations by I-84. Never-the-less this project will impact potential dispersal habitat and remove necessary (and sensitive) habitat features.

ODOT will minimize the impacts by completing the work once permitted, rather than after a catastrophic slide failure. This reduces the amount of potential habitat that will be impacted, and the duration of construction. The project including the construction zone has been designed to use the smallest footprint possible, of which is only a small portion of available habitat in the area. In addition, ODOT will use the following best management practices via contract to preserve and restore sensitive habitat features to the extent that is practicable:

1. Retain felled trees, and other coarse woody debris. Redistribute coarse woody debris post-construction.
2. Retain excavated boulders and redistribute as piles within the restoration area for small mammal and amphibian refuge.
3. Replant with tree species congruent with existing forest community (e.g. Alder/Maple/fir) The landscape architect will determine appropriate trees, quantity, and sizing.
4. Salvage and redistribute duff across the restoration area. This will help preserve moisture and nutrients, create hide holes in rocks and reestablish the native seed bank on site.
5. Avoid disturbing nurse logs. When disturbance is unavoidable, minimize breaking, retain and redistribute post-construction.

The project may impact individual LMS or habitat , but is not expected to result in any long-term negative impacts to the species or population because (1) the impact area is relatively small; and (2) the work is discrete and short term, and major habitat components will be restored to the extent that is allowed by engineering constraints. Finally, the stabilization of the slope may in fact provide more stable habitat for referenced species since catastrophic slides will be prevented.

References

USDA Forest Service. 1991. Management Plan for the Columbia River Gorge National Scenic Area. USDA forest Service, Hood River, Oregon.

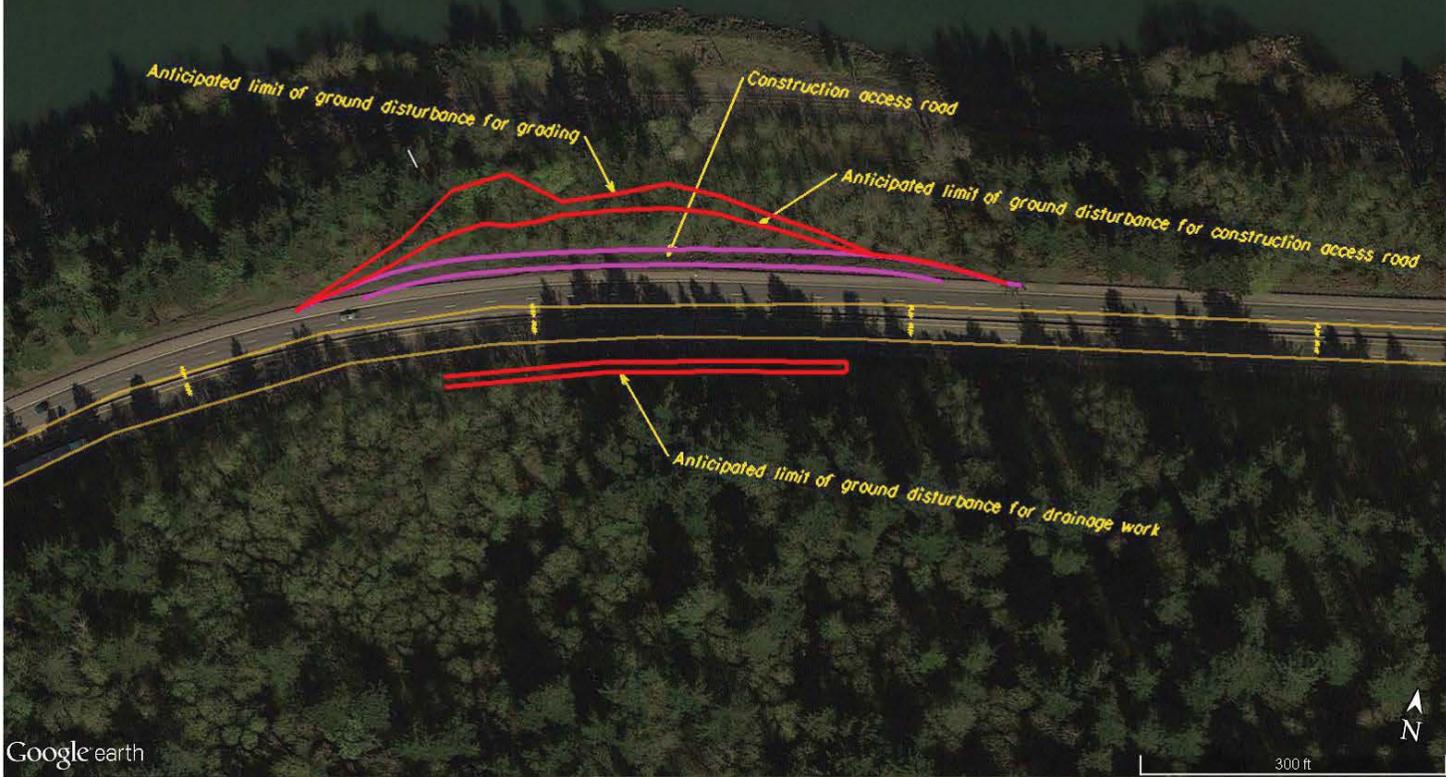
Oregon Natural Heritage Information Center. July 2016. Biotics, Element Occurrence Record Digital Data Set.

USDA Forest Service. 1999, 2004, 2008, 2011, 2015. Regional Forester's (R-6) Sensitive Species List.

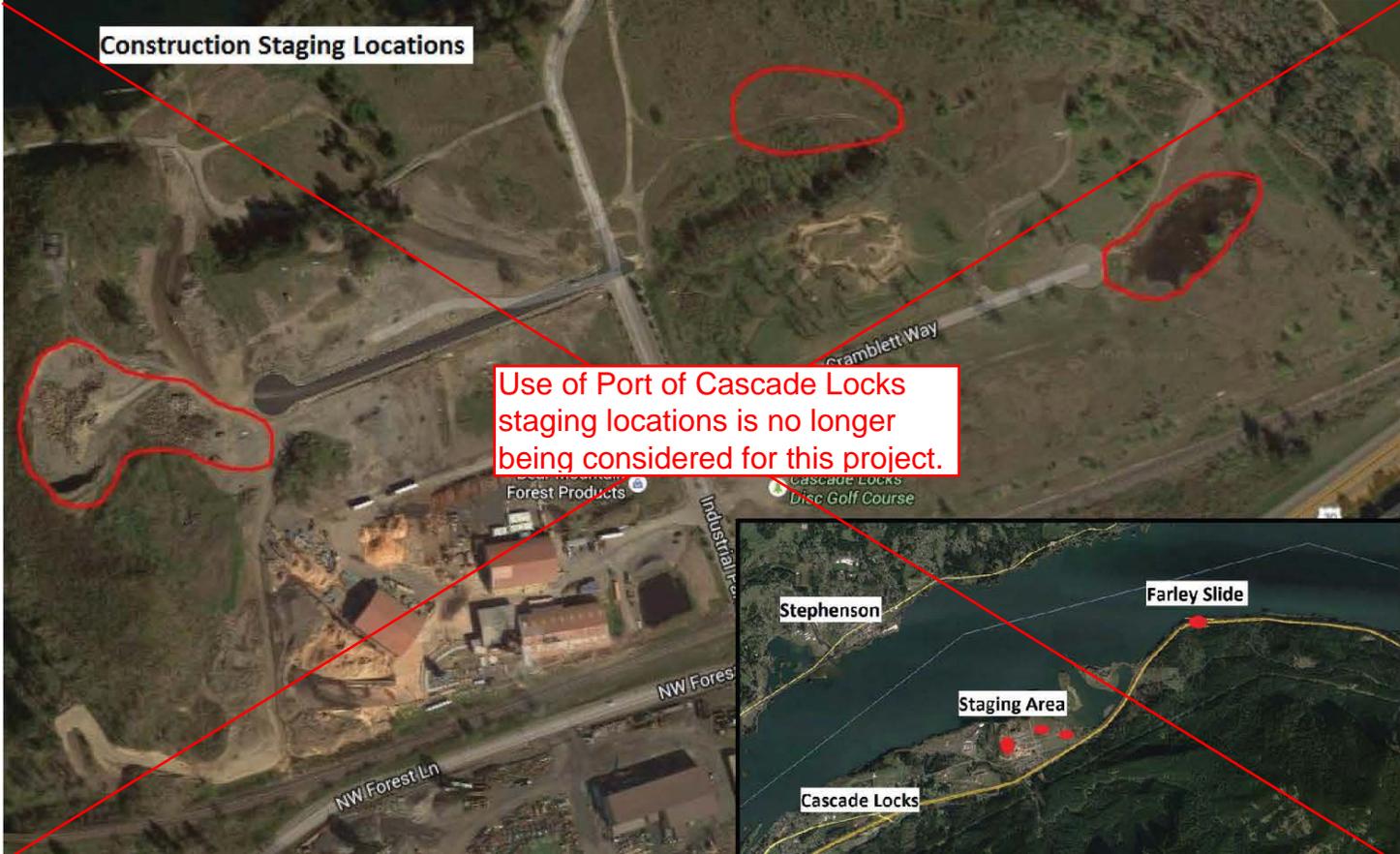
***ATTACHMENT D — ENDANGERED SPECIES ACT
DETERMINATION OF NO EFFECT***

Farley Slide
API Map

Legend
Construction Access
Excavation Limits



Construction Staging Locations



Provide Brief Project Description (1-2 Paragraphs)		
<p>ODOT will stabilize the Farley Slide area north of I-84 (MP 48) and south of the Union Pacific Railroad. Stabilization requires tree removal, 0.79 acres of excavation to a depth of 40-ft, and the installation of drilled micro-pile and tie-backs. Approximately one third of the fill will be returned to the site. Large woody debris, boulders, nurse logs and thick duff layer will be salvaged and placed back on site after project completion. Finally, the area will be replanted with existing overstory vegetation. Construction staging and storage may occur approximately 1.25 miles to the west at disturbed industrial land owned by the Port of Cascade Locks (see attachment).</p>		
Additional Supportive Information:		
<p>The project will not impact designated species or habitat due to upland work lacking in-water work, riparian impacts, changes to impervious surfaces, and noise levels that exceed usual freeway and RxR levels. Though northern spotted owls are known to inhabit the Columbia River Gorge, the project area lacks suitable habitat or connectivity. Additional conservation measures nor best management practices are required beyond ODOT standard specifications to avoid or minimize impacts to designated species or habitat.</p>		
State Listed Species:		
<p>State ESA listed species were considered, but suitable habitat is not present.</p>		
Avoidance Measures Required (If Applicable):		
<p>No avoidance measures are required for this project.</p>		
Required Signatures:		
<p>This No Effect determination is based on the project as defined in the Design Acceptance Package (DAP). Changes in project scope or scale following DAP may invalidate this No Effect determination.</p>		
<p>Individual Responsible for the No Effect Determination:</p>	<p>ODOT Reviewer</p>	<p>Individuals Responsible for Ensuring Implementation of Avoidance Measures: (Signatures only required if minimization measures are listed above)</p>
<p>Benjamin White</p>  <p><small>Digitally signed by Benjamin White DN: cn=Benjamin White, o=ODOT, ou=Region 1 Biologist, email=Benjamin.white@odot.state.or.us, c=US Date: 2016.07.07 10:47:00 -07'00'</small></p>	<p>Mary Young</p>  <p><small>Digitally signed by Mary Young DN: cn=Mary Young, o=Region 1 ODOT, ou=Geo Environmental, email=mary.e.young@odot.state.or.us, c=US Date: 2016.07.07 13:18:40 -07'00'</small></p>	
<p>ODOT Biologist, Region 1</p>	<p>ODOT REC, Region 1</p>	<p>Project OR District Manager, Organization</p>

***ATTACHMENT E — BIOLOGIST'S EMAIL CONCERNING
WETLANDS***

Natalie Warner

From: SARGENT Kenneth W <Kenneth.W.SARGENT@odot.state.or.us>
Sent: Wednesday, June 22, 2016 8:17 AM
To: YOUNG Mary E
Cc: WHITE Benjamin
Subject: I-84 Farley Landslide K18762 - Wetlands and Waters

Mary,

I visited the Farley project site on Monday. I looked for wetland and waters and did not find any.

There were ditches on the south Side of I-84 and the railroad tracks but they carry only stormwater and are not jurisdictional.

There is a large pipe (about 3 feet in diameter) on the western side of the project site that drains stormwater from I-84 down the slope and under the railroad tracks to the Columbia River. This is also not jurisdictional.

Regards

Ken

[Ken Sargent](#) ▲ Environmental Program Coordinator 2

ODOT Region 1

123 NW Flanders St., Portland, OR 97209-4012

503.731.8427 ▲ cell 206.849.2519

Kenneth.W.SARGENT@odot.state.or.us

ATTACHMENT F — CULTURAL RESOURCES EMAIL

Natalie Warner

From: Kevin Bracy
Sent: Monday, August 29, 2016 10:25 AM
To: Natalie Warner
Cc: Molly Davis
Subject: FW: I-84: Farley Slide, Key No. 18762

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Purple Category

Hi Natalie,

Shown below is the Archy info to include in your application.

Please also note that the MP 50 Pit is paved, so they are not updating the bio report.

Thanks!

Kevin Bracy, PMP

Sr. Associate | Sr. Project Manager

David Evans and Associates, Inc.

2100 SW River Parkway | Portland, OR 97201 | www.deainc.com

d: 503.499.0351 | c: 503.799.2548 | cisco ext:10351 | kpb@deainc.com



Follow us on LinkedIn | Twitter | Facebook | YouTube

From: YOUNG Mary E [\[mailto:Mary.E.YOUNG@odot.state.or.us\]](mailto:Mary.E.YOUNG@odot.state.or.us)

Sent: Monday, August 29, 2016 10:17 AM

To: FREITAG Matthew D * Matt; Kevin Bracy; Molly Davis

Cc: YOUNG Mary E

Subject: FW: I-84: Farley Slide, Key No. 18762

Here is the Archy clearance for the above named project.

He reviewed the site at MP 50, but since we are using an area that meets the 290.10 spec (previously disturbed and paved) he will not modify the documentation nor re-open consultation.

Mary

From: BOTTMAN Tobin C

Sent: Monday, August 29, 2016 9:57 AM

To: YOUNG Mary E

Cc: HADLOW Robert W

Subject: I-84: Farley Slide, Key No. 18762

Good morning Mary,

The consultation period for the subject project has concluded. Therefore, I have cleared the project for archaeology per Stipulation 4C of the 2011 PA.

I consulted with the following entities on July 27, 2016:

Confederated Tribes and Bands of the Yakama Nation

Confederated Tribes of the Grand Ronde Community of Oregon

Confederated Tribes of the Umatilla Indian Reservation

Confederated Tribes of the Warm Springs Reservation of Oregon

Nez Perce Tribe

Columbia River Gorge National Scenic Area

No responses were received.

Thank you, let me know if you have any questions or require additional information.

Best,

Tobin

Tobin C. Bottman, M.S., RPA
ODOT Archaeologist & Tribal Liaison
Regions 1, 4 and 5
4040 Fairview Industrial Dr. SE
Salem, OR 97302-1142
(503) 986-3783 (o)
(503) 927-3031 (m)
tobin.c.bottman@odot.state.or.us



***ATTACHMENT G — SECTION 106 PROGRAMMATIC
AGREEMENT MEMORANDUM***



Oregon

Kate Brown, Governor

Department of Transportation
Highway Division/Technical Services
Geo-Environmental Section, MS#6
4040 Fairview Industrial Dr SE
Salem, OR 97302
Phone: (503) 986-3252
Fax: (503) 986-3249

DATE: August 30, 2016

FROM: Robert W. Hadlow, Ph.D., Senior Historian, ODOT
Historic Built Resources

SUBJECT: **Section 106 Programmatic Agreement Memo, Stipulation 4C**
Section 106 Finding (Built)
Interstate 84: Farley Slide Project
Hood River County, Oregon
ODOT Key No. 18762
Federal-Aid No. S002(164)PE

*Hood River County
Carson Quadrangle
T2N, R8E, Section 33*

The Interstate 84: Farley Slide Project will stabilize a landslide over which the highway passes at milepost 48.0, in Hood River County. The Oregon State Highway Department built the roadway at this location over a steep ravine underlain by ancient landslide deposits. Roadway fill placed in the ravine reactivated the ancient landslide. The state highway department and its successor agency, the Oregon Department of Transportation (ODOT), have been tracking landslide movement at this location since construction of the water-level route for the Columbia River Highway (today's Interstate 84), which opened there in 1951.

The slide area has a history of consistent movement creating a slump in the highway that maintenance crews must address every year. A catastrophic collapse in 1996 resulted in a large sink hole (100-foot x 40-foot) opening in the center of Interstate 84. The project will stabilize the slide before another catastrophic event forces Interstate 84 closures. Stabilization requires tree removal, 0.79 acres of excavation to an approximate depth of 40 feet, and the installation of drilled micro-pile and tie-back wall.

The Interstate Highway System is exempt from Section 106 except for certain portions that are excluded from the exemption. The segment of Interstate 84 in the project area is not on the exclusion list.

The project may use a nearby isolated and abandoned segment of the original Columbia River Highway as a location for temporarily storing material excavated from the slide site during project construction. The segment is south of Interstate 84 at milepost 49.2, which is 1.2 miles east of the Farley Slide. The Columbia River Highway Historic District was listed in the National Register of Historic Places in 1983 (NRIS 83004168). The nominated property included all extant segments of the highway constructed between the Sandy River to the west and Chenoweth Creek to the east from 1913 to 1922. (The abandoned segment referenced here is part of the historic district.)

Temporarily storing fill material from the slide site on the abandoned segment of the Columbia River Highway will have no effect on this historic property. Therefore, because ODOT has determined that the undertaking is an activity type that does not have the potential to cause effects to historic properties, assuming such historic properties are present, the Section 106 process is complete pursuant to 36 CFR 800.3(a)(1).

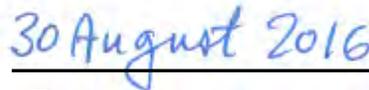
According to the Programmatic Agreement regarding Implementing Section 106 of the National Historic Preservation Act for the Federal-Aid Highway Program in Oregon executed on December 23, 2011, the proposed project does not require formal SHPO review on a project level, but will be reviewed by the SHPO with the Programmatic Agreement's annual report. The ODOT cultural resources staff who meet the requirements of 36 CFR Part 61, Appendix A in the fields of history or architectural history reviewed the project using the standards set forth in Section 106 of the National Historic Preservation Act (16 USC 470f).

ODOT's internal review of the findings resulted in the following determination: The project will have No Effect on the Columbia River Highway National Register Historic District.

ODOT internally reviewed the proposed undertaking under Stipulation 4C of the Programmatic Agreement dated December 23, 2011. Sarah Jalving is the lead cultural resources reviewer for this project. For further information, contact her at 503-986-6926, or contact Robert W. Hadlow at 503-731-8239.



ODOT Qualified Cultural Resources Specialist



Date

Attachments:

- Project Vicinity Map.
- Area of Anticipated Ground Disturbance at MP 48.0 on Interstate 84.
- Potential Storage Site on Abandoned Segment of Columbia River Highway.

Copies:

- Mary Young, Environmental Coordinator, ODOT Region 1, Portland
- Robert W. Hadlow, Senior Historian, ODOT Region 1, Portland
- Sarah Jalving, Historian, ODOT Region 2, Salem
- Tova R. Peltz, Geo-Environmental Manager, ODOT Region 1, Portland
- Key No. 18762, File Type C
- SHPO Tracking File



Fig. 1: Project Vicinity Map.

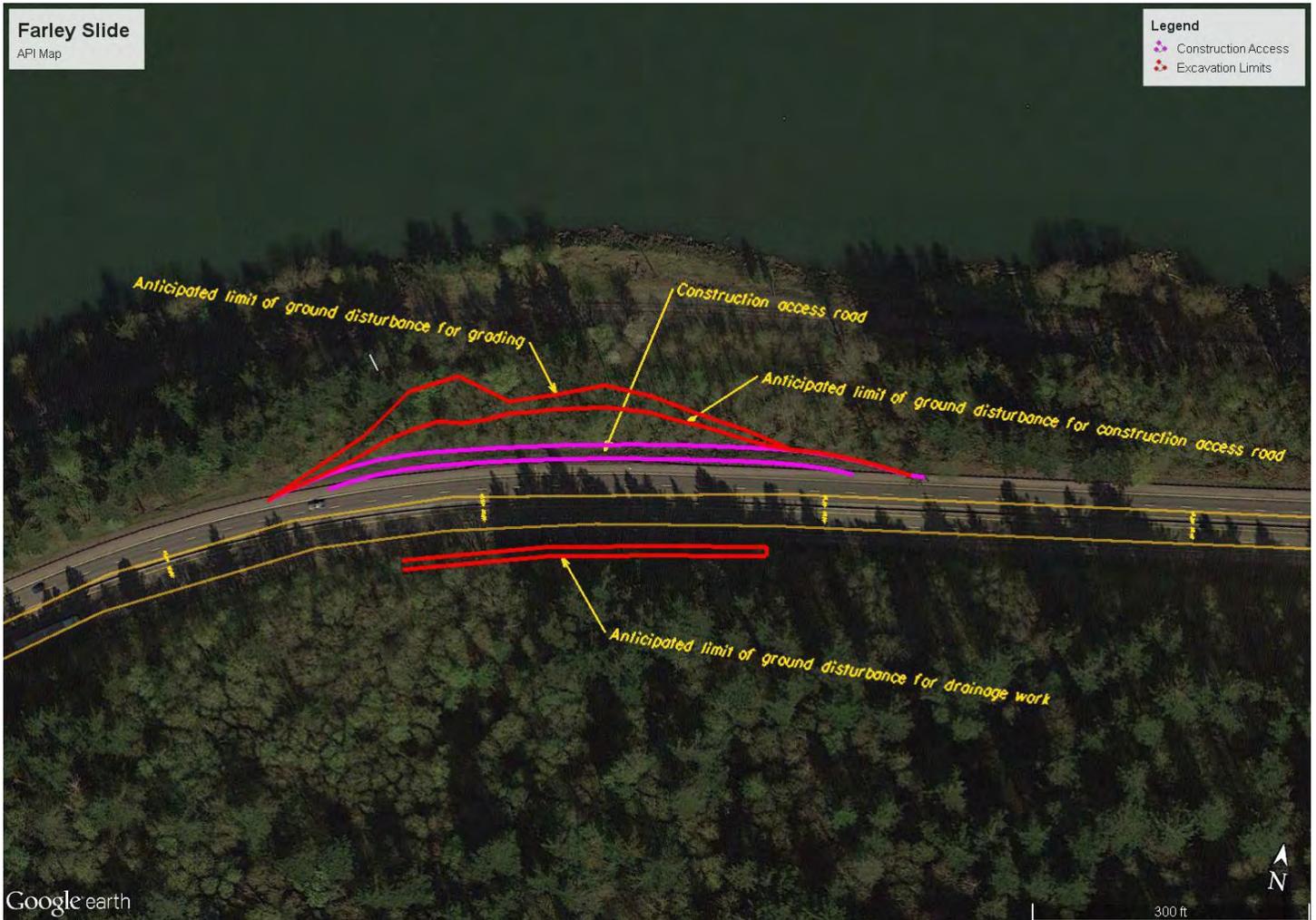


Fig. 2: Area of Anticipated Ground Disturbance at MP 48.0 on Interstate 84.

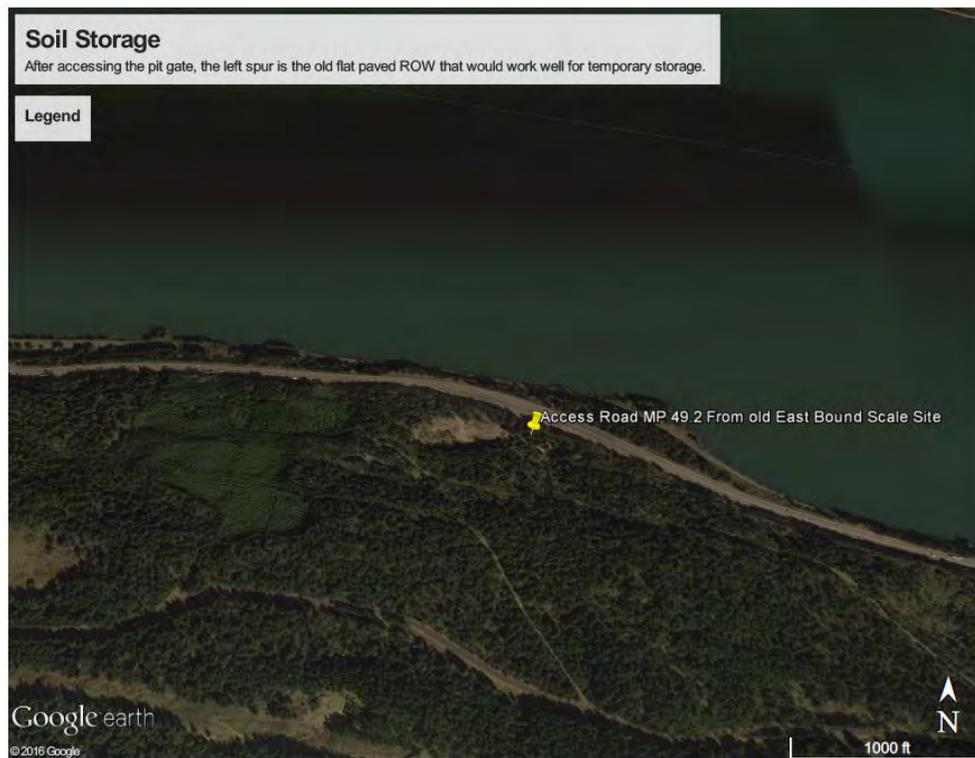
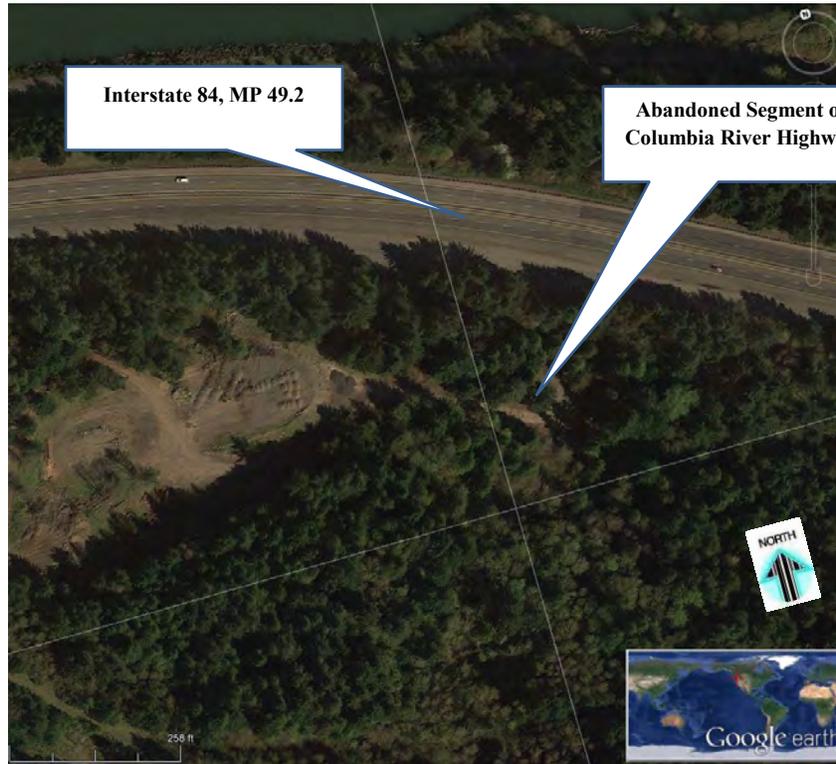


Fig. 3: Two views of Potential Storage Site on Abandoned Segment of Columbia River Highway at MP 49.2.

***ATTACHMENT H — FHWA AND ODOT PCE APPROVAL
DOCUMENT***

Project Name: I-84: Farley Slide		Region: 1
Federal Aid #: S002(164)	ODOT Key #: 18762	
City / County: N/A / Hood River	FHWA Nexus: PE & CON funding	
Project Description:	<p>This project will mitigate slope movement that has sunken the roadway grade at Columbia River Hwy MP 48. Stabilization requires tree removal, 0.79 acres of excavation to a depth of 40-ft, and the installation of drilled micro-pile and tie-backs. Approximately one third of the fill will be returned to the site. Large woody debris, boulders, nurse logs and thick duff layer will be salvaged and placed back on site after project completion. Post-construction, the area will be replanted with native vegetation. Construction staging and storage may occur approximately 1.25 miles to the west at disturbed industrial land owned by the Port of Cascade Locks. Additionally, I-84 will be re-paved where it has been affected by the slide.</p>	
Required Attachments:	Project Area Map: <input checked="" type="checkbox"/>	
Discipline / Resource	Required Compliance / Status Information	Required Attachments
Right-of-Way	No right-of-way files are needed for this project.	None
Land Use	The project is within the Columbia River Gorge National Scenic Area and the Lang Forest State Scenic Corridor. The project was designed to be consistent with the CRGNSA Management Plan and Hood River County land use ordinances. A National Scenic Area permit was issued on XXXXX. This project is consistent with the Hood River County Comprehensive Plan. No state goal exception is required.	None
Socioeconomics	This project benefits the traveling public by improving roadway conditions and safety. No business or residential displacements are proposed. No adverse socioeconomic impacts are anticipated. A bike detour route during construction will send bicyclists off of I-84 onto Forest Lane and through Cascade Locks to avoid the construction zone.	None
Environmental Justice	<p>The project is located within census tract 9501 in Hood River County. The population in census tract 1905 is 29% Hispanic or Latino, 77.6% white, 0.47% African American, 1.6% American Indian or Alaska Native, 0.3% Native Hawaiian and other Pacific Islander and 3.6% two or more races. The population in Hood River County is 31% Hispanic or Latino, 64% white, 0.7% African American, 1.2% American Indian or Alaska Native, 0.3% Native Hawaiian and other Pacific Islander and 2.3% two or more races. 12.6% of the population in Census tract 9501 is living in poverty, compared with 15.7% in the entire county.</p> <p>The project level finding is (1) No disproportionately high and adverse EJ impacts. No minority or low-income populations have been identified that would be adversely impacted by the proposed project, as supported by the Census data cited above. Therefore, in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23, no further EJ analysis is required.</p>	None
CWA Section 404 / Wetlands / Waters	Wetland specialist, Ken Sargent, determined that no wetlands or jurisdictional waterways were located within the project area on 6/20/16. No permits are required.	None
Water Quality	Stormwater treatment is not triggered by this project.	None
ESA/ T&E Species	ODOT Biologist Ben White signed a No Effect Memo for species under the jurisdiction of USFWS and NMFS on 7/7/16.	No Effect Memo
NHPA Section 106 (Cultural Resources)	The Section 106 finding for this project is: No Historic Properties Affected. A 4C PA memo for historic resources was completed by R. Hadlow 09/02/16. The project was cleared for archaeology per Stipulation 4C of the 2011 PA, 08/29/16.	None
Visual Resources	The project is within the Columbia River Gorge National Scenic Area and the Lang Forest State Scenic Corridor. The project was designed to be consistent with the CRGNSA Management Plan and Hood River County land use ordinances. The project is in the Columbia River Gorge National Scenic Area (CRGNSA). Features built in key viewing areas must meet visual subordinate criteria in order to obtain a NSA permit, from Hood River County.	See CE/PCE Procedures

Section 4(f)	The slide repair is on ODOT right of way. The project would not create a Section 4(f) use. No further documentation is required.	None
Section 6(f)(3)	This project does not impact 6(f)3 resources. No further documentation is required.	None
Air Quality	<p>(1) Regional Conformity. The I-84: Farley Slide project, as described in this document is the same project in design and scope as the project that is listed in the 2015-2018 STIP (pg. 92) and is not within an air quality nonattainment or maintenance area .</p> <p>(2) Project Level Conformity. A hot spot analysis is not required.</p> <p>(3) MSAT Considerations. For MSAT considerations, this project falls in the category of 'Exempt or a Project with No Meaningful Potential MSAT effects' because it qualifies as a categorical exclusion under 23 CFR 771.117(c)(26) Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes.</p>	None
Noise	A noise study was not required.	None
Hazardous Materials	DRAFT--A hazardous materials assessment is being completed. Handling the potentially contaminated soil will be covered in the project special provisions to address worker safety and the management and disposal of the contaminated soils.	None
Tribal Coordination	<p>ODOT Archaeologist, T. Bottman consulted with the following entities on 07/27/16:</p> <p>Confederated Tribes and Bands of the Yakama Nation</p> <p>Confederated Tribes of the Grand Ronde Community of Oregon</p> <p>Confederated Tribes of the Umatilla Indian Reservation</p> <p>Confederated Tribes of the Warm Springs Reservation of Oregon</p> <p>Nez Perce Tribe</p> <p>Columbia River Gorge National Scenic Area</p> <p>No responses were received.</p>	See CE/PCE Procedures
Public Outreach	ODOT will host a project website with a project description, construction schedule, traffic impacts and contact information for project staff. This project will be included in a widely distributed mailer and in press releases that highlight multiple projects in the I-84 corridor. A database will be created which includes impacted and interested parties in the project area. Emails will be sent to stakeholders in the database. Comments and responses will be tracked via the database. Project team members will attend community group meetings to provide project updates.	None
Other Federal Agency NEPA Approvals	No other Federal Agency NEPA Approvals are required.	None
Environmental Commitments	No additional environmental commitments have been made.	None

ODOT certifies that this project has been reviewed and documented following the provisions of the 2015 FHWA and ODOT Programmatic Categorical Exclusion Agreement. ODOT certifies that neither significant environmental effects [23 CFR §771.117(a)] nor unusual circumstances [23 CFR §771.117(b)] will result.

This project qualifies as a categorical exclusion as outlined in 23 CFR §771.117 under the following listed CEs:

c-26	▼	▼	▼
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FHWA and Oregon DOT PCE Approval Document



ODOT Preparer	ODOT Approver
Upon submission of this form to GES, please enter project-level information on the appropriate PCE Region Spreadsheet	
Return signed form and attachments to ODOT.GeoAdminWorkOrd@odot.state.or.us	
For detailed information regarding preparation of the PCE Approval Document, see CE/PCE Procedures .	

