



US Army Corps  
of Engineers  
Seattle District



WASHINGTON STATE  
DEPARTMENT OF  
ECOLOGY

# Joint Public Notice

## Application for a Department of the Army Permit and a Washington Department of Ecology Water Quality Certification and/or Coastal Zone Management Consistency Concurrence

US Army Corps of Engineers  
Regulatory Branch  
Post Office Box 3755  
Seattle, WA 98124-3755  
Telephone (206) 764-6909  
Attn: Richard Pratt, Project Manager

WA Department of Ecology  
SEA Program  
Post Office Box 47600  
Olympia, WA 98504-7600  
Telephone (360) 407-7503  
Attn: Kerry Carroll, Permit Manager

Public Notice Date: September 24, 2008  
Expiration Date: October 23, 2008

Reference No.: NWS-2007-2080-SOD  
Name: WA State Dept of Transportation  
I-90 Snoqualmie Pass East, Phase 1

Interested parties are hereby notified that the U.S. Army Corps of Engineers (Corps) and the Washington Department of Ecology (Ecology) have received an application to perform work in waters of the United States as described below and shown on the enclosed drawings.

The Corps will review the work in accordance with Section 404 of the Clean Water Act (CWA). Ecology will review the work pursuant to Section 401 of the CWA, with applicable provisions of State water pollution control laws.

**APPLICANT:** Washington State Dept. of Transportation  
Mr. Jason Smith  
1710 South 24<sup>th</sup> Avenue, Suite 100  
Yakima, Washington 98909  
Telephone: (509) 577-1921

**LOCATION:** In wetlands and tributaries to the Yakima River (and Lake Keechelus), near Snoqualmie Pass, Kittitas County, Washington.

**WORK:** The Washington Department of Transportation (WSDOT) proposes to widen Interstate 90 (I-90) from 4 lanes to 6 lanes from Hyak at Keechelus Dam (MP 55.1 to MP 60.9). The proposed project is Phase 1 of a larger 15 mile corridor project called the I-90 Snoqualmie Pass East Project (MP 55.1 to MP 70.3). Phase 1 is presently the only funded portion of the overall project. The final EIS was published in August 2008 and is available electronically for review (<http://www.wsdot.wa.gov/Projects/I90/SnoqualmiePassEast/Default.htm>).

There are three sub phases in Phase 1 of the work. These include pre-construction work in Phase 1A and roadway construction in Phases 1B and 1C. Pre-construction work (Phase 1A) would occur in 2009 and roadway construction work (Phase 1B and 1C) from 2010 to 2017. Pre-construction would include construction of a temporary detour bridge and approaches at Gold Creek, and removal of material at the Rocky Run Pit Site. Materials removed from the Rocky Run Pit Site would be hauled to the Crystal Springs Sno-Park for sorting and stockpiling. Construction of the highway (Phases 1B and 1C) would include:

- chain up/off areas
- four bridges at Gold Creek (two 120-foot wildlife bridges and 900-foot and 1100-foot bridge over Creek)
- nearshore habitat site for wildlife passage at high pool
- two clear span bridges of 120 and 160 feet over Rocky Run Creek for west and east bound lanes

- one 25-foot bottomless culvert over Wolfe Creek
- culverts for improved permeability and passage at other creeks
- one 440-foot bridge near MP 58.6
- two 180 feet clear span bridges at the Resort Creek area
- one 20-foot culvert for Unnamed Creek at MP 59.7
- one 25-foot bottomless culvert over Townsend Creek
- stormwater treatment facilities meeting the current Highway Runoff Manual (HRM) standards.

These modifications to the roadway would place fill materials all along Keechelus Lake and other jurisdictional wetlands.

Impacts to jurisdictional waters would occur throughout the Phase 1 project corridor. Phase 1A impacts include temporary impacting 0.51 acre of Category II wetlands to construct a temporary bridge at Gold Creek. This fill would be in-place for 3 years and would then be removed and restored. Rocky Run Pit Site excavation would permanently impact 0.88 acre of Category II wetland, 1.05 acres of Category III wetlands, and 0.08 acre of open water. Additionally, temporary impacts would include 0.81 acre of Category II wetland. These temporary impacts would be removed after 5 months. Roadway construction for Phases 1B and 1C would affect wetlands and jurisdictional waters near Gold Creek, Keechelus Lake, Rocky Run Creek, Wolfe Creek, an unnamed Creek at MP 57.3, Resort Creek, an unnamed Creek at MP 59.7, and Townsend Creek. Impacts are quantified in the attached table and are shown on the attached project drawings. All creek crossings would require a temporary channel diversion, bypass, channel change, and / or fill removal to complete the improvements.

Phase 1A Summary Aquatic Resource Impact Table			
Impact Type	Category	Impact Size	
		Temporary (acres)	Permanent (acres)
Wetlands	I	0	0
	II	1.32	0.88
	III	0	1.05
	IV	0	0
	<b>TOTALS</b>		<b>1.32</b>
	Open Water	0	0.08

Phase 1B & 1C Summary Aquatic Resource Impact Table			
Impact Type	Category	Impact Size	
		Temporary (acres)	Permanent (acres)
Wetlands	I	0.32	0
	II	6.70	3.58
	III	3.35	6.02
	IV	0	0.56
	<b>TOTALS</b>		<b>10.37</b>
	Open Water	4.50	6.12
Streams	Gold Creek	0	0
	Rocky Run	0.4	0
	Un-named Creek at MP 57.3	0.2	0
	Wolfe Creek	0.2	0
	Resort Creek	0.5	Taken back to historic location
	Un-named Creek at MP 59.7	0.2	0
	Townsend Creek	0.2	0
<b>TOTALS</b>		<b>1.7</b>	<b>0</b>

Phase 1 Summary (1A, 1B & 1C) Aquatic Resource Impact Table			
	Impact Type	Impact Size	
		Temporary (acres)	Permanent (acres)
<b>Wetlands</b>	I	0.32	0
	II	8.02	4.46
	III	3.35	7.07
	IV	0	0.56
	<b>TOTALS</b>		<b>11.69</b>
	Open Water	4.50	6.20

A total of 12.09 acres of wetlands would be permanently filled as a result of Phase 1 of the project. A total of 11.69 acres of wetlands would be temporarily disturbed during construction. A complete list of wetland impacts, their location, size, Ecology rating, Hydrogeomorphic Classification, and Cowardin Class can be found (2008 Wetland Biology Report). Approximately 10.57 acres of wetland buffers would be permanently affected by the project and 6.06 acres would be temporarily affected. If issued, this permit would be valid for twelve years.

**PURPOSE:** The purpose of the project is to meet projected traffic demands, improve public safety, correct structural deficiencies, and reduce avalanche and slope instability along a 6-mile stretch of I-90 between the communities of Hyak and Keechelus Dam.

**MITIGATION:** WSDOT minimized impacts to wetlands and streams by utilizing the existing roadway over alternatives that created new roadways. For the preferred alternative, WSDOT minimized impacts through minor alignment shifts, construction of retaining walls, bridging, changes in roadway profile, changes in lane or median width, and steepening roadway slopes. These changes reduced wetland impacts from 15.10 acres to 12.09 acres, a decrease of approximately 20 percent.

Mitigation for project impacts is described in the Wetland and Aquatic Resource Mitigation (WARM) Plan which is available by contacting the applicant listed on page 1. The plan was developed in cooperation with the I-90 Snoqualmie Pass East Inter-disciplinary Team (IDT) which includes the U.S. Forest Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Environmental Protection Agency, National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS). The WARM Plan was developed in conjunction with the project's "landscape level watershed based approach" that focuses compensatory mitigation on restoring, protecting and improving the ecological connectivity of the surrounding sub-alpine Cascade landscape.

The WARM Plan identifies ten individual mitigation sites (or modules) to compensate for wetland impacts. The specific mitigation sites in the Draft WARM Plan include the Upper Gold Creek West Preservation, Upper Keechelus Lake Nearshore Habitat, Gold Creek Restoration, Rocky Run Creek, Wolfe Creek, Resort Creek, Unnamed Creek (MP 59.7), Townsend Creek, Townsend Creek Old US Highway 10 Restoration, and a self-mitigating fill (bioengineered) along the new fill slope of the highway below the Ordinary High Water Mark of Keechelus Lake.

Of the proposed compensatory mitigation there are 26 acres of wetland preservation, 237 acres of upland preservation, 11.27 acres of wetland restoration, 3.94 acres of stream / riparian area restoration, 0.17 acres of stream and riparian restoration related to culvert improvements, 1.46 acres of upland restoration, and 4.01 acres of self-mitigating fill (bioengineered habitat shoreline along Keechelus Lake). A total of 31.37 acres of compensatory wetland and aquatic resource mitigation credit are planned for this project. Implementing the compensatory mitigation in phases would help realize mitigation credits at or before the wetland resource impact occurs.

**ENDANGERED SPECIES:** The Endangered Species Act (ESA) requires federal agencies to consult with the NMFS and/or USFWS pursuant to Section 7 of ESA on all actions that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat.

The Federal Highway Administration, as the lead agency for ESA consultation, has consulted with the NMFS and the USFWS as required under Section 7 of the ESA. The Corps agrees with NMFS determination that the project "may affect, not likely to adversely affect" for Middle Columbia River Steelhead and their designated critical habitat. Concurrence was issued on April 7, 2008. Due to a "likely to adversely effect" determination the Federal Highway Administration initiated formal consultation with USFWS for Columbia River bull trout, Northern Spotted Owl, and Marbled murrelet. Additional species or habitats that are determined to be "may affect, not likely to adversely affect" are Gray Wolf, Grizzly Bear, Canada Lynx, Designated habitat for Columbia River bull trout and Northern Spotted Owl. The Biological Opinion from USFWS was issued on September 3, 2008, and concurrence was issued August 5, 2008.

**ESSENTIAL FISH HABITAT:** The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The proposed action would not impact EFH in the project area.

The Federal Highway Administration, as the lead agency for a determination regarding EFH, has consulted with the NMFS. The Corps agrees with their determination that the project will not adversely affect EFH species. Concurrence was issued on April 7, 2008.

**CULTURAL RESOURCES:** The Federal Highway Administration, as the lead agency for determining compliance with Section 106 of the National Historic Preservation Act, will consult with the State Historic Preservation Office as appropriate. FHWA has been consulting with the Confederated Tribes of the Colville Reservation, Yakama Nation, Snoqualmie Tribe, Muckleshoot Tribe, Tulalip Tribes, Wanapum Tribe, and SHPO. This consultation will continue through construction of the project.

**PUBLIC HEARING:** Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

**EVALUATION – CORPS** - The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; Native American Nations or tribal governments; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement

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pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

The described discharge will be evaluated for compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the CWA. These guidelines require an alternatives analysis for any proposed discharge of dredged or fill material into waters of the United States.

**EVALUATION—ECOLOGY:** Ecology is soliciting comments from the public; Federal, Native American Nations or tribal governments, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Ecology will be considering all comments to determine whether to certify or deny certification for the proposed project.

**COMMENT AND REVIEW PERIOD:** Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether it would be in the public interest to authorize this proposal. In order to be accepted, e-mail comments must originate from the author's e-mail account and must include on the subject line of the e-mail message the permit applicant's name and reference number as shown below. Either conventional mail or e-mail comments must include the permit applicant's name and reference number, as shown below, and the commentor's name, address, and phone number. All comments whether conventional mail or e-mail must reach this office, no later than the expiration date of this public notice to ensure consideration.

**Corps comments:** All e-mail comments should be sent to [Richard.I.Pratt@usace.army.mil](mailto:Richard.I.Pratt@usace.army.mil). Conventional mail comments should be sent to U.S. Army Corps of Engineers, Regulatory Branch, Attn: Richard Pratt, Post Office Box 3755, Seattle, Washington, 98124-3755.

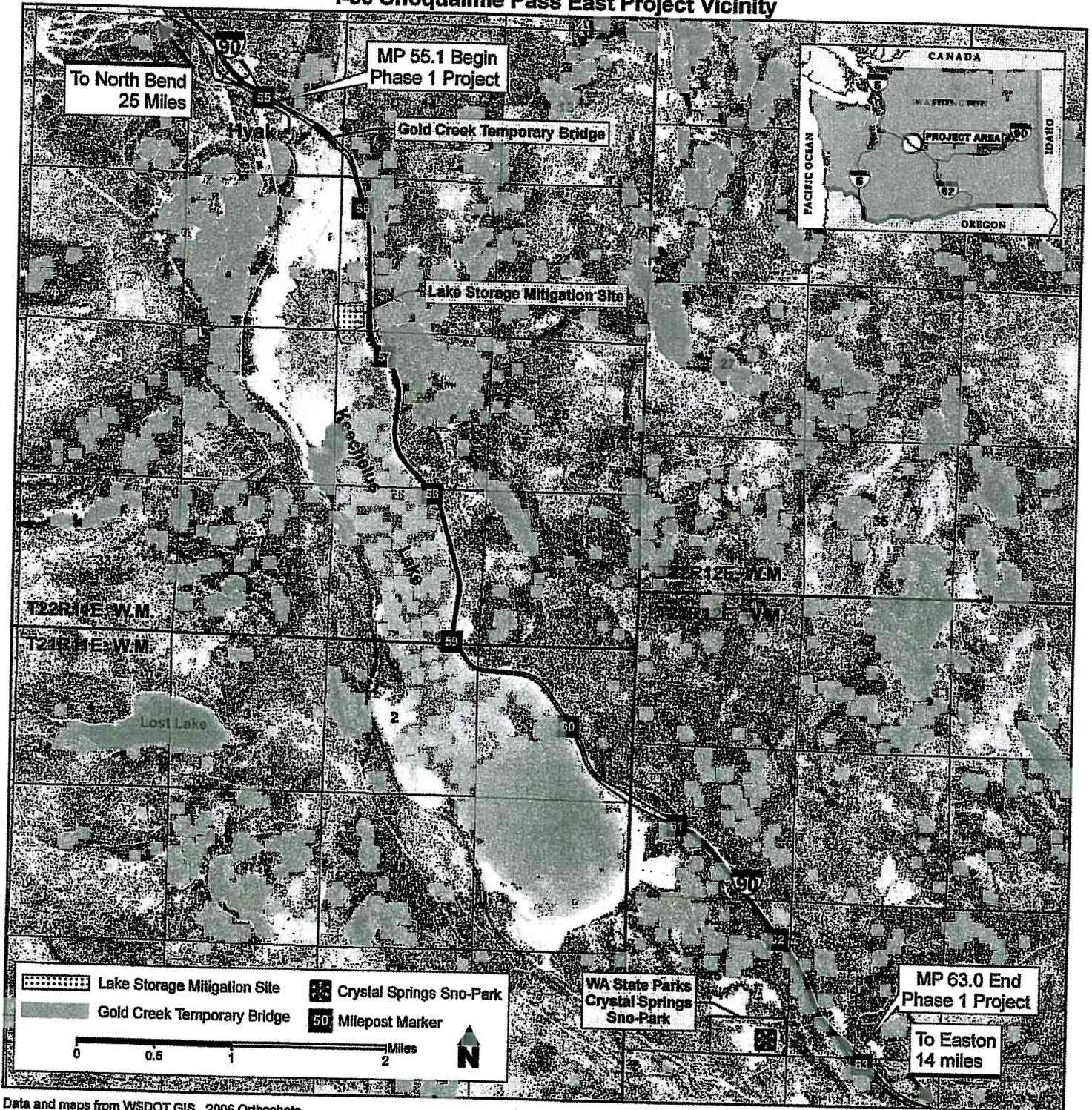
**Ecology Comments:** Any person desiring to present views on the project pertaining to a request for water quality certification under Section 401 of the CWA, may do so by submitting written comments to the following address: Department of Ecology, Attn: Ms. Kerry Carroll, P.O. Box 47600, Olympia, Washington, 98504-7600, or e-mail to [kstr461@ecy.wa.gov](mailto:kstr461@ecy.wa.gov)

To ensure proper consideration of all comments, responders must include the following name and reference number in the text of their comments: Washington State Dept. of Transportation, NWS-2007-2080-SOD

Encl: Figures (32)



# I-90 Snoqualmie Pass East Project Vicinity



Data and maps from WSDOT GIS, 2006 Orthophoto

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** n/a

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake

**NEAR:** Hyak, Washington

**COUNTY:** Kittitas **STATE:** WA

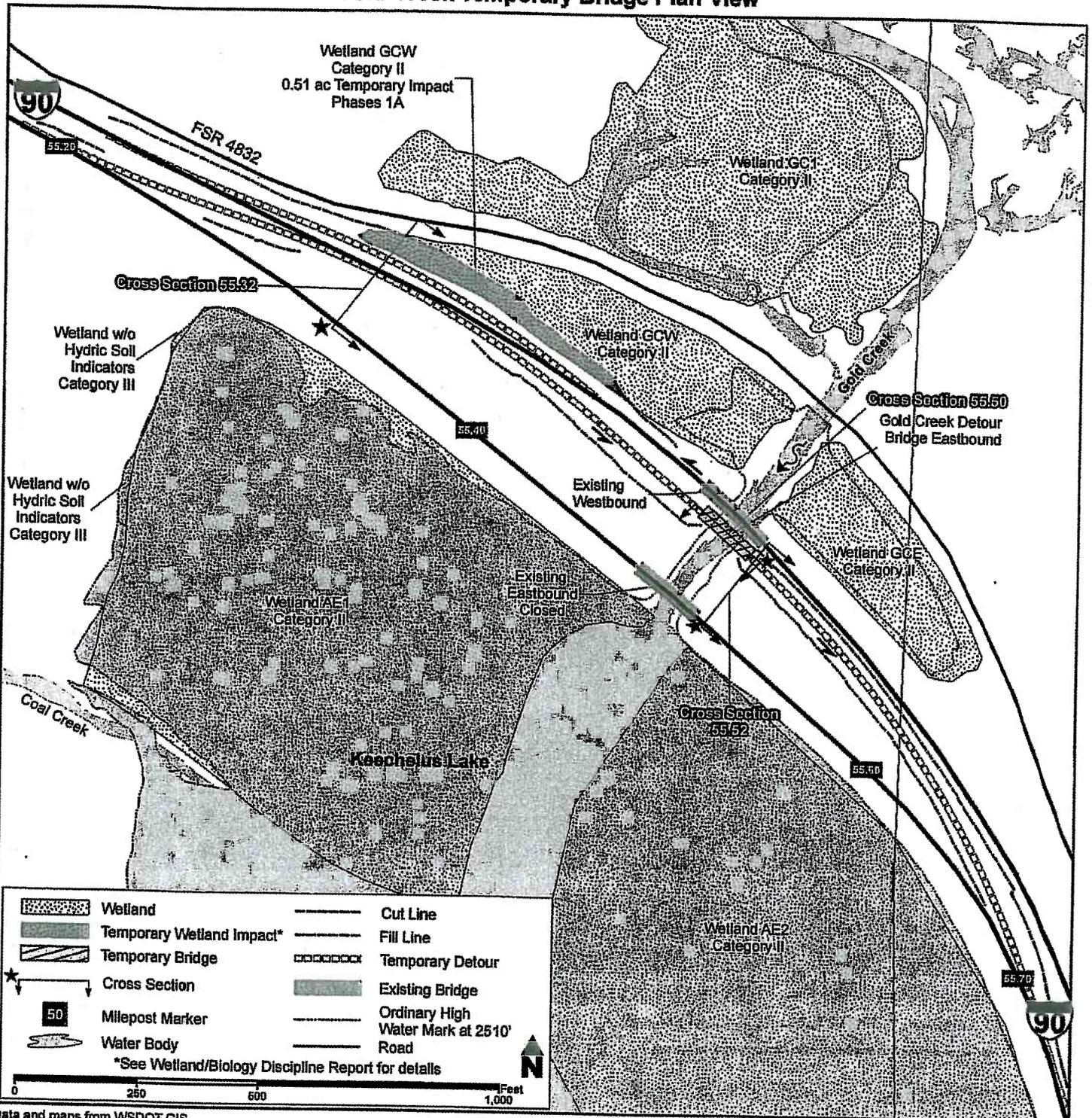
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# Gold Creek Temporary Bridge Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1A)

**USAGE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

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 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

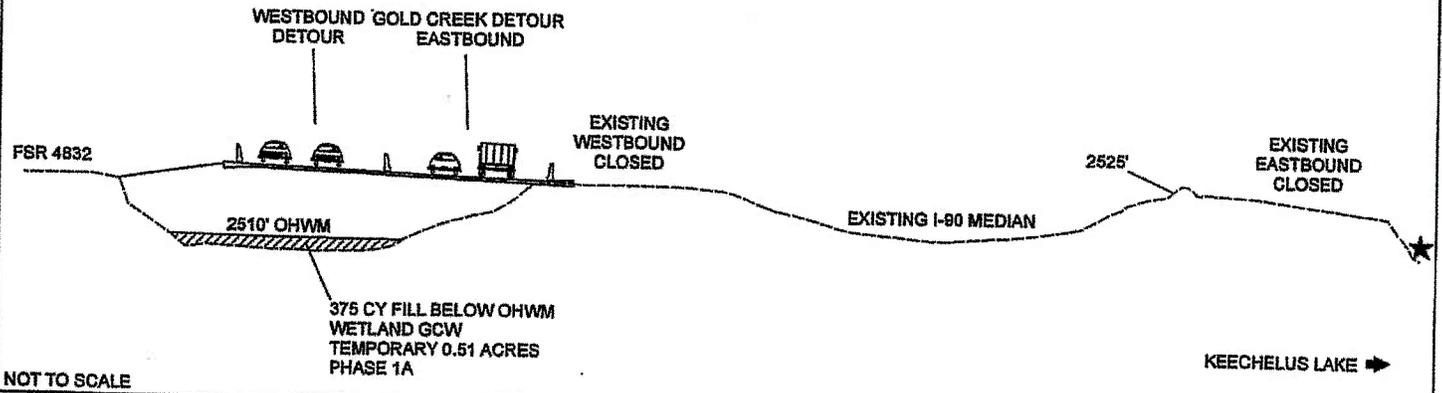
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

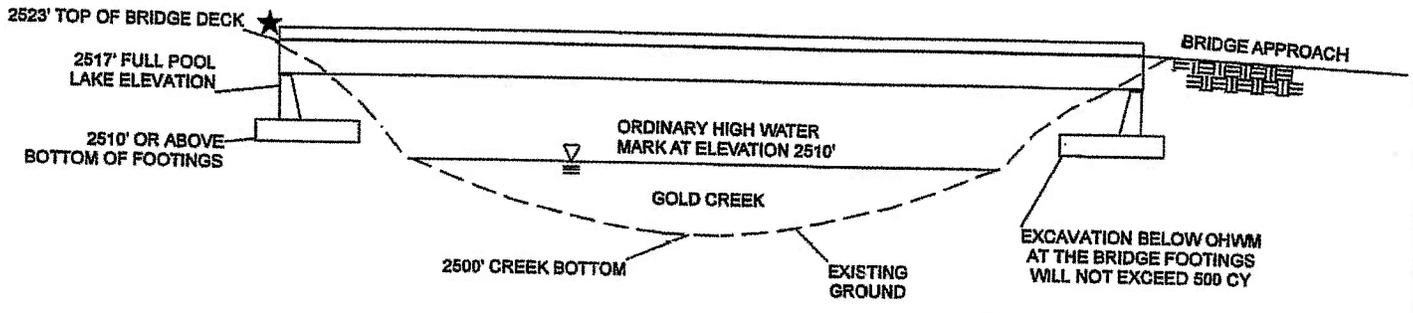
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# Gold Creek Temporary Bridge Details

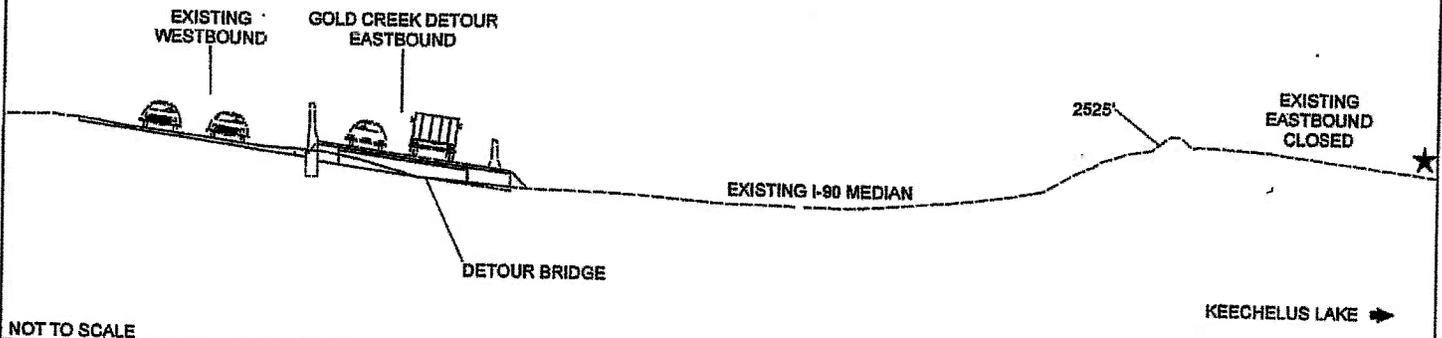
## Gold Creek Proposed Roadway Detour Cross Section 55.32



## Gold Creek Temporary Bridge Profile Cross Section 55.50



## Gold Creek Proposed Roadway Detour Cross Section 55.52



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1A)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
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Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
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Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

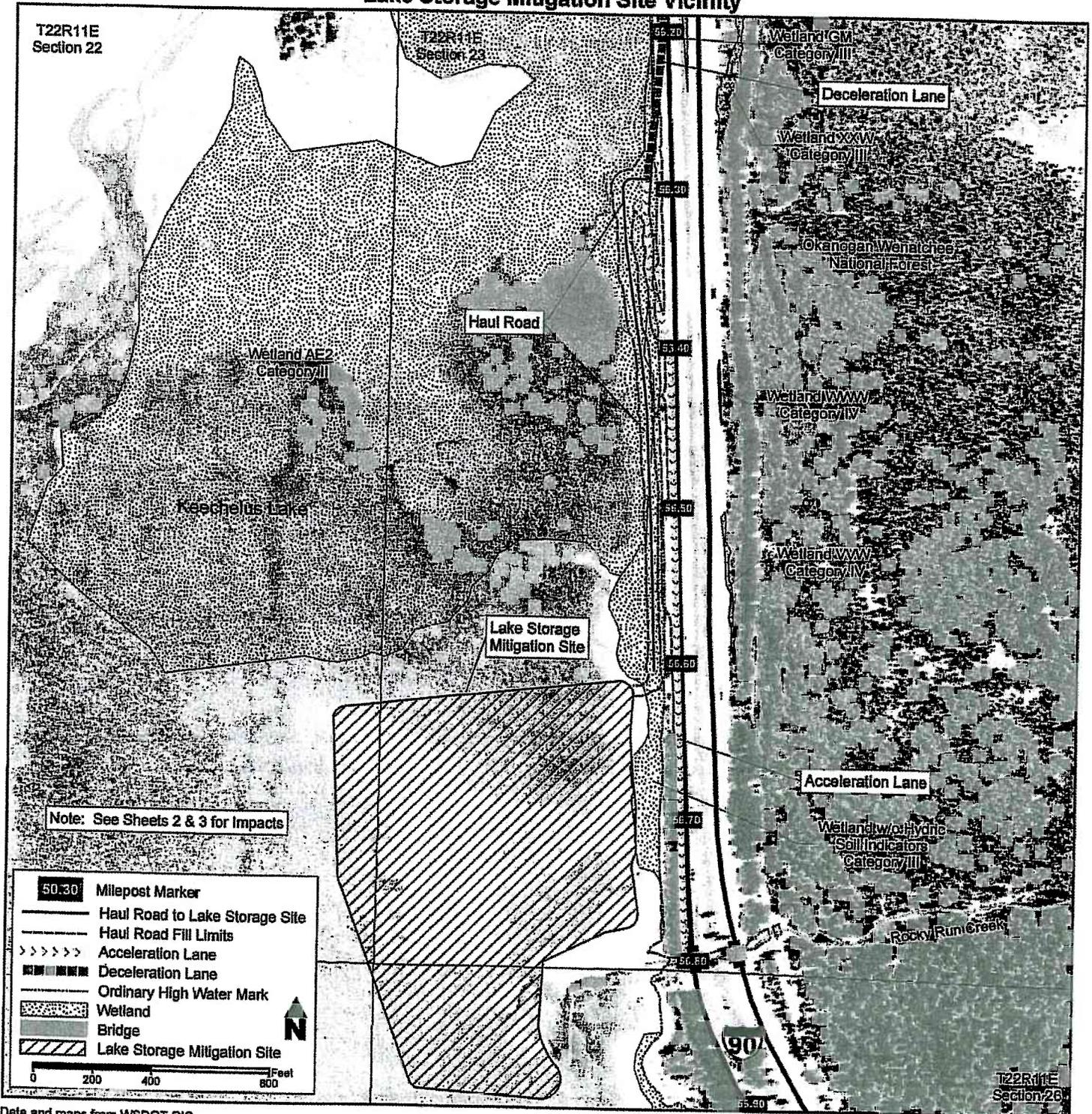
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# Lake Storage Mitigation Site Vicinity



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1A)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

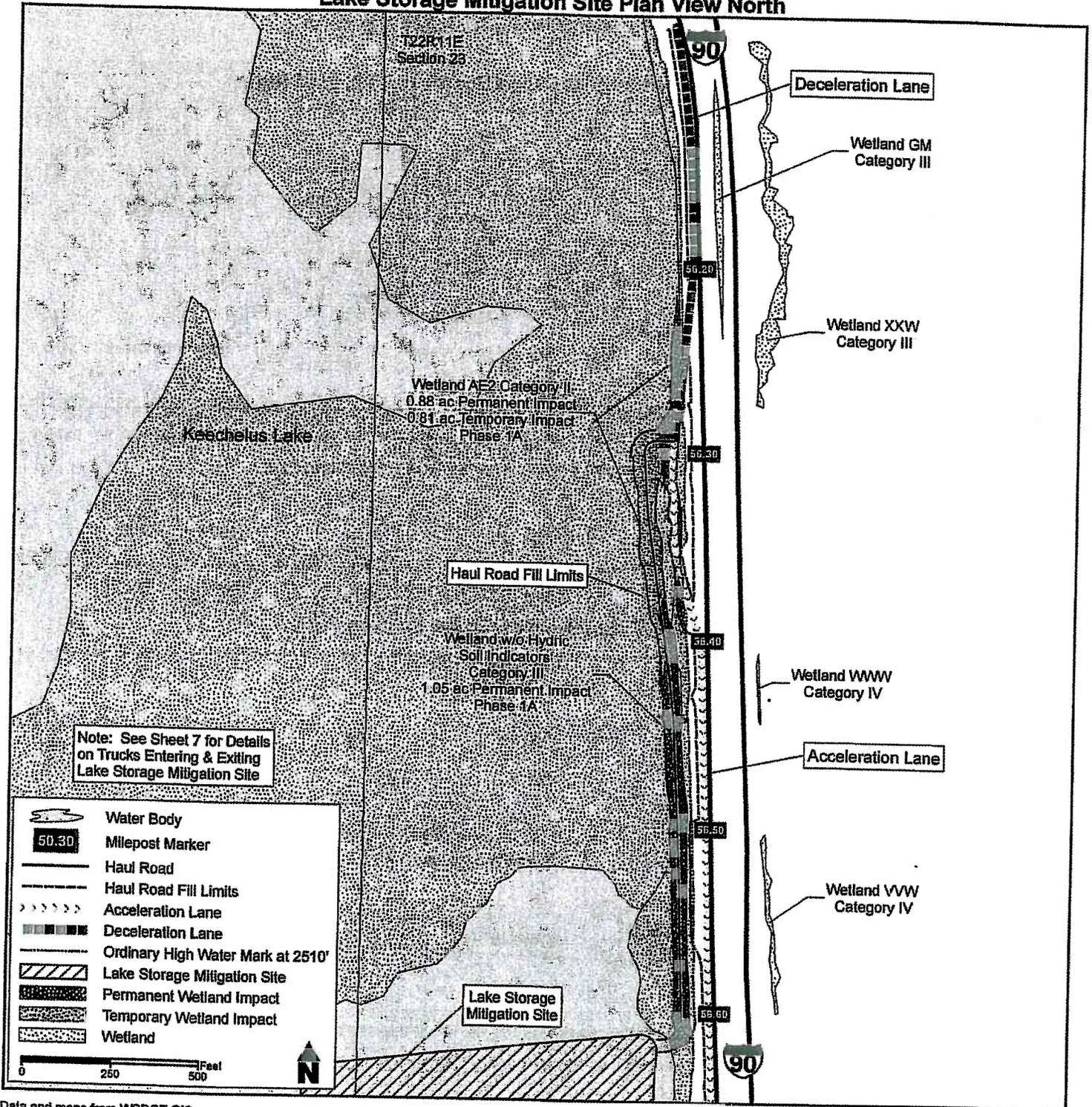
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# Lake Storage Mitigation Site Plan View North



Note: See Sheet 7 for Details on Trucks Entering & Exiting Lake Storage Mitigation Site

Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1A)

**USAGE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

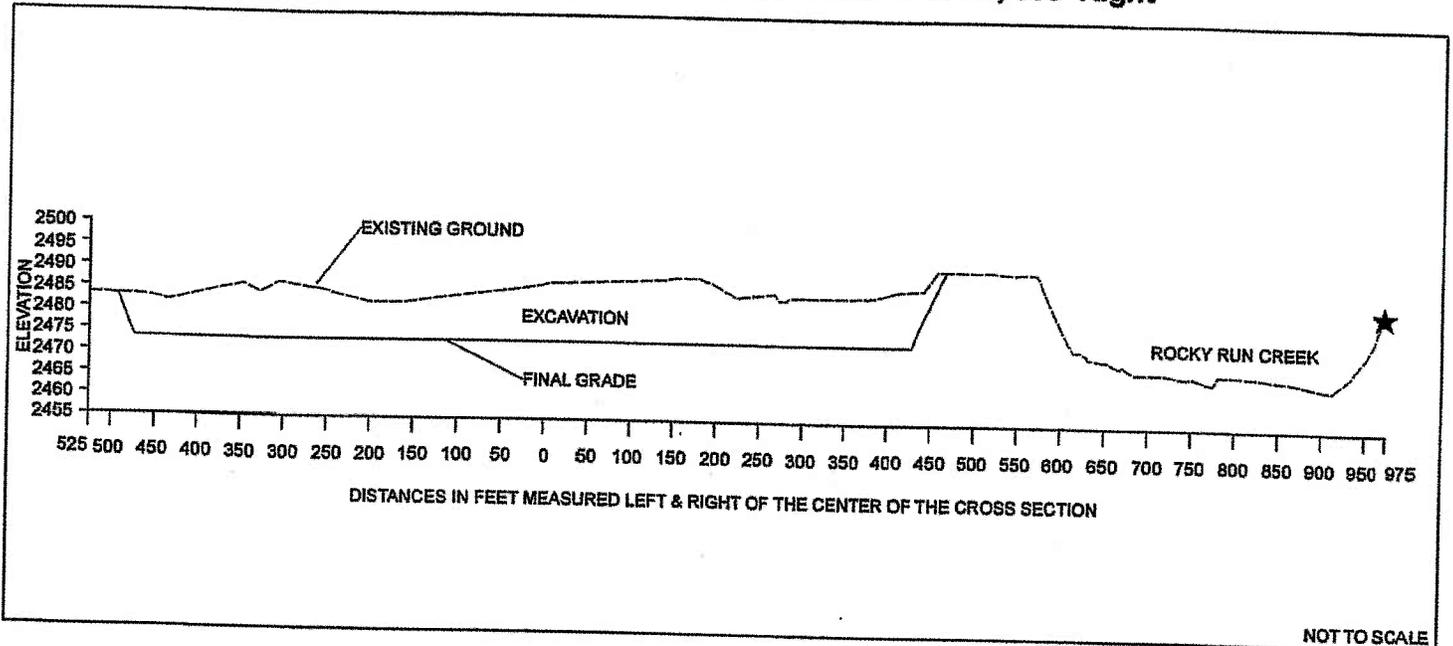
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

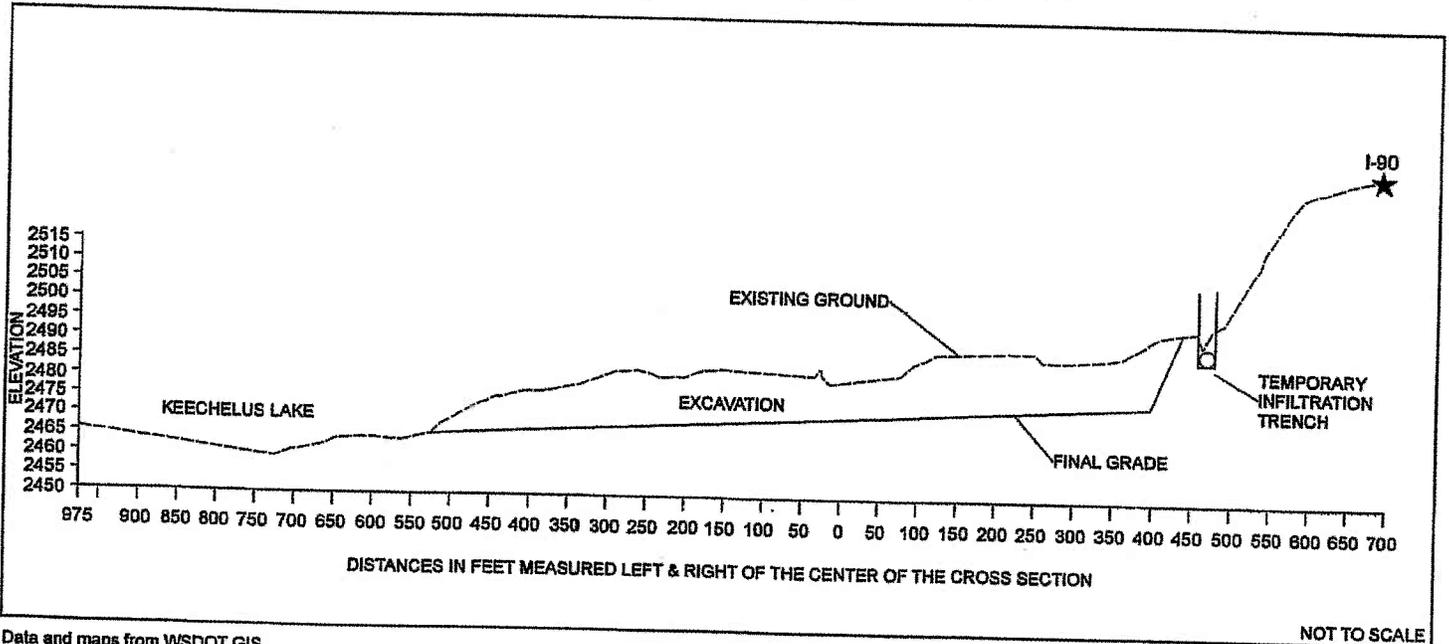
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## Lake Storage Mitigation Site Cross Sections

### Lake Storage Mitigation Site Cross Section 56.72, 500' Right



### Lake Storage Mitigation Site Cross Section 56.72



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1A)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
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 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
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 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

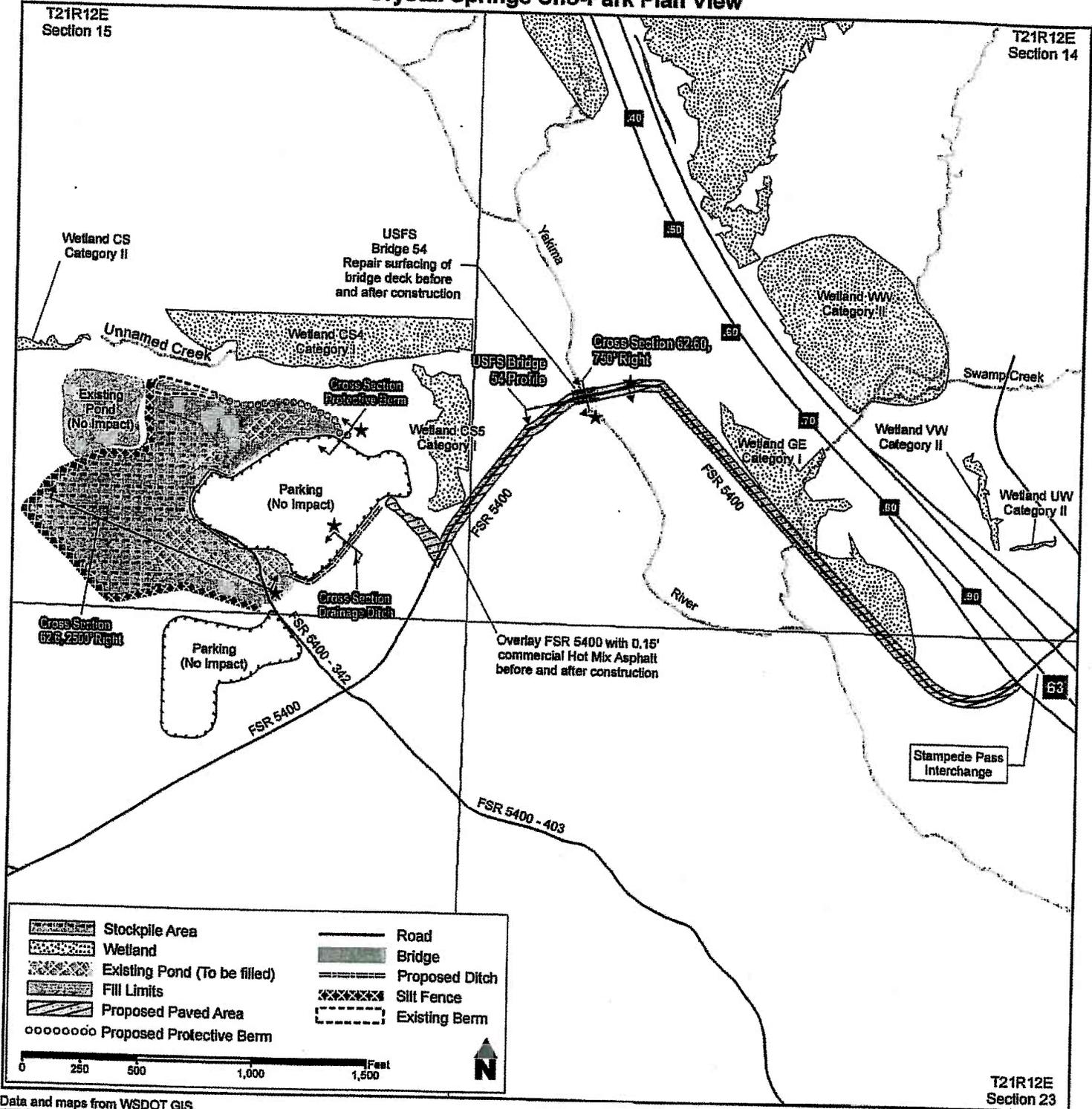
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# Crystal Springs Sno-Park Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1A)

**USACE REF. #** \_\_\_\_\_

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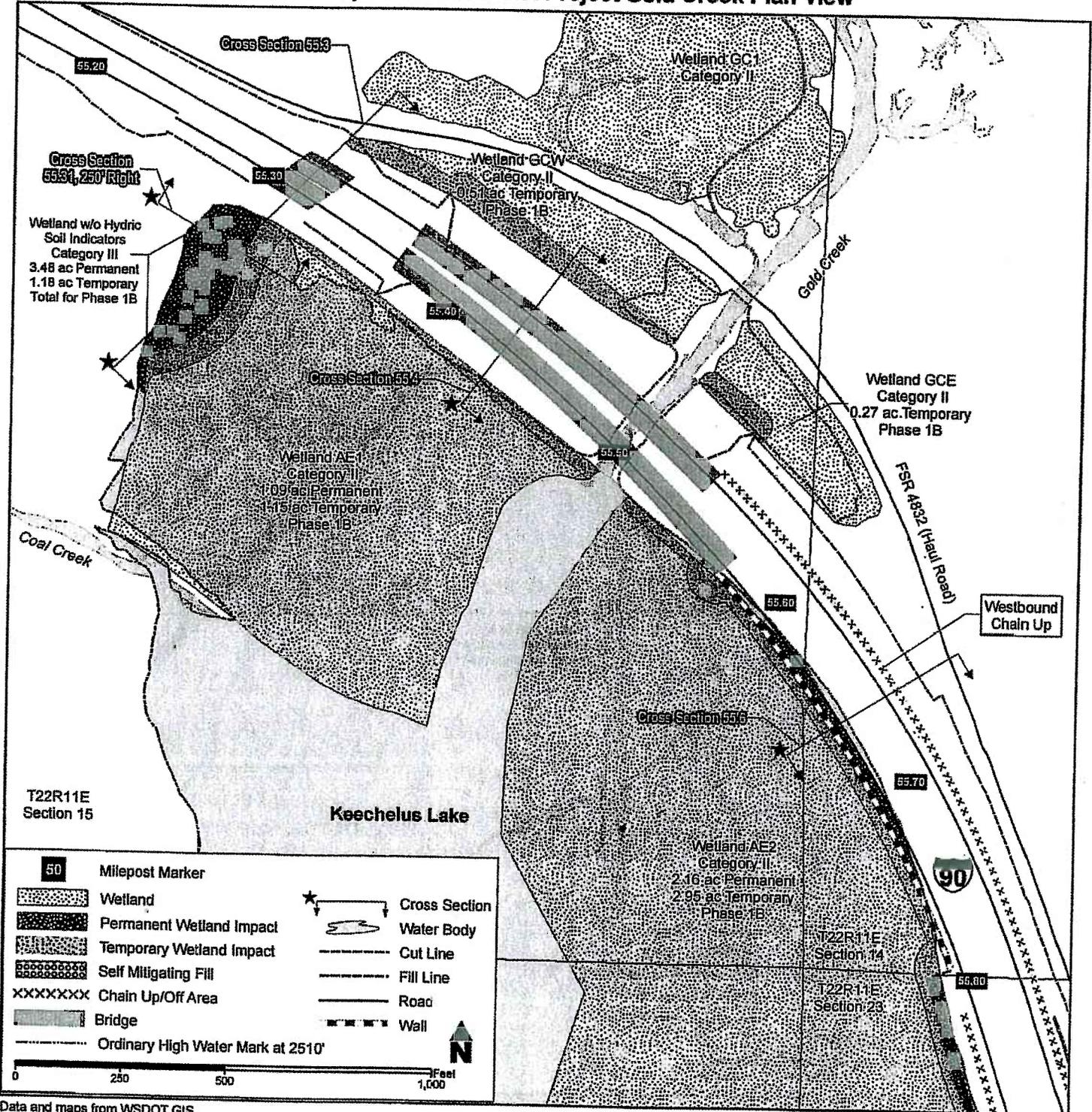
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 T21R12E S10, S14, S15, S23, W.M.,  
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 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

<b>Reference:</b> NWS-2007-2080-SOD
<b>Application:</b> WA Dept of Transportation
<b>Date:</b> September 16, 2008
<b>Page:</b> 7 of 32

# I-90 Snoqualmie Pass East Project Gold Creek Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
 T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
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 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

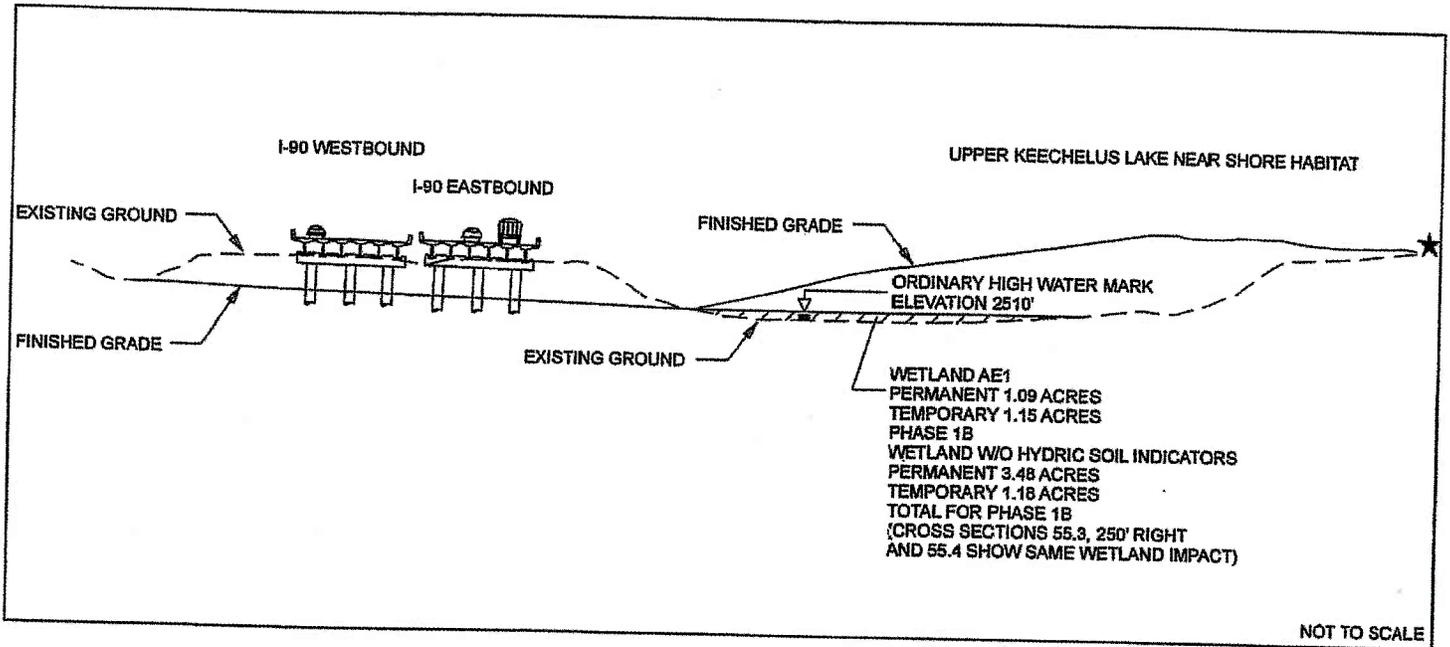
**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

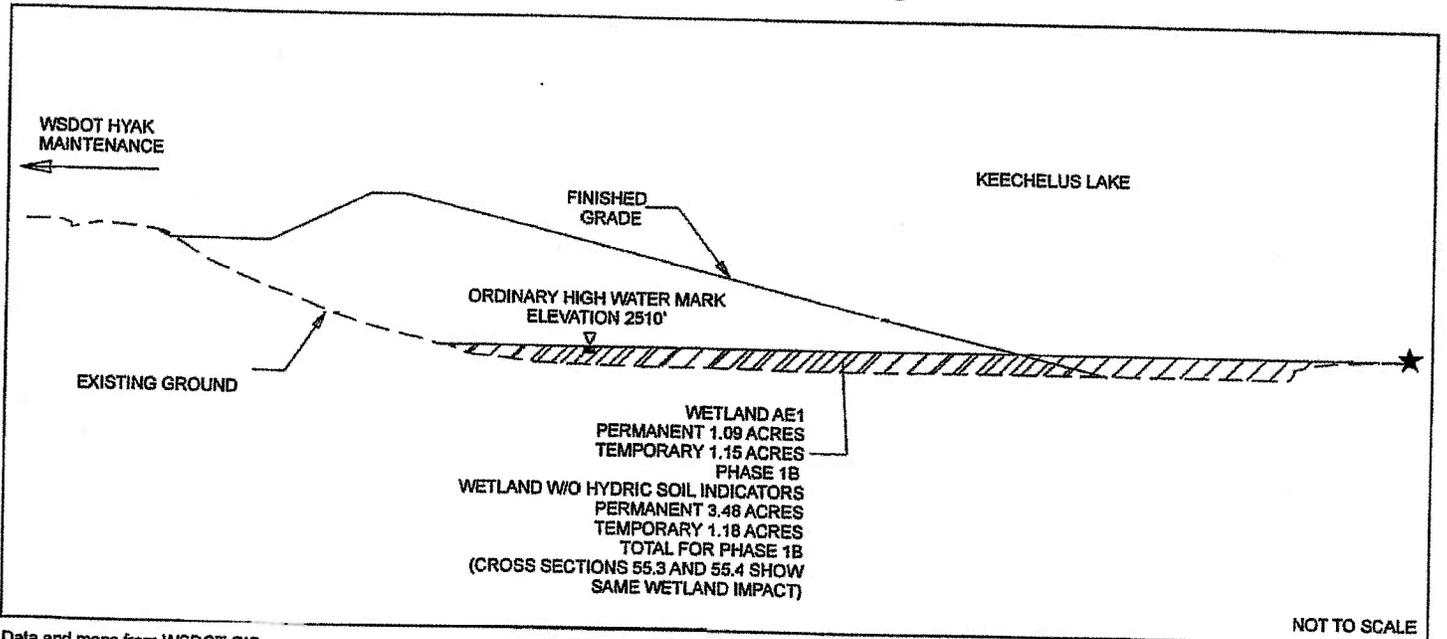
<b>Reference:</b> NWS-2007-2080-SOD
<b>Application:</b> WA Dept of Transportation
<b>Date:</b> September 16, 2008
<b>Page:</b> 8 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 55.3



## Cross Section 55.3, 250' Right



Data and maps from WSDOT GIS

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
to Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

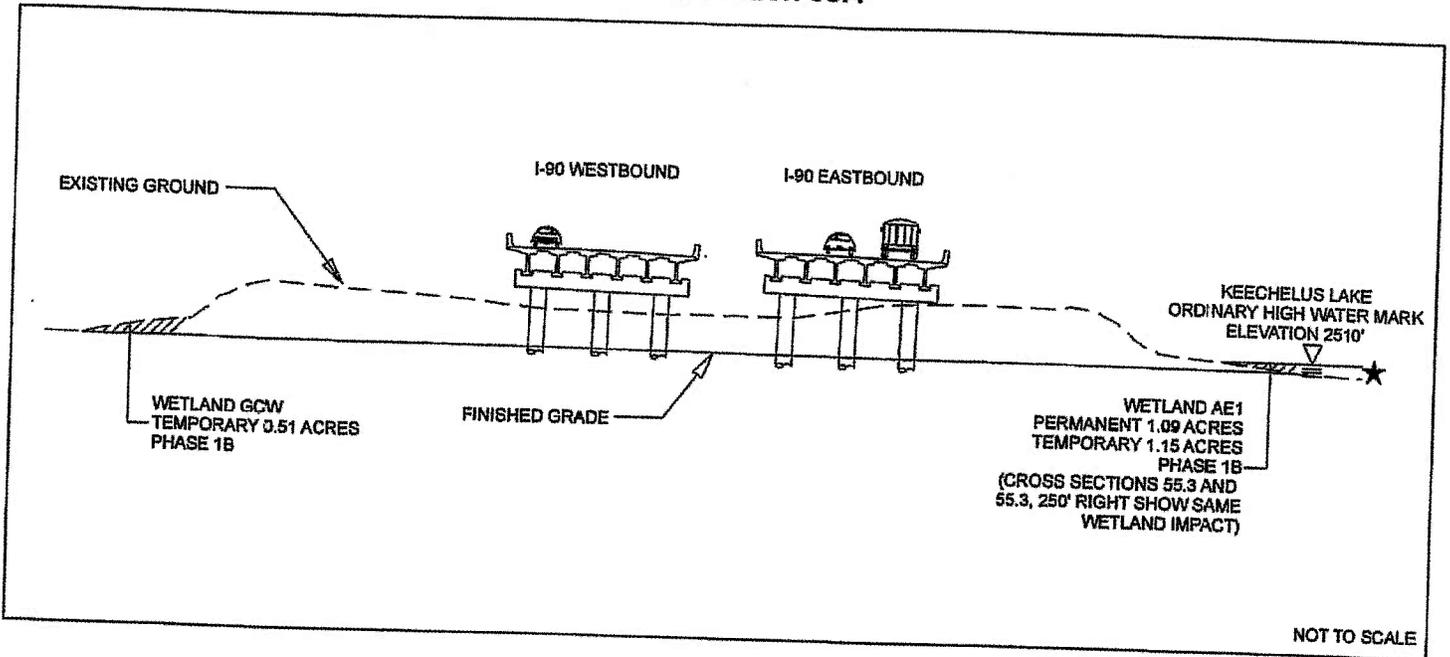
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

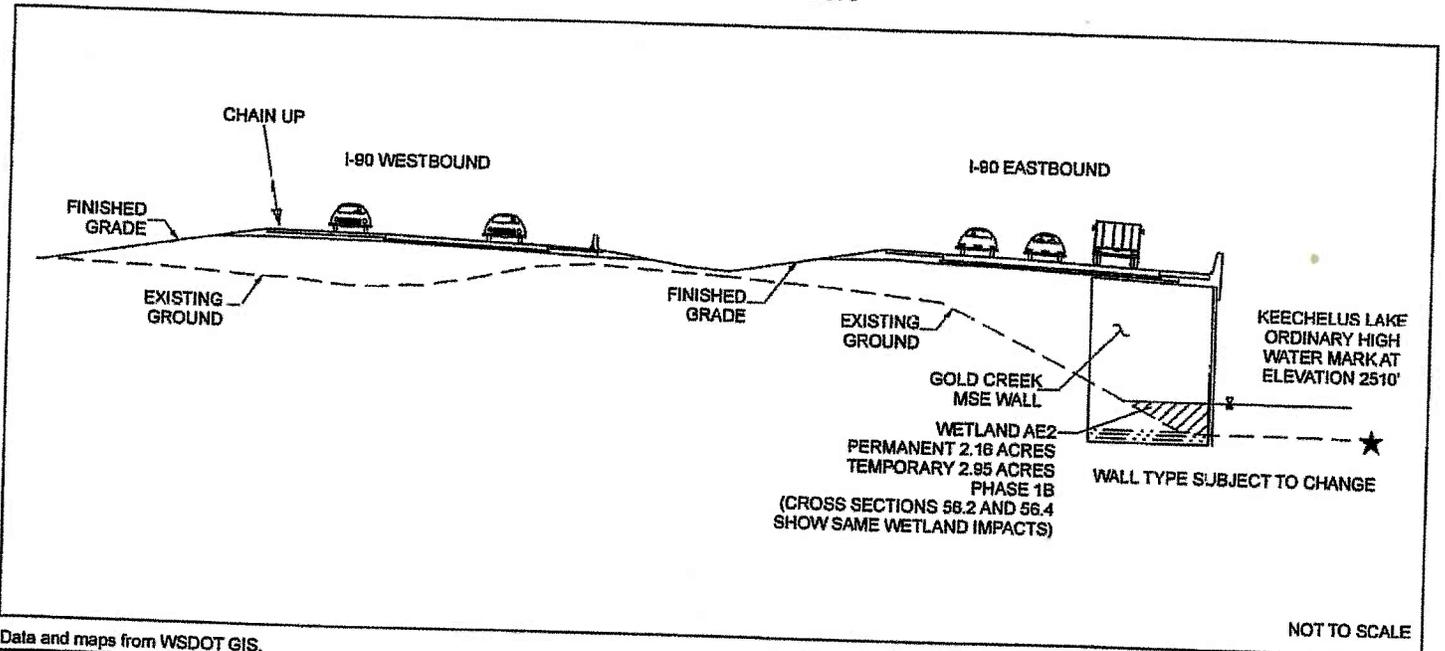
**Page:** 9 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 55.4



## Cross Section 55.6



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
To Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

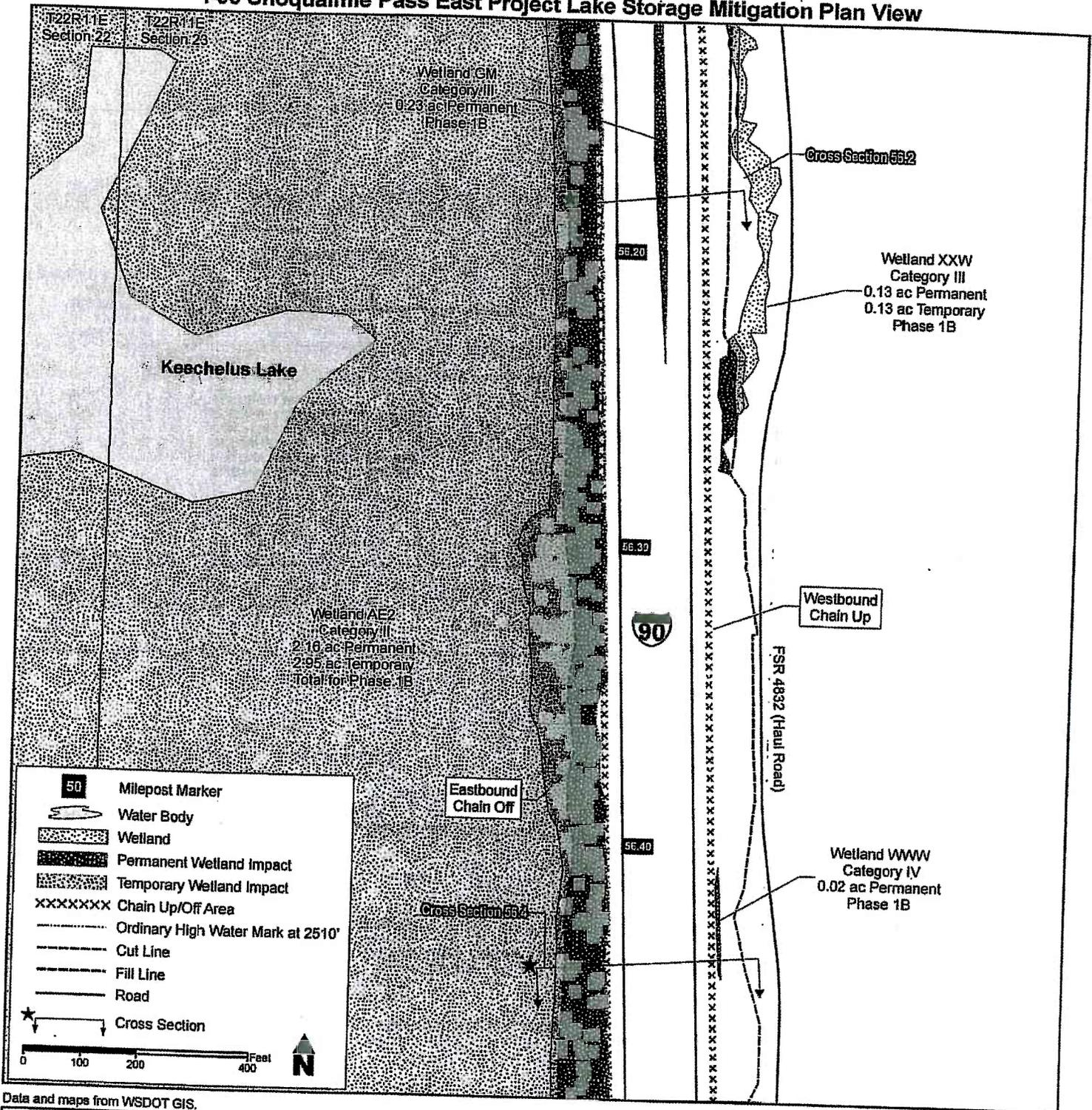
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 10 of 32

# I-90 Snoqualmie Pass East Project Lake Storage Mitigation Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

- ADJACENT PROPERTY OWNERS:**
1. USDA Forest Service
  2. Washington State Department of Transportation
  3. US Bureau of Reclamation
  4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
 T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

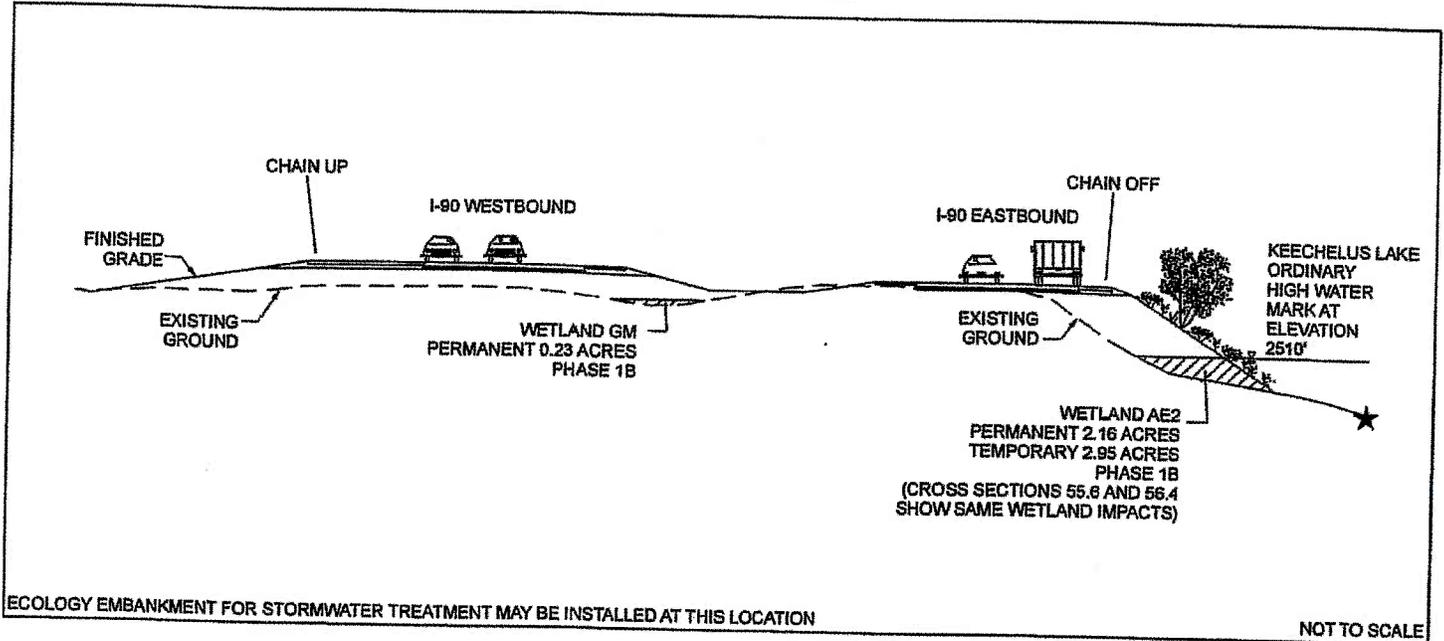
**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

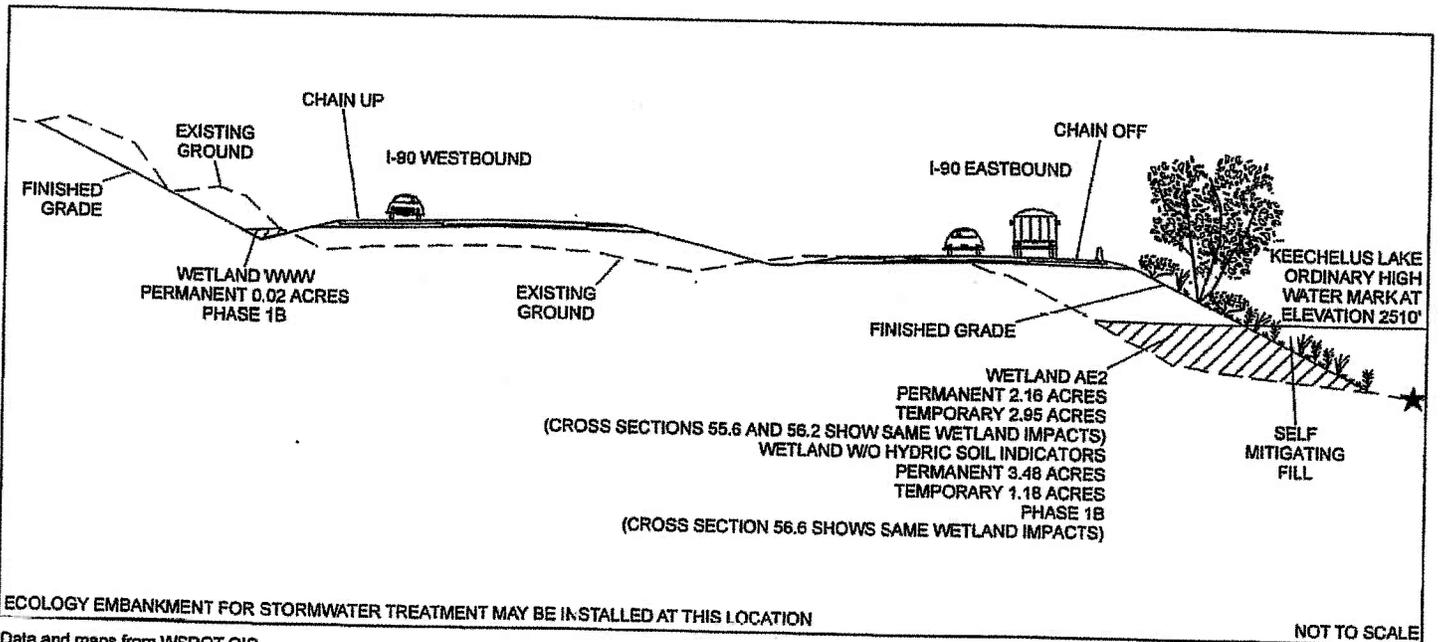
<b>Reference:</b> NWS-2007-2080-SOD
<b>Application:</b> WA Dept of Transportation
<b>Date:</b> September 16, 2008
<b>Page:</b> 11 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 56.2



## Cross Section 56.4



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
To Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

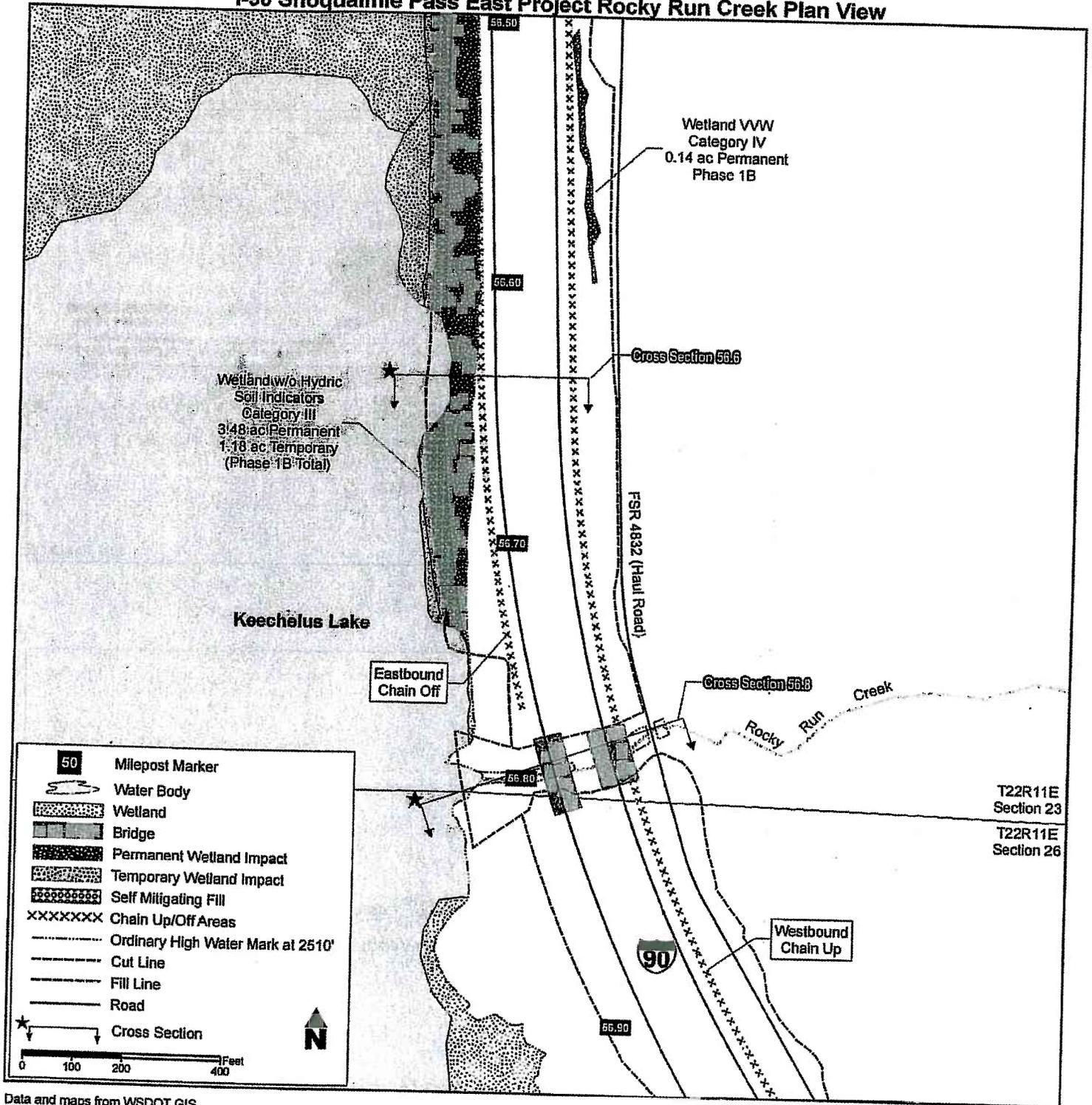
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 12 of 32

# I-90 Snoqualmie Pass East Project Rocky Run Creek Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 to Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

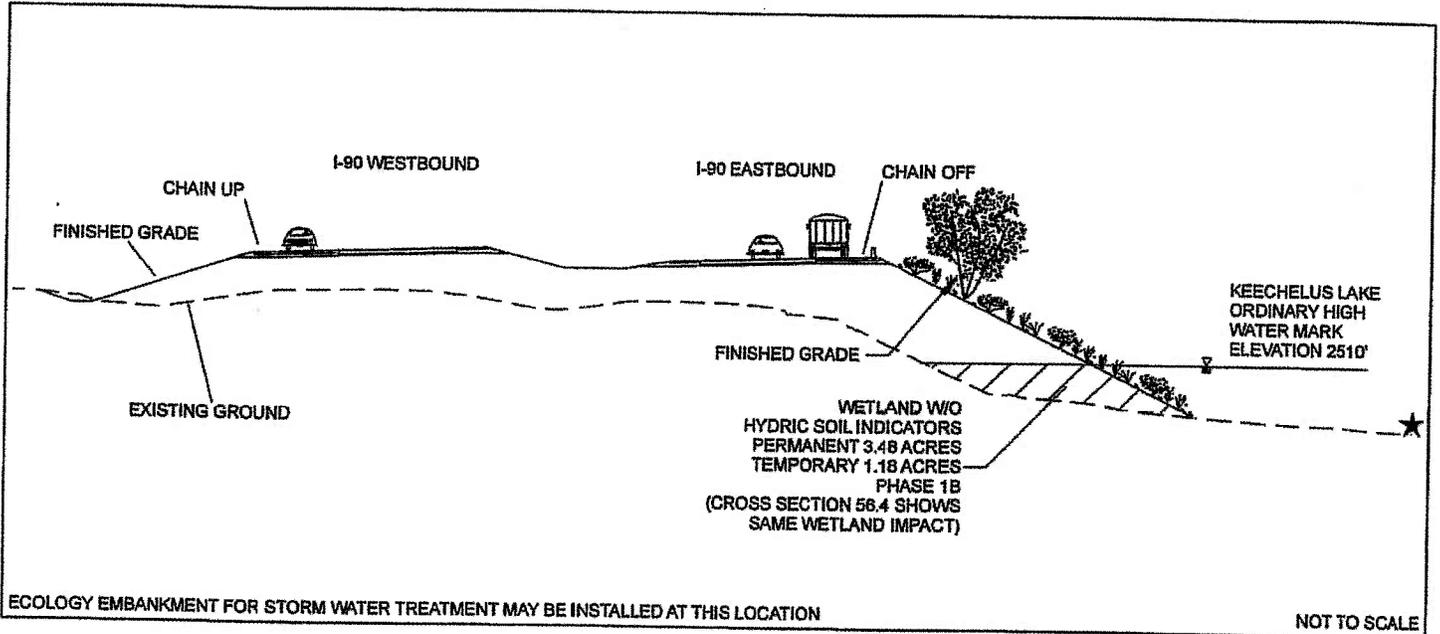
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

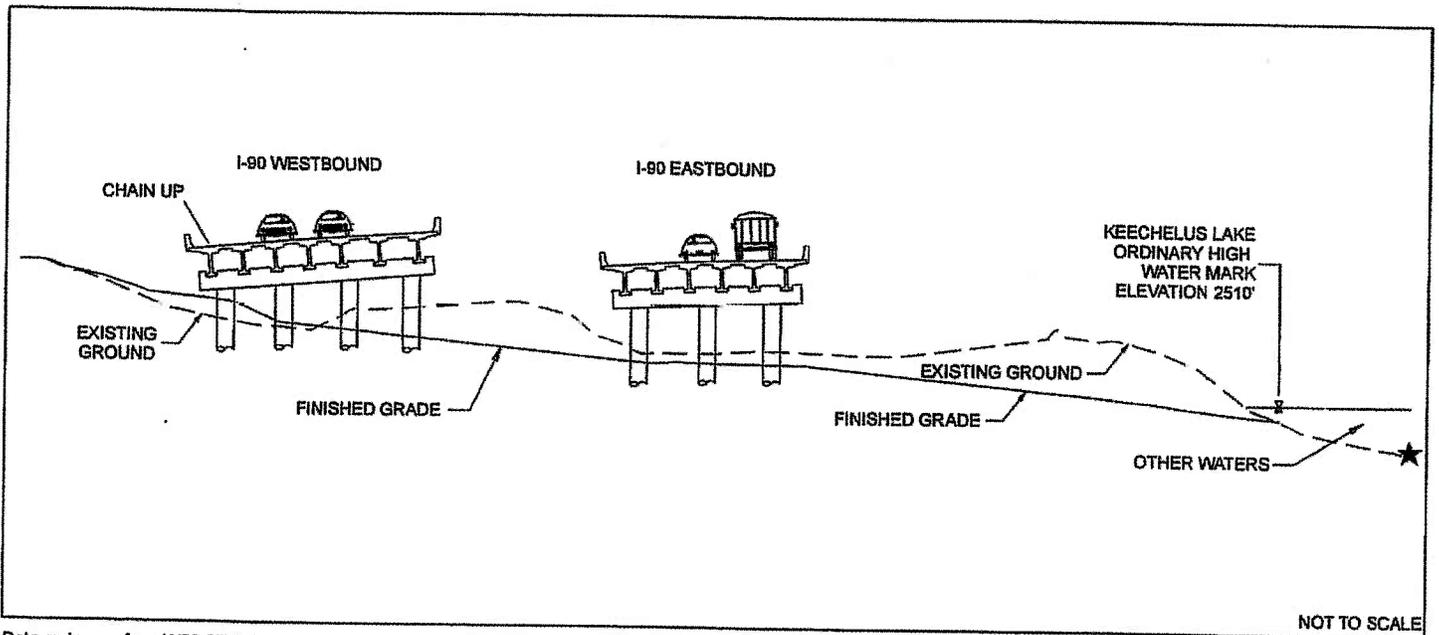
**Page:** 13 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section MP 56.6



## Cross Section MP 56.8



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

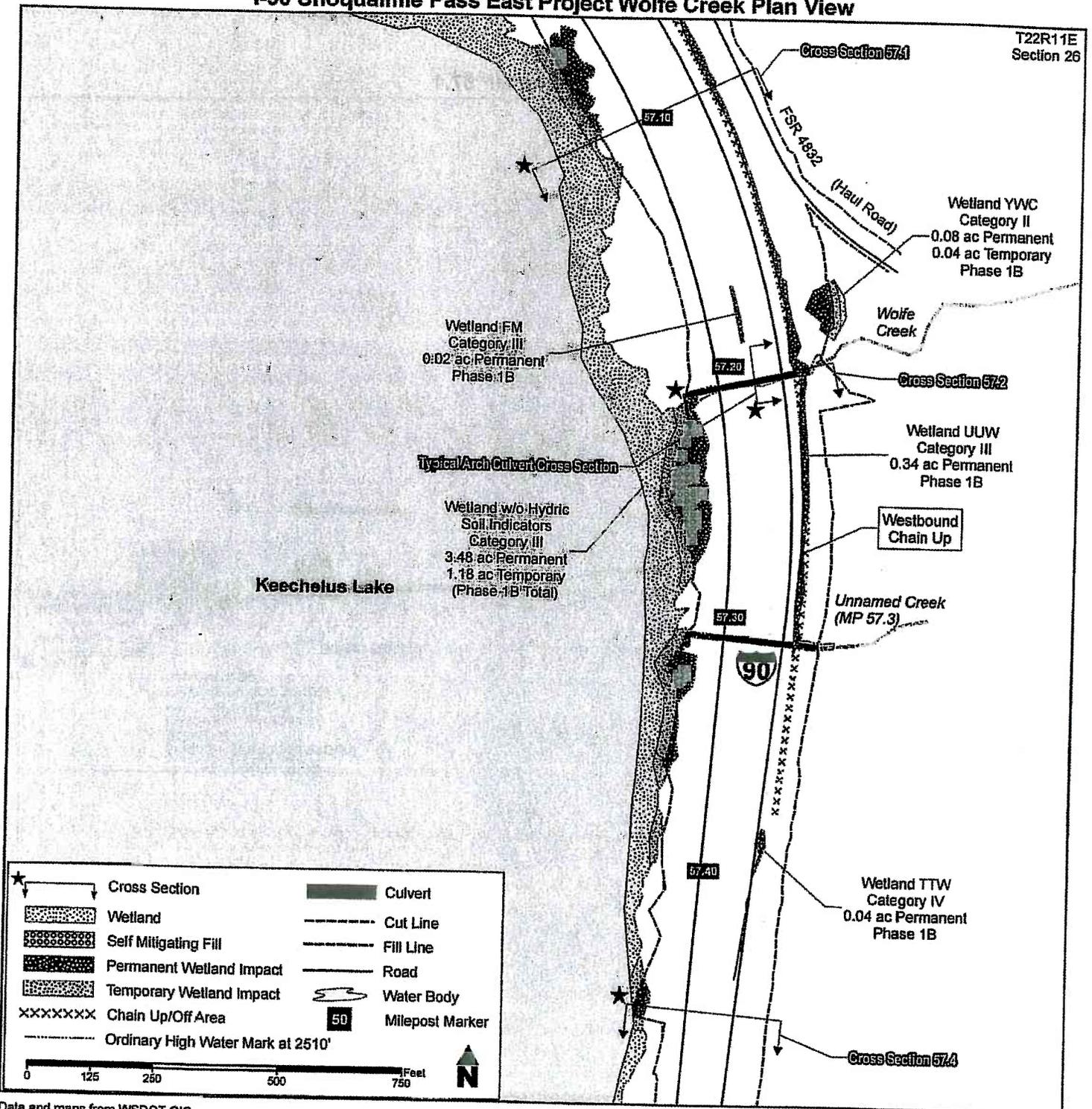
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 14 of 32

# I-90 Snoqualmie Pass East Project Wolfe Creek Plan View

T22R11E  
Section 26



★	Cross Section	▬	Culvert
▨	Wetland	---	Cut Line
▩	Self Mitigating Fill	---	Fill Line
▧	Permanent Wetland Impact	---	Road
▦	Temporary Wetland Impact	○	Water Body
XXXXXXX	Chain Up/Off Area	50	Milepost Marker
---	Ordinary High Water Mark at 2510'		

Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
To Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

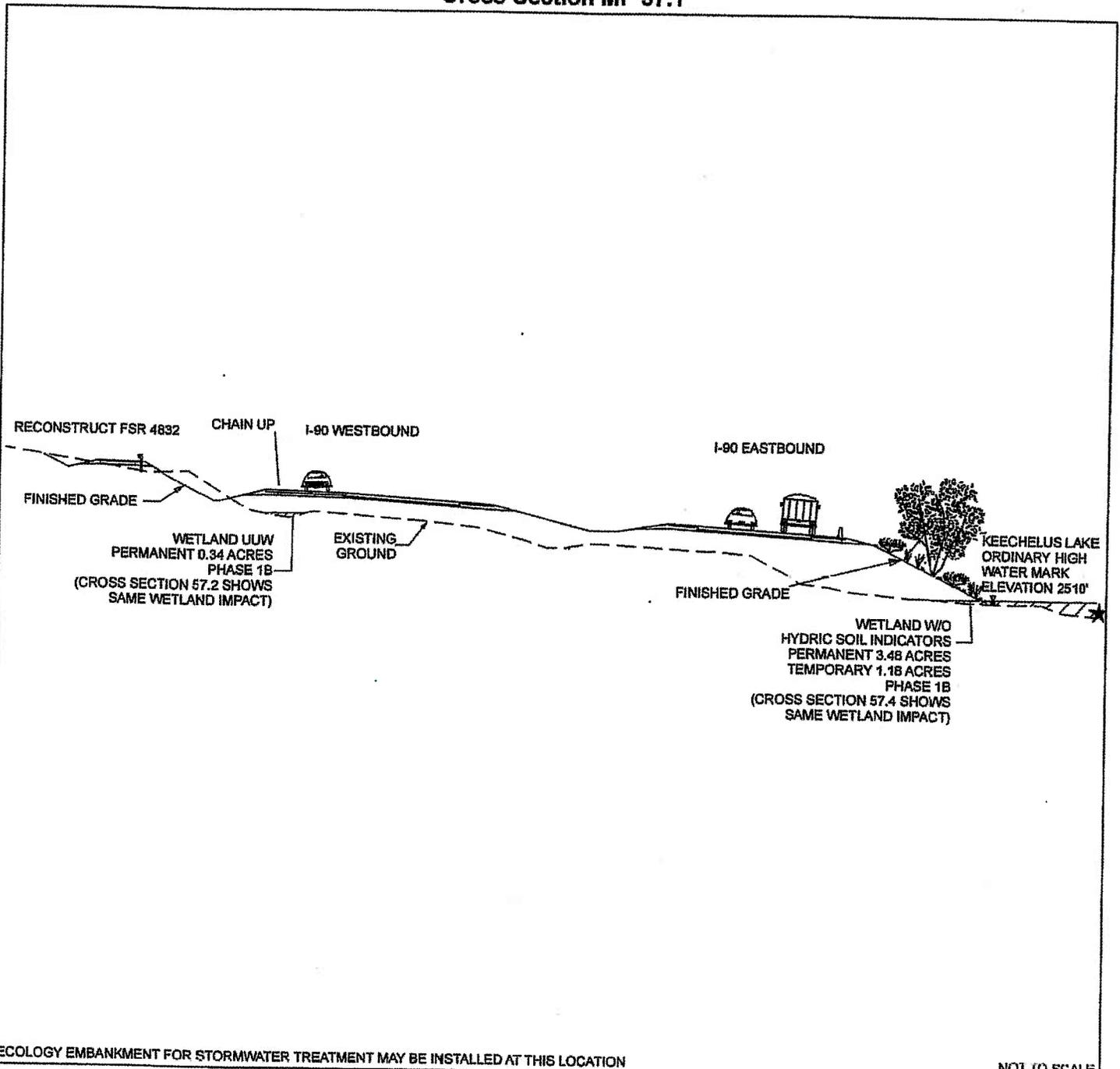
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 15 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section MP 57.1



Data and maps from WSDOT GIS.

NOT TO SCALE

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

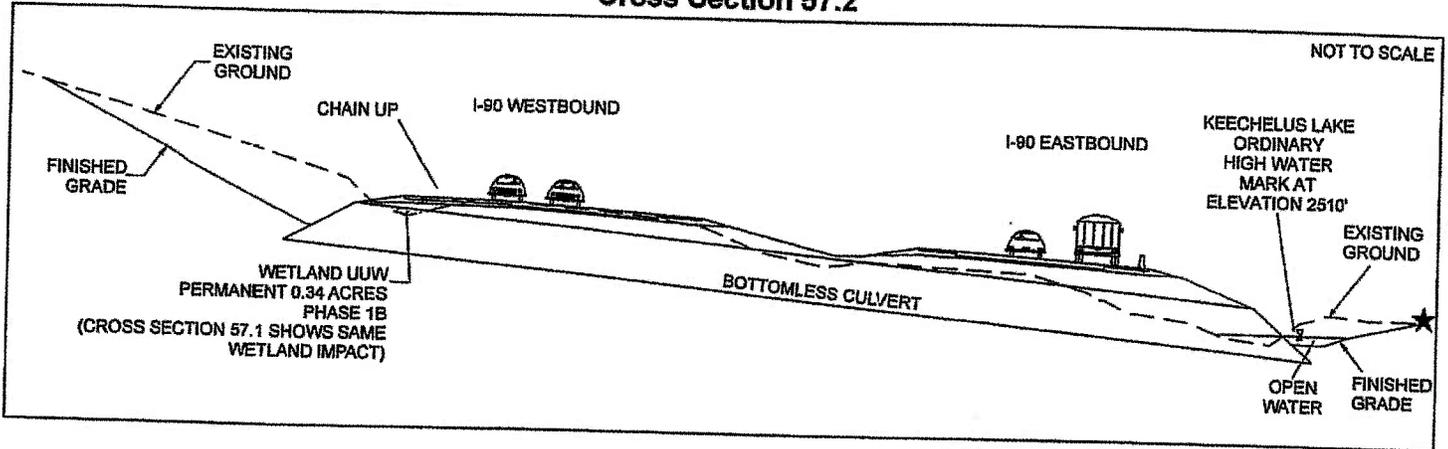
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

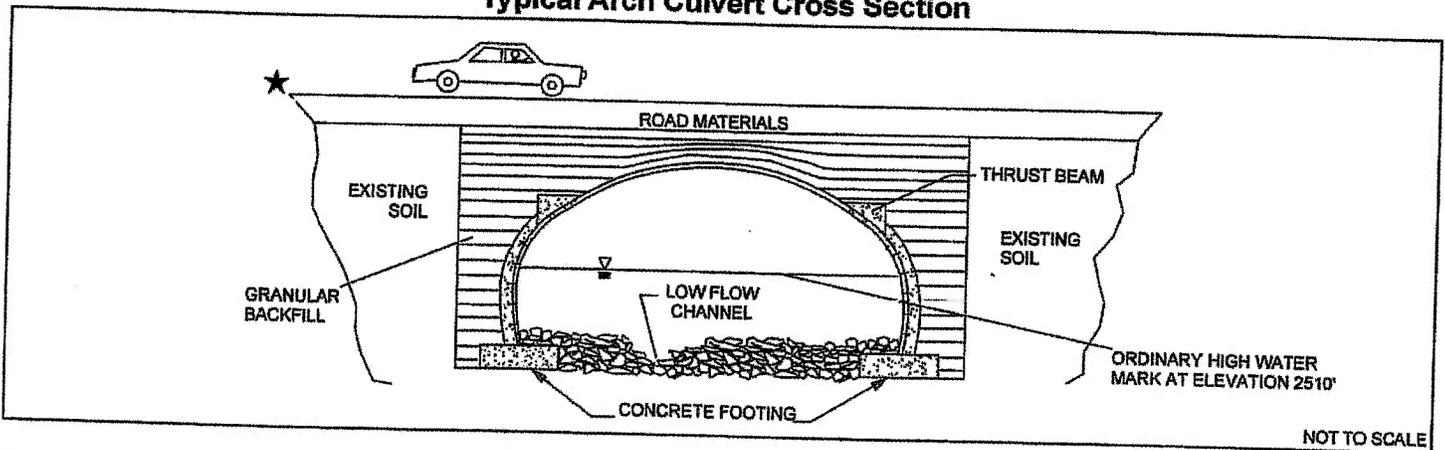
**Page:** 16 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

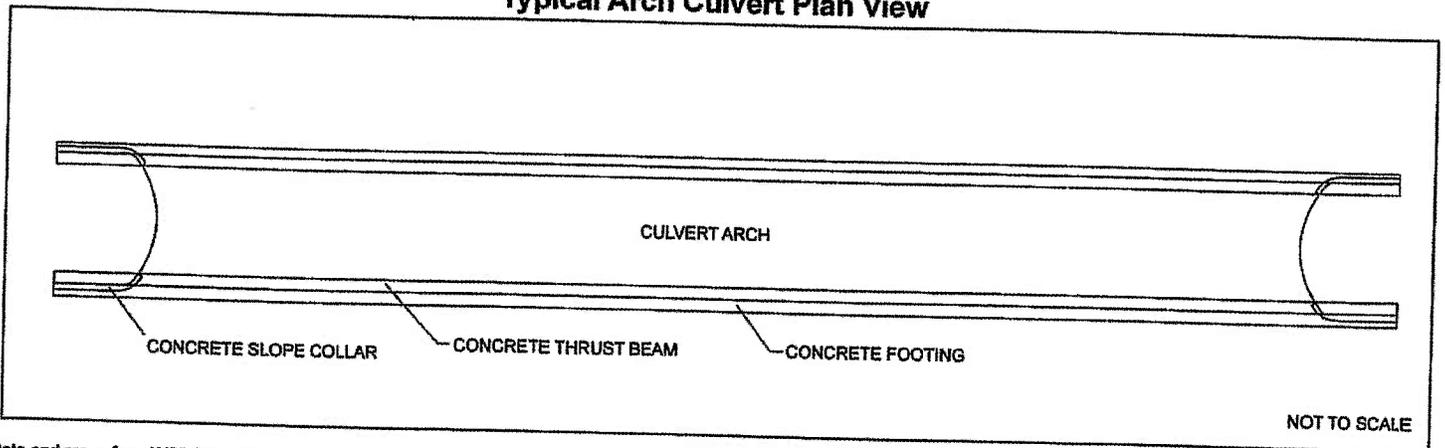
## Cross Section 57.2



## Typical Arch Culvert Cross Section



## Typical Arch Culvert Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
To Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

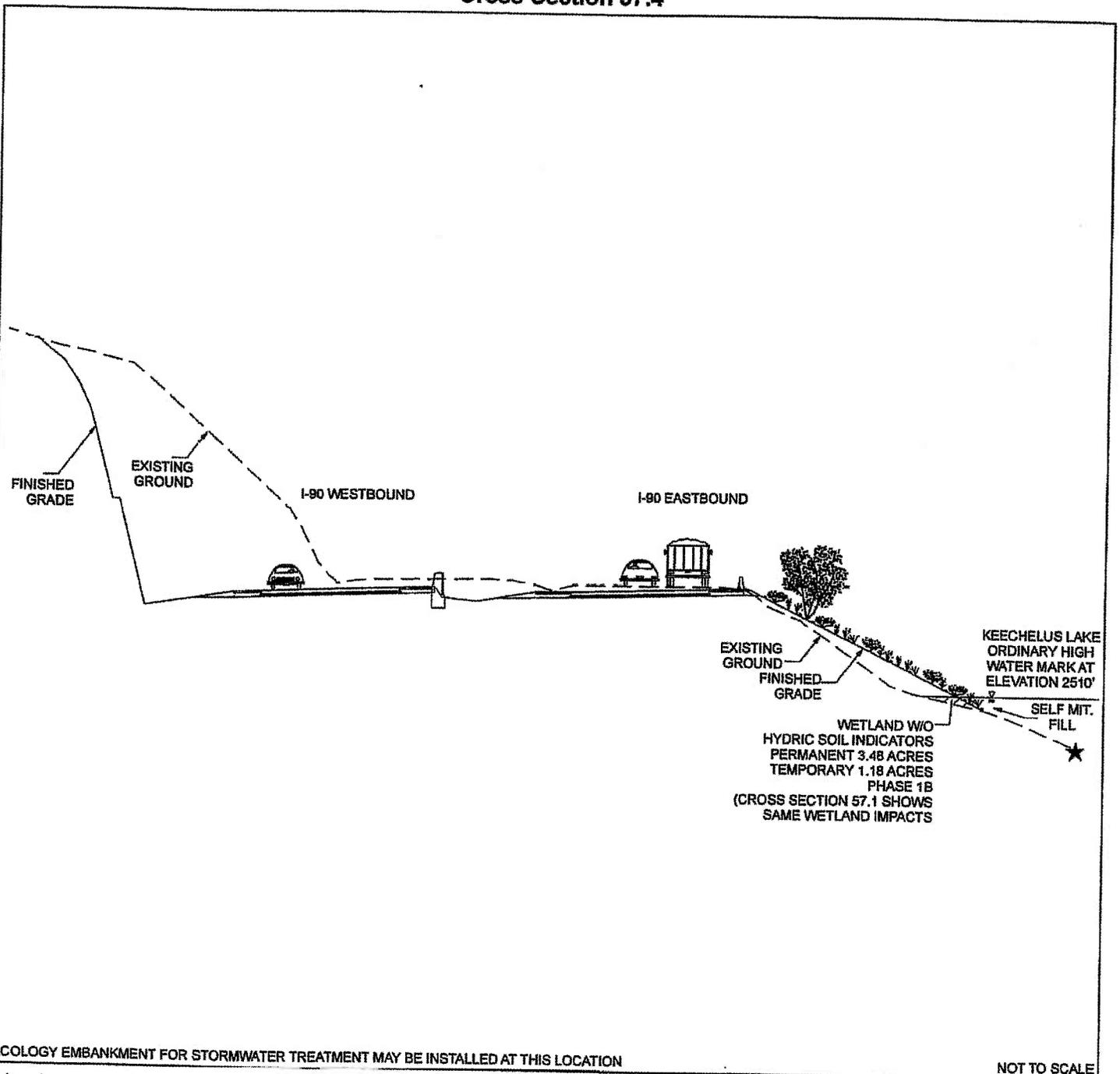
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 17 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 57.4



Data and maps from WSDOT GIS.

NOT TO SCALE

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1B)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

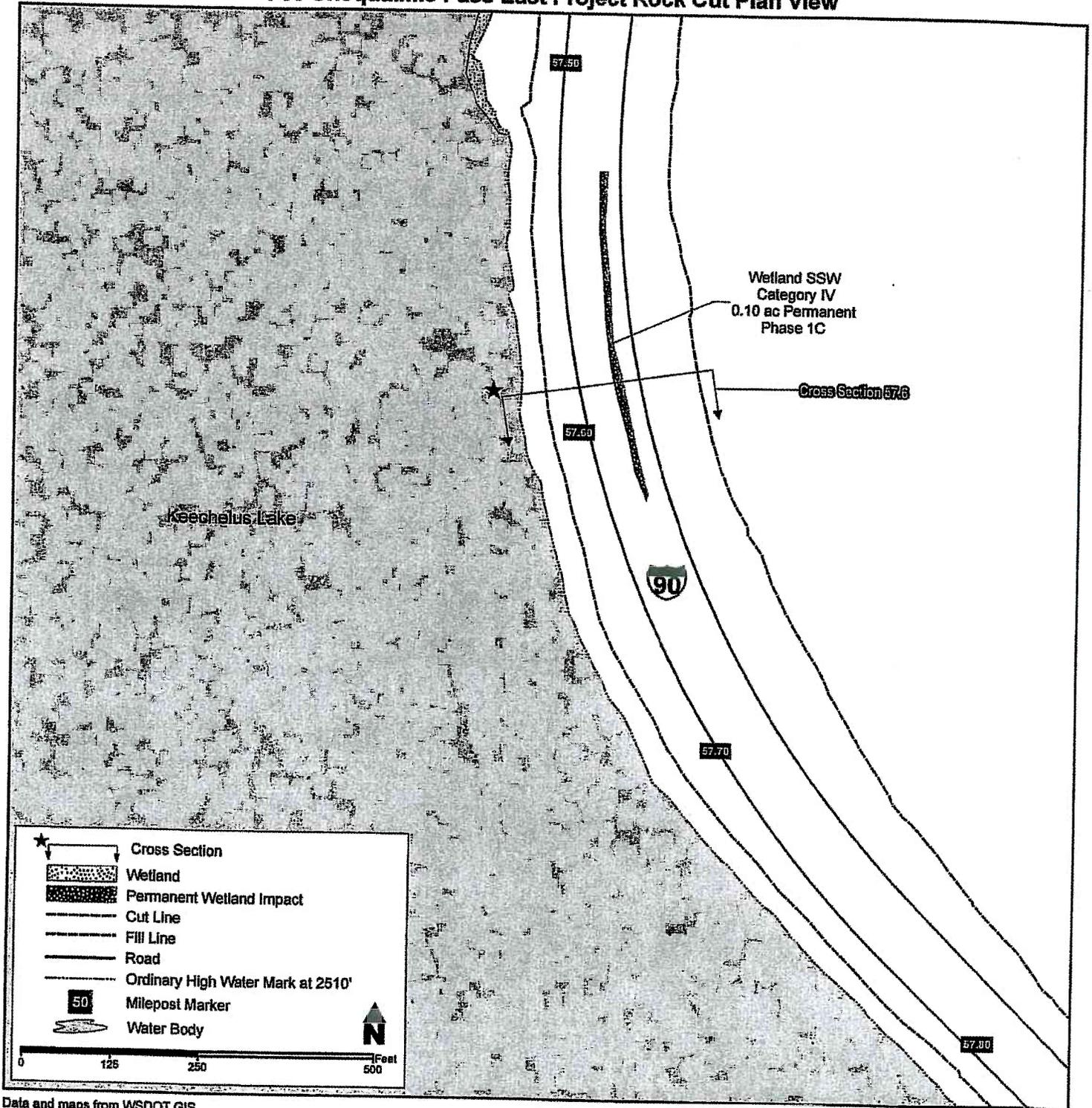
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 18 of 32

# I-90 Snoqualmie Pass East Project Rock Cut Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

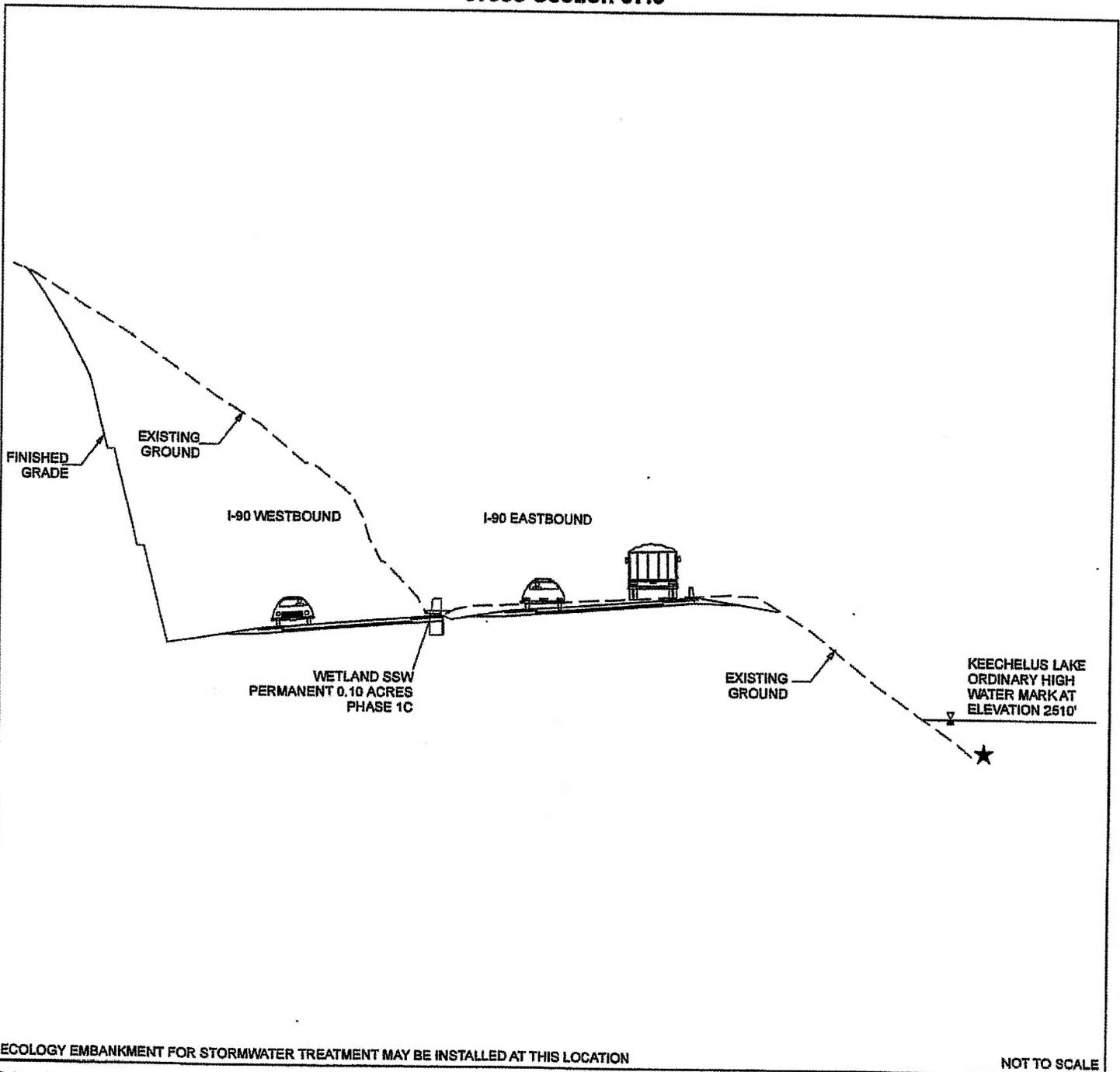
**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

<b>Reference:</b> NWS-2007-2080-SOD
<b>Application:</b> WA Dept of Transportation
<b>Date:</b> September 16, 2008
<b>Page:</b> 19 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 57.6



ECOLOGY EMBANKMENT FOR STORMWATER TREATMENT MAY BE INSTALLED AT THIS LOCATION

NOT TO SCALE

Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

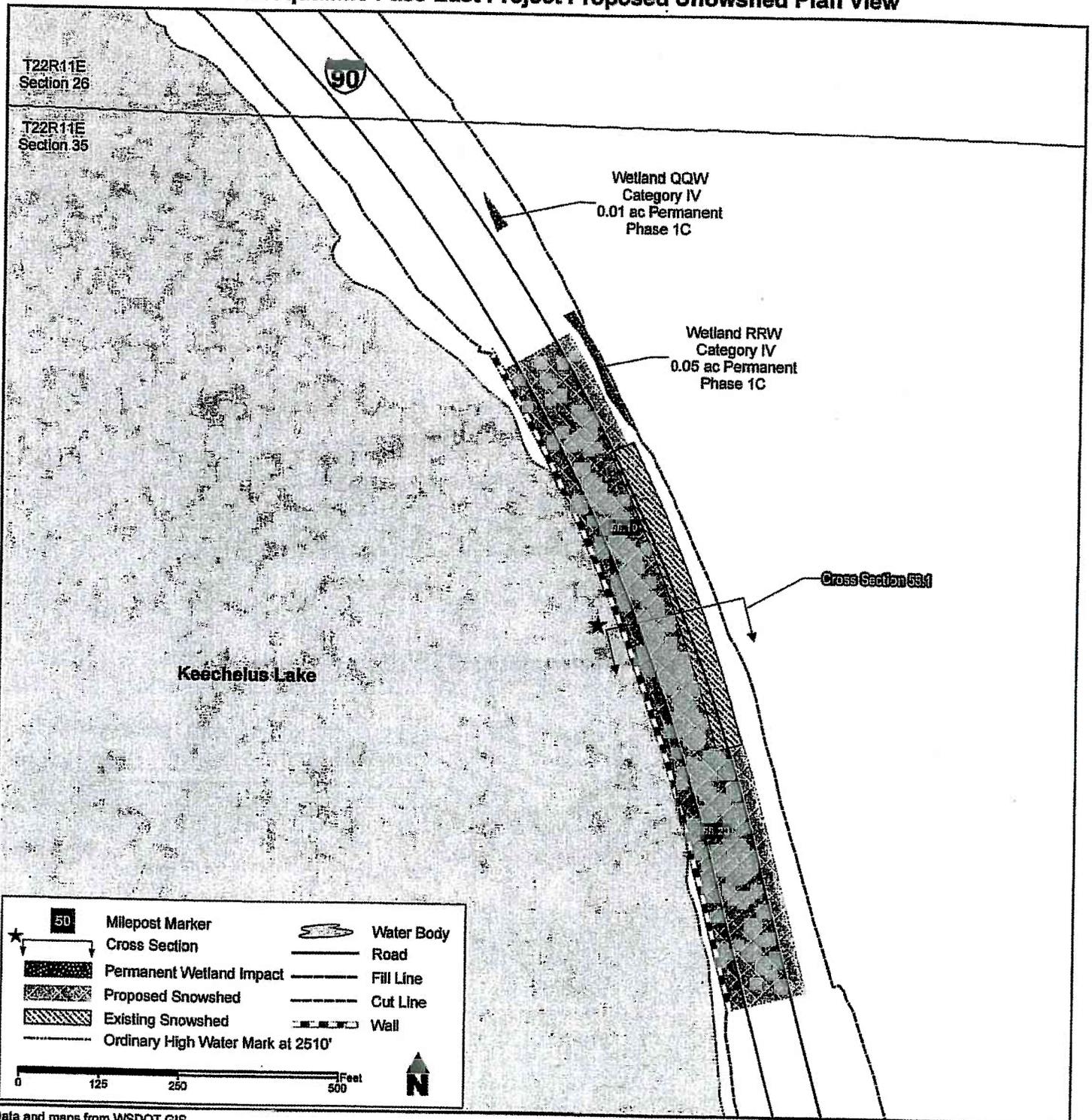
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 20 of 32

# I-90 Snoqualmie Pass East Project Proposed Snowshed Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
To Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

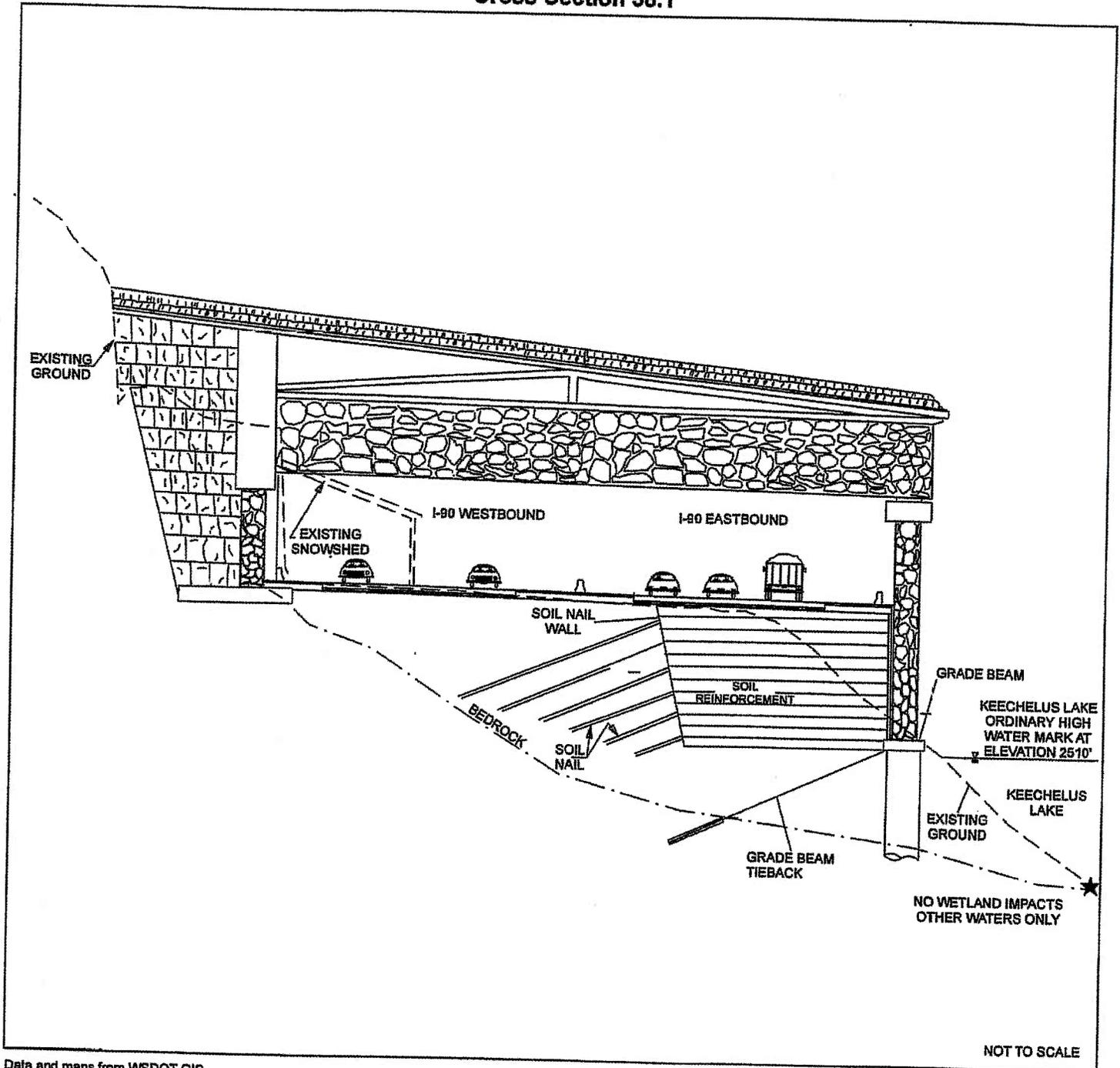
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 21 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 58.1



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
 T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

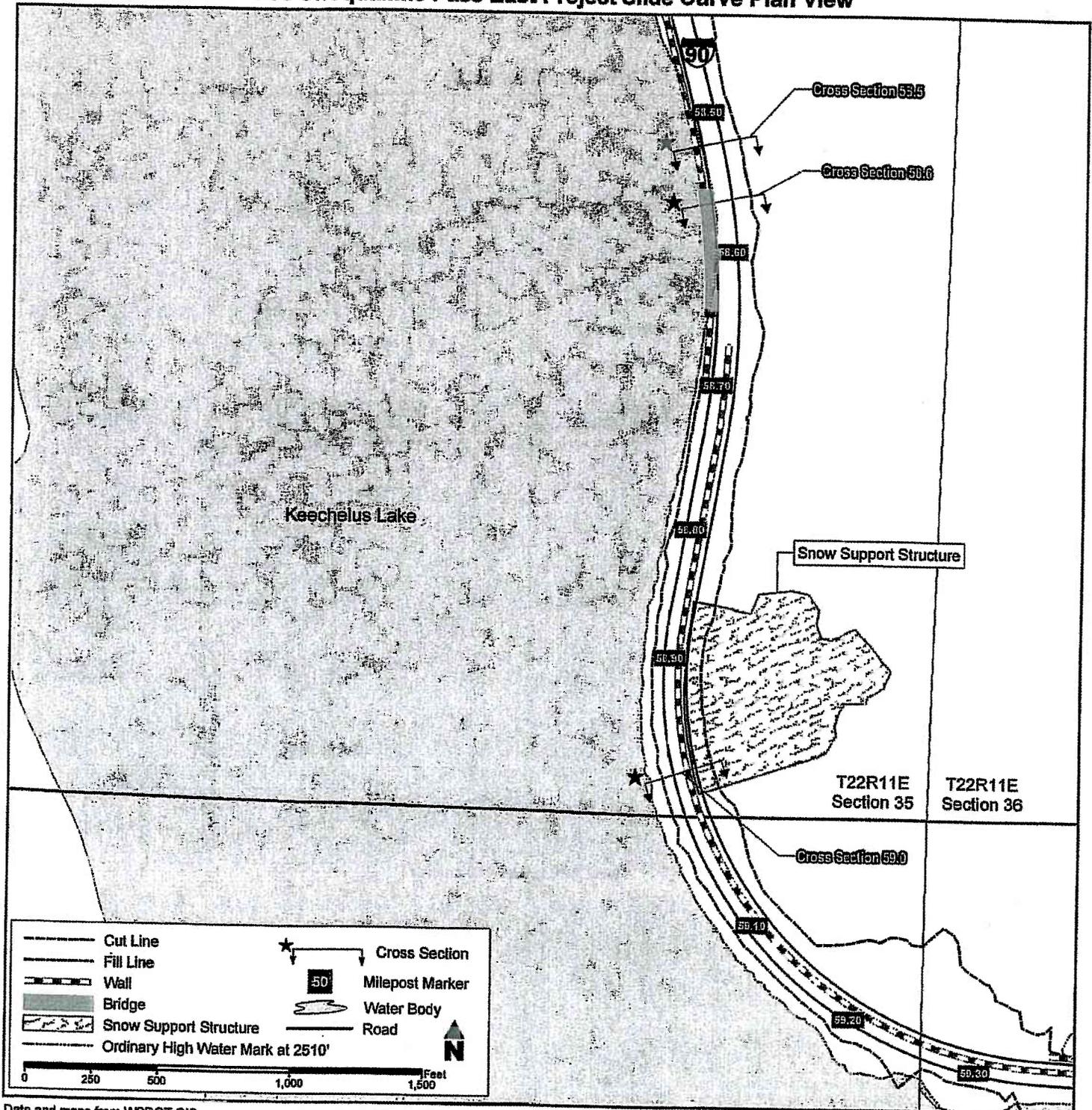
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 22 of 32

# I-90 Snoqualmie Pass East Project Slide Curve Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**  
 T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

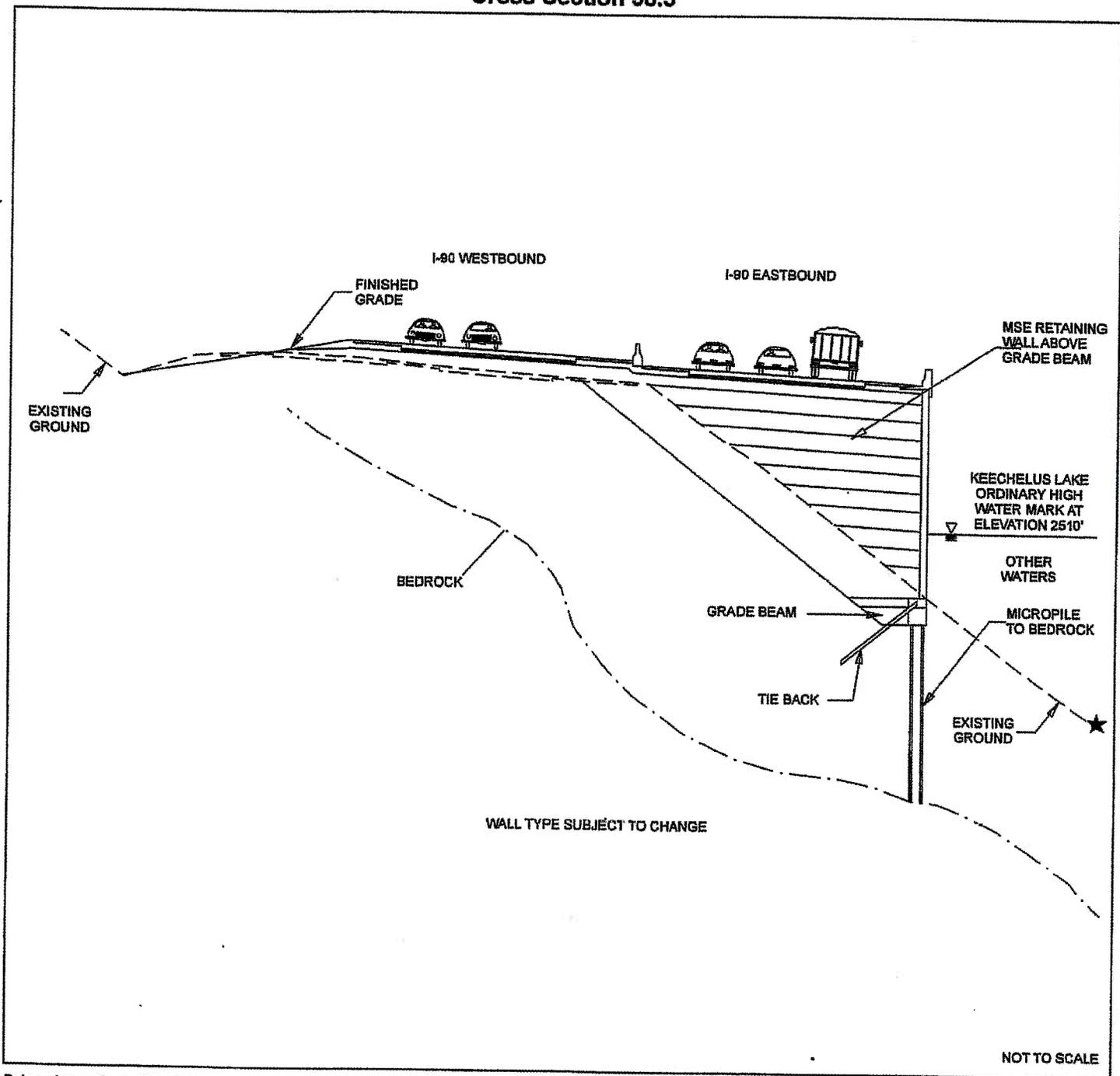
**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

<b>Reference:</b> NWS-2007-2080-SOD
<b>Application:</b> WA Dept of Transportation
<b>Date:</b> September 16, 2008
<b>Page:</b> 23 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 58.5



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

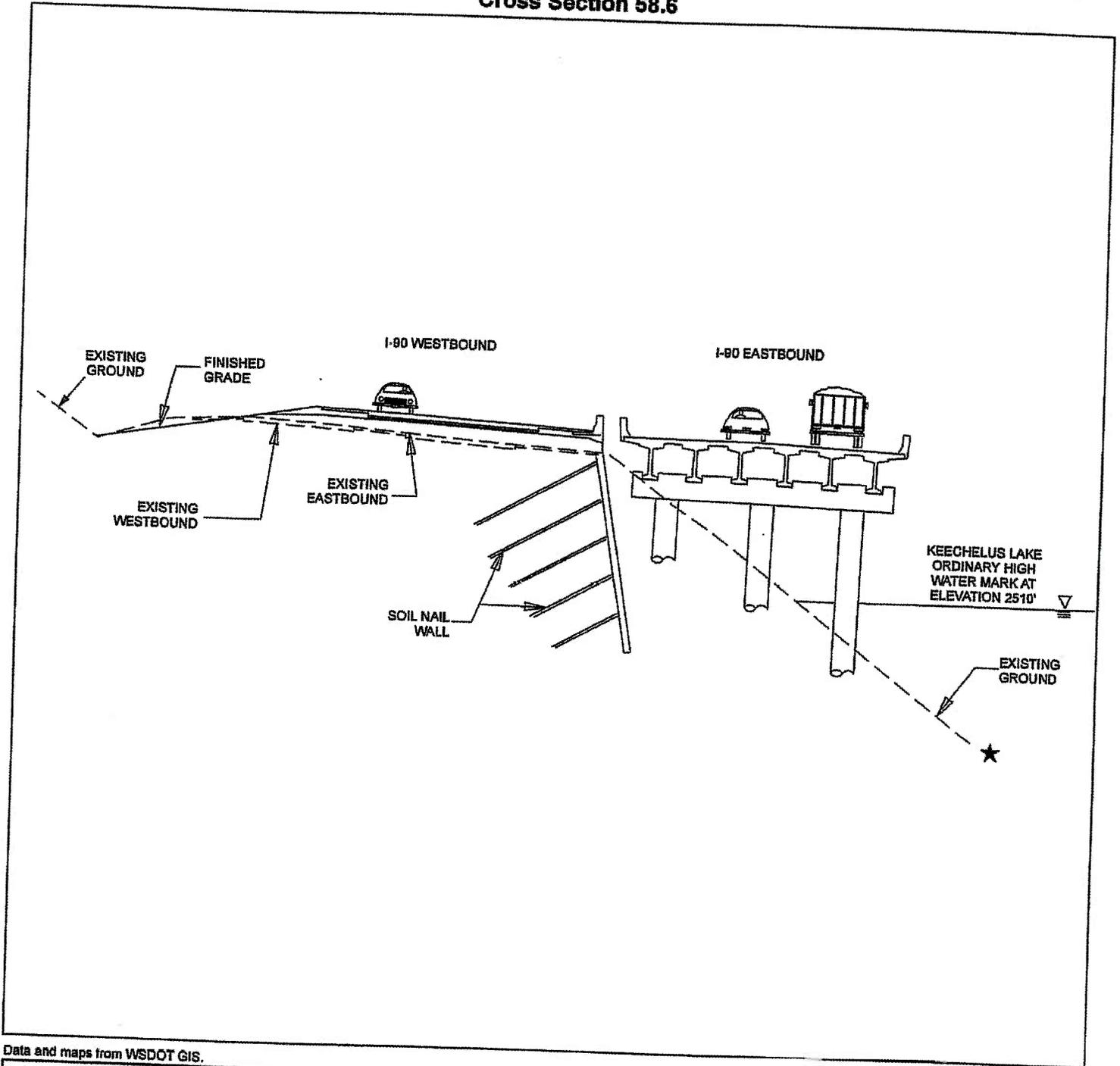
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 24 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 58.6



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake

**NEAR:** Hyak, Washington

**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

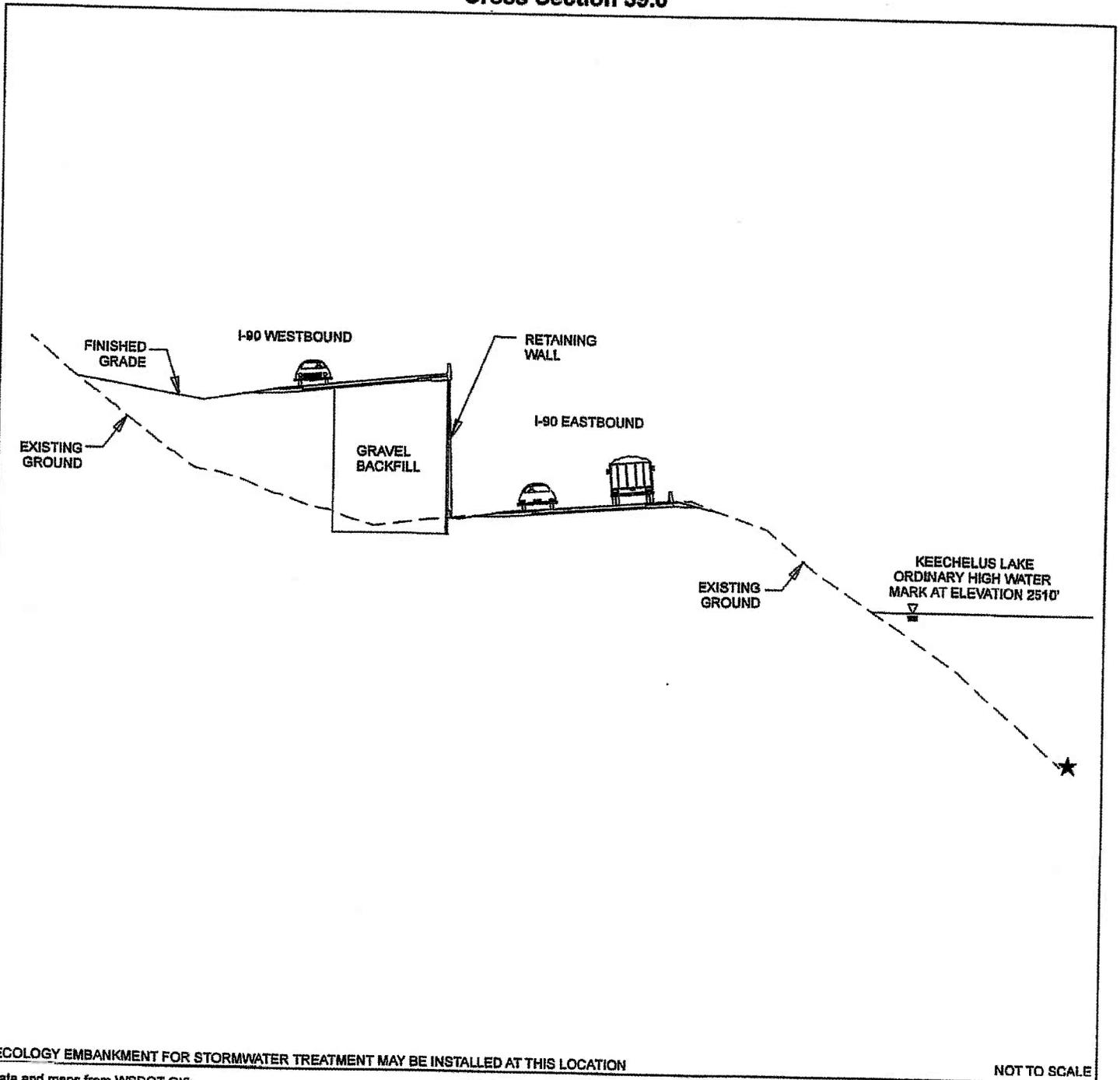
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 59.0



ECOLOGY EMBANKMENT FOR STORMWATER TREATMENT MAY BE INSTALLED AT THIS LOCATION

NOT TO SCALE

Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

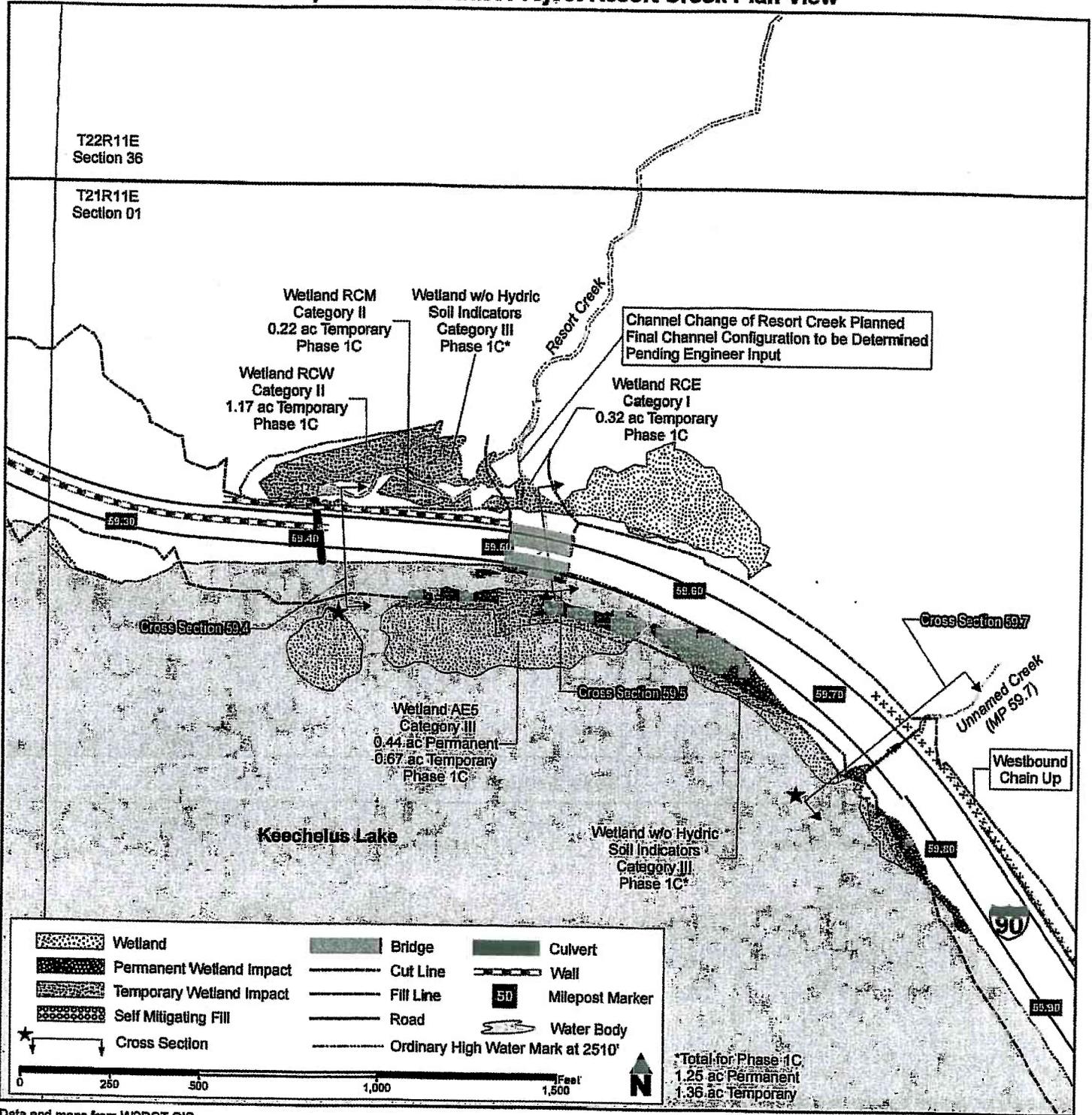
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# Snoqualmie Pass East Project Resort Creek Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
T21R11E S1, S2, W.M.,  
T21R12E S10, S14, S15, S23, W.M.,  
From Interstate 90 Milepost (MP) 55.1;  
Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
To Interstate 90 (MP) 63.0;  
Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

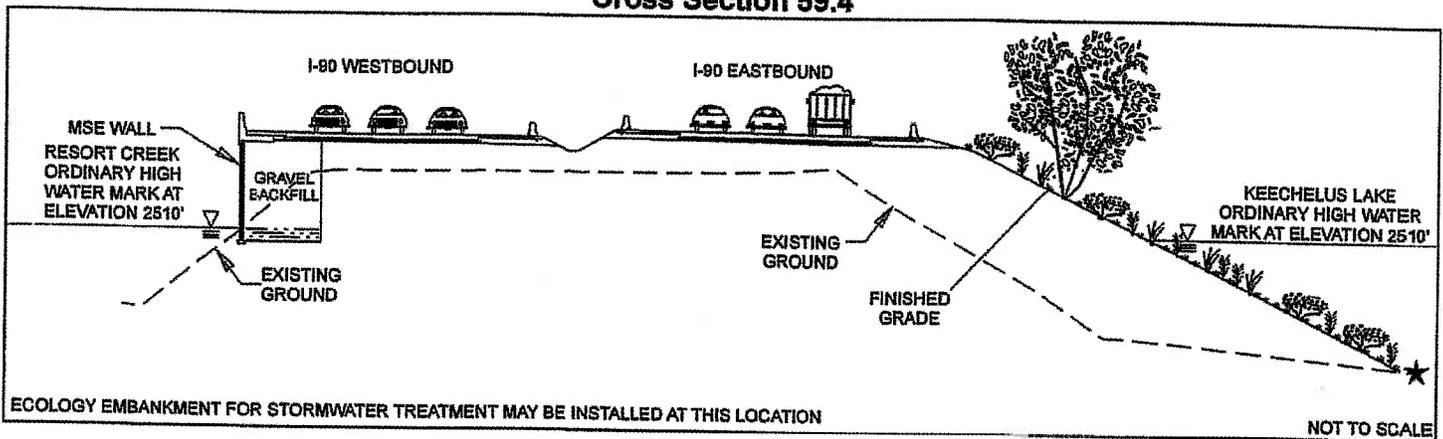
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

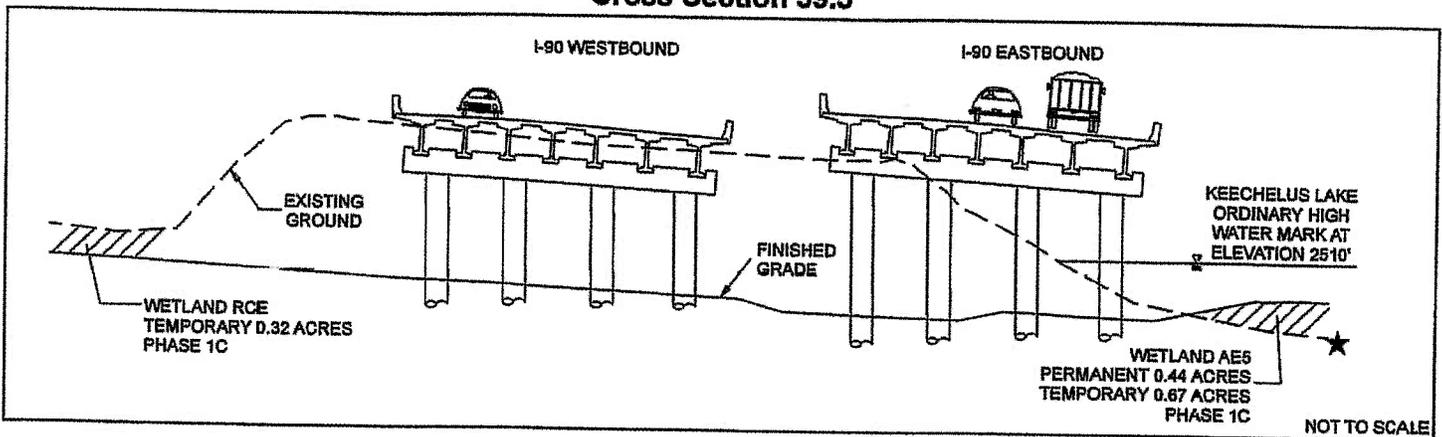
**Page:** 27 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

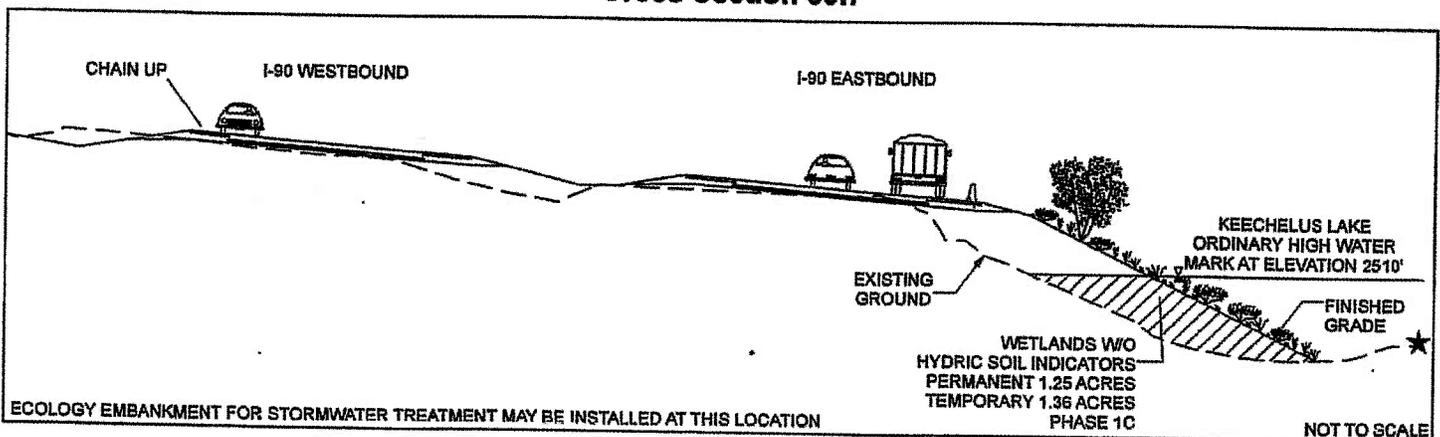
## Cross Section 59.4



## Cross Section 59.5



## Cross Section 59.7



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

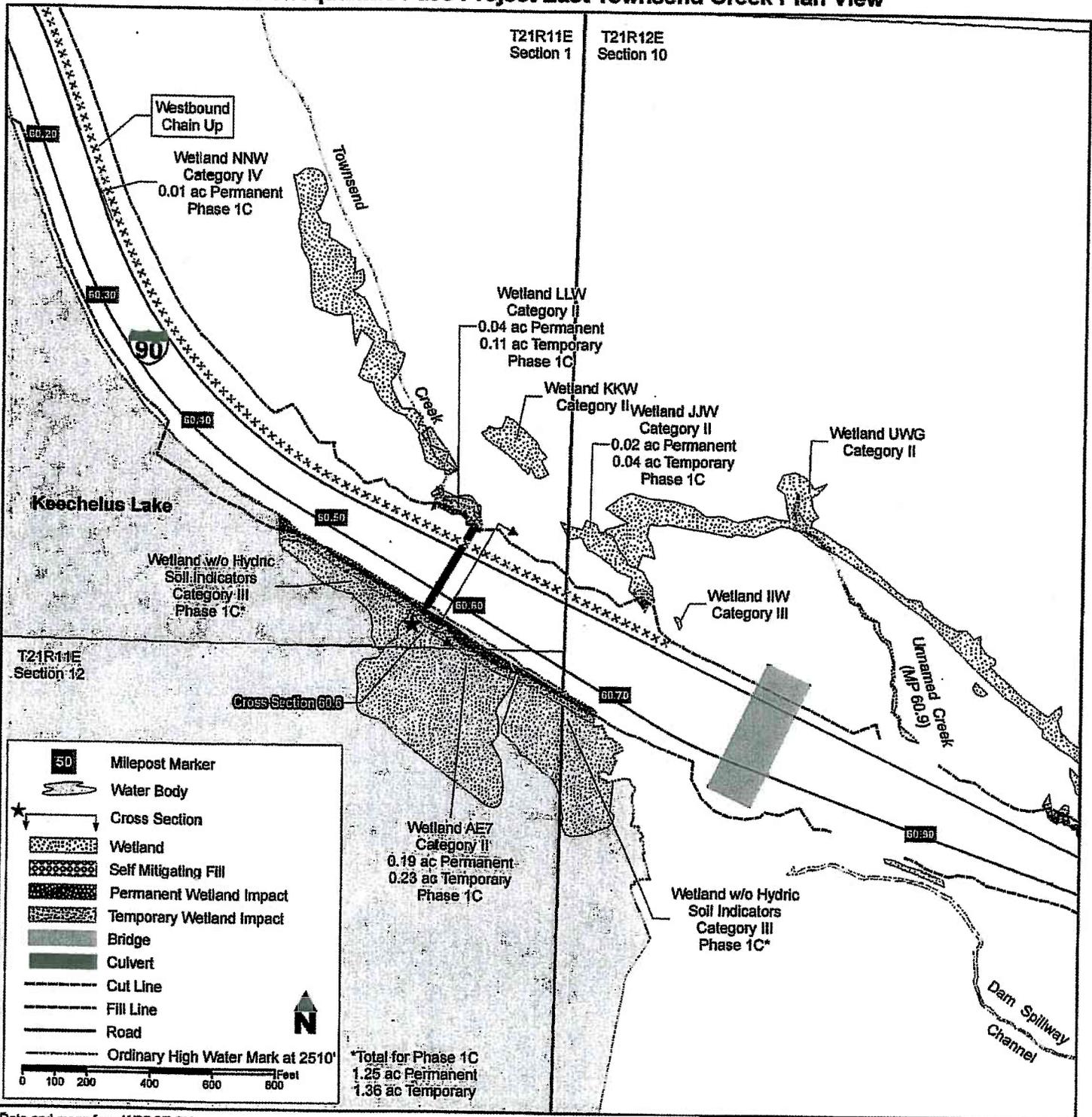
**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

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# I-90 Snoqualmie Pass Project East Townsend Creek Plan View



Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 38.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

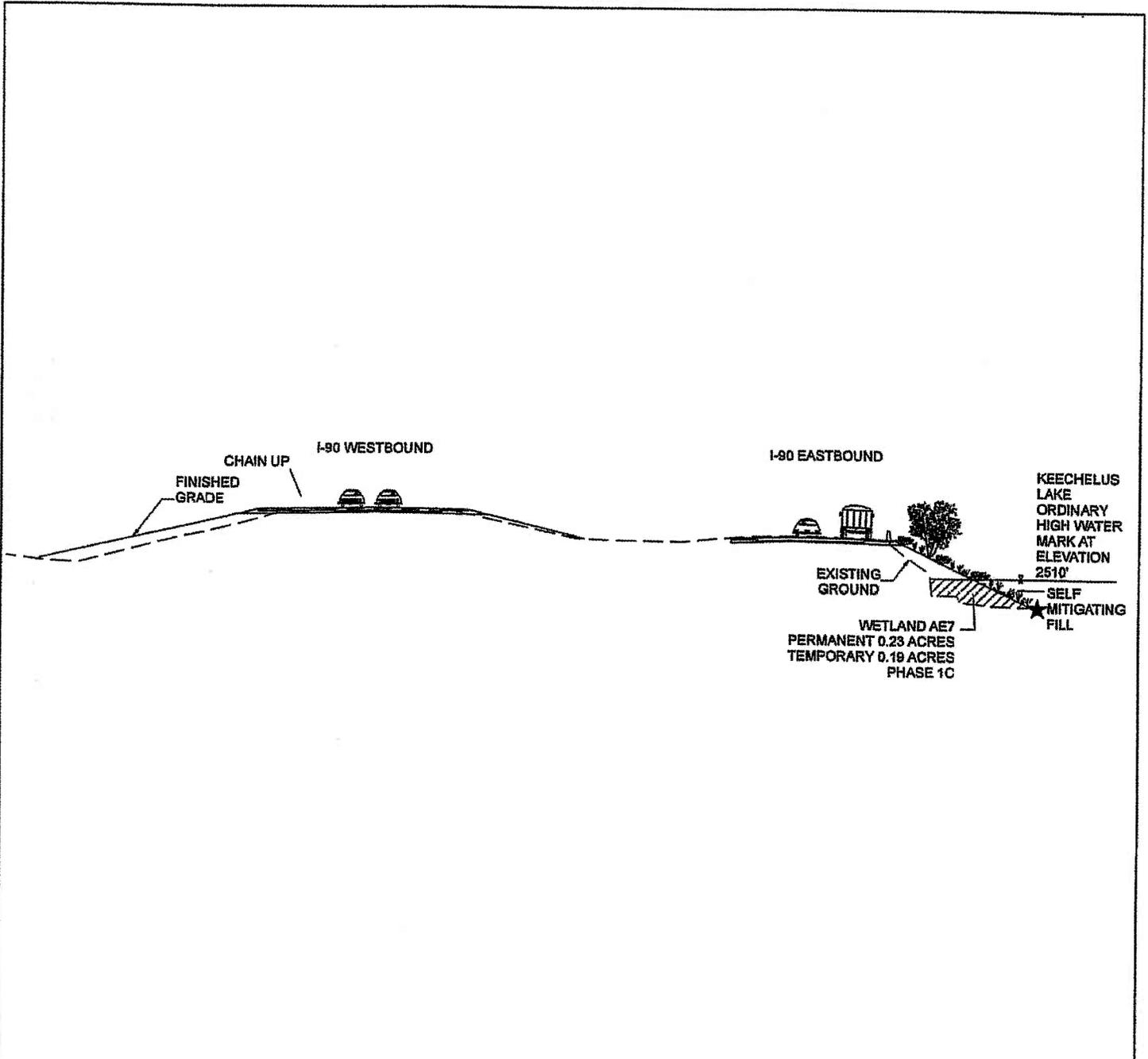
**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 29 of 32

# I-90 Snoqualmie Pass East Project Cross Sections

## Cross Section 60.6



ECOLOGY EMBANKMENT FOR STORMWATER TREATMENT MAY BE INSTALLED AT THIS LOCATION

NOT TO SCALE

Data and maps from WSDOT GIS.

**PURPOSE:** Meet projected traffic demands, improve public safety and meet identified project needs.

**DATUM:** Mean Sea Level

**ADJACENT PROPERTY OWNERS:**

1. USDA Forest Service
2. Washington State Department of Transportation
3. US Bureau of Reclamation
4. Individuals listed in application

**PROJECT NAME:** I-90 Snoqualmie Pass East Project, Hyak to Keechelus Lake Dam (Phase 1C)

**USACE REF. #** \_\_\_\_\_

**SITE LOCATION ADDRESS:**

T22R11E S14, S15, S23, S26, S35, W.M.  
 T21R11E S1, S2, W.M.,  
 T21R12E S10, S14, S15, S23, W.M.,  
 From Interstate 90 Milepost (MP) 55.1;  
 Lat 47° 23' 36.1" N Long 121° 23' 25.7" W  
 To Interstate 90 (MP) 63.0;  
 Lat 47° 18' 17.4" N Long 121° 18' 21.5" W

**PROPOSED:** Widen the roadway, stabilize rock slopes, replace the snowshed, fix structurally deficient roadway, bridges, culverts, and provide habitat connectivity.

**IN:** Adjacent to Keechelus Lake  
**NEAR:** Hyak, Washington  
**COUNTY:** Kittitas **STATE:** WA

**Reference:** NWS-2007-2080-SOD

**Application:** WA Dept of Transportation

**Date:** September 16, 2008

**Page:** 30 of 32

Reference: NWS-2007-2080-SOD

Application: WA Dept of Transportation

Date: September 16, 2008

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I-90 Snoqualmie Pass East Project  
DRAFT Wetland Impacts

Construction Phase	Activity	Wetland	HGM Class	Cowardin Class	Category	Temporary Value	Permanent Value	Subtotal (Phase 1)	Permanent Value of US	
Phase 1A	Gold Creek Bridge Detour	GGW	Riverine	Scrub-shrub	II	0.51	0	0.51	0.00	
		AE2	Lake-Fringe	Emergent Scrub-shrub	II	0.81	0.88	0.81	0.00	
	Lake Storage Mitigation Site	Wetlands w/ Hydric Soil Indicators	Lake-Fringe	Emergent Scrub-shrub	III	0	1.65	0	0.00	
		Waters of U.S. (Keechelus Lake)	Open Water	Open Water	N/A	0	0	0.00	0.00	
	Crystal Springs	Total Acreage				0	0	0	0.00	
						1.32	1.93	0.00	0.00	
	Phase 1B	Gold Creek	AE1	Lake-Fringe	Open Water	IV	0	0.09	0	0.00
			AE2	Lake-Fringe	Emergent Scrub-shrub	II	2.95	0.5	1.86	0.00
		GCE	Riverine	Scrub-shrub	I	0.51	0	0	0.00	
		XXW	Depressional/Slope	Scrub-shrub	III	0.27	0	0	0.00	
GME		Depressional	Emergent	III	0.13	0.09	0.09	0.00		
WWW		Depressional	Emergent	III	0.13	0.13	0.13	0.00		
UJW		Slope	Emergent Scrub-shrub	IV	0	0.23	0	0.00		
UJW		Slope	Scrub-shrub	III	0	0.02	0	0.00		
YWC		Depressional	Emergent	III	0	0.34	0	0.00		
TLW		Depressional	Emergent	III	0.04	0.02	0	0.00		
Phase 1C	Unnamed Creek (MP 57.3)	Waters of the U.S.	Open Water	Open Water	N/A	0	0.08	0	0.00	
		Wetlands w/ Hydric Soil Indicators	Open Water	Open Water	N/A	0	0	0.00	0.00	
	Multiple CEAs	Total Acreage				1.18	2.33	0	0.00	
						0	0	0.00	0.00	
	Phase 1C	Wolfe Creek	SSW	Depressional	Emergent	IV	0	0.1	0.1	0.00
			GGW	Depressional	Emergent	IV	0	0.01	0	0.00
		RRW	Depressional	Emergent	IV	0	0.05	0	0.00	
		AE6	Lake-Fringe	Emergent Scrub-shrub	III	0.57	0.95	0.38	0.00	
		RCW	Riverine	Emergent	II	1.17	0	0	0.00	
		RCE	Riverine	Emergent Scrub-shrub	I	0.22	0	0	0.00	
PFW		Slope	Emergent	I	0.32	0	0	0.00		
Waters of U.S.		Open Water	Open Water	N/A	0	0.19	0	0.00		
AE7		Lake-Fringe	Open Water	N/A	0	0	0	0.00		
OOW		Depressional	Emergent	II	0.23	0	0.19	0.00		
Phase 1C	Townsend Creek	NWW	Riverine	Emergent	IV	0	0.05	0	0.00	
		LLW	Slope	Emergent	IV	0	0.01	0	0.00	
	LLW	Riverine	Emergent Forested	II	0.11	0.04	0	0.00		
	Waters of U.S.	Open Water	Open Water	N/A	0.04	0.02	0	0.00		
	Multiple CEAs	Total Acreage				0	0	0	0.00	
						1.36	0.31	0.34	0.00	
	Sub-Total Wetlands in Keechelus Lake	Sub-Total Wetlands Outside of Keechelus Lake				4.12	1.34	1.21	5.60	
						0.35	0.51	0.22	0.00	
	Total Acreage					0.92	0.50	0	0.00	
	Total Acreage					1.67	3.00	0.02	6.20	

K:\Environmental\Mitigation\Wetland Mitigation Design Team\Supporting Data\Balance Sheet\06\_25\_2008\_Mitigation\_balance.xls

**I-90 Snoqualmie Pass East Project  
DRAFT  
Ratios for Impacted Wetlands**

Reference: NWS-2007-2080-SOD
Application: WA Dept of Transportation
Date: September 16, 2008
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Wetland Category/Class	Recommended Ratios for Impacted Wetlands			
	Permanent Impacts (acres)	Kittitas County		Ecology
		Replacement Ratios	Mitigation (acres)	
II (non-forested)	4.34	2:1	8.67	3:1
II (forested)	0.12	2:1	0.23	4:1
III	7.08	1.5:1	10.61	2:1
IV	0.56	1:1	0.56	1.5:1
<b>Total Acreage</b>	<b>12.09</b>		<b>20.08</b>	<b>0.84</b>

Wetland Category/Class	Proposed Ratios for Impacted Wetlands			
	Permanent Impacts (acres)	WSDOT Proposal		Mitigation (acres)
		Replacement Ratios	Mitigation (acres)	
II (non-forested)*	4.32	1:1	4.32	3:1
II (non-forested)	0.02	2:1	0.04	2:1
II (forested)	0.12	2:1	0.23	2:1
III**	0.44	1:1	0.44	1:1
III	0.85	1.5:1	1.28	1.5:1
IV	0.56	1:1	0.56	1:1
Wetlands without Hydric Soil Indicators***	5.78	0.75:1	4.33	0.75:1
<b>Total Acreage</b>	<b>12.09</b>		<b>11.21</b>	<b>11.21</b>

\*Wetlands below the OHWM of Keechelus Lake. The ratios are reduced from 2:1 (Kittitas County) and 3:1 (Ecology) based on low functions.  
 \*\*Wetlands below the OHWM of Keechelus Lake. The ratios are reduced from 1.5:1 (Kittitas County) and 2:1 (Ecology) based on low functions.  
 \*\*\*Wetlands below the OHWM of Keechelus Lake, which do not have hydric soil indicators, are assessed a ratio of 0.75:1 based on low functions.