



US Army Corps  
of Engineers  
Seattle District



# 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) 316-3893  
ATTN: Ron Wilcox,  
Project Manager

### WA Department of Ecology

SEA Program  
Post Office Box 47600  
Olympia, WA 98504-7600  
Telephone: (360) 407-6068  
ATTN: SEA Program,  
Federal Permit Coordinator

**Public Notice Date: March 17, 2015**

**Expiration Date: April 16, 2015**

**Reference No.: NWS-2014-980**

**Name: BNSF Railway Company  
(Custer to Ferndale Double Track  
Project)**

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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 dated September 2014.

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 and the Coastal Zone Management Act.

**APPLICANT:** BNSF Railway Company (BNSF)  
Attention: Mr. Donald Omsberg  
2454 Occidental Avenue South, Suite 2D  
Seattle, Washington 98134-1451  
Telephone: (206) 625-6264

**AGENT:** J. L. Patterson and Associates – Environmental (JLP-E)  
Attention: Mr. Pierre Bordenave  
P. O. Box 1724  
Sandpoint, Idaho 83864  
Telephone: (208) 263-9391

**LOCATION:** In wetlands and California Creek from BNSF Mile Post (MP) 107.87 (south end) to MP 111.35 (north end) between Custer and Ferndale, Whatcom County, Washington.

**WORK:** Construct 3.48 miles of new railroad track to connect existing sidings to allow for 6.6 miles of double track operations. Work will include extending a box culvert for California Creek, extending four existing culverts, replacing one culvert, installing one new culvert, and modifying one existing culvert. The existing mainline track will also be upgraded. Rail construction would result in an unavoidable permanent fill of 2.35 acres of Category III wetland. Approximately 16,000 cubic yards of clean structural fill material would be used to construct the proposed work.

## **NWS-2014-00980, BNSF Railway Company Custer to Ferndale Double Track Project**

**PURPOSE:** The purpose of the transportation project is to improve rail operations on the BNSF Bellingham Subdivision, Line Segment 50, between Custer and Ferndale.

**ADDITIONAL INFORMATION:** The proposed project is intended to address steadily increasing freight and passenger demands each year. BNSF has identified the need for reduced passenger and freight train delays on this section of the BNSF interstate mainline through improved operational capacity, efficiency, service, and safety. The construction activities will use methods typical of large scale railroad construction, utilizing earth moving/grading equipment such as excavators, backhoes, graders, and cranes, tie/track laying equipment, and a variety of support vehicles/trucks. Machinery and materials would be brought to, and would access the worksite, via existing public roads, BNSF ROW maintenance access points along the work area, and rail. No activities are within the 100-year floodplain.

Copies of this public notice which have been mailed or otherwise physically distributed feature project drawings in black and white. The electronic version features those drawings in color, which we think more accurately communicates the scope of project impacts. To access the electronic version of this public notice, go to the Seattle District's web page at <http://www.nws.usace.army.mil/> and under the heading Open Public Comment Periods select Regulatory Public Notices. Recently-issued public notices are listed in chronological order of the date of issuance. Select and view the listing for this project.

The wetland boundaries and location of the ordinary high water mark shown on the project drawings have not yet been verified by the Corps. If the Corps determines the boundaries of the wetland/waters are substantially inaccurate a new public notice may be published.

**MITIGATION:** The applicant has provided a conceptual compensatory mitigation plan proposing to purchase credits from a wetland mitigation bank in the projects watershed.

**ENDANGERED SPECIES:** The Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service pursuant to Section 7 of the 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.

After receipt of comments from this public notice, the Corps will evaluate the potential impacts to proposed and/or listed species and their designated critical habitat.

**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).

If the Corps determines that the proposed action may adversely affect EFH for federally managed fisheries in Washington waters, the Corps will initiate EFH consultation with the NMFS. The Corps' final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

**CULTURAL RESOURCES:** The Corps has reviewed the latest published version of the National Register of Historic Places, lists of properties determined eligible and other sources of information. Historic properties are recorded near the proposed project. However, they do not occur in the permit area. The permit area has been so extensively disturbed by modern development that little likelihood exists for the proposed project to impinge upon an undisturbed historic property.

## **NWS-2014-00980, BNSF Railway Company Custer to Ferndale Double Track Project**

The Corps invites responses to this public notice from Native American Tribes or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns regarding historic properties and sites of religious and cultural significance at or near the project area. After receipt of comments from this public notice, the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the National Historic Preservation Act, as appropriate.

**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 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.

**SOURCE OF FILL MATERIAL:** The applicant has not yet identified the source of the fill material. Should a permit be issued, the Corps will evaluate the fill material source prior to the start of construction.

**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 commentator'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.

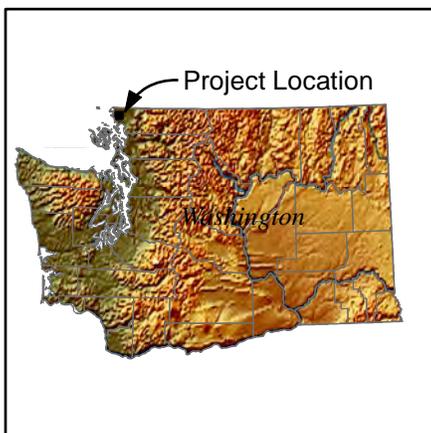
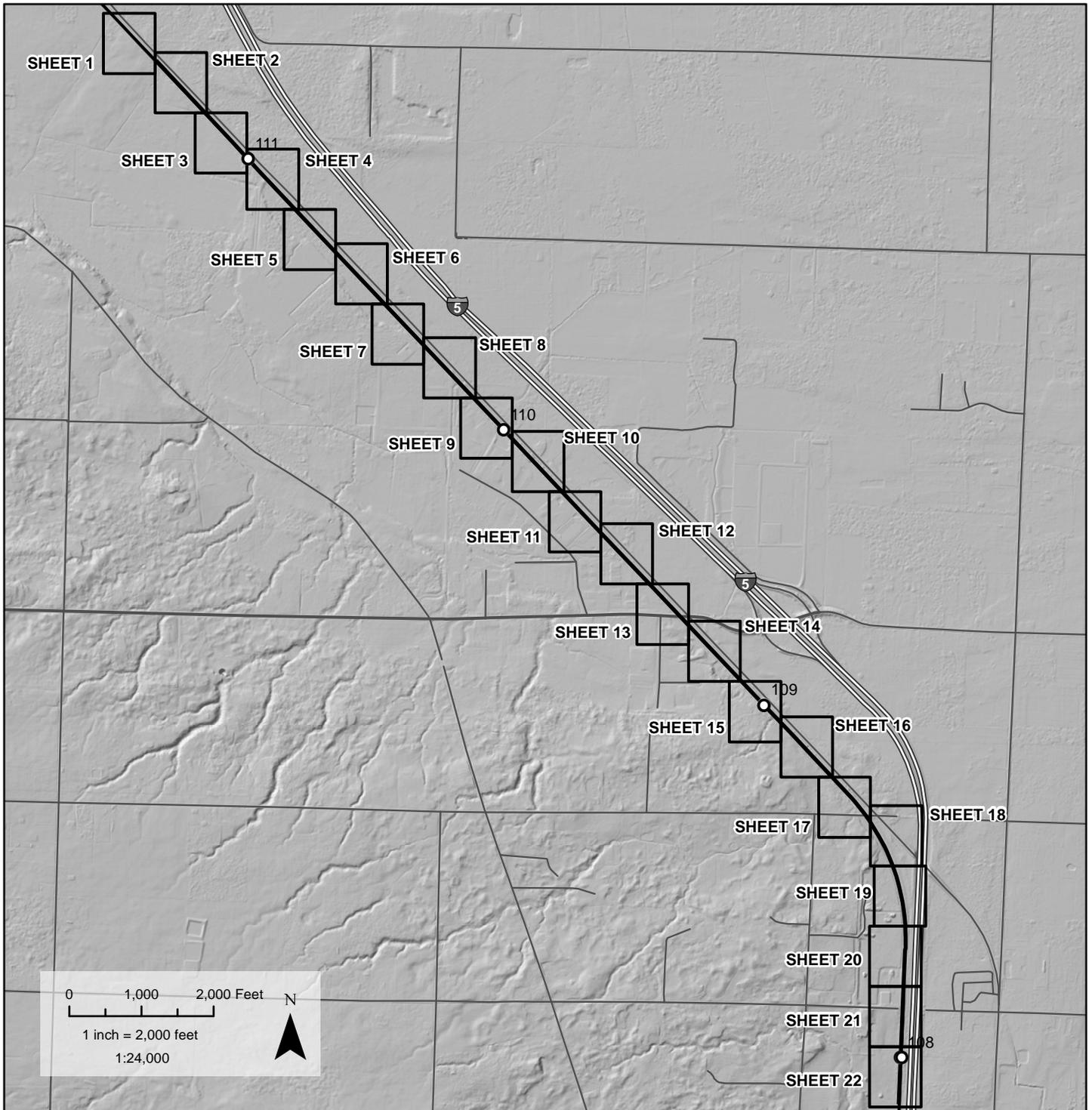
**NWS-2014-00980, BNSF Railway Company Custer to Ferndale Double Track Project**

CORPS COMMENTS: All e-mail comments should be sent to [ronald.j.wilcox@usace.army.mil](mailto:ronald.j.wilcox@usace.army.mil). Conventional mail comments should be sent to: U.S. Army Corps of Engineers, Regulatory Branch, Attention: Mr. Ron Wilcox, P.O. Box 3755, Seattle, Washington 98124-3755. All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act including any personally identifiable information such as names, phone numbers, and addresses.

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 and/or Coastal Zone Management consistency concurrence, may do so by submitting written comments to the following address: Washington State Department of Ecology, Attention: Federal Permit Coordinator, P.O. Box 47600, Olympia, Washington 98504-7600, or e-mail to [ecyrefedpermits@ecy.wa.gov](mailto:ecyrefedpermits@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: BNSF Railway Company (Custer to Ferndale Double Track Project); NWS-2014-00980

Encl: Figures (36)



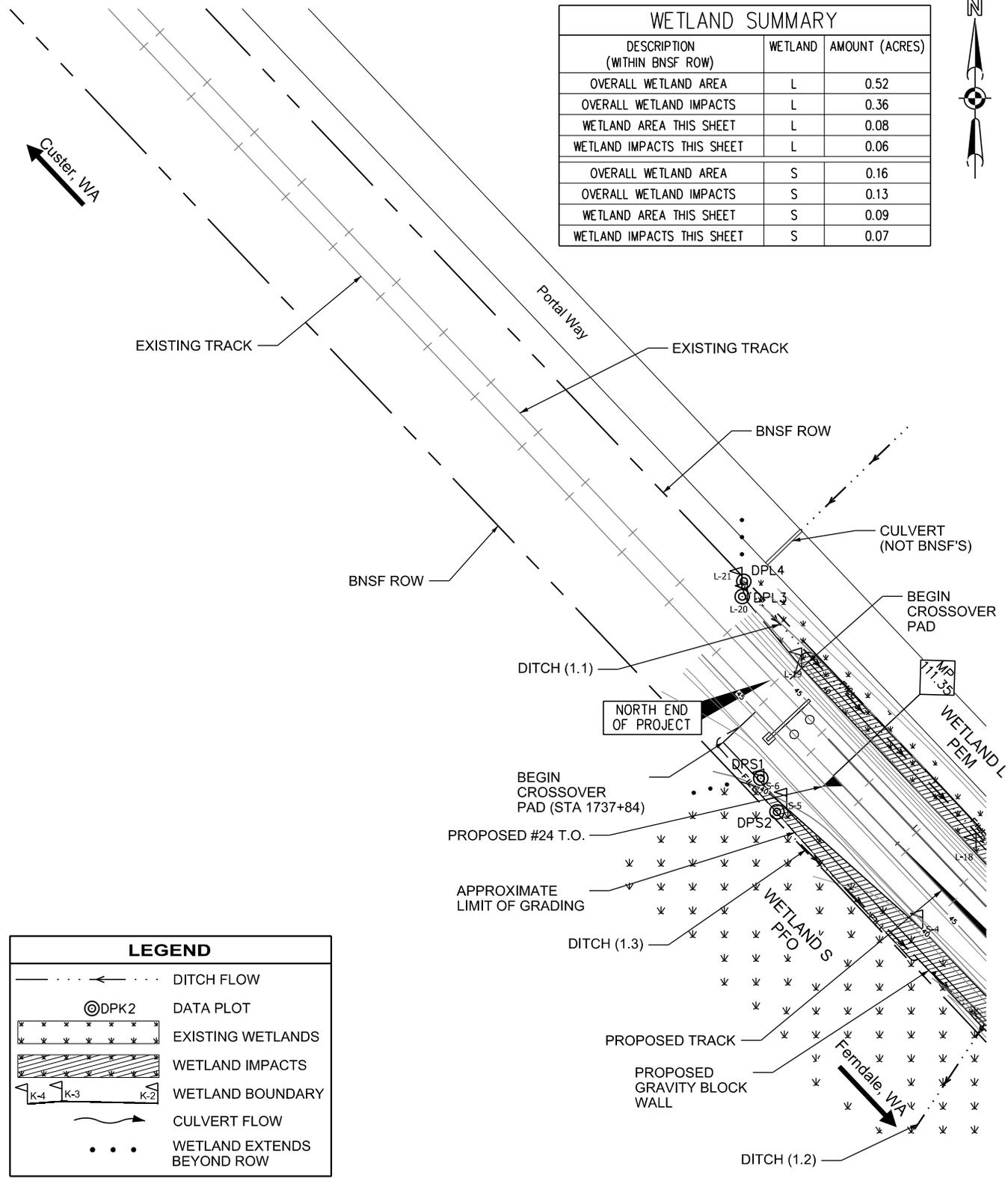
-  Mileposts
-  JARPA Sheet Extent
-  Project Track
-  Street
-  I-5
-  State Route

### JARPA PLAN SHEET LOCATION OVERVIEW

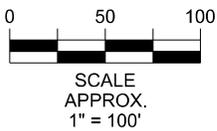
**USACE REF NO.:**  
**PROJECT:** CUSTER TO FERNDALE DOUBLE TRACK  
**APPLICANT:** BNSF RAILWAY  
**WATERWAY:** CALIFORNIA CREEK  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUB, LS 50, MP 107.87 - 111.35  
**LEGAL:** IN PORTIONS OF SECTIONS 6, 7, 8 & 17 T39N R2E; S36 T40N R1E; S1 T39N R1E  
**NORTH END (MP 111.35):** 48°54'45.85"N, 122°38'2.36"W  
**SOUTH END (MP 107.87):** 48°52'30.99"N, 122°35'23.08"W  
**COUNTY:** WHATCOM **STATE:** WASHINGTON  
**DATE:** SEPTEMBER 2014

DATA SOURCES: BNSF (RAILWAY AND MILEPOSTS), NATURAL EARTH (STATE MAP), PUGET SOUND LIDAR CONSORTIUM (TOPOGRAPHY), US CENSUS TIGER FILES (TRANSPORTATION)  
MAP PRODUCED BY: J.L. PATTERSON AND ASSOCIATES, INC. - ENVIRONMENTAL | INFO@JLPATTERSON.COM | 208.263.9391  
CARTOGRAPHER: IAN DAVID CRICKMORE

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	L	0.52
OVERALL WETLAND IMPACTS	L	0.36
WETLAND AREA THIS SHEET	L	0.08
WETLAND IMPACTS THIS SHEET	L	0.06
OVERALL WETLAND AREA	S	0.16
OVERALL WETLAND IMPACTS	S	0.13
WETLAND AREA THIS SHEET	S	0.09
WETLAND IMPACTS THIS SHEET	S	0.07



LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

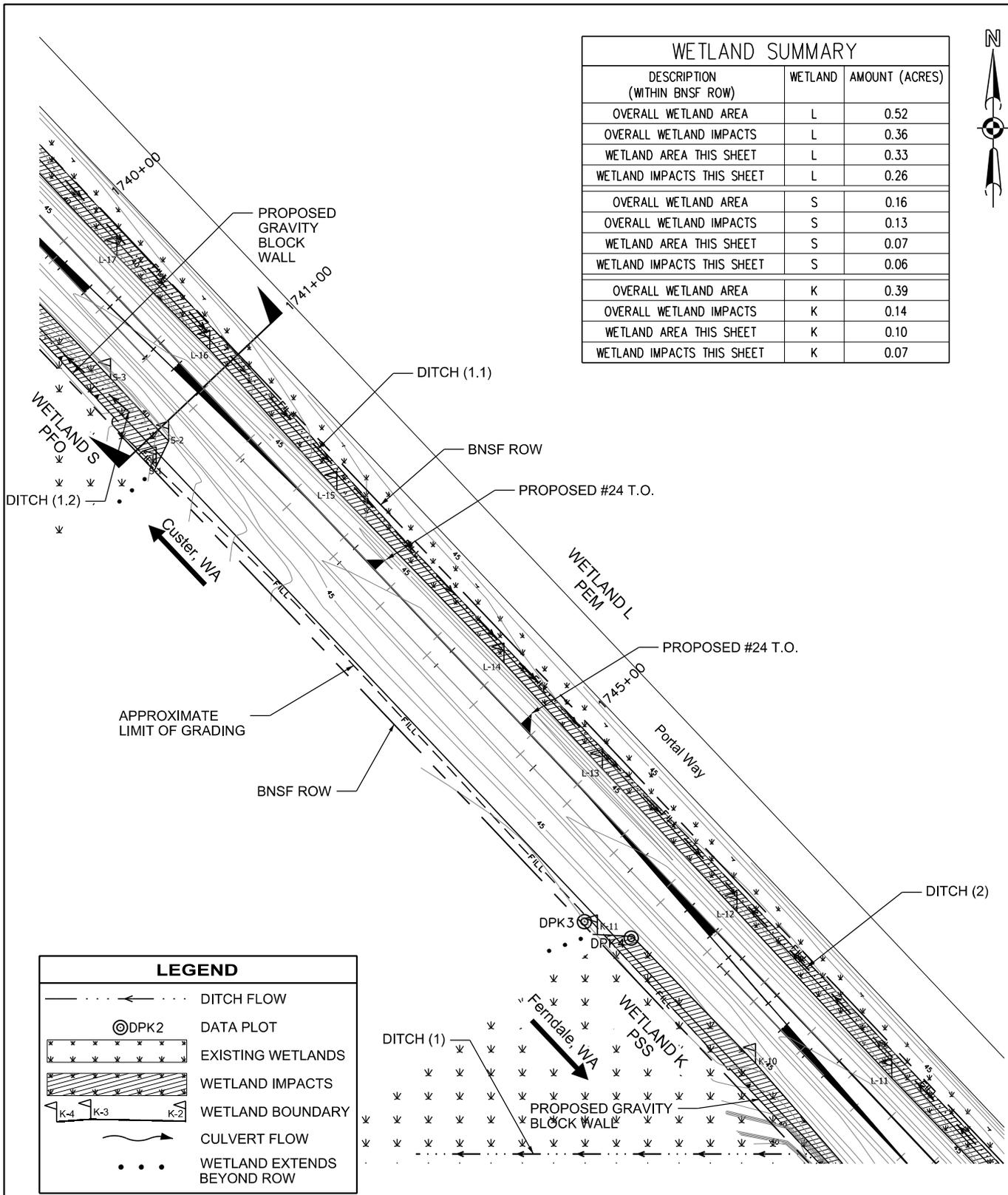


BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

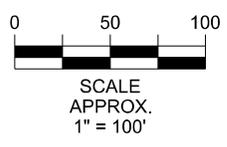
**PROPOSED WORK - DETAIL SHEET 1**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF

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OVERALL WETLAND AREA	L	0.52
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WETLAND AREA THIS SHEET	L	0.33
WETLAND IMPACTS THIS SHEET	L	0.26
OVERALL WETLAND AREA	S	0.16
OVERALL WETLAND IMPACTS	S	0.13
WETLAND AREA THIS SHEET	S	0.07
WETLAND IMPACTS THIS SHEET	S	0.06
OVERALL WETLAND AREA	K	0.39
OVERALL WETLAND IMPACTS	K	0.14
WETLAND AREA THIS SHEET	K	0.10
WETLAND IMPACTS THIS SHEET	K	0.07



LEGEND	
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	DATA PLOT
	EXISTING WETLANDS
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	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

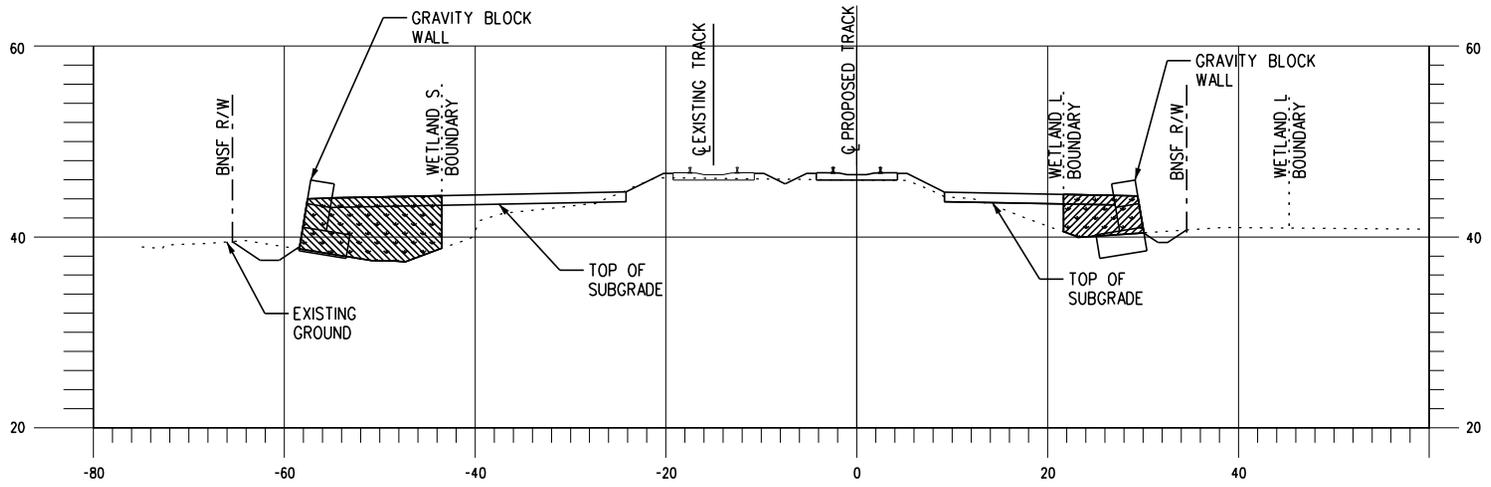


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**PROPOSED WORK - DETAIL SHEET 2**

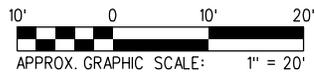
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**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
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**STATE:** WA **DATE:** SEPTEMBER 2014

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(SEE PLAN DETAIL SHEET- 2)

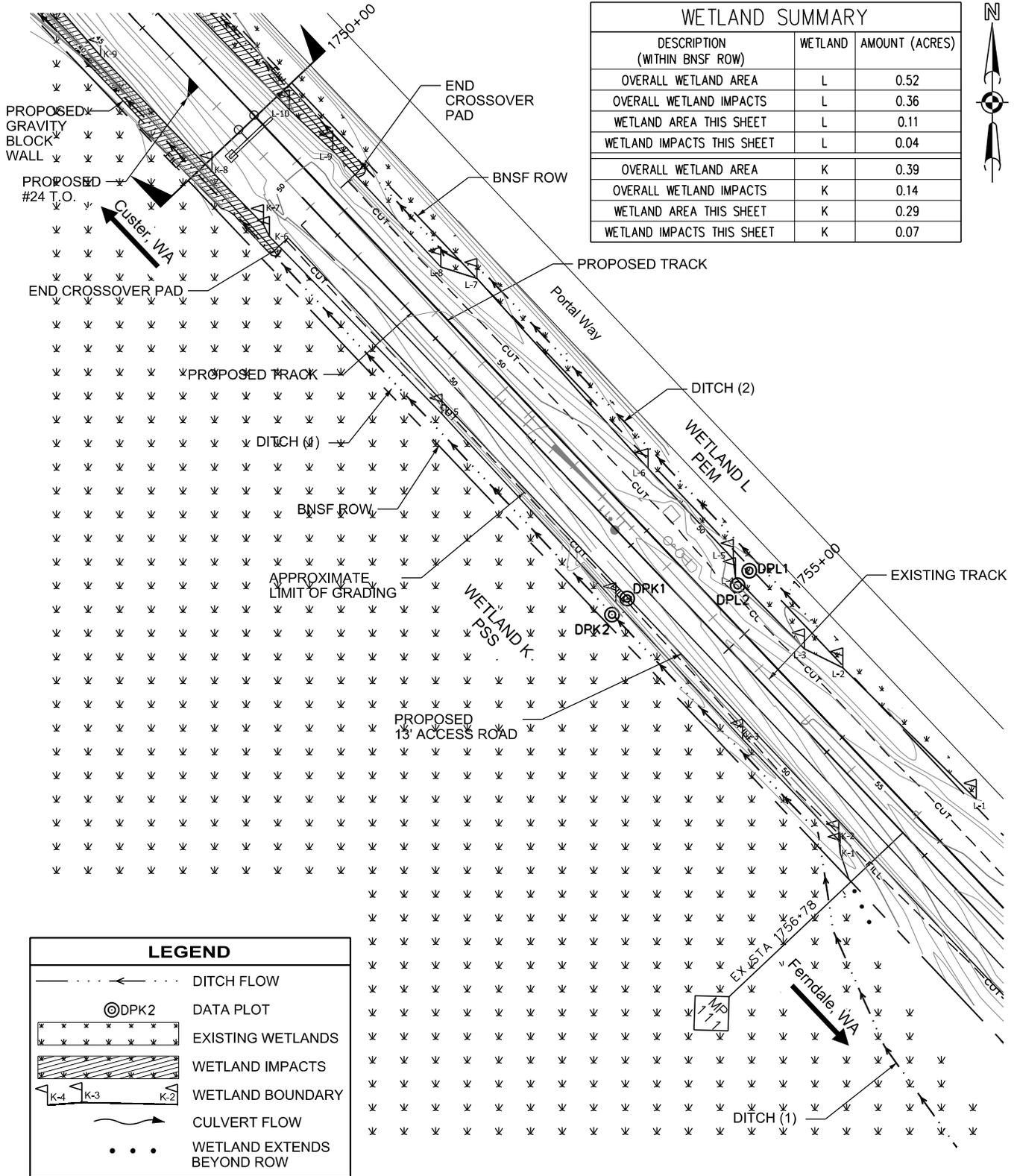
 WETLAND FILL



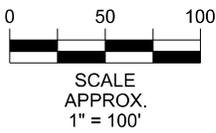
**PROPOSED WORK - CROSS SECTION**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM  
 SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1  
 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
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WETLAND AREA THIS SHEET	L	0.11
WETLAND IMPACTS THIS SHEET	L	0.04
OVERALL WETLAND AREA	K	0.39
OVERALL WETLAND IMPACTS	K	0.14
WETLAND AREA THIS SHEET	K	0.29
WETLAND IMPACTS THIS SHEET	K	0.07



LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

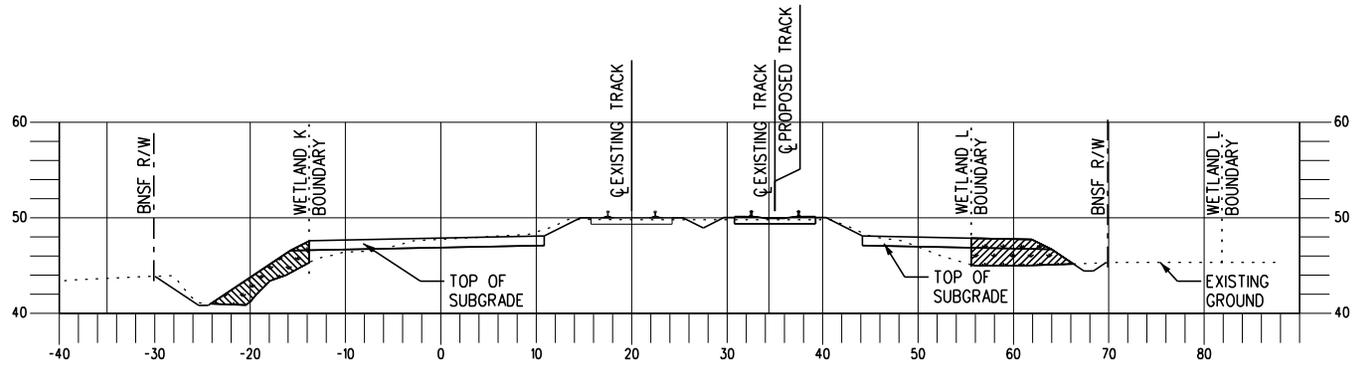


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**PROPOSED WORK - DETAIL SHEET 3**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
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**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014

SHEET OF



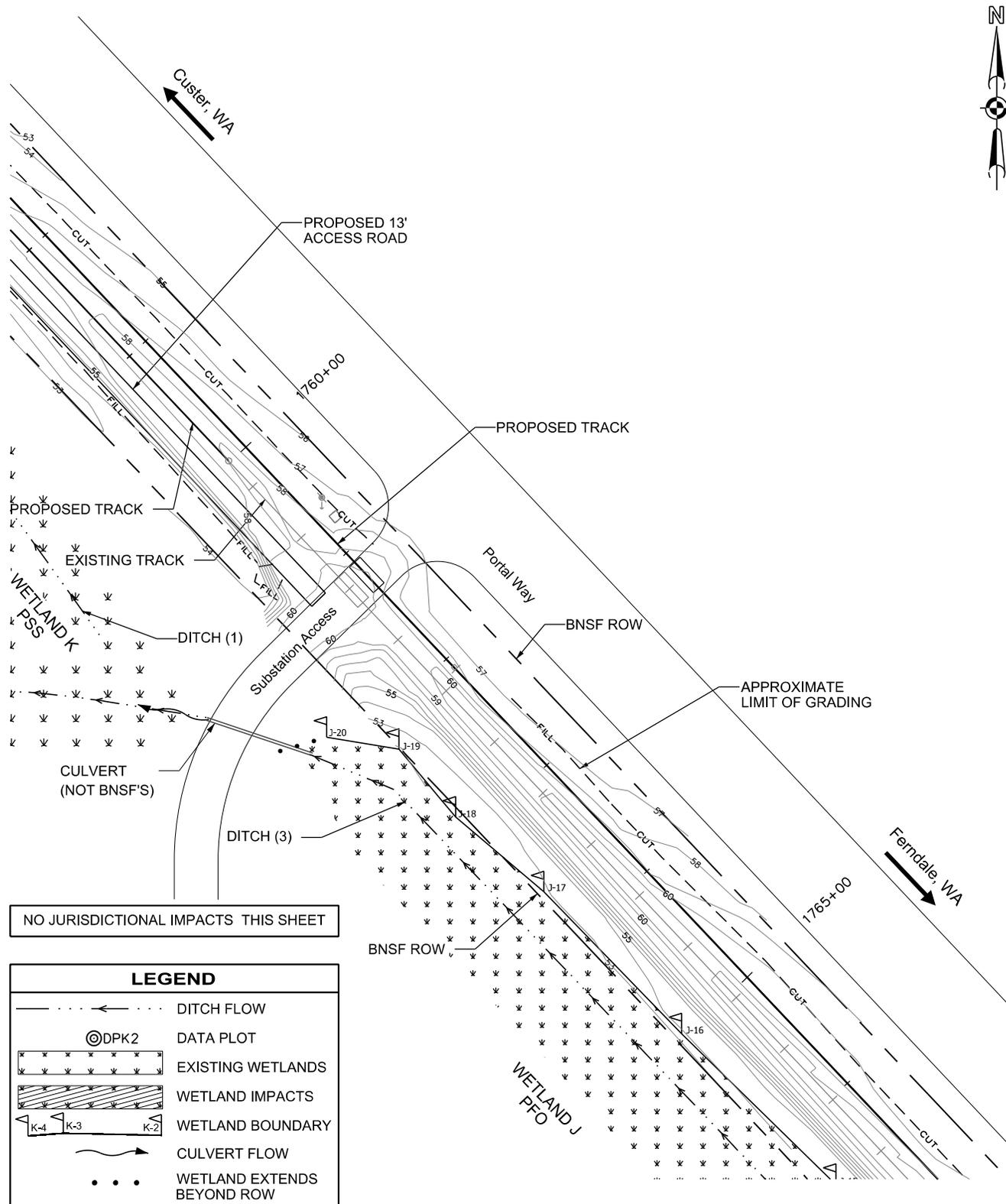
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(SEE PLAN DETAIL SHEET- 3)

 WETLAND FILL



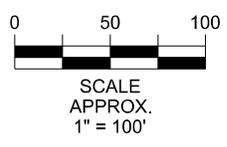
**PROPOSED WORK - CROSS SECTION**

**USACE REF NO:**  
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**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM  
 SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
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**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF



NO JURISDICTIONAL IMPACTS THIS SHEET

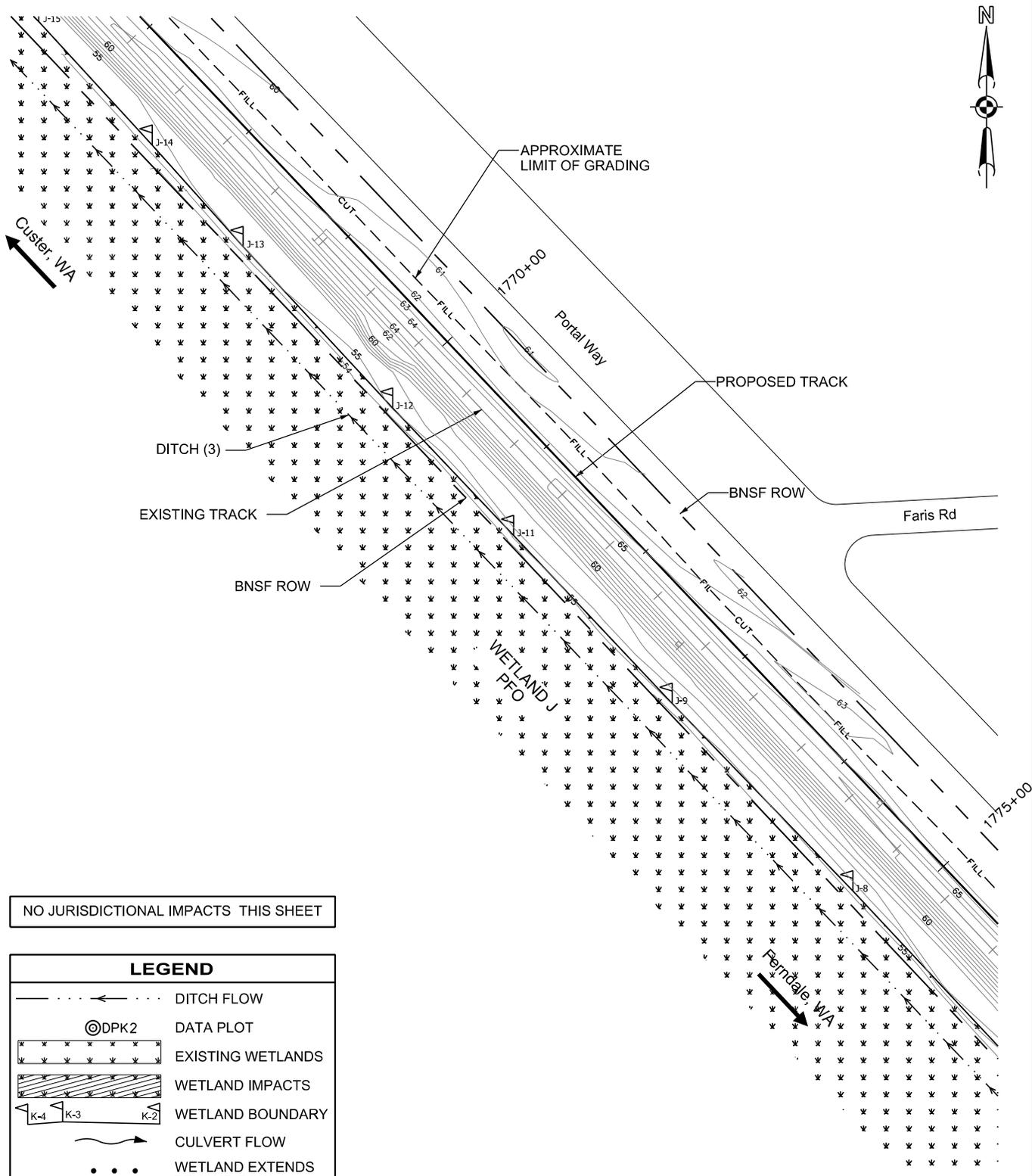
LEGEND	
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	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



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08/13/2014

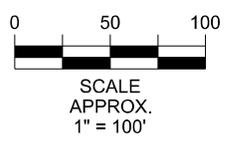
**PROPOSED WORK - DETAIL SHEET 4**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
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**STATE:** WA **DATE:** SEPTEMBER 2014



NO JURISDICTIONAL IMPACTS THIS SHEET

LEGEND	
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	DATA PLOT
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	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
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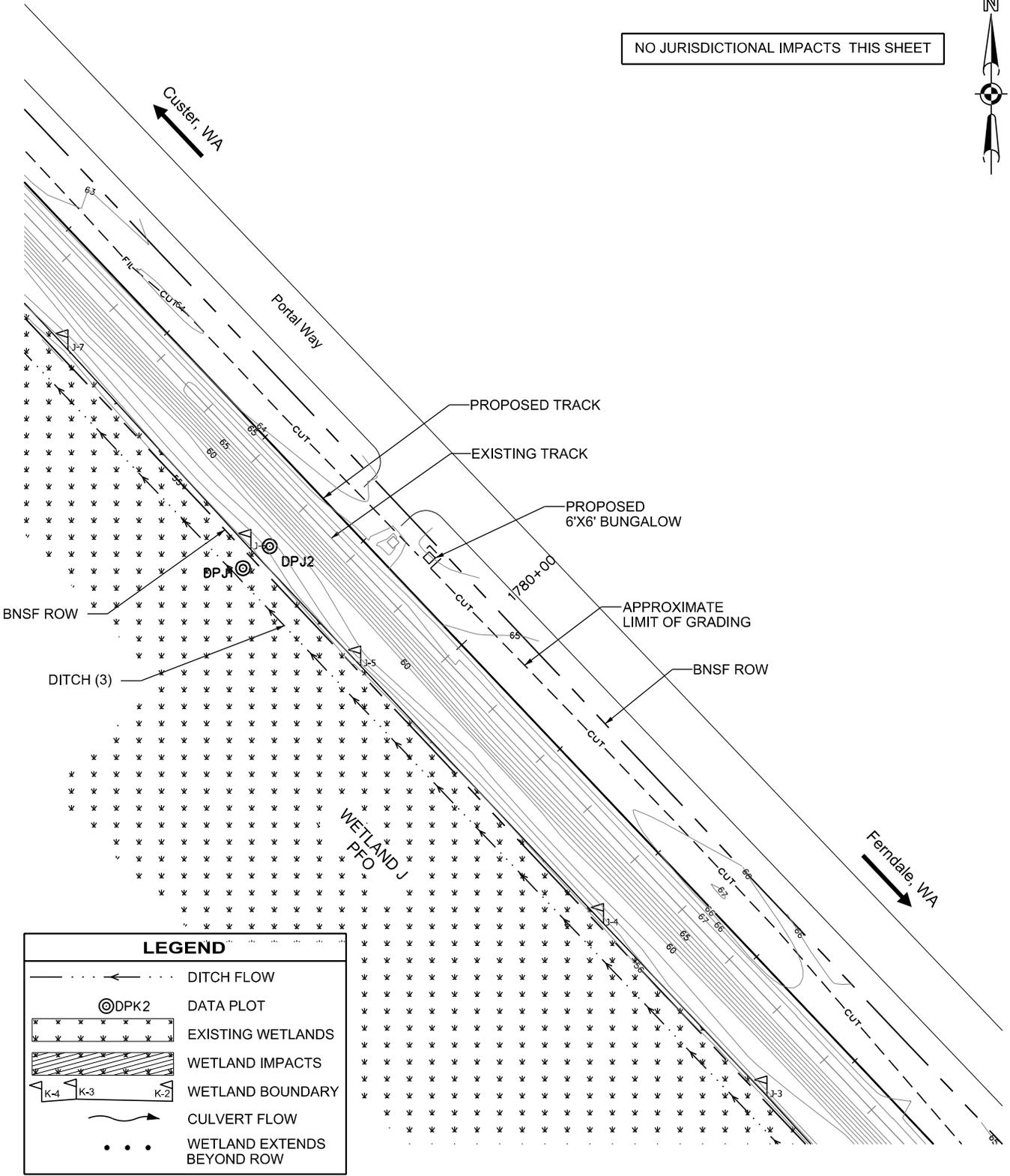


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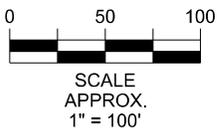
**PROPOSED WORK - DETAIL SHEET 5**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
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**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014

NO JURISDICTIONAL IMPACTS THIS SHEET



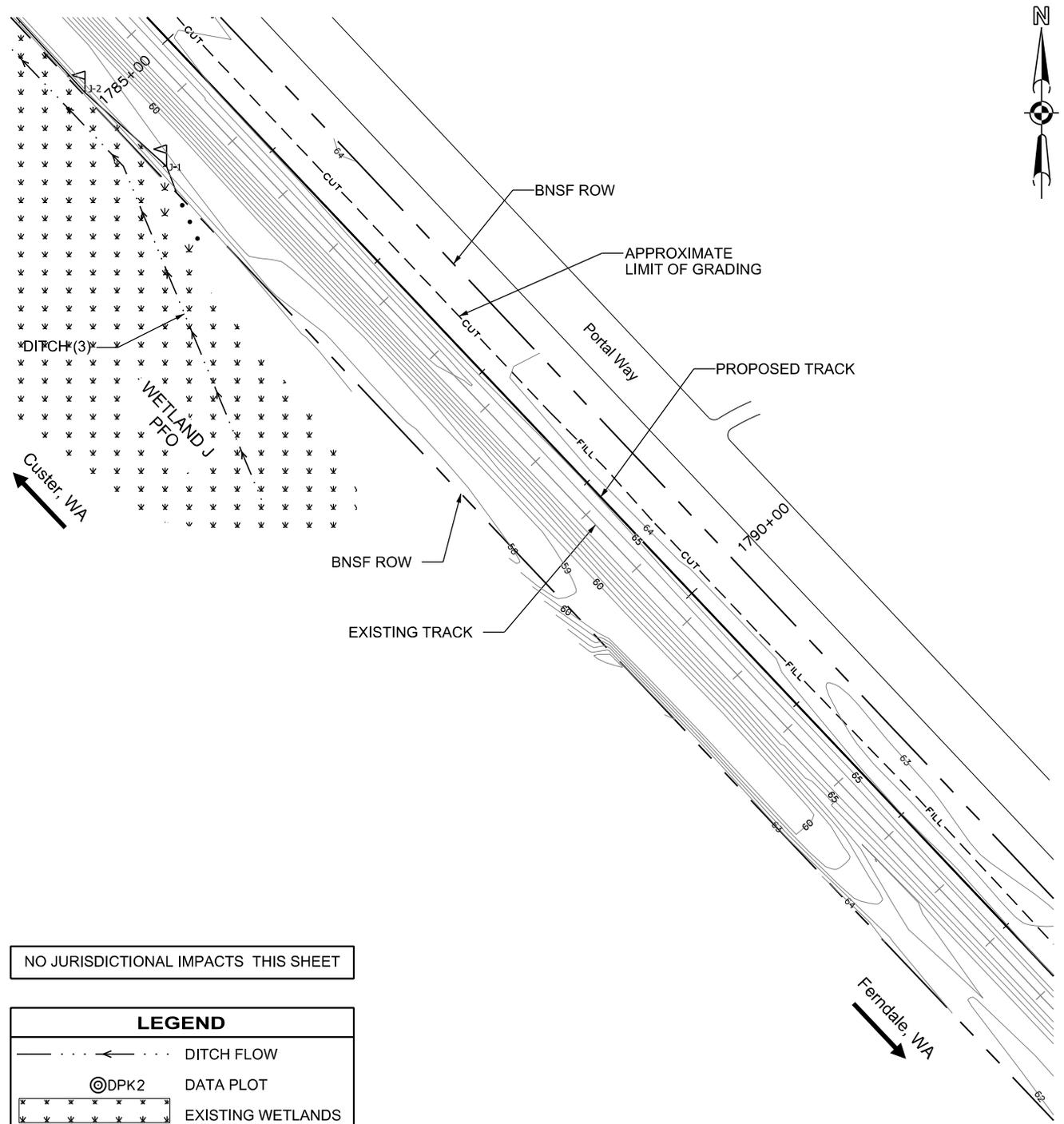
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



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08/13/2014

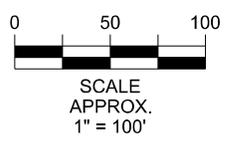
**PROPOSED WORK - DETAIL SHEET 6**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
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**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



NO JURISDICTIONAL IMPACTS THIS SHEET

LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

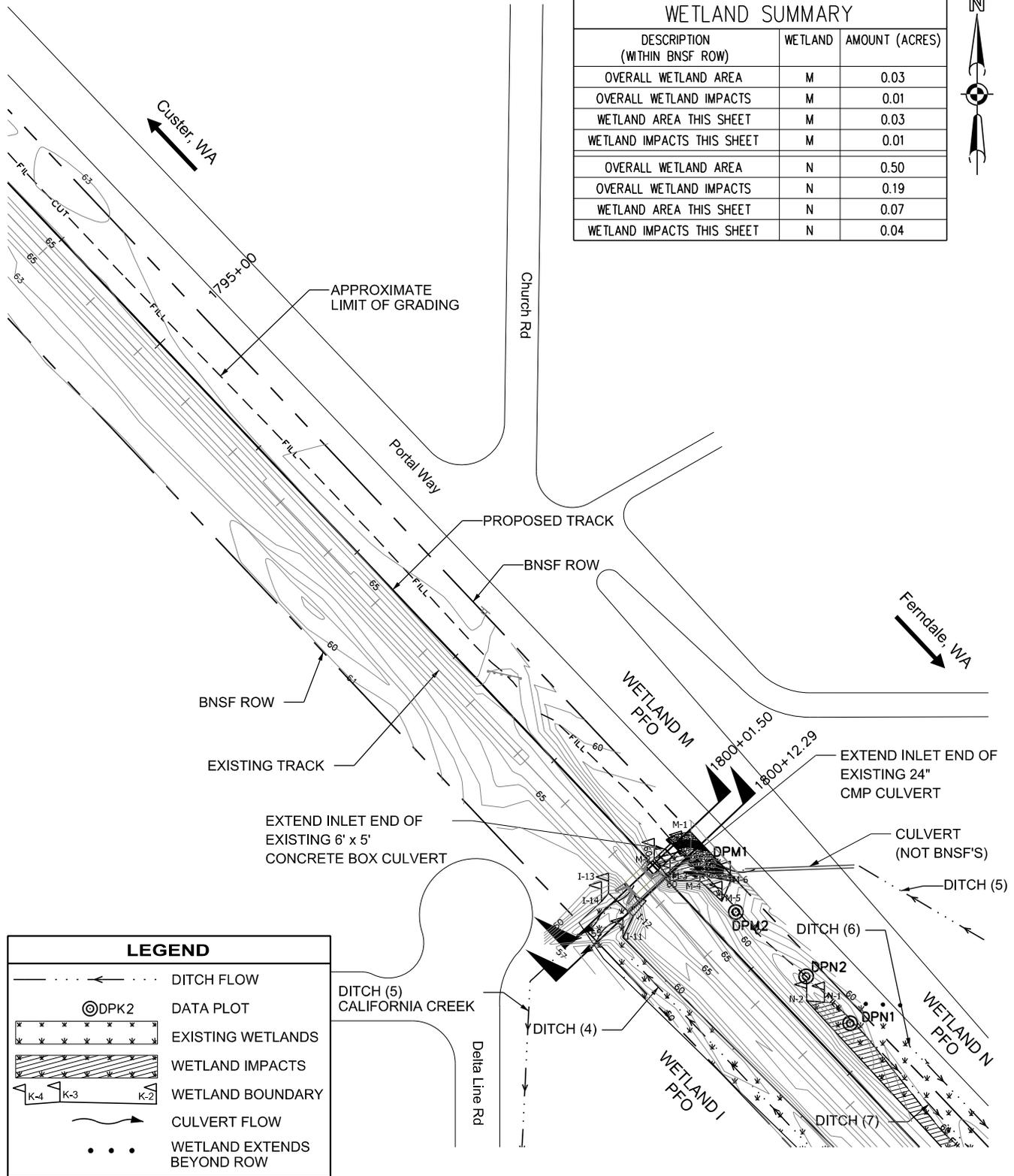


BASEMAP: HNTB 100% FINAL DESIGN PLANS 08/13/2014

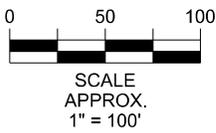
**PROPOSED WORK - DETAIL SHEET 7**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK    **COUNTY:** WHATCOM  
**STATE:** WA    **DATE:** SEPTEMBER 2014

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	M	0.03
OVERALL WETLAND IMPACTS	M	0.01
WETLAND AREA THIS SHEET	M	0.03
WETLAND IMPACTS THIS SHEET	M	0.01
OVERALL WETLAND AREA	N	0.50
OVERALL WETLAND IMPACTS	N	0.19
WETLAND AREA THIS SHEET	N	0.07
WETLAND IMPACTS THIS SHEET	N	0.04



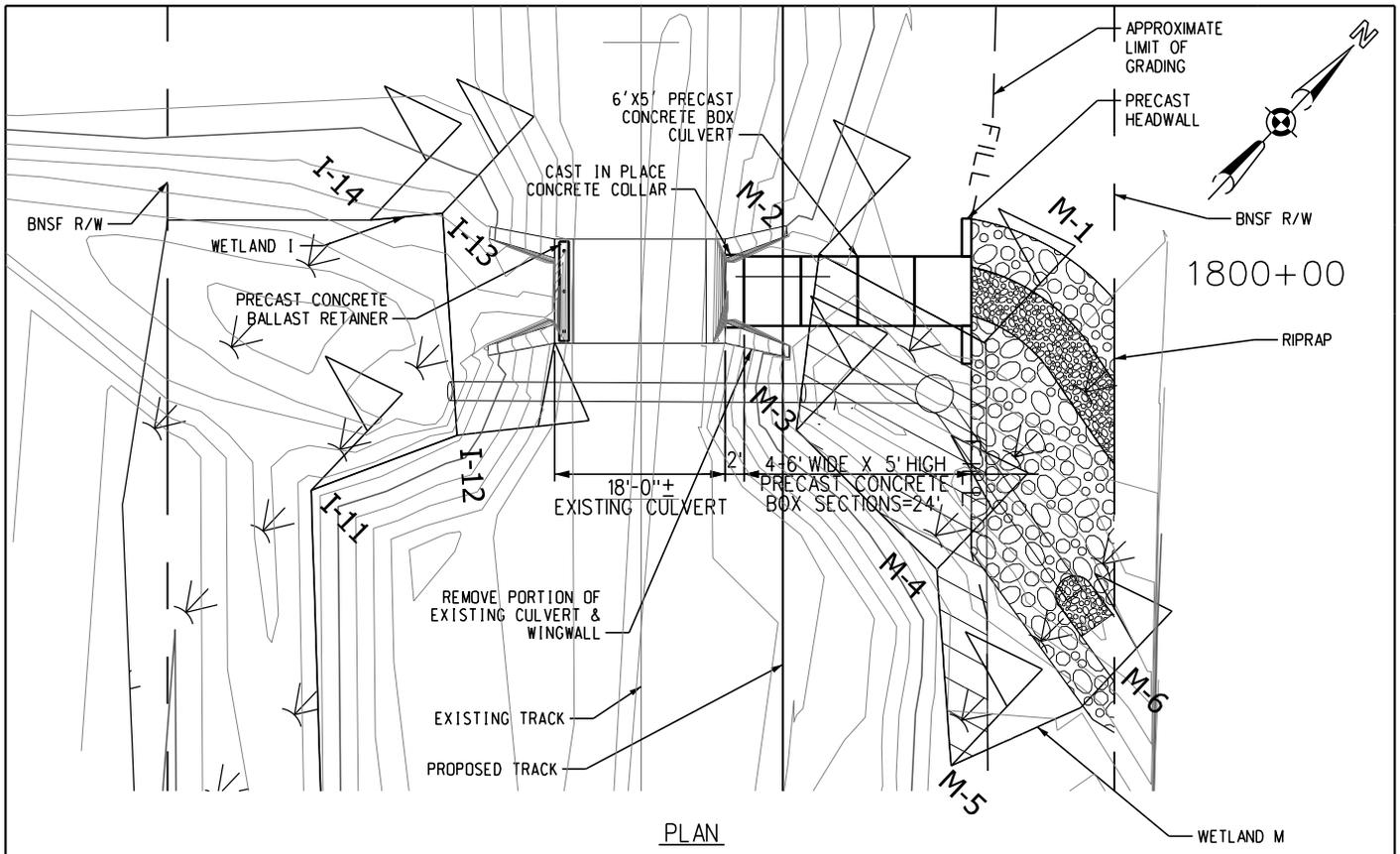
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



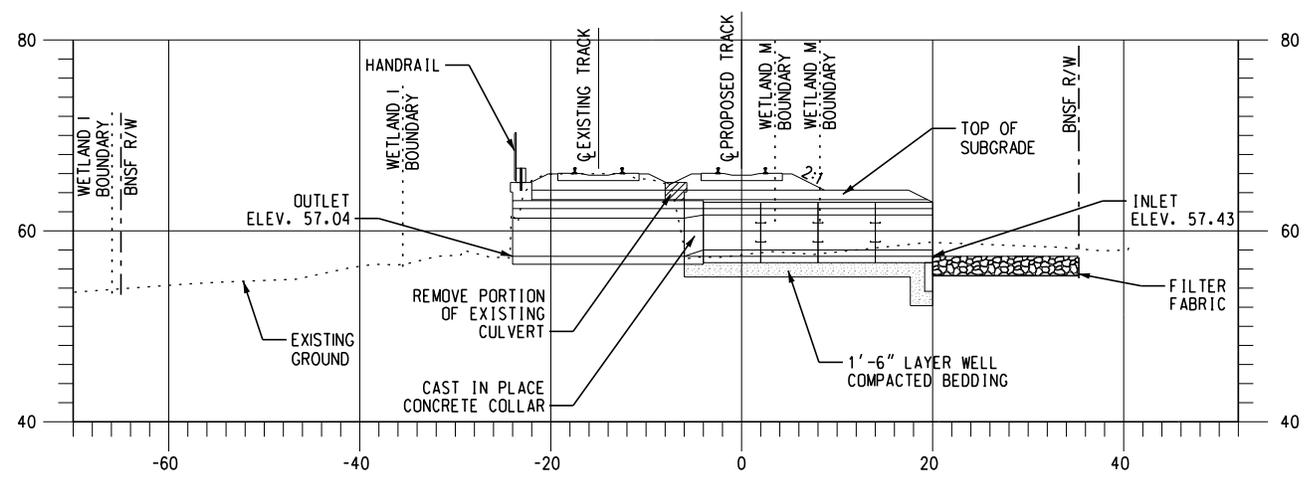
BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 8**

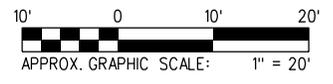
**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF



PLAN

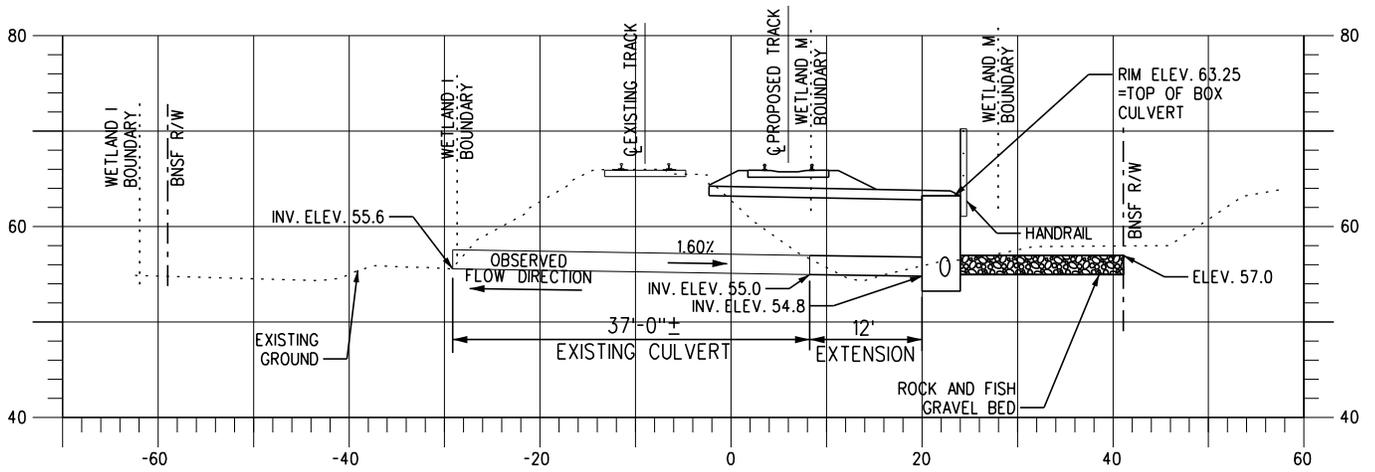
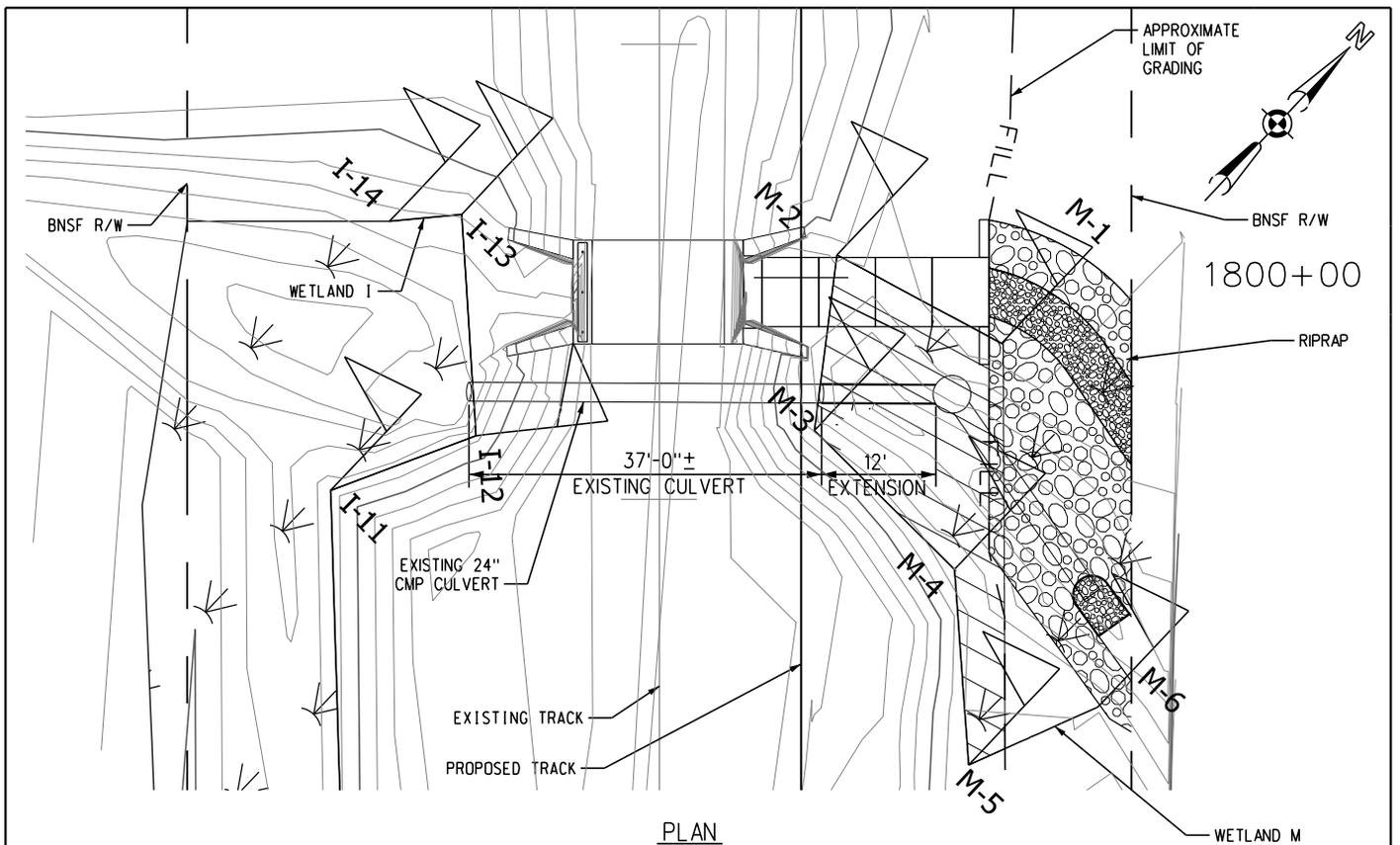


STA 1800+01.50  
 (SEE PLAN DETAIL SHEET - 8)



BASEMAP: HNTB 100%  
 FINAL DESIGN PLANS  
 08/13/2014

**PROPOSED WORK - CROSS SECTION**  
**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDAL DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF



STA 1800+12.29  
(SEE PLAN DETAIL SHEET - 8)

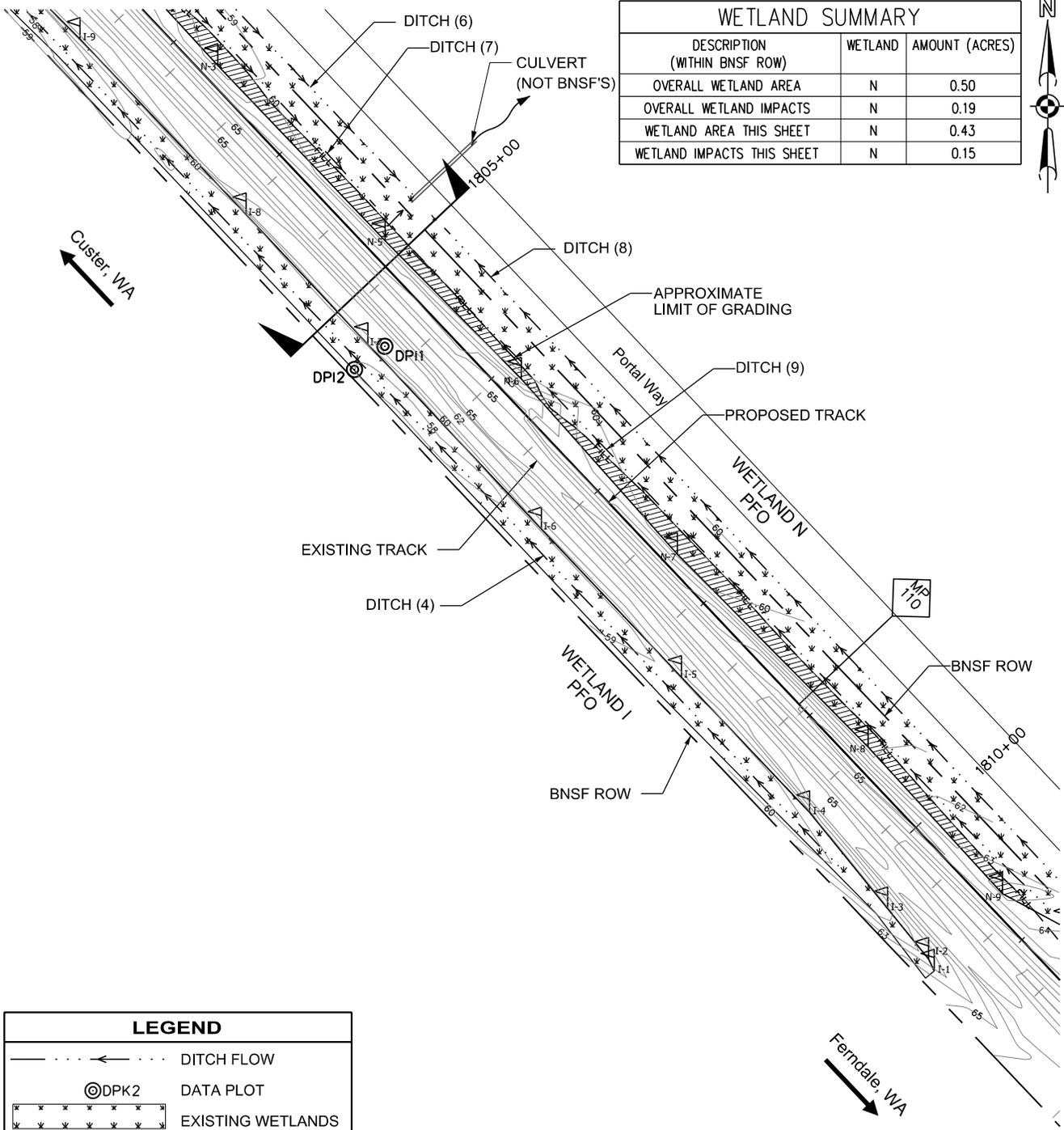


BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

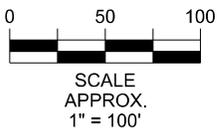
**PROPOSED WORK - CROSS SECTION**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK    **COUNTY:** WHATCOM  
**STATE:** WA    **DATE:** SEPTEMBER 2014    **SHEET** OF

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	N	0.50
OVERALL WETLAND IMPACTS	N	0.19
WETLAND AREA THIS SHEET	N	0.43
WETLAND IMPACTS THIS SHEET	N	0.15



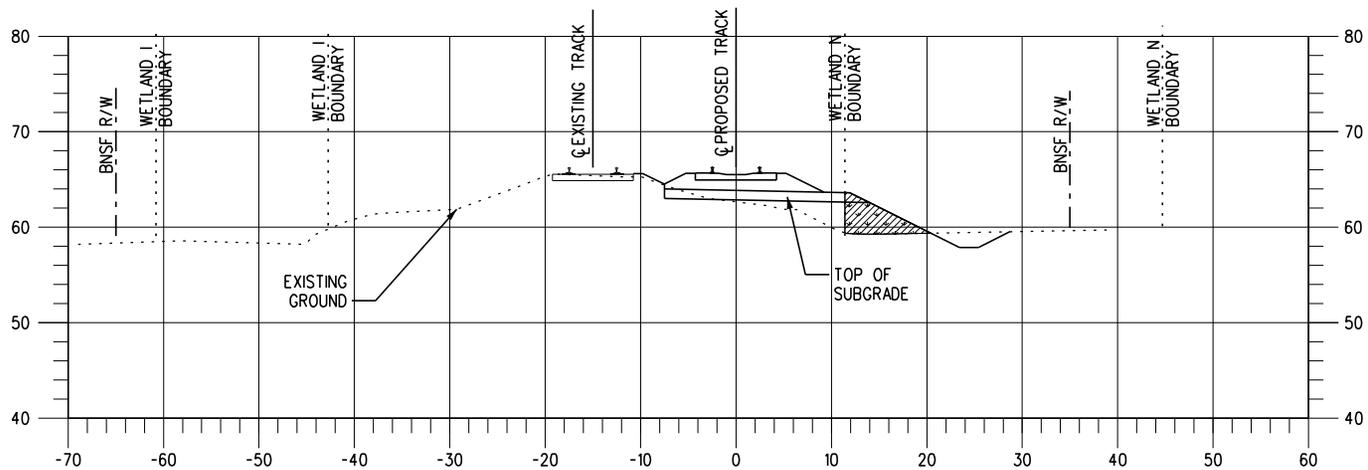
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 9**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



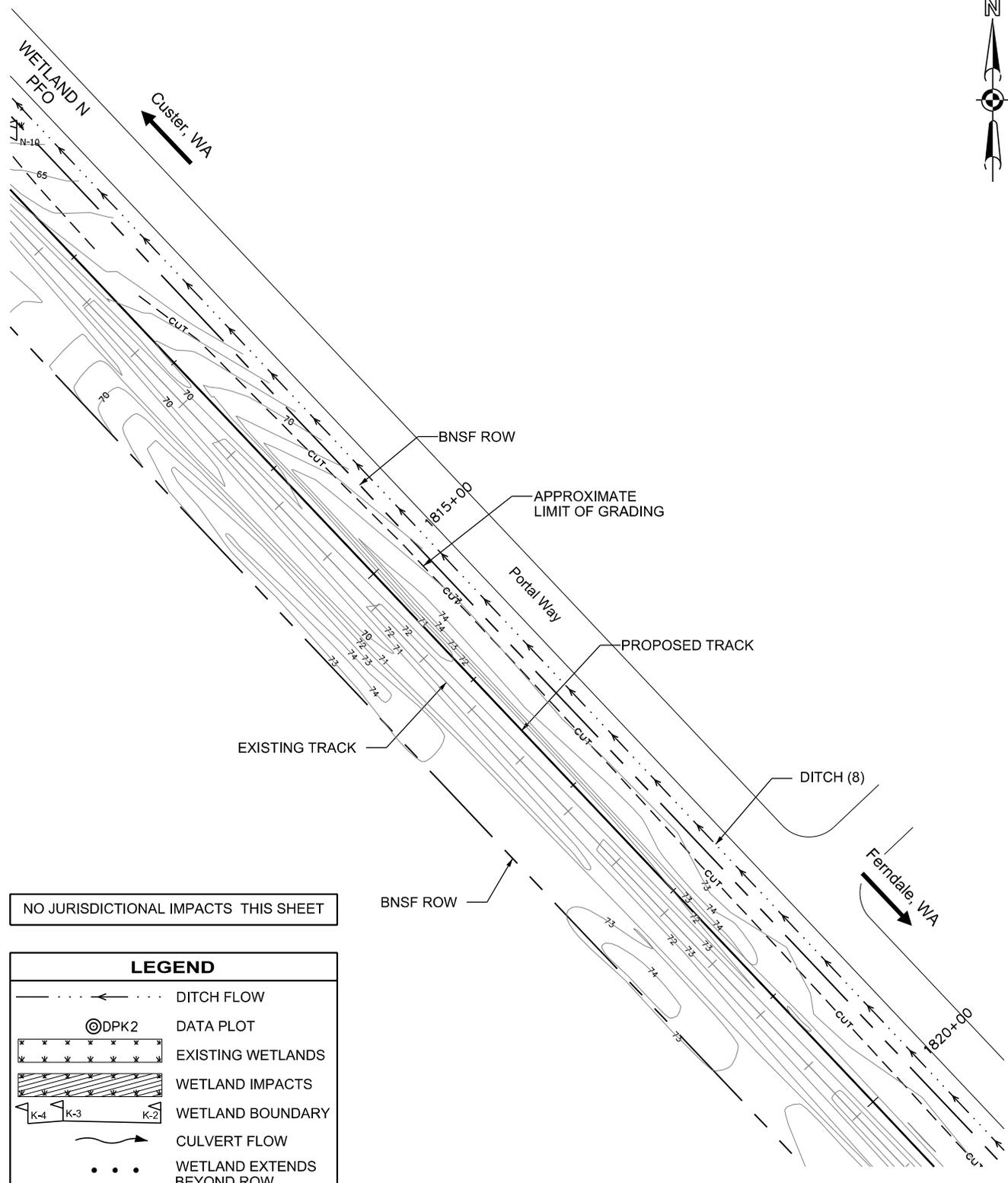
STA 1805+00  
(SEE PLAN DETAIL SHEET- 9)

 WETLAND FILL



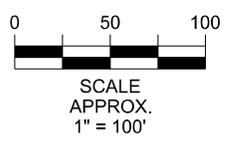
**PROPOSED WORK - CROSS SECTION**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM  
 SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1  
 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF



NO JURISDICTIONAL IMPACTS THIS SHEET

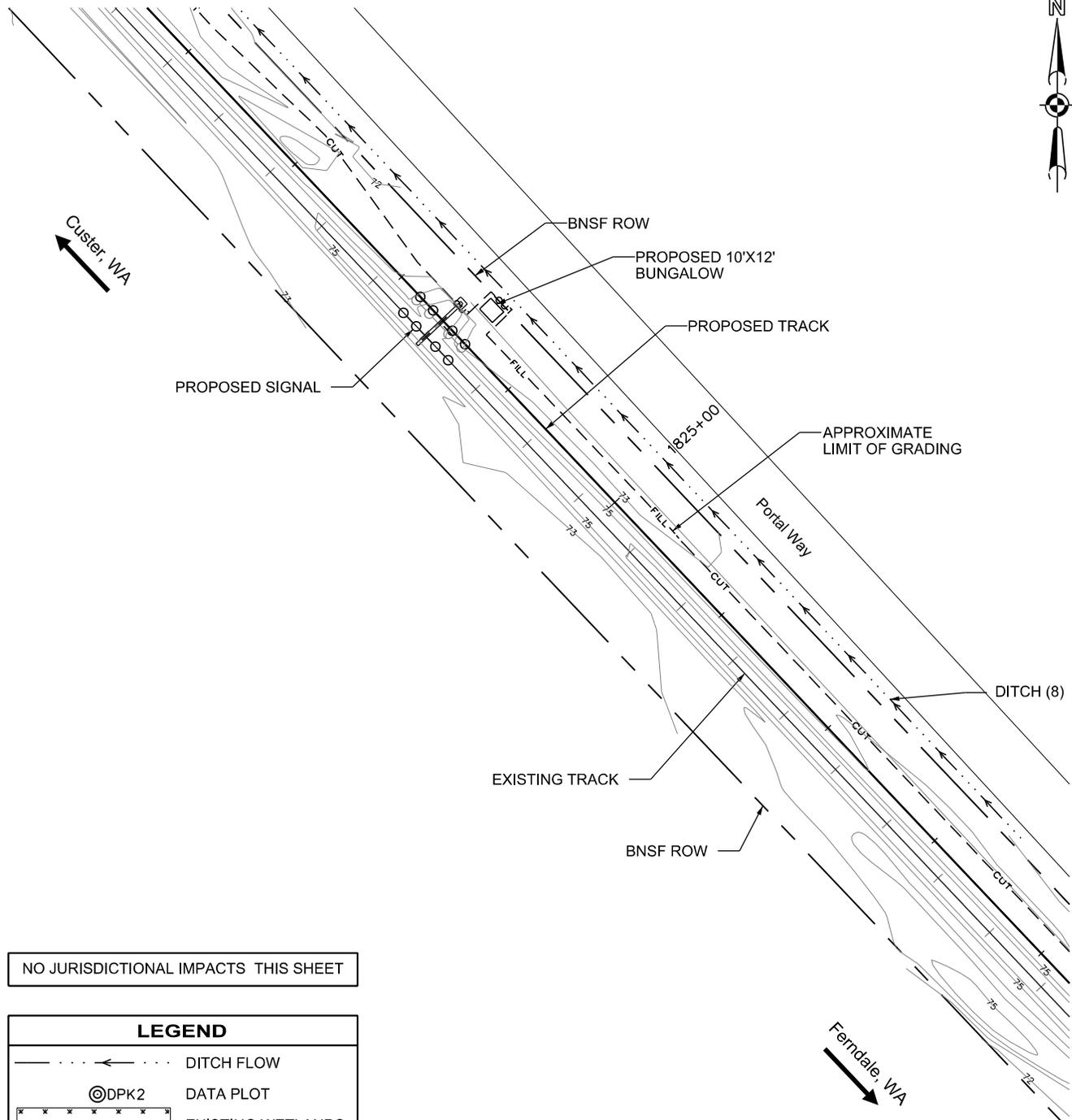
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

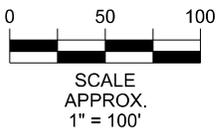
**PROPOSED WORK - DETAIL SHEET 10**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



NO JURISDICTIONAL IMPACTS THIS SHEET

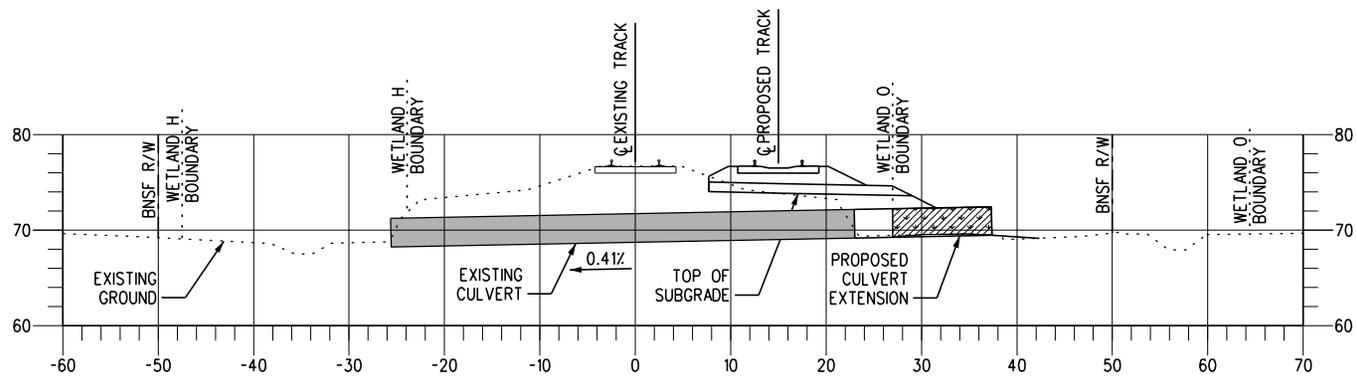
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 11**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



STA 1834+67.72  
(SEE PLAN DETAIL SHEET- 12)

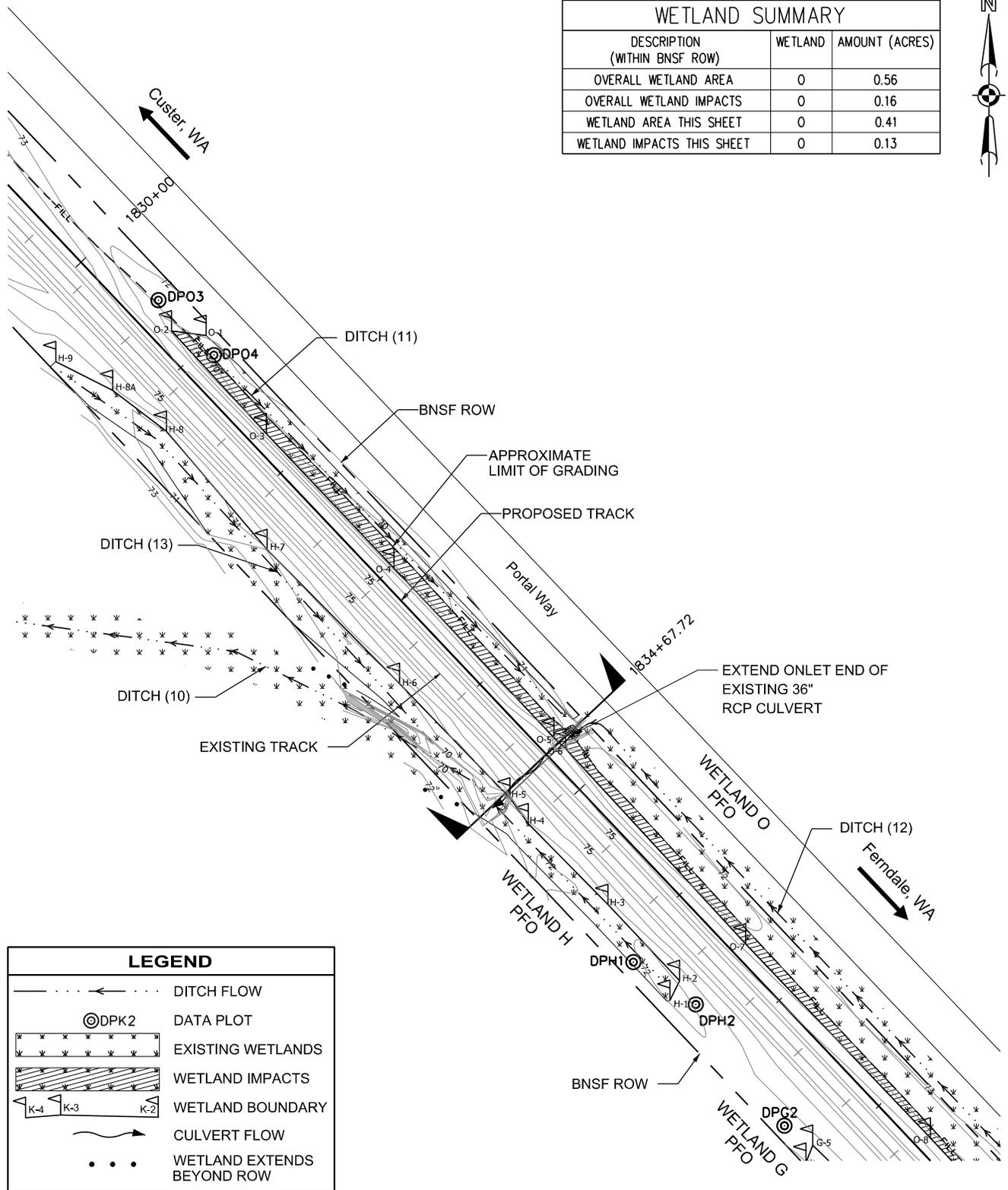
 WETLAND FILL



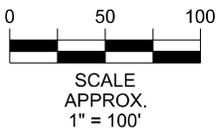
### PROPOSED WORK - CROSS SECTION

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	0	0.56
OVERALL WETLAND IMPACTS	0	0.16
WETLAND AREA THIS SHEET	0	0.41
WETLAND IMPACTS THIS SHEET	0	0.13



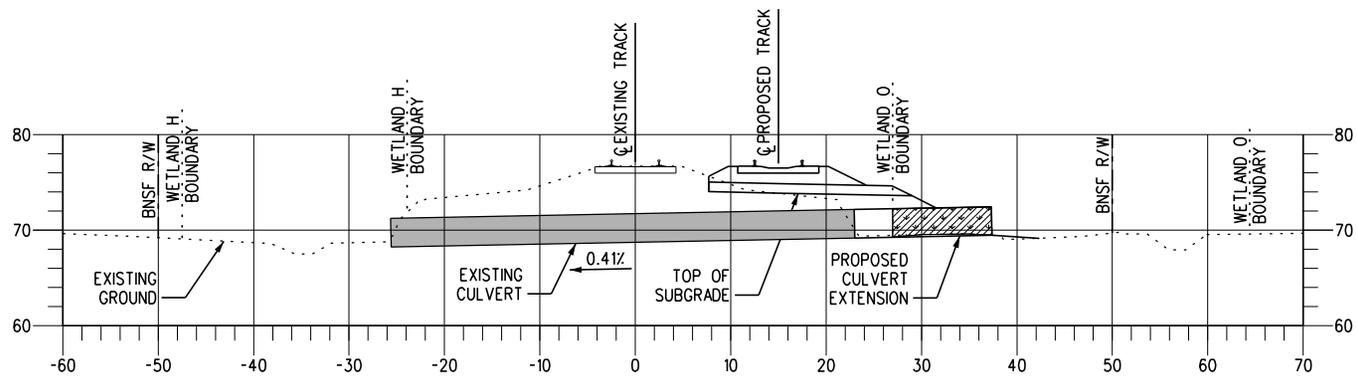
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 12**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



STA 1834+67.72  
(SEE PLAN DETAIL SHEET- 12)

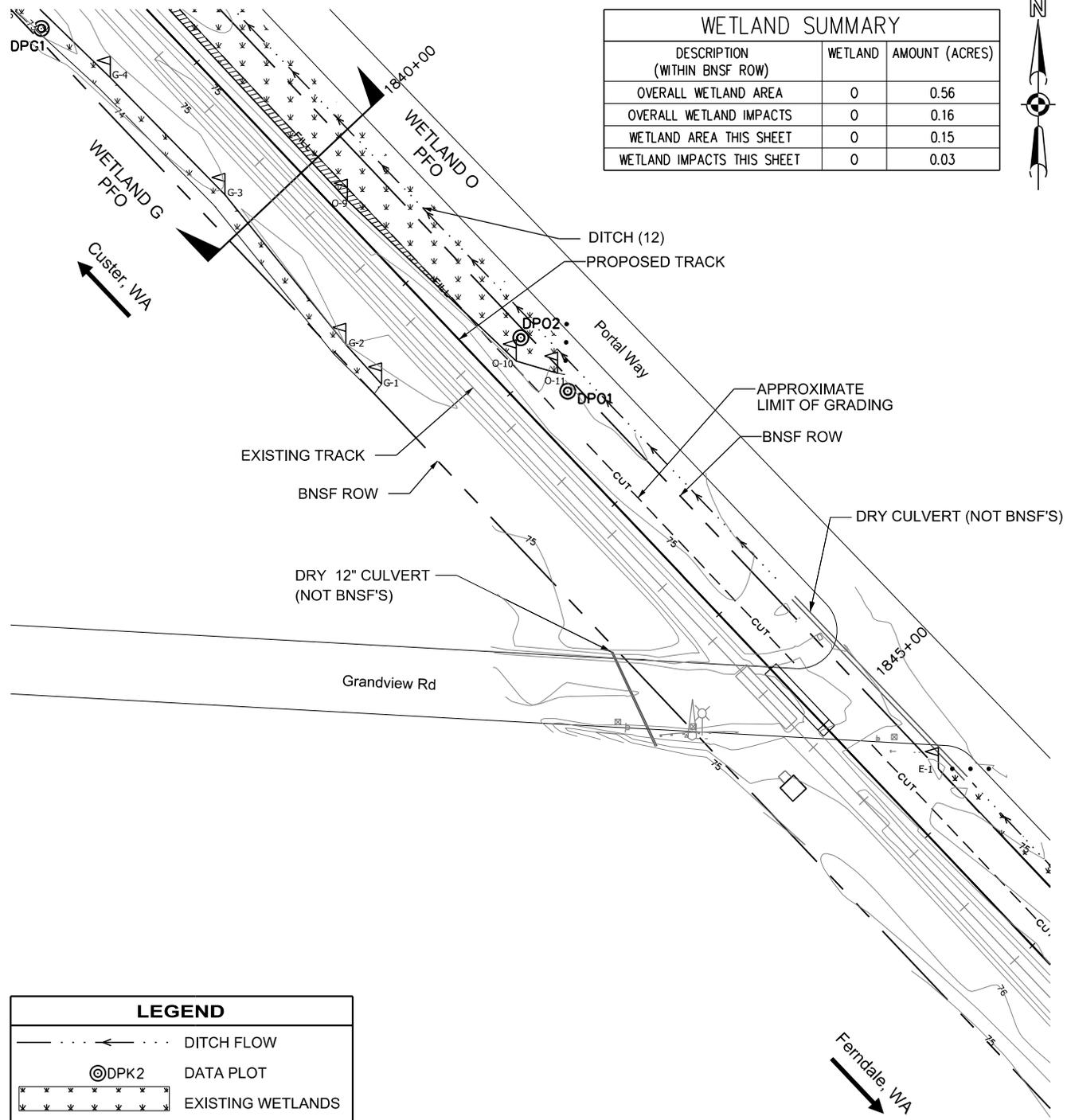
 WETLAND FILL



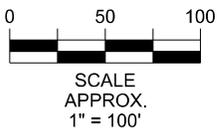
### PROPOSED WORK - CROSS SECTION

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	0	0.56
OVERALL WETLAND IMPACTS	0	0.16
WETLAND AREA THIS SHEET	0	0.15
WETLAND IMPACTS THIS SHEET	0	0.03



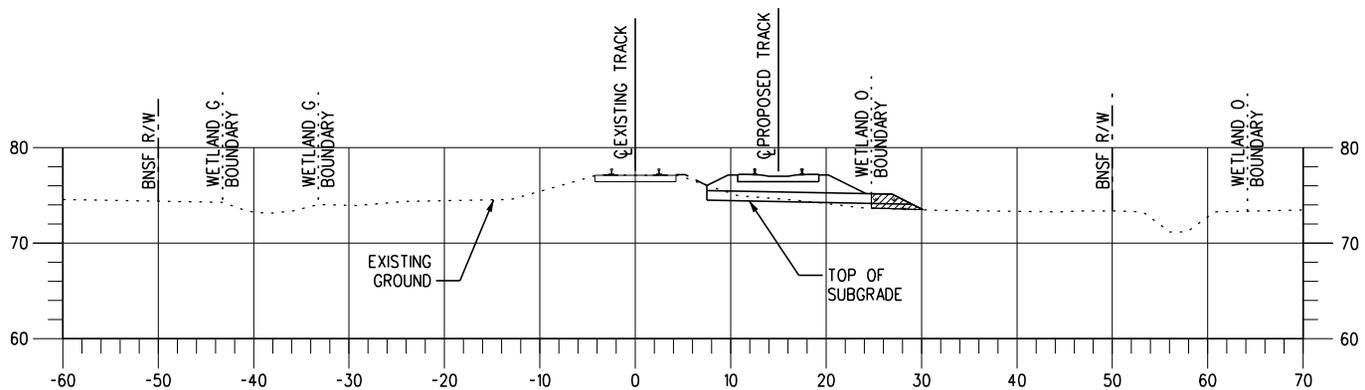
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

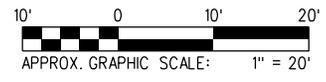
**PROPOSED WORK - DETAIL SHEET 13**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



STA 1840+00  
(SEE PLAN DETAIL SHEET- 13)

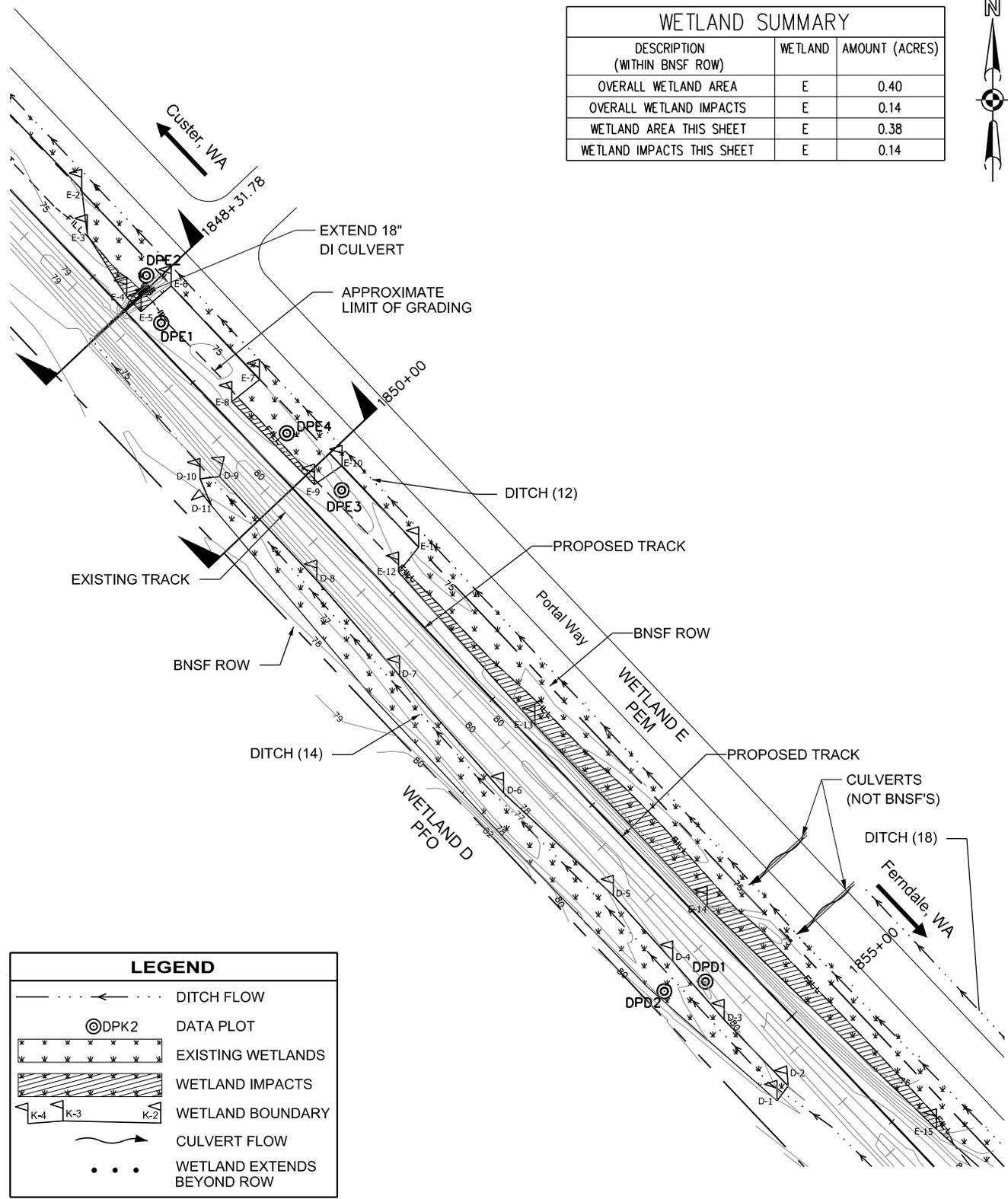
 WETLAND FILL



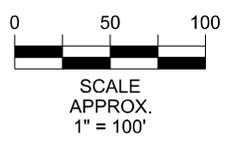
**PROPOSED WORK - CROSS SECTION**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	E	0.40
OVERALL WETLAND IMPACTS	E	0.14
WETLAND AREA THIS SHEET	E	0.38
WETLAND IMPACTS THIS SHEET	E	0.14



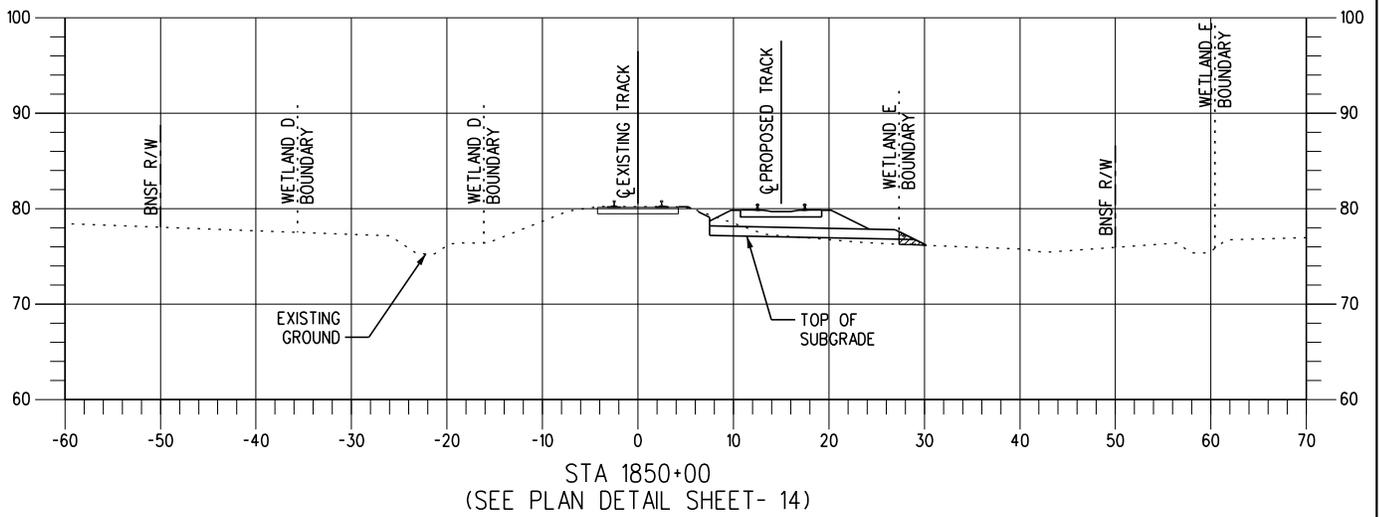
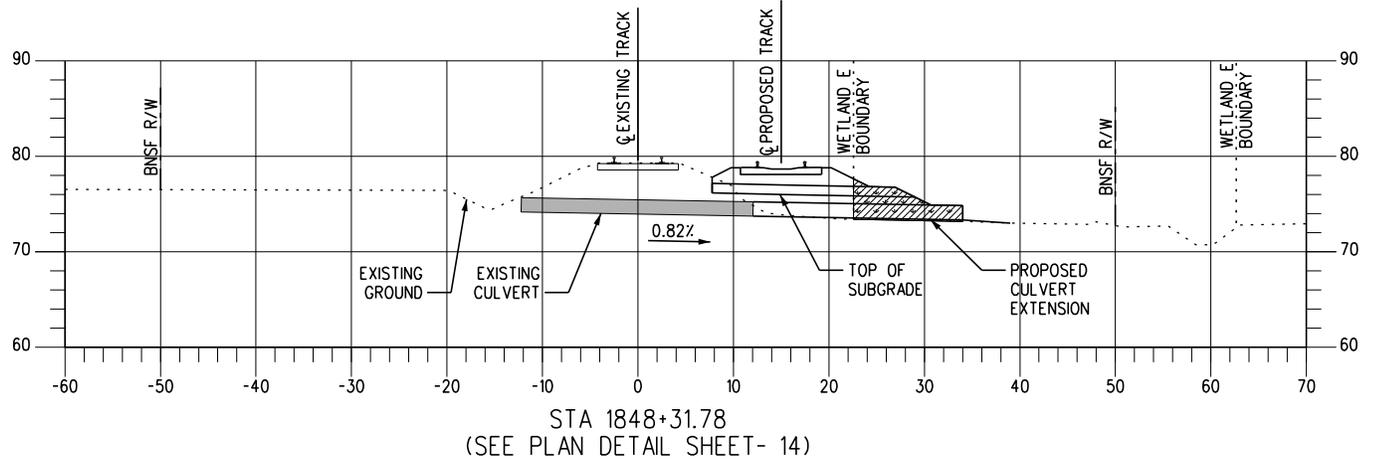
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



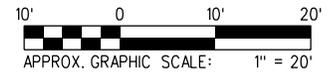
BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 14**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



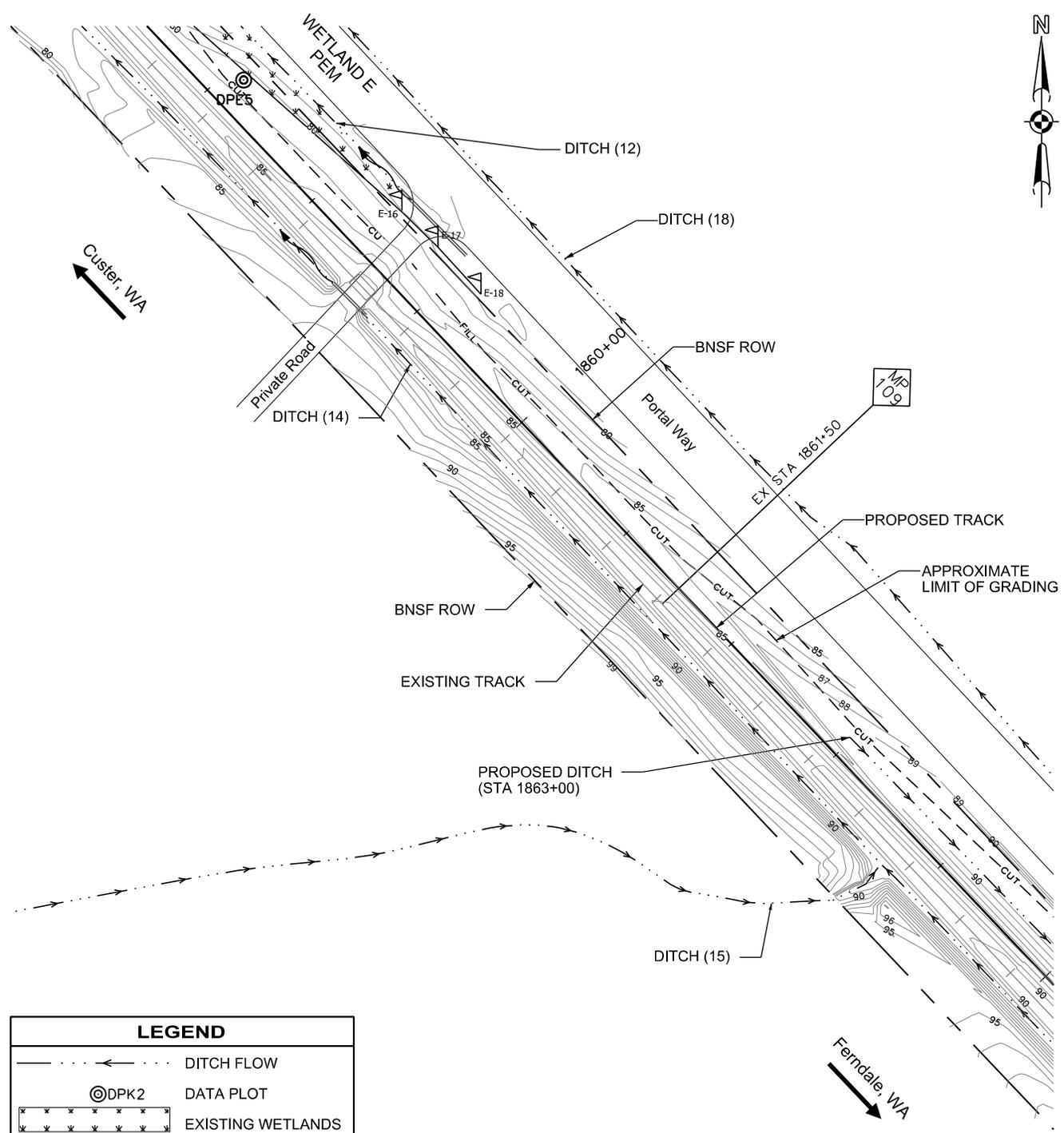
 WETLAND FILL



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

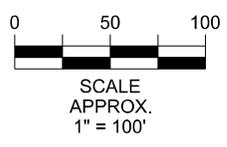
**PROPOSED WORK - CROSS SECTIONS**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

NO JURISDICTIONAL IMPACTS THIS SHEET

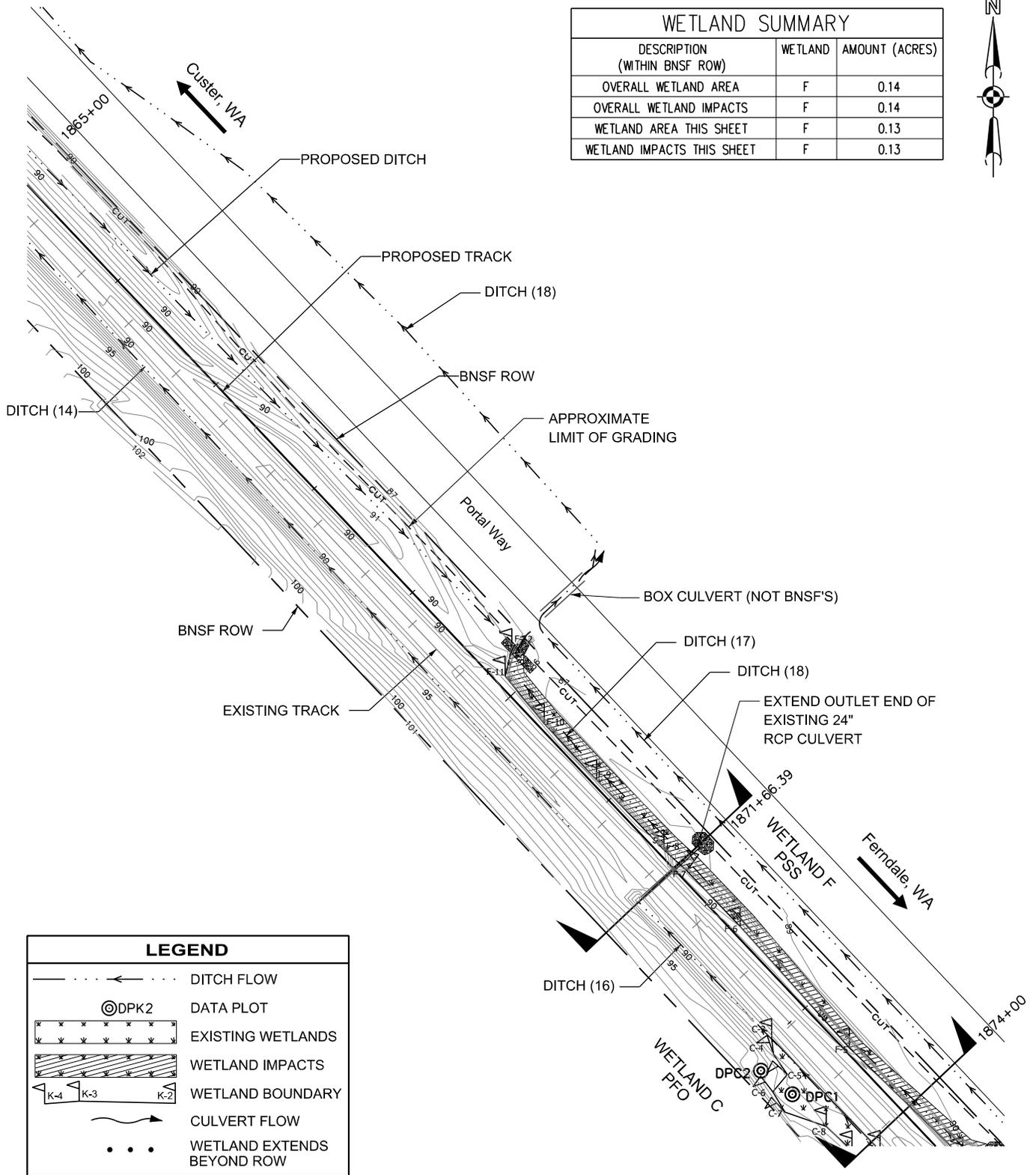


BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

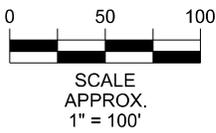
**PROPOSED WORK - DETAIL SHEET 15**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	F	0.14
OVERALL WETLAND IMPACTS	F	0.14
WETLAND AREA THIS SHEET	F	0.13
WETLAND IMPACTS THIS SHEET	F	0.13



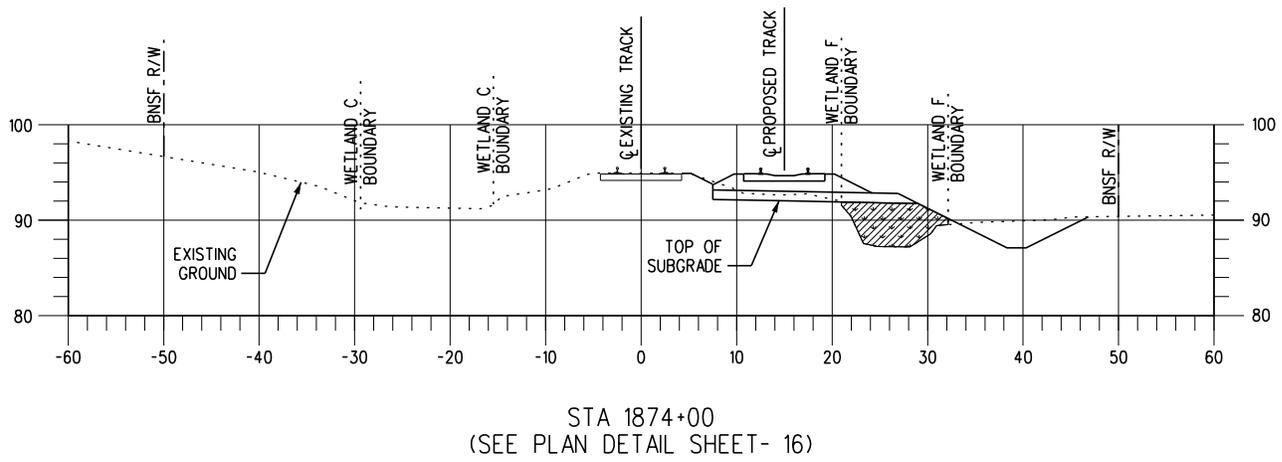
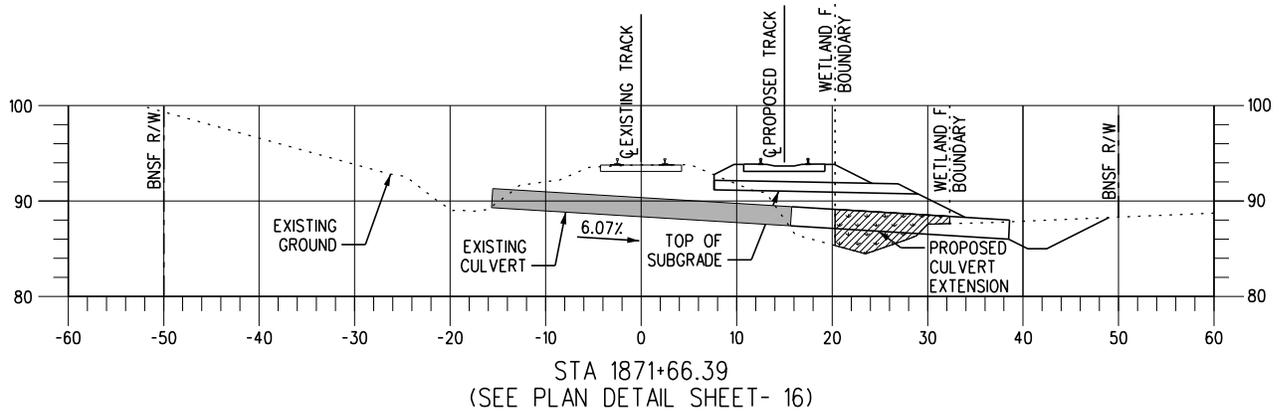
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 16**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



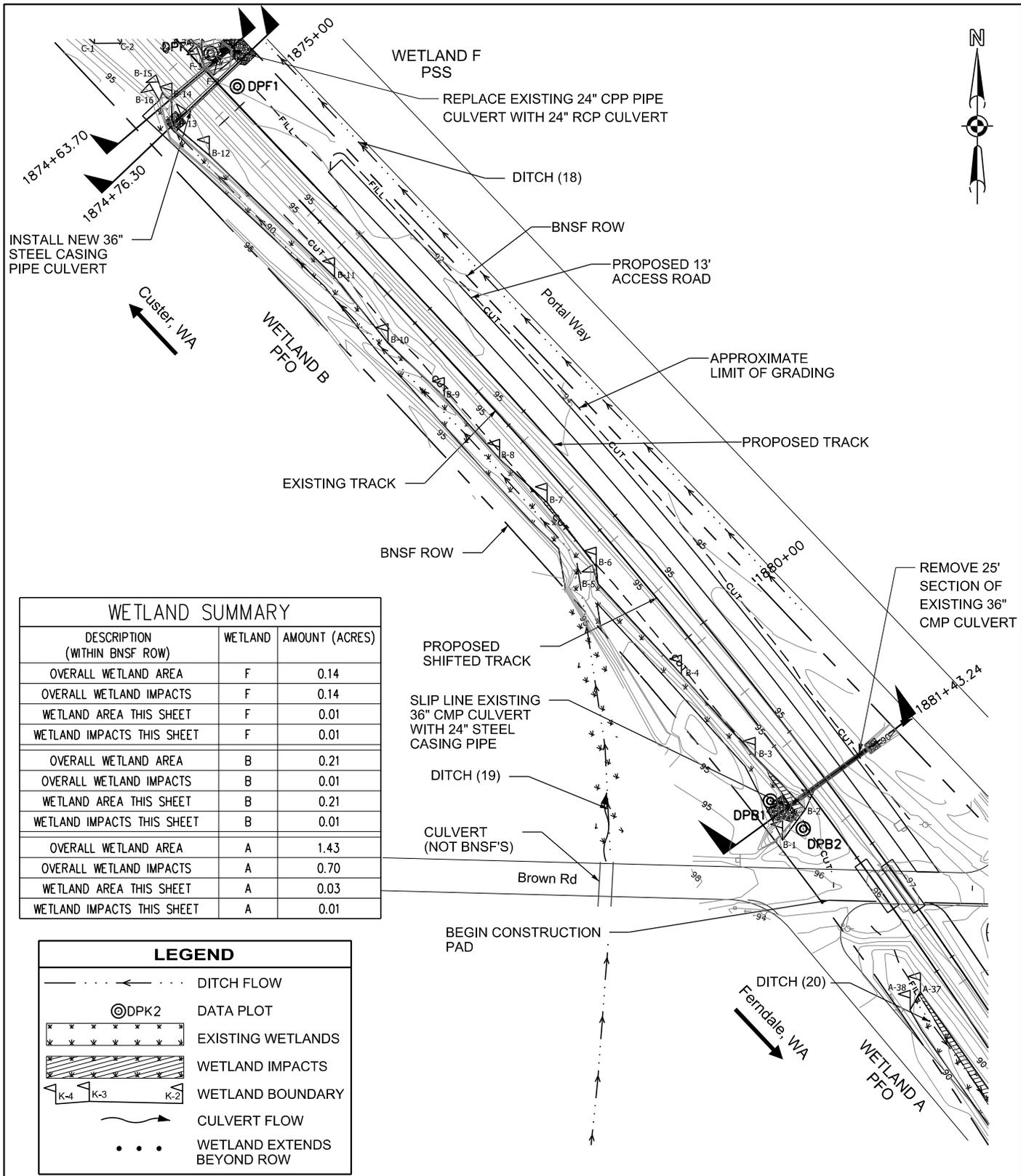
 WETLAND FILL



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

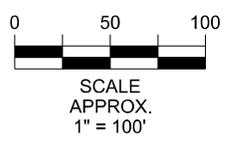
**PROPOSED WORK - CROSS SECTIONS**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALDE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	F	0.14
OVERALL WETLAND IMPACTS	F	0.14
WETLAND AREA THIS SHEET	F	0.01
WETLAND IMPACTS THIS SHEET	F	0.01
OVERALL WETLAND AREA	B	0.21
OVERALL WETLAND IMPACTS	B	0.01
WETLAND AREA THIS SHEET	B	0.21
WETLAND IMPACTS THIS SHEET	B	0.01
OVERALL WETLAND AREA	A	1.43
OVERALL WETLAND IMPACTS	A	0.70
WETLAND AREA THIS SHEET	A	0.03
WETLAND IMPACTS THIS SHEET	A	0.01

LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

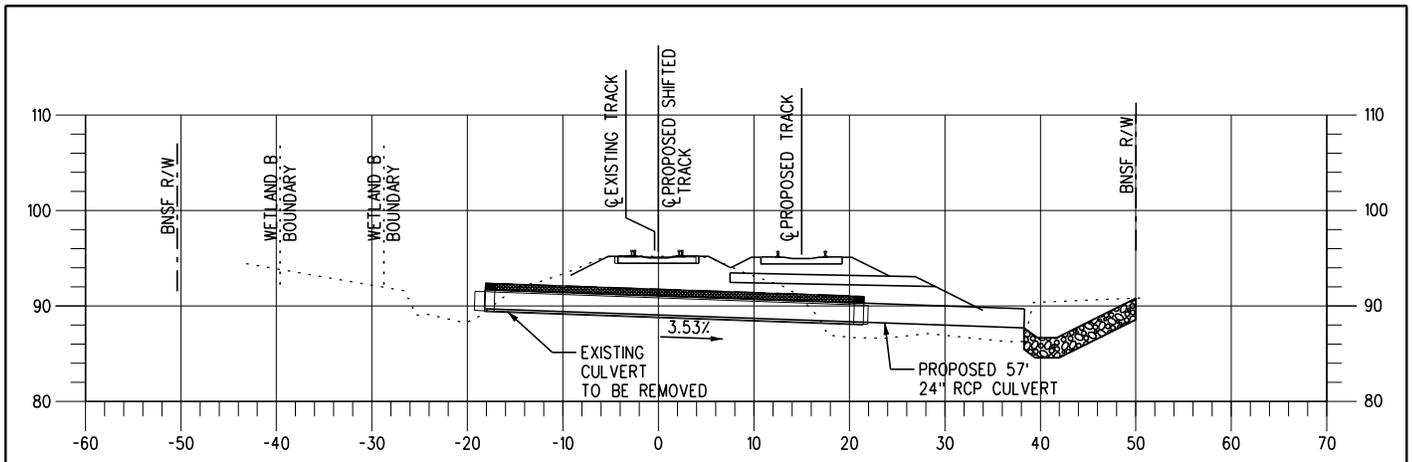


BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

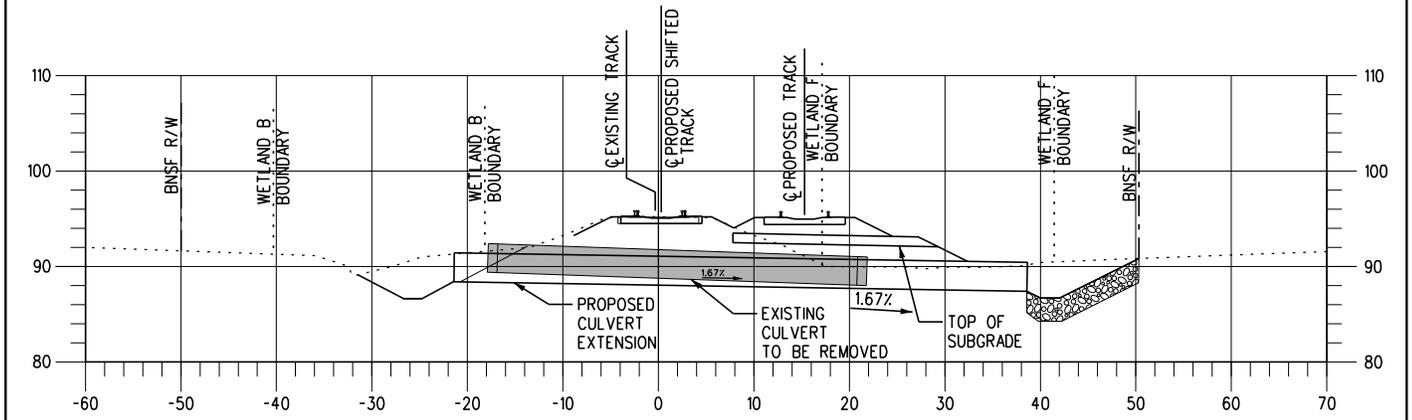
**PROPOSED WORK - DETAIL SHEET 17**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014

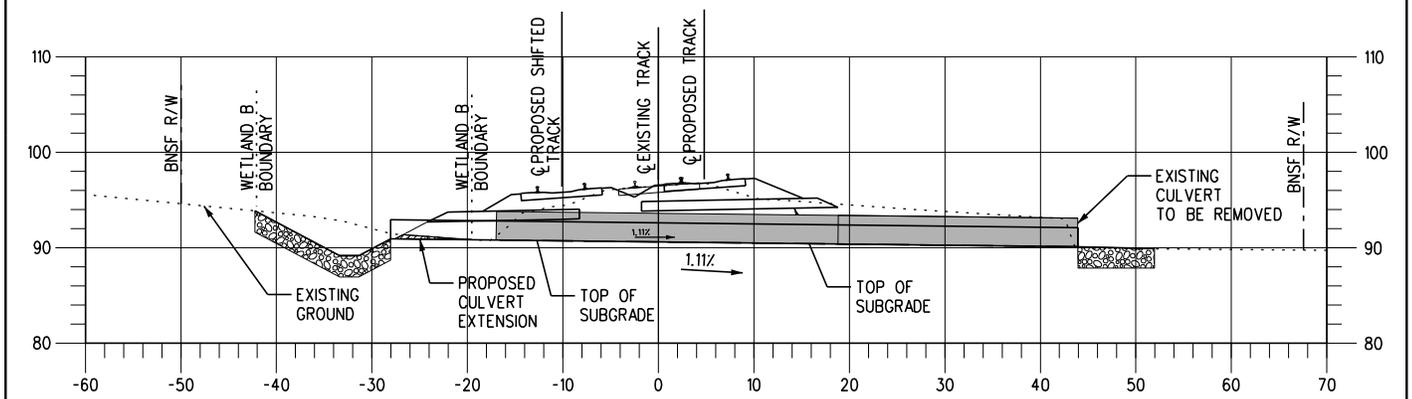
SHEET OF



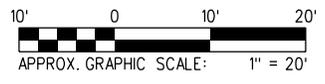
STA 1874+63.70  
(SEE PLAN DETAIL SHEET- 17)



STA 1874+76.30  
(SEE PLAN DETAIL SHEET- 17)



STA 1881+43.24  
(SEE PLAN DETAIL SHEET- 17)



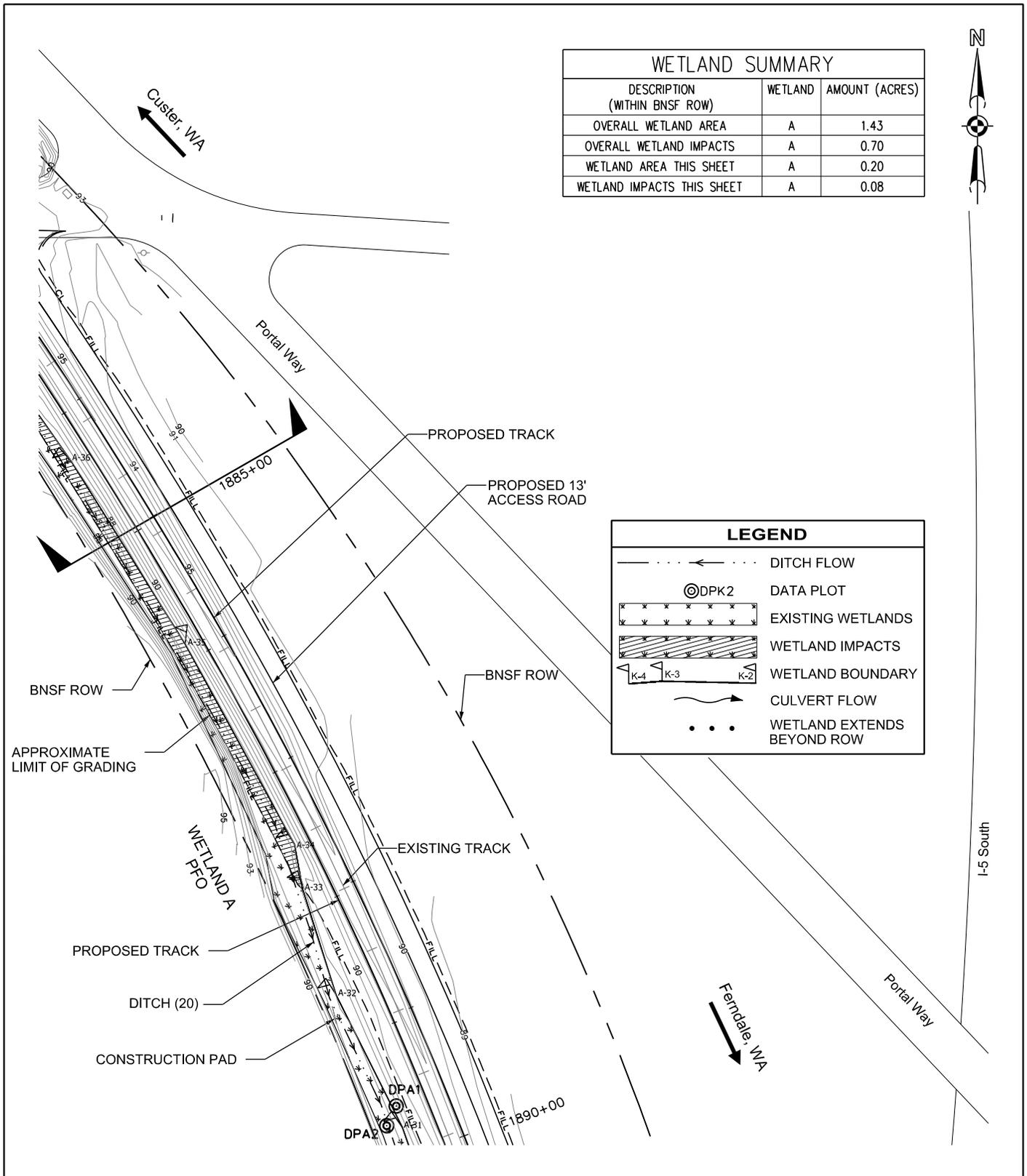
BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - CROSS SECTIONS**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDAL DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014

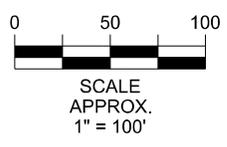
SHEET OF

WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	A	1.43
OVERALL WETLAND IMPACTS	A	0.70
WETLAND AREA THIS SHEET	A	0.20
WETLAND IMPACTS THIS SHEET	A	0.08



LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

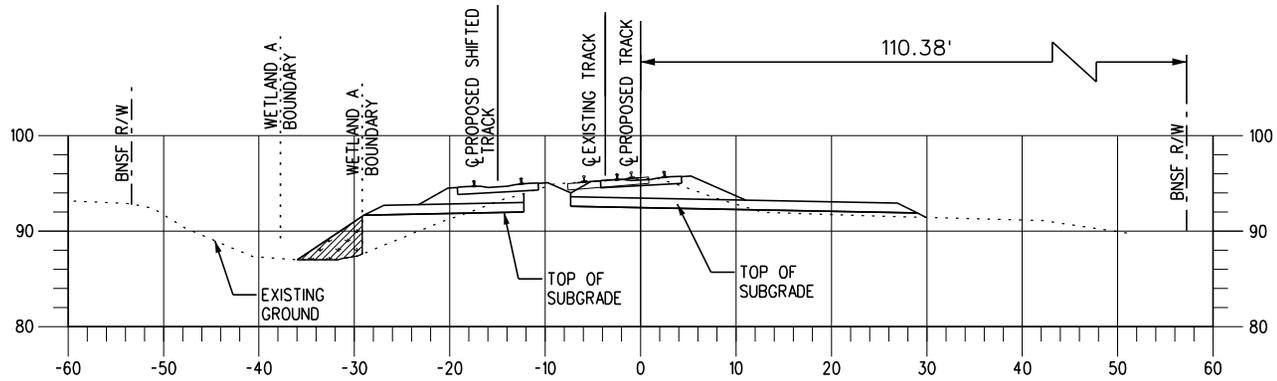
I-5 South



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 18**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



STA 1885+00  
(SEE PLAN DETAIL SHEET- 18)

 WETLAND FILL

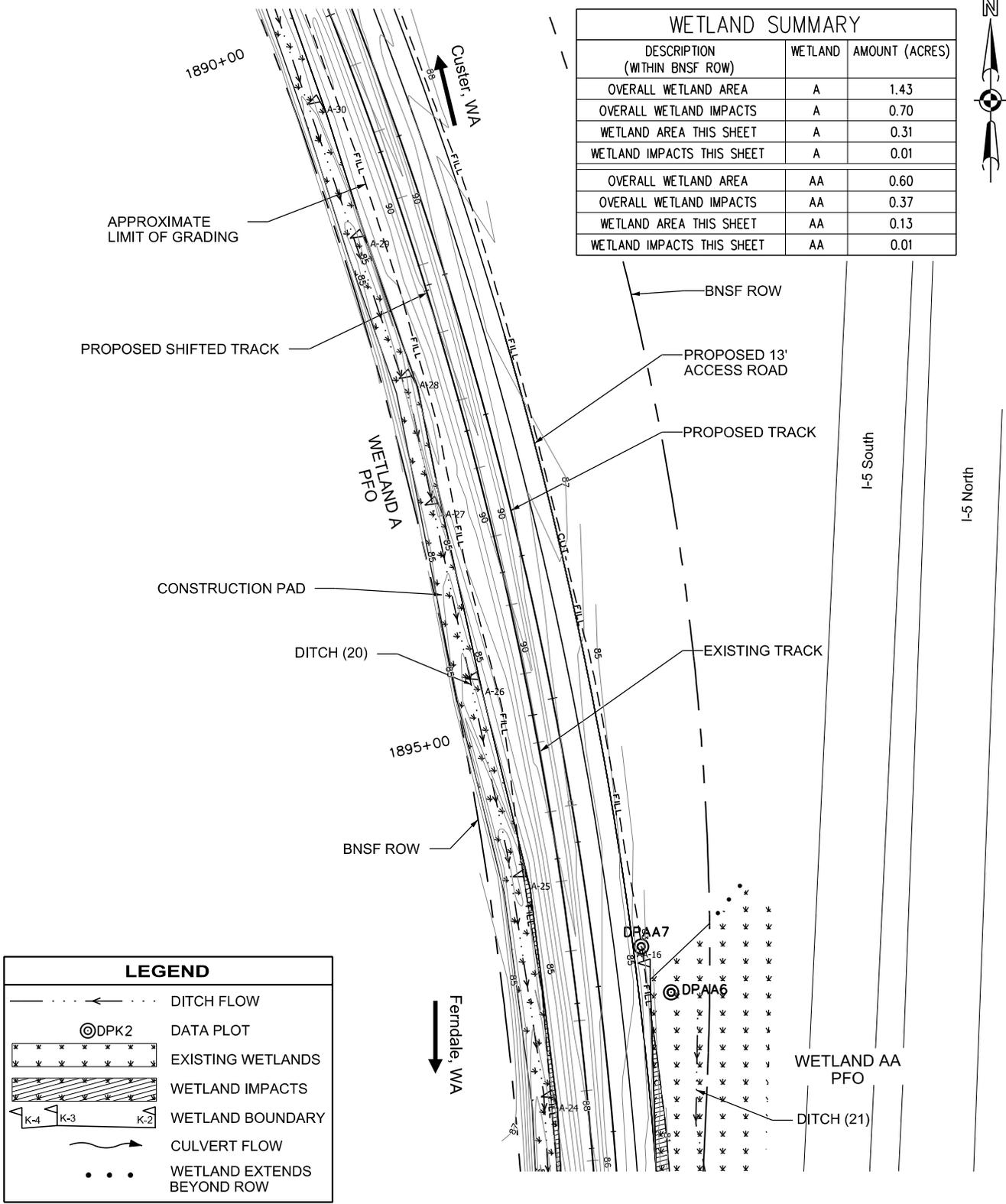


**PROPOSED WORK - CROSS SECTION**

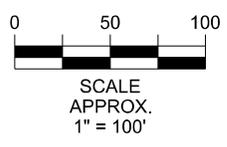
**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM  
 SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1  
 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF



WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	A	1.43
OVERALL WETLAND IMPACTS	A	0.70
WETLAND AREA THIS SHEET	A	0.31
WETLAND IMPACTS THIS SHEET	A	0.01
OVERALL WETLAND AREA	AA	0.60
OVERALL WETLAND IMPACTS	AA	0.37
WETLAND AREA THIS SHEET	AA	0.13
WETLAND IMPACTS THIS SHEET	AA	0.01



LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW

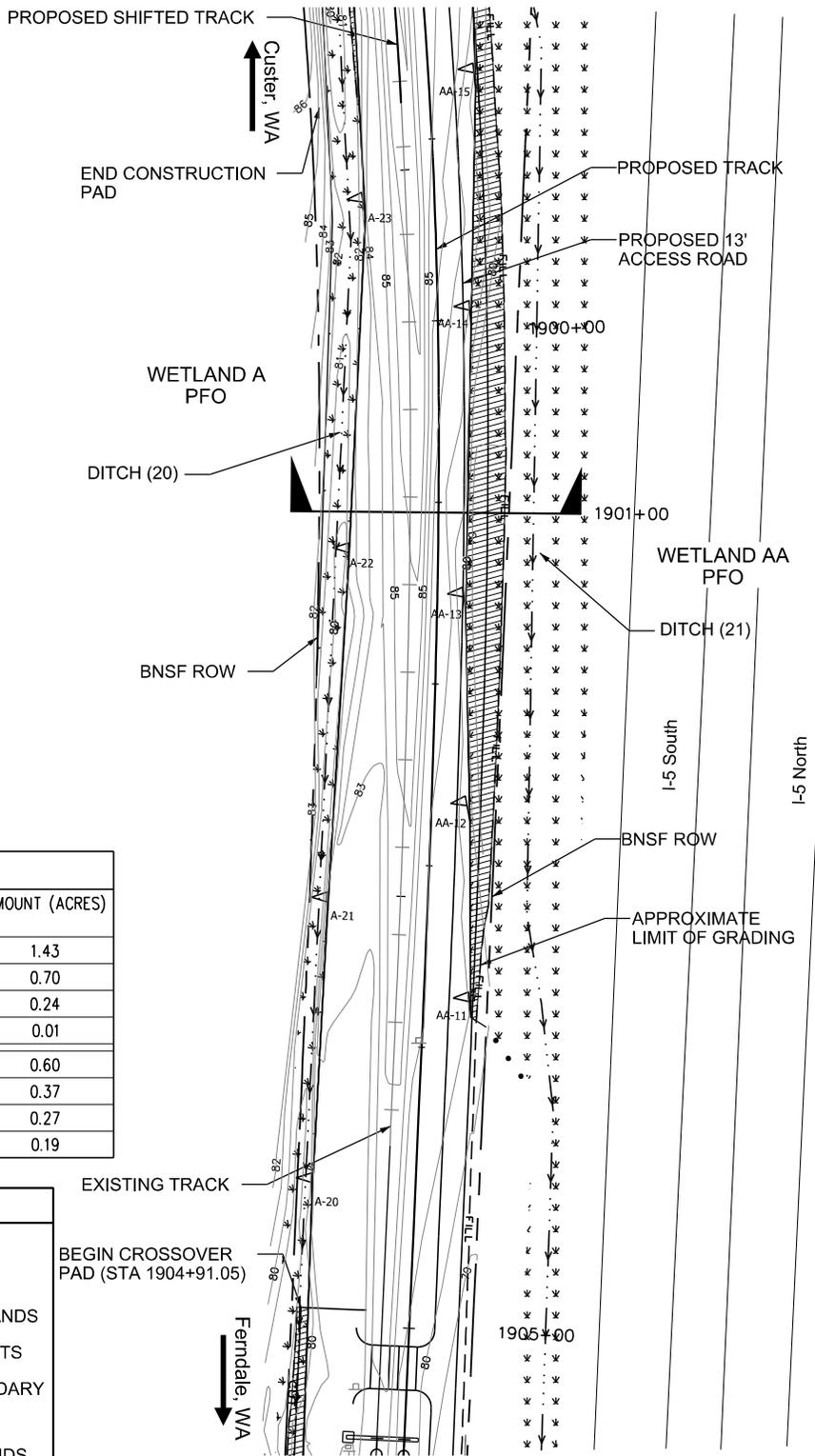


BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 19**

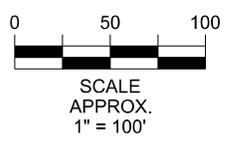
**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014

SHEET OF



WETLAND SUMMARY		
DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	A	1.43
OVERALL WETLAND IMPACTS	A	0.70
WETLAND AREA THIS SHEET	A	0.24
WETLAND IMPACTS THIS SHEET	A	0.01
OVERALL WETLAND AREA	AA	0.60
OVERALL WETLAND IMPACTS	AA	0.37
WETLAND AREA THIS SHEET	AA	0.27
WETLAND IMPACTS THIS SHEET	AA	0.19

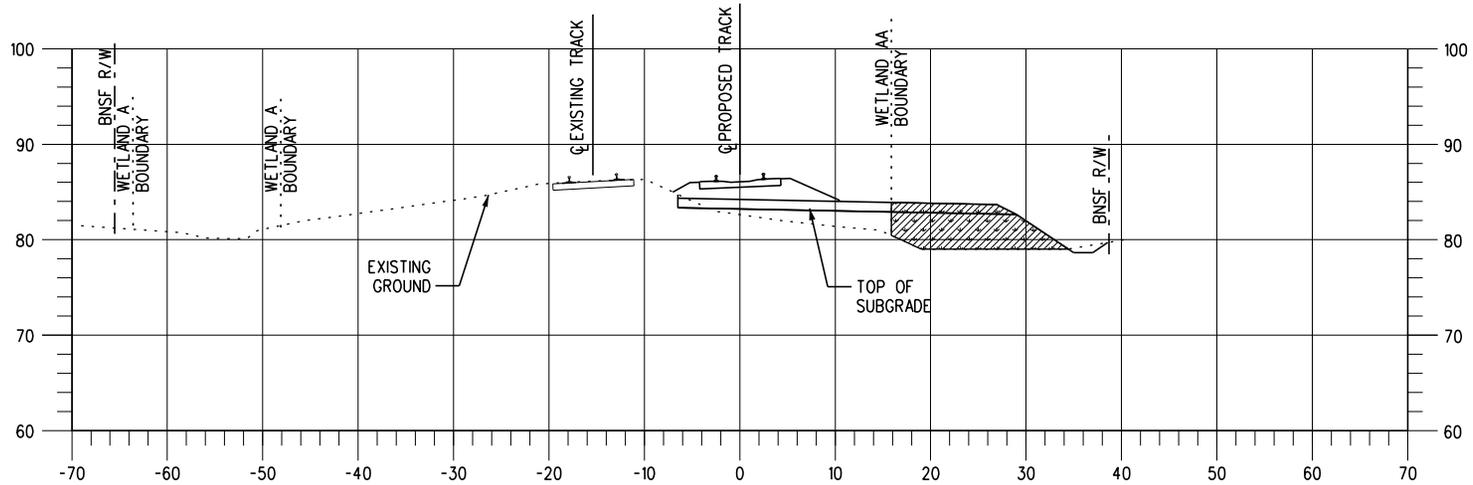
LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

**PROPOSED WORK - DETAIL SHEET 20**

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014



STA 1901+00  
(SEE PLAN DETAIL SHEET- 20)

 WETLAND FILL

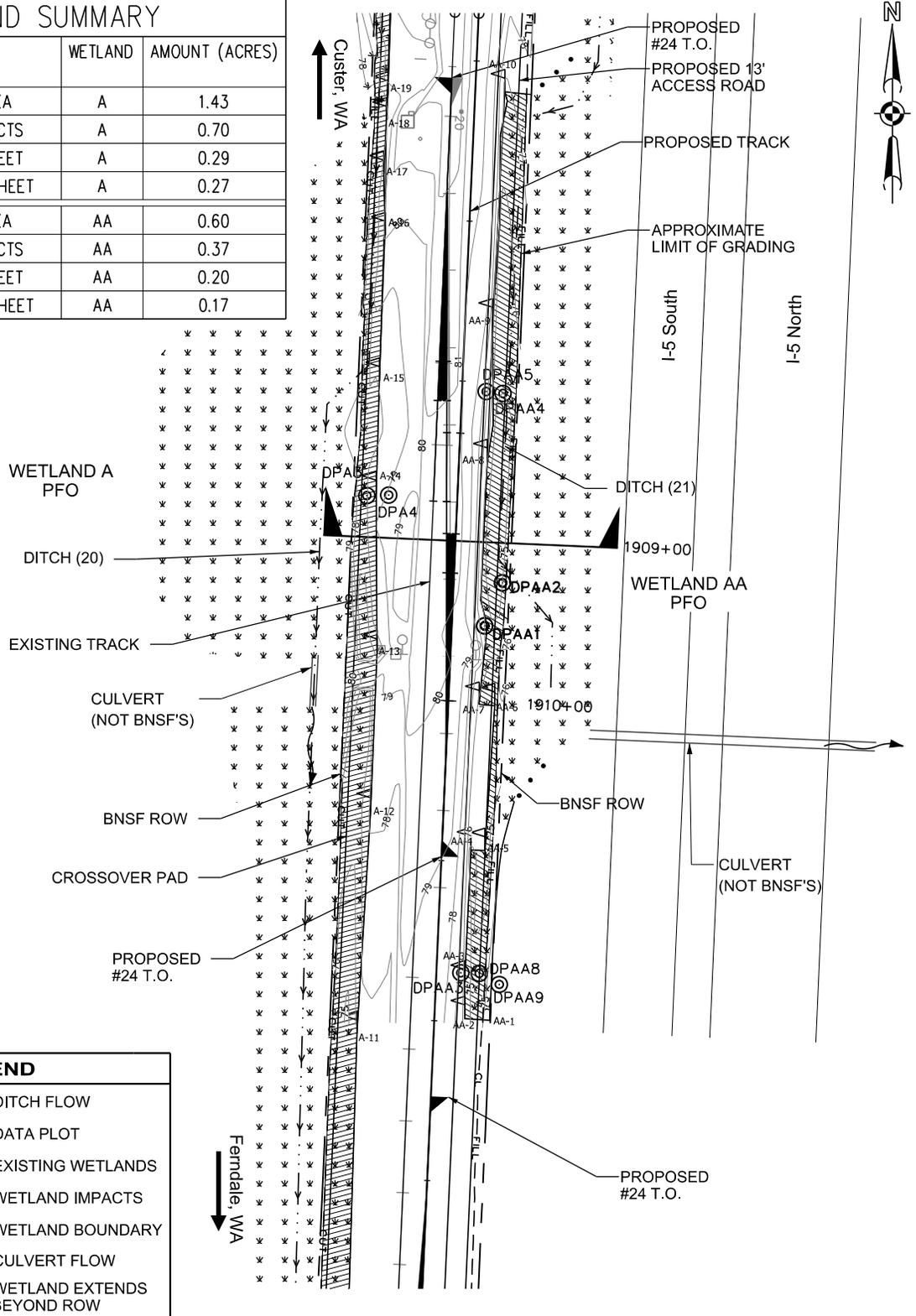


**PROPOSED WORK - CROSS SECTION**

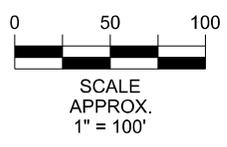
**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF

# WETLAND SUMMARY

DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	A	1.43
OVERALL WETLAND IMPACTS	A	0.70
WETLAND AREA THIS SHEET	A	0.29
WETLAND IMPACTS THIS SHEET	A	0.27
OVERALL WETLAND AREA	AA	0.60
OVERALL WETLAND IMPACTS	AA	0.37
WETLAND AREA THIS SHEET	AA	0.20
WETLAND IMPACTS THIS SHEET	AA	0.17



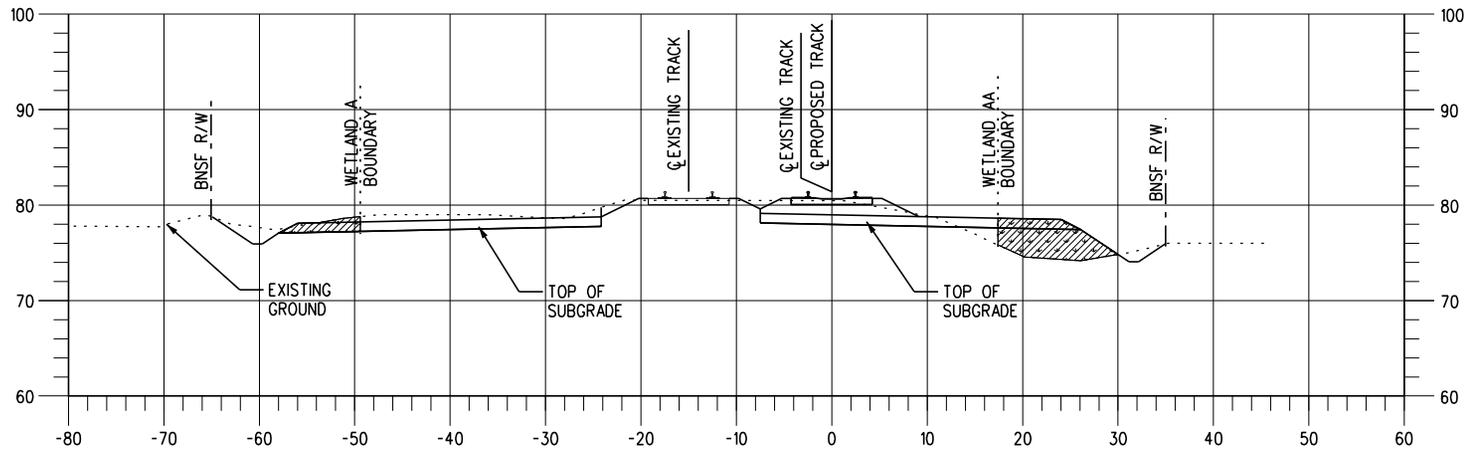
LEGEND	
- - - - ->	DITCH FLOW
⊙DPK2	DATA PLOT
[X-X-X-X]	EXISTING WETLANDS
[//-//-//]	WETLAND IMPACTS
K-4 K-3 K-2	WETLAND BOUNDARY
~>	CULVERT FLOW
. . .	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100%  
FINAL DESIGN PLANS  
08/13/2014

## PROPOSED WORK - DETAIL SHEET 21

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK    **COUNTY:** WHATCOM  
**STATE:** WA    **DATE:** SEPTEMBER 2014    **SHEET** OF



STA 1909+00  
(SEE PLAN DETAIL SHEET- 21)

 WETLAND FILL

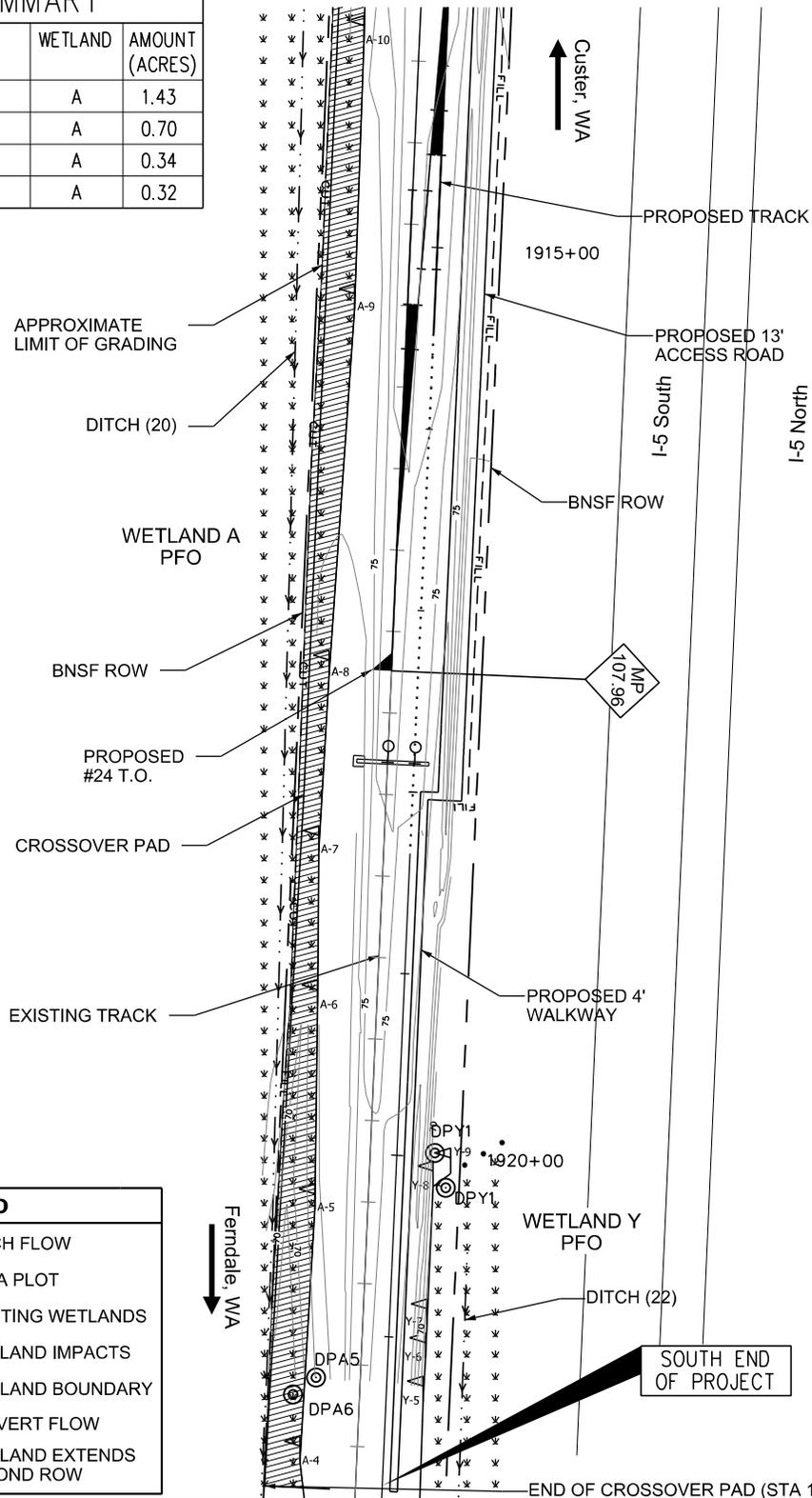


**PROPOSED WORK - CROSS SECTION**

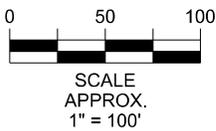
**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM  
 SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1  
 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014 **SHEET** OF

# WETLAND SUMMARY

DESCRIPTION (WITHIN BNSF ROW)	WETLAND	AMOUNT (ACRES)
OVERALL WETLAND AREA	A	1.43
OVERALL WETLAND IMPACTS	A	0.70
WETLAND AREA THIS SHEET	A	0.34
WETLAND IMPACTS THIS SHEET	A	0.32



LEGEND	
	DITCH FLOW
	DATA PLOT
	EXISTING WETLANDS
	WETLAND IMPACTS
	WETLAND BOUNDARY
	CULVERT FLOW
	WETLAND EXTENDS BEYOND ROW



BASEMAP: HNTB 100% FINAL DESIGN PLANS 08/13/2014

## PROPOSED WORK - DETAIL SHEET 22

**USACE REF NO:**  
**PROJECT AREA:** CUSTER TO FERNDALE DOUBLE TRACK  
**OWNER:** BNSF RAILWAY  
**BNSF LOCATION:** NW DIVISION, BELLINGHAM SUBDIVISION, LINE SEGMENT 50, MP 107.87 TO 111.35  
**LEGAL:** IN PORTIONS OF SEC. 36, T40N, R1E; SEC 1 T39N, R1E; SEC 6, 7, 8 & 17 T39N, R2E; W.M.  
**APPROX. LAT/LONG:**  
**NORTH END:** 48° 54' 45.85" N, 122° 38' 02.36" W  
**SOUTH END:** 48° 52' 38.44" N, 122° 35' 22.60" W  
**WATERWAY:** CALIFORNIA CREEK **COUNTY:** WHATCOM  
**STATE:** WA **DATE:** SEPTEMBER 2014