


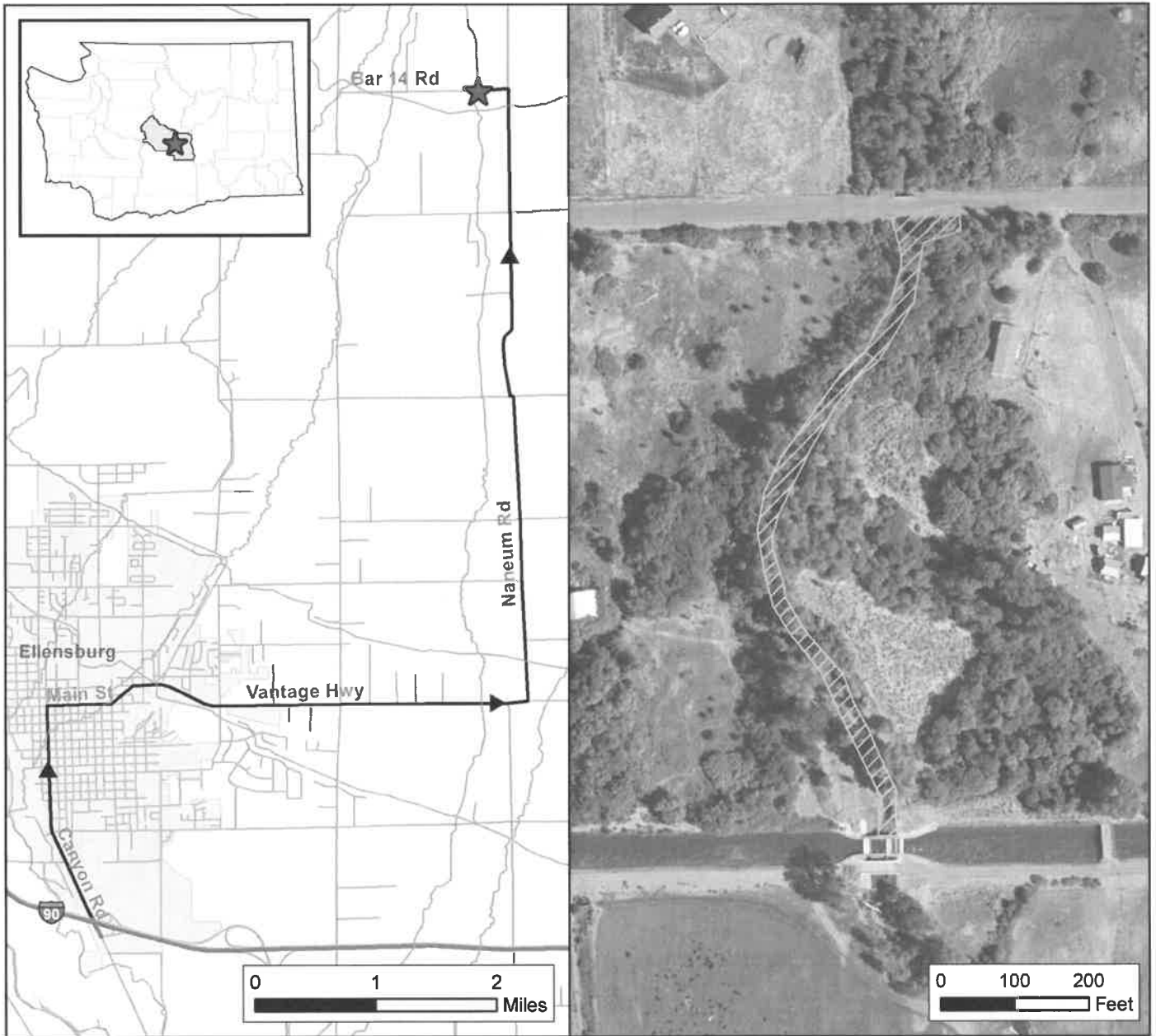


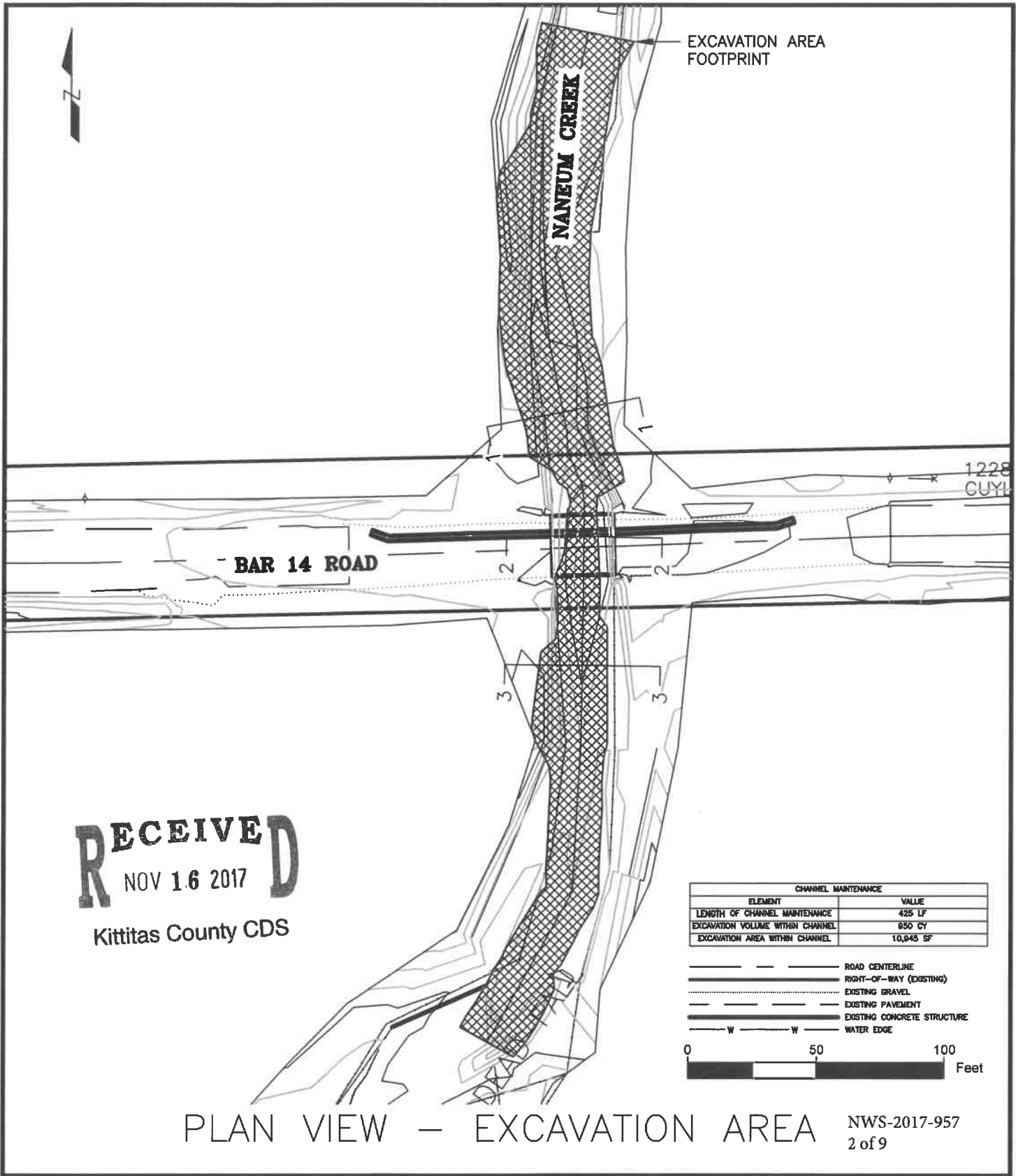
VICINITY MAP

<ul style="list-style-type: none"> <li> Project Area</li> <li> Project Location</li> <li> Driving Route</li> </ul>	<p><b>RECEIVED</b> NOV 16 2017 Kittitas County CDS</p>	<table border="1"> <thead> <tr> <th colspan="2">Channel Maintenance</th> </tr> <tr> <th>Element</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Length of Channel Maintenance</td> <td>425 LF</td> </tr> <tr> <td>Excavation Volume within Channel</td> <td>950 CY</td> </tr> <tr> <td>Excavation Area within Channel</td> <td>10,945 SF</td> </tr> </tbody> </table>	Channel Maintenance		Element	Value	Length of Channel Maintenance	425 LF	Excavation Volume within Channel	950 CY	Excavation Area within Channel	10,945 SF
Channel Maintenance												
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Length of Channel Maintenance	425 LF											
Excavation Volume within Channel	950 CY											
Excavation Area within Channel	10,945 SF											
<p><b>JACOBS</b> Applicant: Kittitas County Public Works Reference No.:</p>		<p>Lat/Long: 47.073625N/-120.473056W TRS: T18N R19E S04/09 SW/NW Proposed Project: Bar 14 Road Bridge removal Adjacent Property Owners: See JARPA</p>										
<p>Date: 10/19/2017 In: Naneum Creek County: Kittitas Near: Ellensburg State: WA Page: 1 of 7</p>												



## VICINITY MAP

<ul style="list-style-type: none"> <li>★ Project Location</li> <li>→ Driving Route</li> </ul>	<p><b>Project Area</b></p> <ul style="list-style-type: none"> <li> Access</li> <li> Sediment Removal</li> </ul>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Channel Maintenance</th> </tr> <tr> <th style="text-align: center;">Element</th> <th style="text-align: center;">Value</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Length of Channel Maintenance</td> <td style="text-align: center;">780 LF</td> </tr> <tr> <td style="text-align: center;">Excavation Volume within Channel</td> <td style="text-align: center;">2,250 CY</td> </tr> <tr> <td style="text-align: center;">Excavation Area within Channel</td> <td style="text-align: center;">19,175 SF</td> </tr> </tbody> </table>	Channel Maintenance		Element	Value	Length of Channel Maintenance	780 LF	Excavation Volume within Channel	2,250 CY	Excavation Area within Channel	19,175 SF
Channel Maintenance													
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Excavation Volume within Channel	2,250 CY												
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Imagery Source: Esri													
<p><b>Lat/Long:</b> 47.073625N/-120.473056W  <b>TRS:</b> T18N R19E S09 NW  <b>Proposed Project:</b> Naneum Creek Channel Maintenance  <b>Adjacent Property Owners:</b> See JARPA  <b>Applicant:</b> Kittitas Reclamation District  <b>Reference No.:</b></p>		<p><b>Date:</b> 10/30/2017  <b>In:</b> Naneum Creek  <b>County:</b> Kittitas  <b>Near:</b> Ellensburg  <b>State:</b> WA  <b>Page:</b> 1 of 7</p>											



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APPLICANT:  
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REFERENCE:

LAT/LONG | TRS: 47.073625N/-120.473056W  
SW/NW|04/09|18N|19E

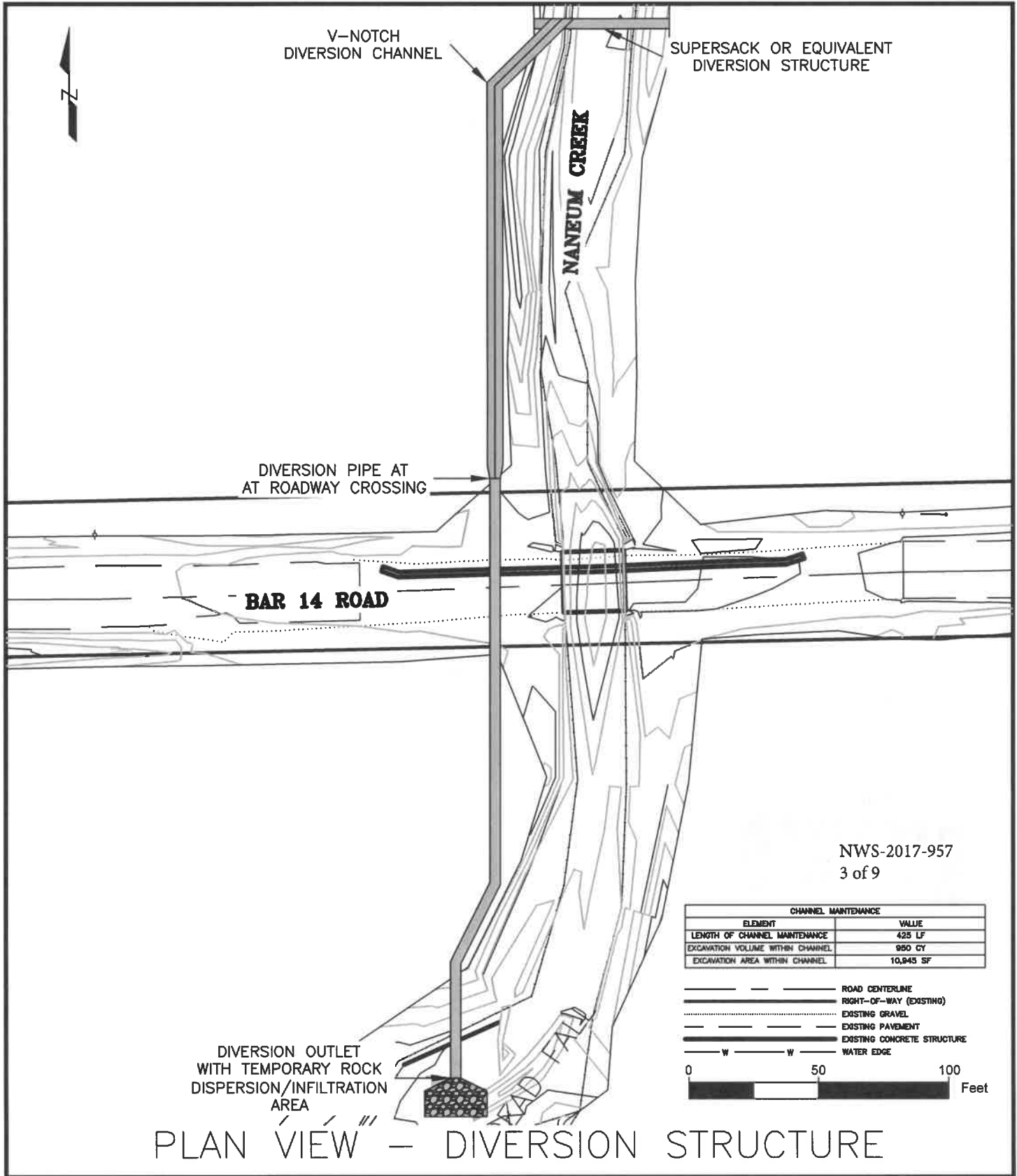
PROJECT DESCRIPTION:  
BAR 14 RD BRIDGE REMOVAL - EX. PLAN

ADJACENT PROPERTY OWNERS:  
SEE JARPA

DATE: 10/17/2017 PAGE: 2 OF 7

IN: NANEUM CREEK NEAR/AT: ELLENSBURG

COUNTY: KITTITAS STATE: WA



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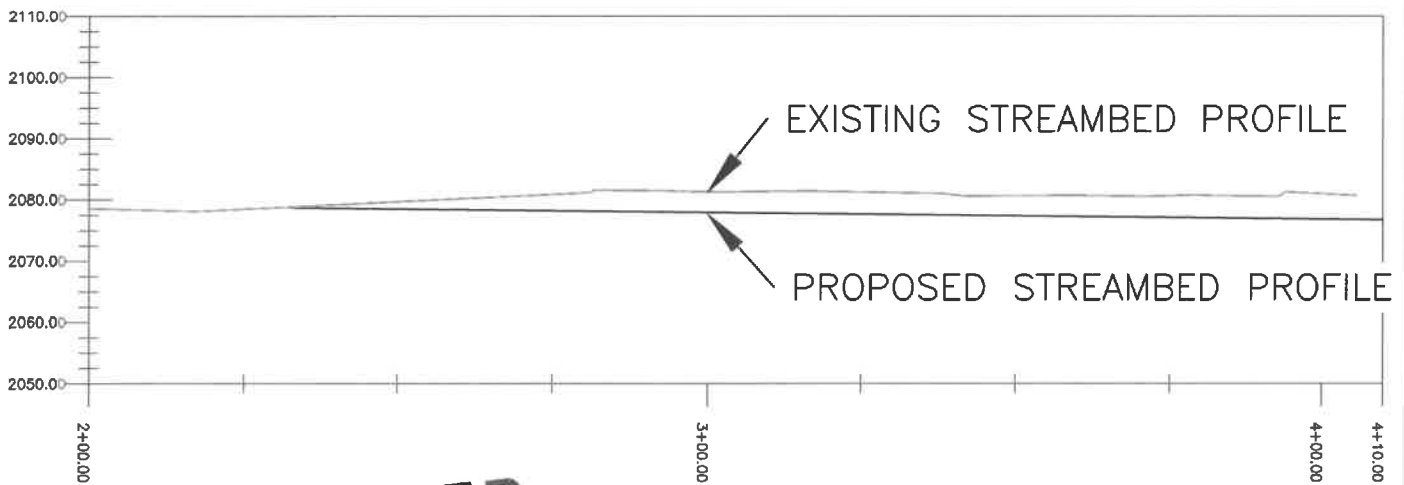
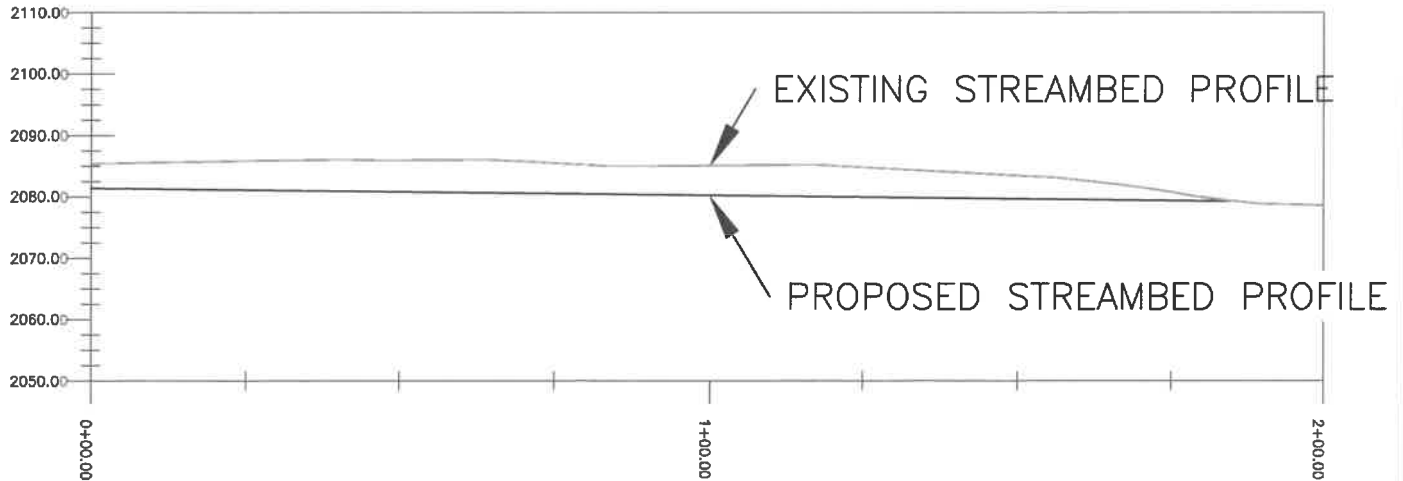
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LAT/LONG | TRS: 47.073625N/-120.473056W  
SW/NW|04/09|18N|19E

PROJECT DESCRIPTION:  
BAR 14 RD BRIDGE REMOVAL - DIVERSION

ADJACENT PROPERTY OWNERS:  
SEE JARPA

DATE: 10/17/2017	PAGE: 3 OF 7
IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
COUNTY: KITTITAS	STATE: WA



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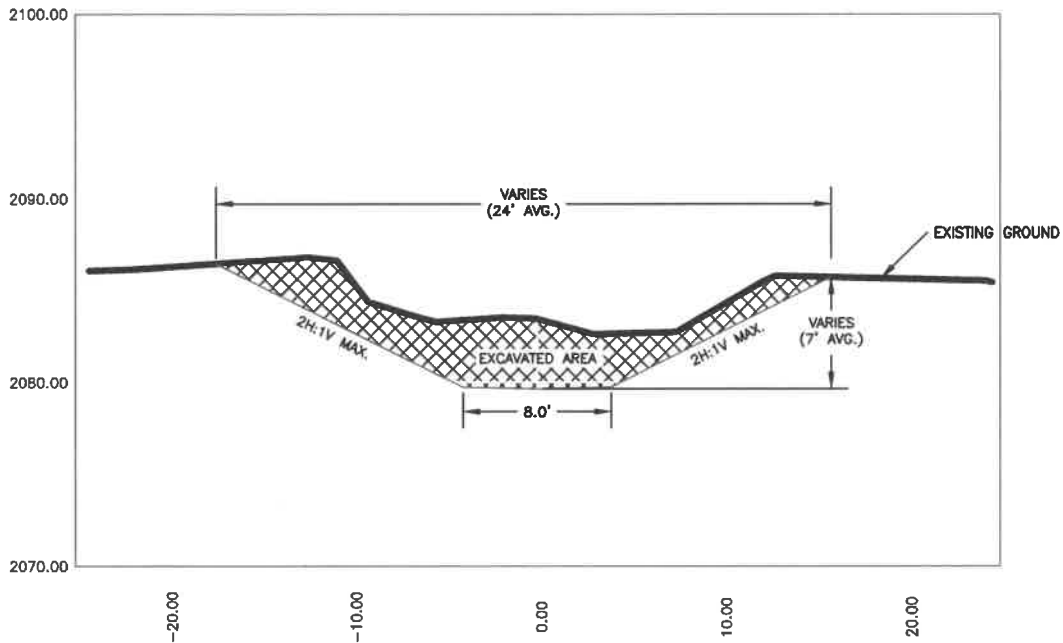
CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	425 LF
EXCAVATION VOLUME WITHIN CHANNEL	950 CY
EXCAVATION AREA WITHIN CHANNEL	10,945 SF

NWS-2017-957  
 4 of 9

PROFILE — STREAMBED

<b>JACOBS</b> <sup>®</sup>	LAT/LONG   TRS: 47.073625N/-120.473056W	DATE:	PAGE:
	SW/NW 04/09 18N 19E	10/17/2017	4 OF 7
APPLICANT:	PROJECT DESCRIPTION:	IN:	NEAR/AT:
KITTITAS COUNTY PUBLIC WORKS	BAR 14 RD BRIDGE REMOVAL - PROFILE	NANEUM CREEK	ELLENSBURG
REFERENCE:	ADJACENT PROPERTY OWNERS:	COUNTY:	STATE:
	SEE JARPA	KITTITAS	WA

1



CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	425 LF
EXCAVATION VOLUME WITHIN CHANNEL	950 CY
EXCAVATION AREA WITHIN CHANNEL	10,945 SF

NWS-2017-957  
5 of 9

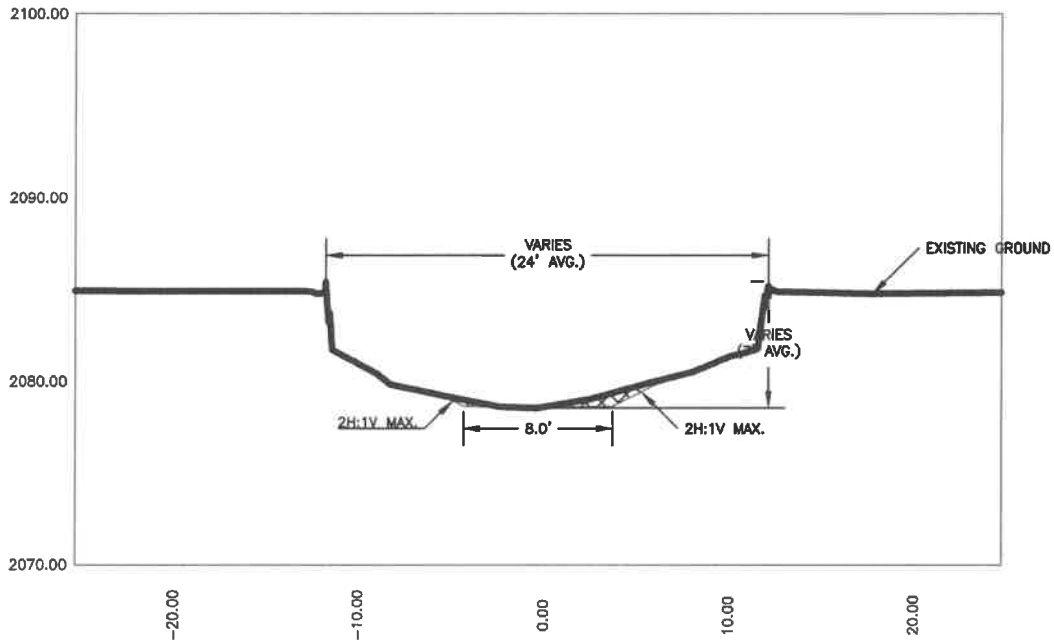
### CROSS SECTION 1-1

**JACOBS**  
 APPLICANT:  
 KITTITAS COUNTY PUBLIC WORKS  
 REFERENCE:

LAT/LONG | TRS: 47.073625N/-120.473056W  
 SW/NW|04/09|18N|19E  
 PROJECT DESCRIPTION:  
 BAR 14 RD BRIDGE REMOVAL - SECTION  
 ADJACENT PROPERTY OWNERS:  
 SEE JARPA

DATE: 10/17/2017	PAGE: 5 OF 7
IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
COUNTY: KITTITAS	STATE: WA

2



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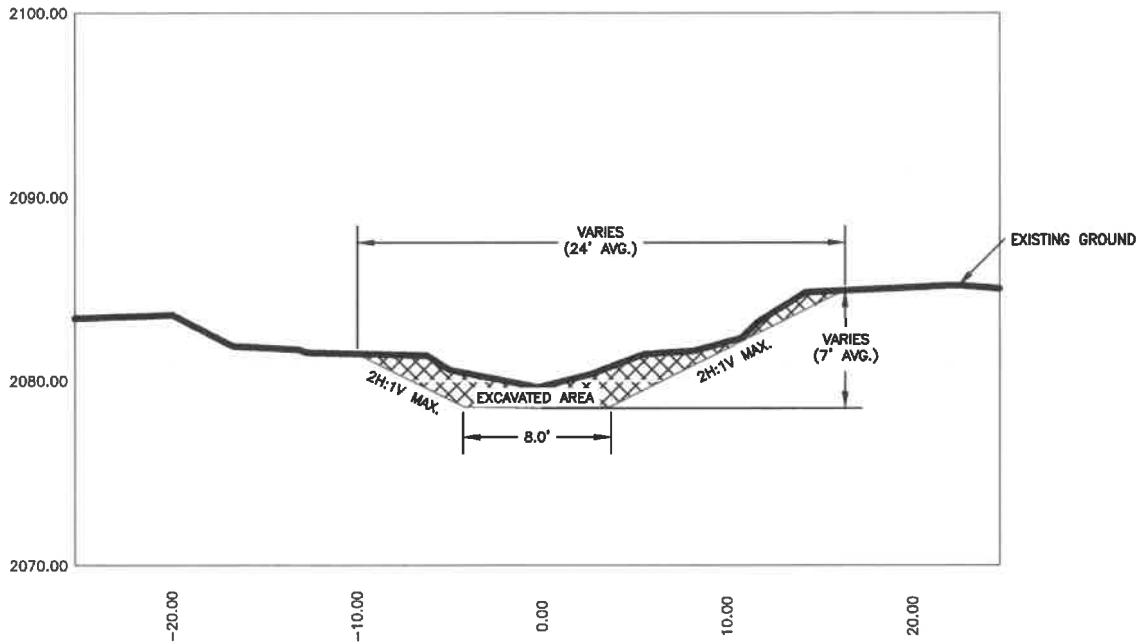
CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	425 LF
EXCAVATION VOLUME WITHIN CHANNEL	950 CY
EXCAVATION AREA WITHIN CHANNEL	10,945 SF

NWS-2017-957  
6 of 9

## CROSS SECTION 2-2

<p style="font-size: 2em; font-weight: bold; margin: 0;">JACOBS®</p> <p>APPLICANT: KITTITAS COUNTY PUBLIC WORKS</p> <p>REFERENCE:</p>	<p>LAT/LONG   TRS: 47.073625N/-120.473056W SW/NW 04 09 18N 19E</p>	<p>DATE: 10/17/2017</p>	<p>PAGE: 6 OF 7</p>
	<p>PROJECT DESCRIPTION: BAR 14 RD BRIDGE REMOVAL - SECTION</p> <p>ADJACENT PROPERTY OWNERS: SEE JARPA</p>	<p>IN: NANEUM CREEK</p> <p>COUNTY: KITTITAS</p>	<p>NEAR/AT: ELLENSBURG</p> <p>STATE: WA</p>

3



CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	425 LF
EXCAVATION VOLUME WITHIN CHANNEL	950 CY
EXCAVATION AREA WITHIN CHANNEL	10,945 SF

NWS-2017-957  
7 of 9

### CROSS SECTION 3-3

**JACOBS**<sup>®</sup>

APPLICANT:  
KITTITAS COUNTY PUBLIC WORKS

REFERENCE:

LAT/LONG | TRS: 47.073625N/-120.473056W  
SW/NW|04/09|18N|19E

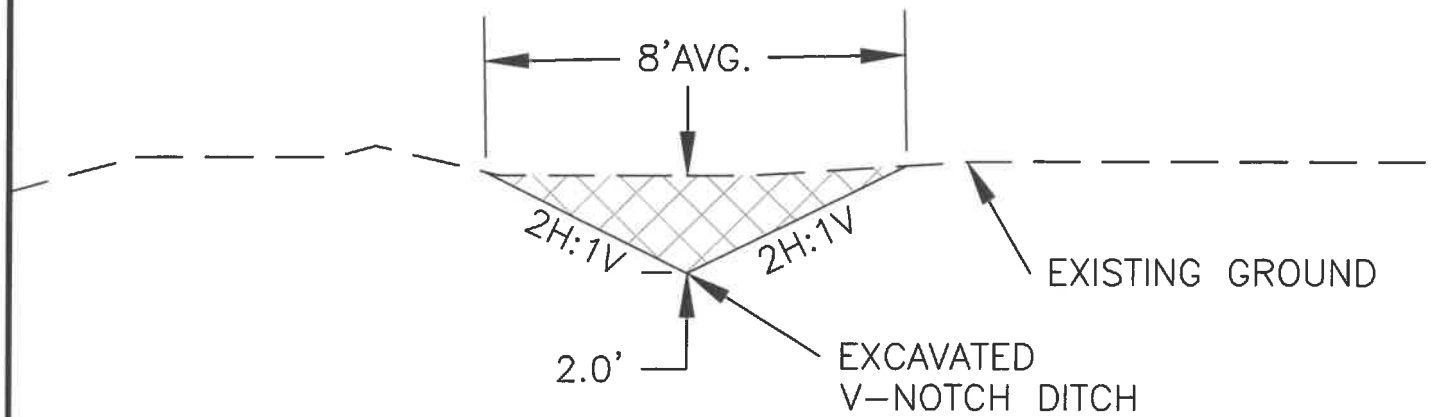
PROJECT DESCRIPTION:  
BAR 14 RD BRIDGE REMOVAL - SECTION

ADJACENT PROPERTY OWNERS:  
SEE JARPA

DATE: 10/17/2017	PAGE: 7 OF 7
IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
COUNTY: KITTITAS	STATE: WA



TYPICAL CROSS SECTION



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DIVERSION DITCH	
ELEMENT	VALUE
LENGTH OF DIVERSION DITCH	650 LF
EXCAVATION VOLUME WITHIN DITCH	195 CY
EXCAVATION AREA WITHIN DITCH	5,200 SF

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8/9

DIVERSION DITCH CROSS SECTION

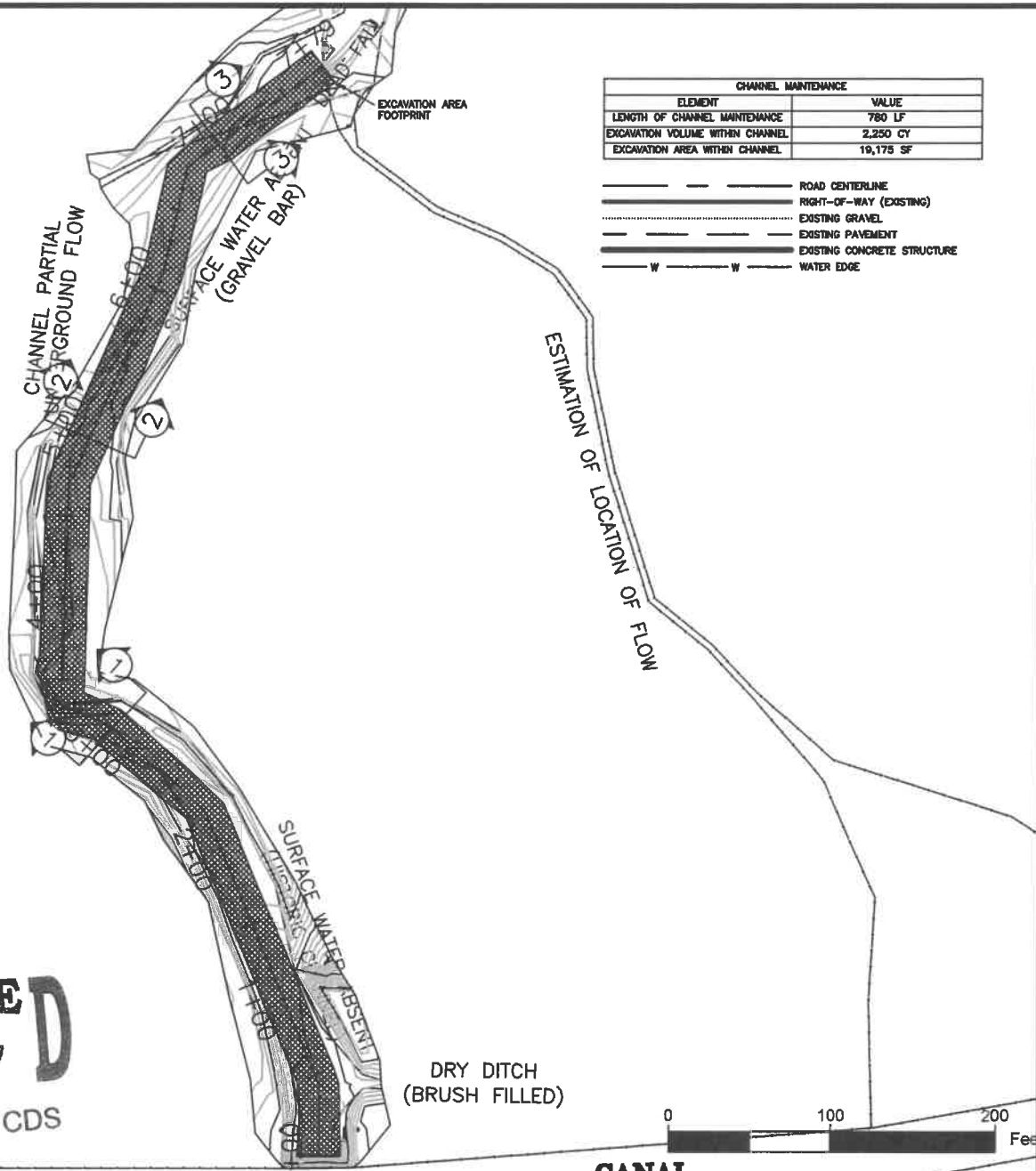
<b>JACOBS</b> APPLICANT: KITTITAS RECLAMATION DISTRICT REFERENCE:	LAT/LONG   TRS: SW/NW 04 09 18N 19E	DATE: 10/26/2017	PAGE: 8 OF 8
	PROJECT DESCRIPTION: NANEUM CREEK CHANNEL MAINTENANCE	IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
	ADJACENT PROPERTY OWNERS: SEE JARPA	COUNTY: KITTITAS	STATE: WA

NWS-2017-957  
26 October 2017  
9/9

Bat-14-Rd

Google





CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	780 LF
EXCAVATION VOLUME WITHIN CHANNEL	2,250 CY
EXCAVATION AREA WITHIN CHANNEL	19,175 SF

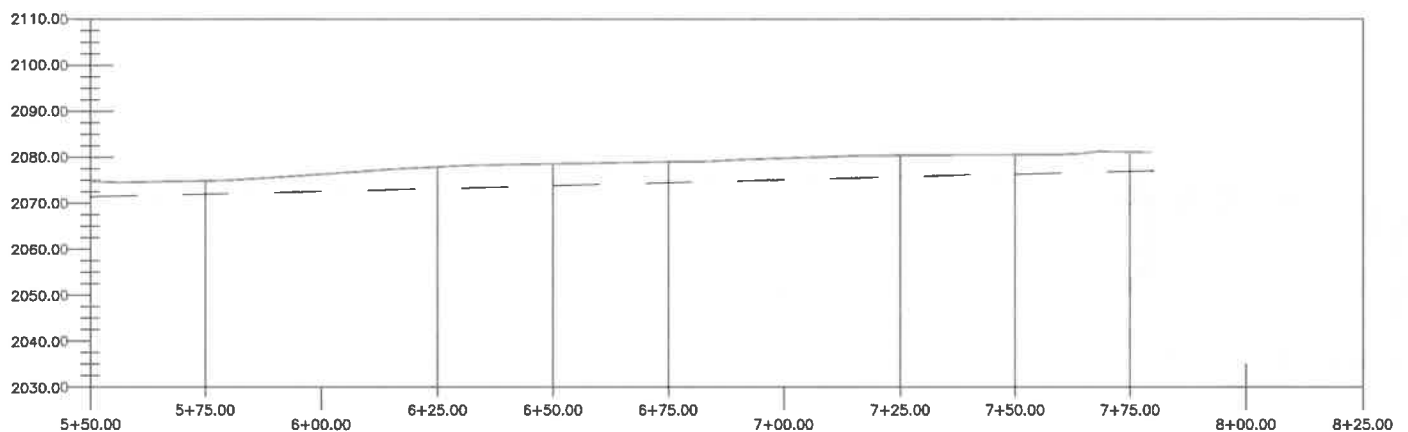
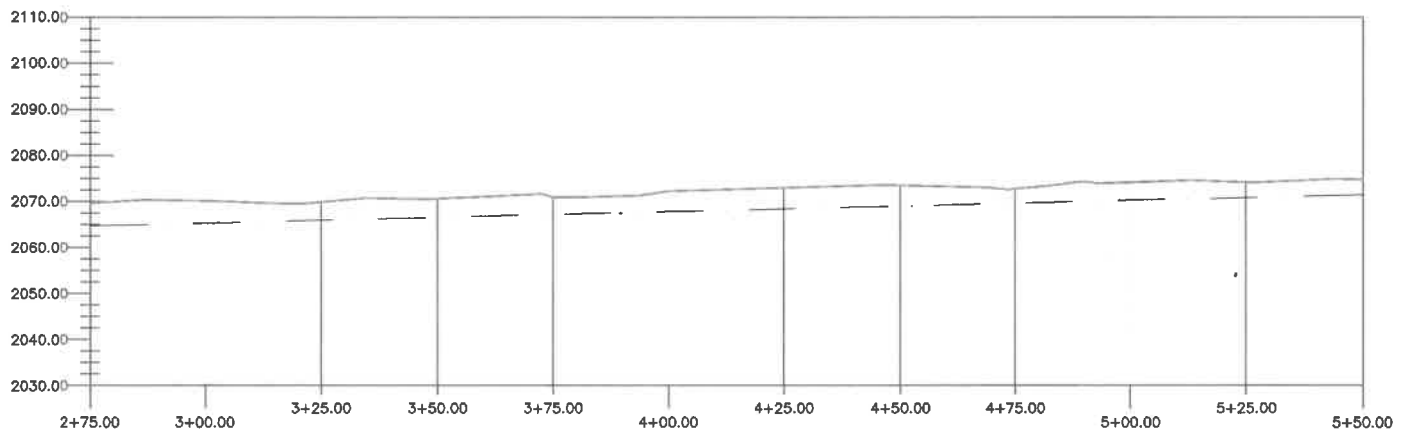
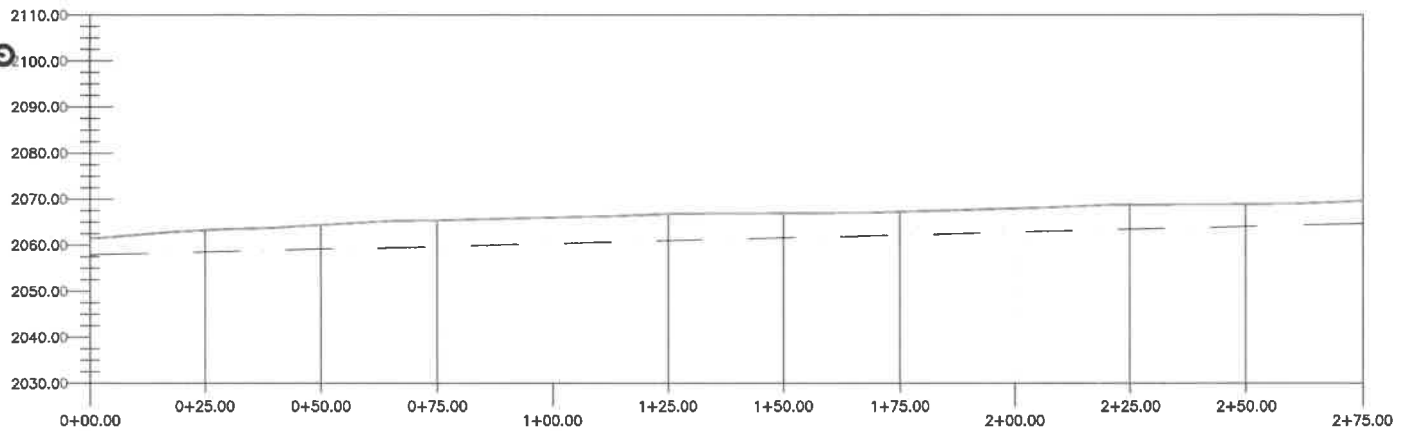
- ROAD CENTERLINE
- RIGHT-OF-WAY (EXISTING)
- EXISTING GRAVEL
- EXISTING PAVEMENT
- EXISTING CONCRETE STRUCTURE
- W — W — WATER EDGE

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CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	780 LF
EXCAVATION VOLUME WITHIN CHANNEL	2,250 CY
EXCAVATION AREA WITHIN CHANNEL	19,175 SF

PLAN VIEW — EXCAVATION AREA

<b>JACOBS</b> <sup>®</sup>	LAT/LONG   TRS: 47.073625N/-120.473056W	DATE:	PAGE:
	SW/NW 04/09 18N 19E	10/26/2017	2 OF 6
APPLICANT:	PROJECT DESCRIPTION:	IN:	NEAR/AT:
KITTITAS RECLAMATION DISTRICT	NANEUM CREEK CHANNEL MAINTENANCE	NANEUM CREEK	ELLENSBURG
REFERENCE:	ADJACENT PROPERTY OWNERS:	COUNTY:	STATE:
	SEE JARPA	KITTITAS	WA



CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	780 LF
EXCAVATION VOLUME WITHIN CHANNEL	2,250 CY
EXCAVATION AREA WITHIN CHANNEL	19,175 SF

## PROFILE — STREAMBED

**JACOBS**<sup>®</sup>

APPLICANT:  
KITTITAS COUNTY PUBLIC WORKS

REFERENCE:

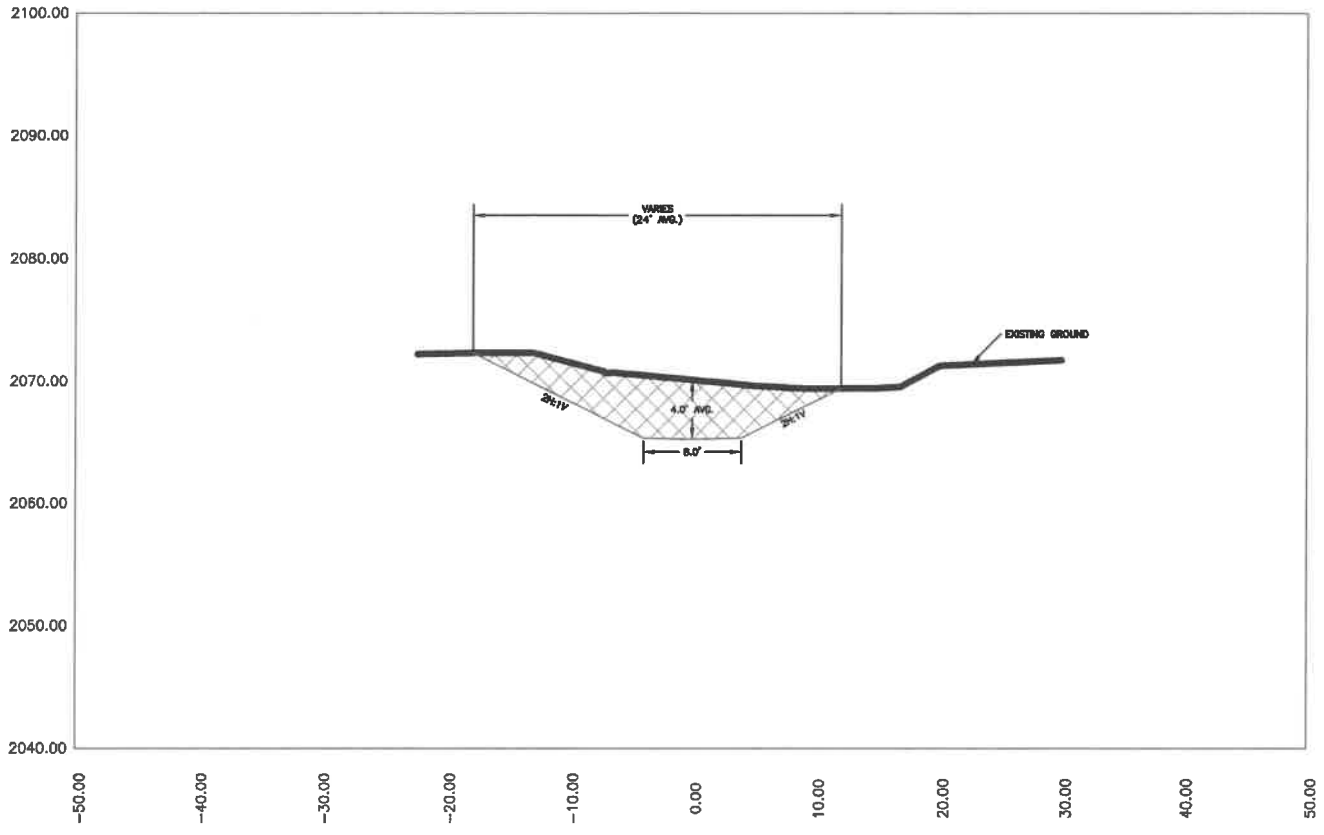
LAT/LONG | TRS: 47.073625N/-120.473056W  
SW/NW|04/09|18N|19E

PROJECT DESCRIPTION:  
NANEUM CREEK CHANNEL MAINTENANCE

ADJACENT PROPERTY OWNERS:  
SEE JARPA

DATE: 10/17/2017	PAGE: 3 OF 6
IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
COUNTY: KITTITAS	STATE: WA

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CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	780 LF
EXCAVATION VOLUME WITHIN CHANNEL	2,250 CY
EXCAVATION AREA WITHIN CHANNEL	19,175 SF

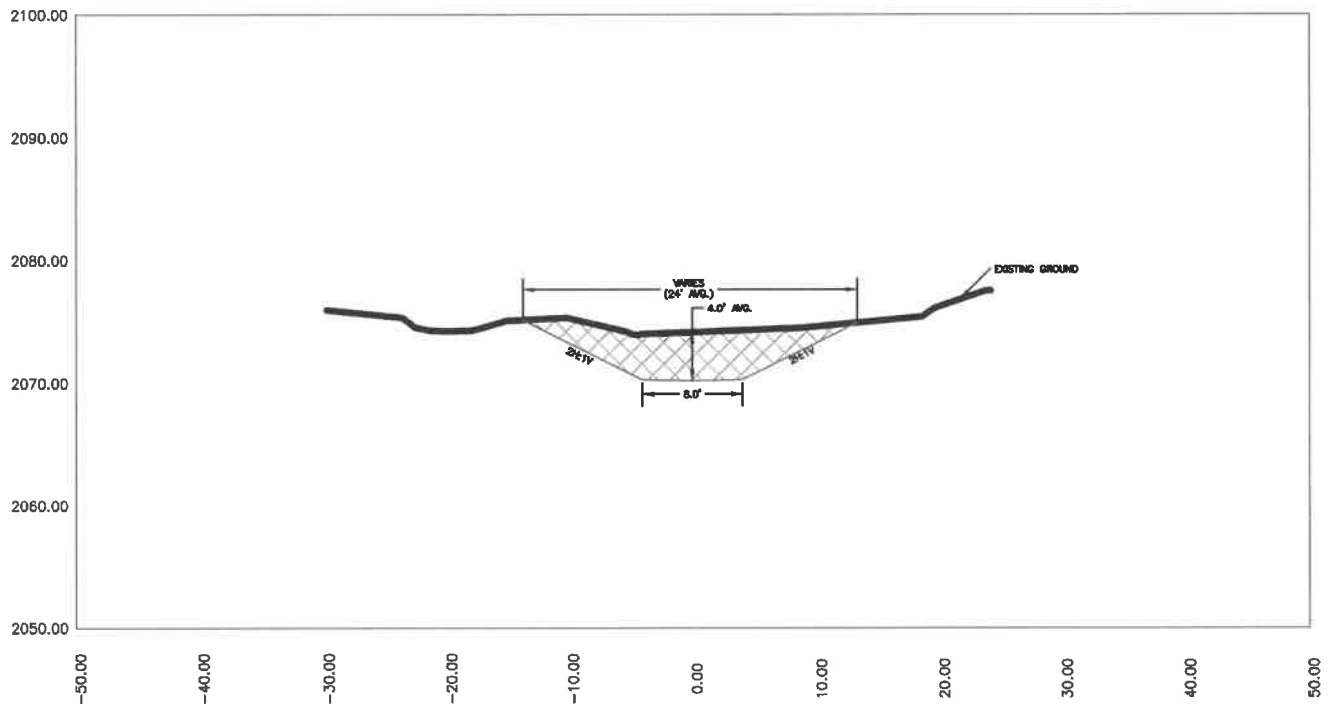
CROSS SECTION 1-1

**JACOBS**<sup>®</sup>  
 APPLICANT:  
 KITTITAS RECLAMATION DISTRICT  
 REFERENCE:

LAT/LONG | TRS: 47.073625N/-120.473056W  
 SW/NW|04/09|18N|19E  
 PROJECT DESCRIPTION:  
 NANEUM CREEK CHANNEL MAINTENANCE  
 ADJACENT PROPERTY OWNERS:  
 SEE JARPA

DATE: 10/26/2017	PAGE: 4 OF 6
IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
COUNTY: KITTITAS	STATE: WA

2



CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	780 LF
EXCAVATION VOLUME WITHIN CHANNEL	2,250 CY
EXCAVATION AREA WITHIN CHANNEL	19,175 SF

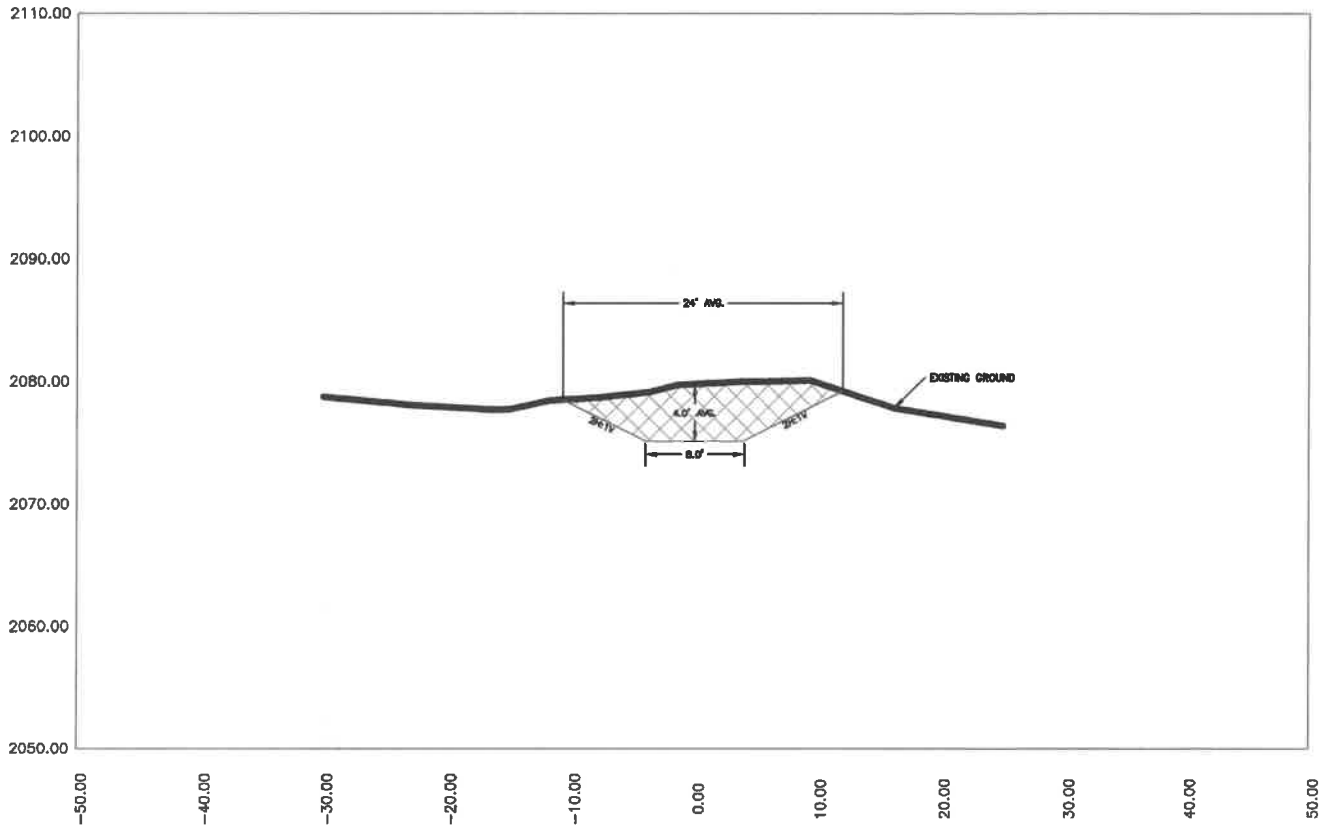
## CROSS SECTION 2-2

**JACOBS**<sup>®</sup>  
 APPLICANT:  
 KITTITAS RECLAMATION DISTRICT  
 REFERENCE:

LAT/LONG | TRS: 47.073625N/-120.473056W  
 SW/NW|04/09|18N|19E  
 PROJECT DESCRIPTION:  
 NANEUM CREEK CHANNEL MAINTENANCE  
 ADJACENT PROPERTY OWNERS:  
 SEE JARPA

DATE: 10/26/2017	PAGE: 5 OF 6
IN: NANEUM CREEK	NEAR/AT: ELLENSBURG
COUNTY: KITTITAS	STATE: WA

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NOV 16 2017

Kittitas County CDS

CHANNEL MAINTENANCE	
ELEMENT	VALUE
LENGTH OF CHANNEL MAINTENANCE	780 LF
EXCAVATION VOLUME WITHIN CHANNEL	2,250 CY
EXCAVATION AREA WITHIN CHANNEL	19,175 SF

### CROSS SECTION 3-3

<b>JACOBS</b> <sup>®</sup>	LAT/LONG   TRS: 47.073625N/-120.473056W	DATE:	PAGE:
	SW/NW 04/09 18N 19E	10/26/2017	6 OF 6
APPLICANT:	PROJECT DESCRIPTION:	IN:	NEAR/AT:
KITTITAS RECLAMATION DISTRICT	NANEUM CREEK CHANNEL MAINTENANCE	NANEUM CREEK	ELLENSBURG
REFERENCE:	ADJACENT PROPERTY OWNERS:	COUNTY:	STATE:
	SEE JARPA	KITTITAS	WA

Photo 1. Bar 14 Road Bridge and riparian vegetation.

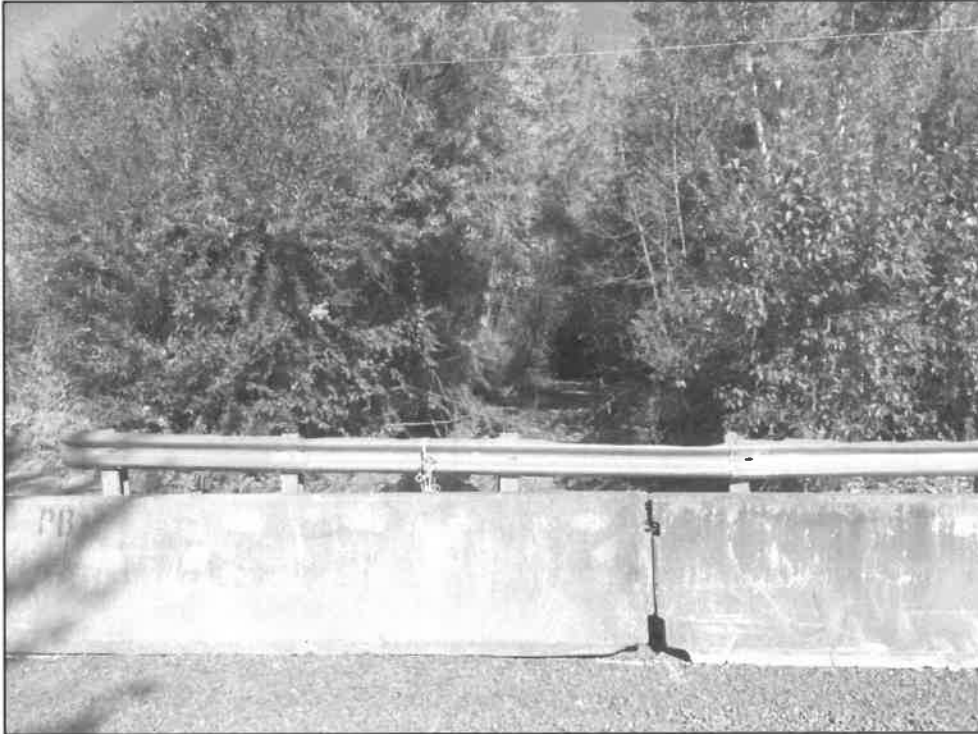


Photo 2. Bar 14 Road Bridge over Naneum Creek.





Photo 3. Bar 14 Road Bridge from downstream.



Photo 4. Damage to Bar 14 Road Bridge.



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Kittitas County CDS

Photo 5. Aggraded sediment and cobbles upstream of the bridge.



Photo 6. Aggraded sediment and cobbles upstream of the bridge.



Photo 7. Sidecast material from historic channel maintenance.



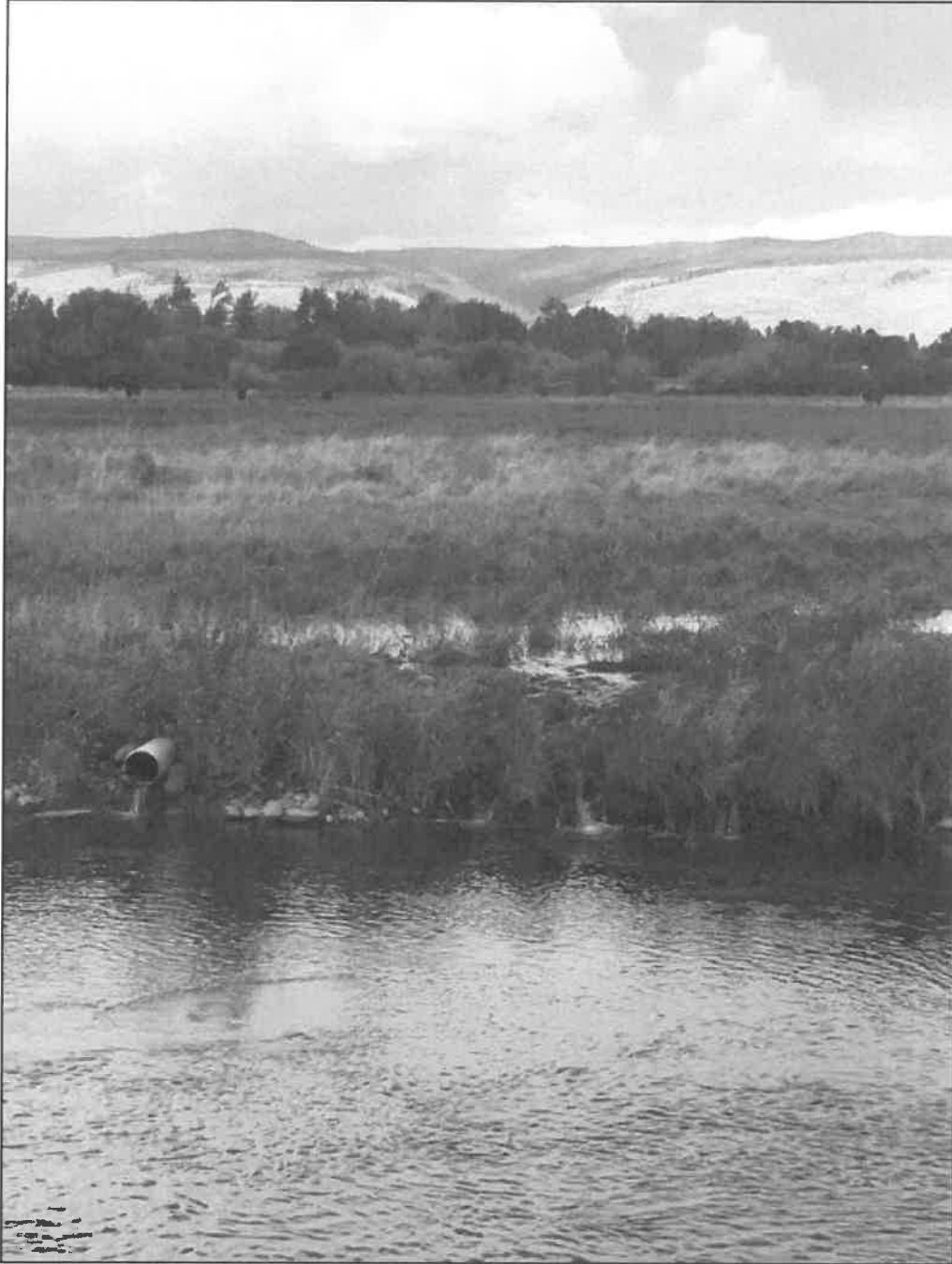
All photos taken October 2017.

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Kittitas County CDS

Photo 1. KRD intake looking upstream at Naneum Creek channel. Note chronic bedload on the left that is removed from the intake structure. Circle shows perched bedload.



Photo 2. KRD canal with Naneum Creek overflow. Note bank scour.



All photos taken October 2017.

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