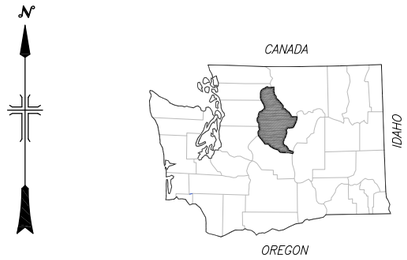
SITE SUMMARY

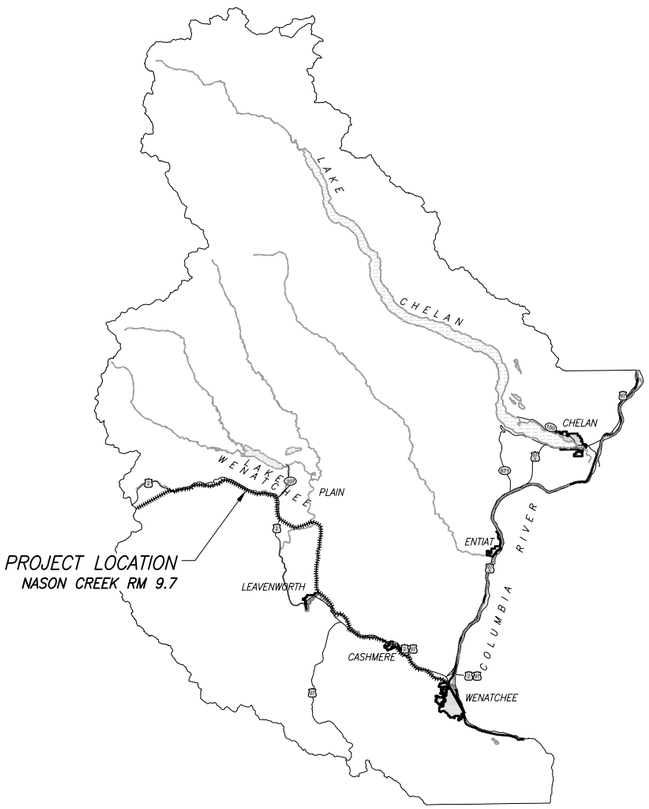
Chelan County
Leavenworth, Washington

S2 T26N R16E
S3 T26N R16E
S10 T26N R16E
S11 T26N R16E

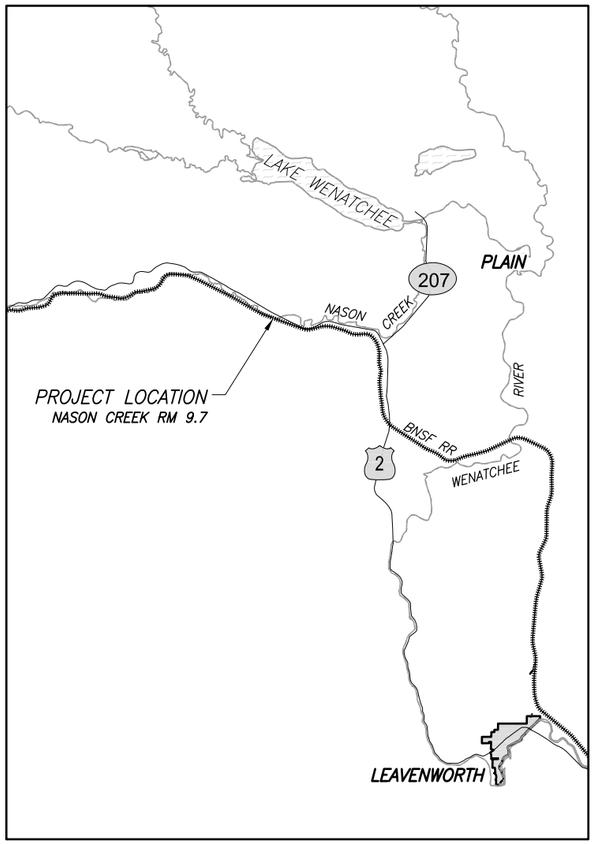
N47°46'15", W120°49'01"

Lower White Pine
Oxbow Reconnection Project
Chelan County, Washington

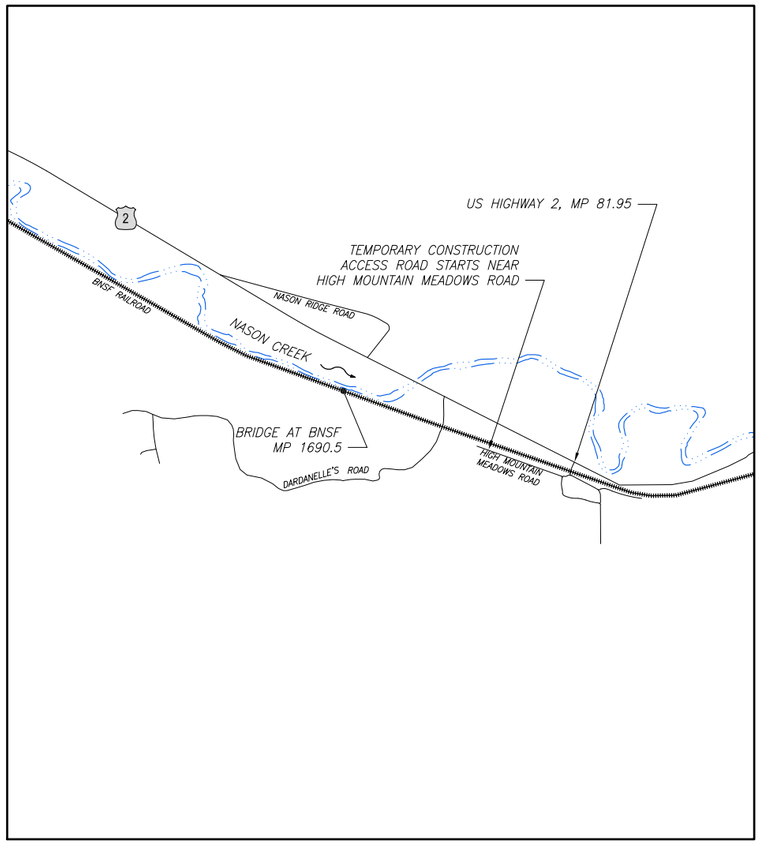




CHELAN COUNTY, WASHINGTON
NOT TO SCALE



LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

SHEET INDEX

RECLAMATION
Managing Water in the West

MARTIN K. FISHER
STATE OF WASHINGTON
31205
REGISTERED
PROFESSIONAL ENGINEER
5/8/2013

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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COLUMBIA SNAKE RIVER SALMON RECOVERY PROGRAM – WASHINGTON
FCRPS HABITAT IMPROVEMENT PROGRAM

WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

COVER SHEET

REV NO

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

COVER SHEET

SHEET G-1

SHEET 1 OF 21

DATE AND TIME PLOTTED
May 8, 2013 02:05
PLOTTED BY
FISHER, MARTIN

CAD SYSTEM
AutoCAD Rel. 18.0s
CAD FILENAME
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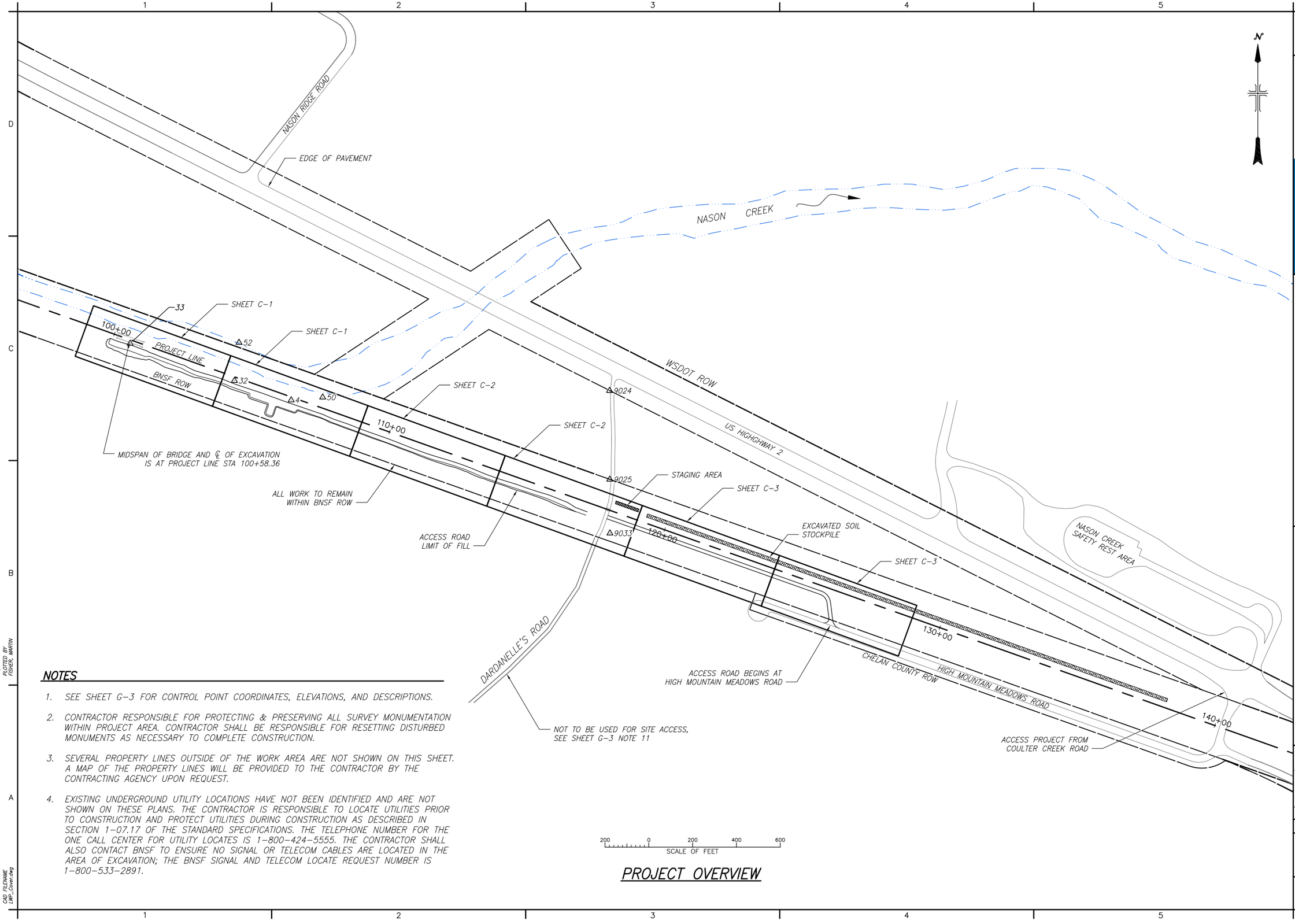

NOTES

1. SEE SHEET G-3 FOR CONTROL POINT COORDINATES, ELEVATIONS, AND DESCRIPTIONS.
2. CONTRACTOR RESPONSIBLE FOR PROTECTING & PRESERVING ALL SURVEY MONUMENTATION WITHIN PROJECT AREA. CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING DISTURBED MONUMENTS AS NECESSARY TO COMPLETE CONSTRUCTION.
3. SEVERAL PROPERTY LINES OUTSIDE OF THE WORK AREA ARE NOT SHOWN ON THIS SHEET. A MAP OF THE PROPERTY LINES WILL BE PROVIDED TO THE CONTRACTOR BY THE CONTRACTING AGENCY UPON REQUEST.
4. EXISTING UNDERGROUND UTILITY LOCATIONS HAVE NOT BEEN IDENTIFIED AND ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE UTILITIES PRIOR TO CONSTRUCTION AND PROTECT UTILITIES DURING CONSTRUCTION AS DESCRIBED IN SECTION 1-07.17 OF THE STANDARD SPECIFICATIONS. THE TELEPHONE NUMBER FOR THE ONE CALL CENTER FOR UTILITY LOCATES IS 1-800-424-5555. THE CONTRACTOR SHALL ALSO CONTACT BNSF TO ENSURE NO SIGNAL OR TELECOM CABLES ARE LOCATED IN THE AREA OF EXCAVATION; THE BNSF SIGNAL AND TELECOM LOCATE REQUEST NUMBER IS 1-800-533-2891.

200 0 200 400 600
SCALE OF FEET

PROJECT OVERVIEW

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PROJECT OVERVIEW

REV NO

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

PROJECT OVERVIEW

SHEET G-2

SHEET 2 OF 21

DATE AND TIME PLOTTED
May 8, 2013 02:05
PLOTTED BY
FISHER, MARTIN

CAD SYSTEM
AutoCAD Rel. 18.0s
CAD FILENAME
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GENERAL NOTES

1. ANY ITEM NOT SPECIFICALLY DISCUSSED IN THE GENERAL CONTRACT FOR THIS PROJECT OR IN NOTES ON SHEETS IN THE PLANS SHALL BE AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND MUNICIPAL CONSTRUCTION, 2012 PUBLISHED BY THE STATE OF WASHINGTON DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR IS RESPONSIBLE TO BE FAMILIAR WITH THE STANDARD SPECIFICATIONS AND TO HAVE ACCESS TO THE STANDARD SPECIFICATIONS AT THE PROJECT SITE TO ENSURE THAT CONSTRUCTION OF THE PROJECT IS IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.
2. THE NOTES ON THIS PLAN SET SUPERSEDE ANY DUPLICATE ITEMS IN THE STANDARD SPECIFICATIONS.
3. HORIZONTAL DATUM: STATE PLANE COORDINATE SYSTEM, WASHINGTON NORTH ZONE, NAD83/91, US SURVEY FEET.

   VERTICAL DATUM: NAVD88, FEET.
4. TOPOGRAPHIC MAPPING OF THE PROJECT AREA PERFORMED BY WH–PACIFIC IN 2010, SUPPLEMENTAL TOPOGRAPHIC MAPPING OUTSIDE THE AREA OF CONSTRUCTION IS BASED ON 2010 GPS AND 2006 LiDAR IMAGING, CHELAN COUNTY, WASHINGTON.
5. ELEVATIONS AND DISTANCES SHOWN ARE IN FEET AND DECIMALS WITH CONTOUR INTERVALS AT ONE FOOT INCREMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION, AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
7. ALL EMPLOYEES MUST COMPLY WITH BNSF SAFETY REQUIREMENTS. THIS INCLUDES BUT IS NOT LIMITED TO, PASSING A SAFETY COURSE, OBTAINING DOCUMENTATION OF SUCCESSFULLY PASSING THE COURSE, AND ADHERING TO REQUIREMENTS IDENTIFIED IN THE COURSE. THE REQUIRED BNSF SAFETY COURSE MAY BE ACCESSED AT THE FOLLOWING WEBSITE: WWW.RAILROADCOURSES.COM.
8. A BNSF FLAGGER SHALL BE PRESENT ANY TIME THE CONTRACTOR IS WORKING WITHIN 25 FEET OF THE TRACKS. THE CONTRACTOR SHALL COMMUNICATE WITH THE CONTRACTING OFFICER TO ARRANGE FOR A FLAGGER TO BE PRESENT DURING THESE TIMES.
9. EXISTING UNDERGROUND UTILITY LOCATIONS HAVE NOT BEEN IDENTIFIED AND ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE UTILITIES PRIOR TO CONSTRUCTION AND PROTECT UTILITIES DURING CONSTRUCTION AS DESCRIBED IN SECTION 1–07.17 OF THE STANDARD SPECIFICATIONS. THE TELEPHONE NUMBER FOR THE ONE CALL CENTER FOR UTILITY LOCATES IS 1–800–424–5555. THE CONTRACTOR SHALL ALSO CONTACT BNSF TO ENSURE NO SIGNAL OR TELECOM CABLES ARE LOCATED IN THE AREA OF EXCAVATION; THE BNSF SIGNAL AND TELECOM LOCATE REQUEST NUMBER IS 1–800–533–2891.
10. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL PROVIDE THE CONTRACTING AGENCY WITH A DETAILED CONSTRUCTION SCHEDULE AND WORK PLAN FOR APPROVAL. THE CONTRACTOR SHALL NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE CONTRACTING OFFICER.
11. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE CONTRACTING OFFICER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL.
12. THE CONTRACTOR SHALL CONSTRUCT AN ACCESS ROAD OFF HIGH MOUNTAIN MEADOWS AT A LOCATION STAKED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL USE THE ACCESS ROAD TO ACCESS THE SITE FOR ALL CONSTRUCTION RELATED ACTIVITIES AND SHALL NOT USE DARDANELLE'S ROAD FOR SITE ACCESS. IT IS ANTICIPATED THAT AN UNRELATED CONSTRUCTION PROJECT WILL BE TAKING PLACE CONCURRENT WITH THIS PROJECT IN THE SAME VICINITY; DARDANELLE'S ROAD WILL BE SHUT DOWN AT VARIOUS TIMES DUE TO THAT PROJECT AND SHALL NOT BE USED TO ACCESS THE SITE TO ENSURE NO CONFLICT TO SITE ACCESS FOR EITHER PROJECT WILL OCCUR.
13. TRAFFIC ON DARDANELLE'S ROAD HAS THE RIGHT–OF–WAY AT ALL TIMES; CONSTRUCTION TRAFFIC ON THE ACCESS ROAD SHALL YIELD TO TRAFFIC ON DARDANELLE'S ROAD.
14. BRIDGE INSTALLATION WILL BE PERFORMED BY BNSF FOLLOWING CONSTRUCTION OF THE ACCESS ROAD; THE CONTRACTOR SHALL MAINTAIN CLOSE COORDINATION WITH THE CONTRACTING OFFICER REGARDING THE TIMING OF WORK TO AVOID CONFLICTS WITH BRIDGE INSTALLATION OR RELATED ACTIVITIES.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED CONSTRUCTION STAGING AREAS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AT THE CONTRACTOR'S EXPENSE, ALL CONSTRUCTION PERMITS AS REQUIRED BY THE LOCAL AGENCIES. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS. THE CONTRACTING AGENCY HAS SECURED ENVIRONMENTAL PERMITS FOR THE PROJECT; THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS LISTED IN THE PERMITS.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS. HORIZONTAL AND VERTICAL ALIGNMENT DATA FOR EXCAVATIONS AND FILLS ARE INCLUDED IN THESE PLANS.
18. THE CONTRACTOR SHALL PLACE TEMPORARY COFFERDAMS BETWEEN THE ACTIVELY FLOWING CREEK OR PONDED WATER IN THE OXBOW AREA AND THE EXTENTS OF ANY EXCAVATION TO KEEP WATER AND FISH FROM ENTERING THE ACTIVE CONSTRUCTION AREA. TWO COFFERDAMS WILL BE REQUIRED TO COMPLETE THE WORK SHOWN ON THESE PLANS, ONE ON THE NASON CREEK SIDE OF THE RAILROAD EMBANKMENT AND ONE ON THE OXBOW SIDE. THE COFFERDAM ON THE NASON CREEK SIDE OF THE EMBANKMENT SHALL BE INSTALLED BETWEEN JULY 1, AND AUGUST 10, 2013. THE NASON CREEK COFFERDAM SHALL REMAIN IN PLACE FROM INSTALLATION UNTIL OCTOBER 15, 2013. THE NASON CREEK COFFERDAM SHALL BE REMOVED ON OCTOBER 15, 2013. THE COFFERDAM ON THE OXBOW SIDE OF THE RAILROAD EMBANKMENT SHALL BE INSTALLED AFTER INSTALLATION OF THE NASON CREEK COFFERDAM; THE OXBOW COFFERDAM MAY BE REMOVED PRIOR TO BUT NO LATER THAN OCTOBER 15, 2013.
19. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 5 WORKING DAYS IN ADVANCE OF COFFERDAM CONSTRUCTION TO COORDINATE FISH REMOVAL. THE CONTRACTING AGENCY WILL BE RESPONSIBLE FOR ALL FISH REMOVAL AND HANDLING.
20. DEWATERING WITHIN COFFERDAMS SHALL BE PERFORMED TO THE EXTENT NECESSARY, AS DETERMINED BY THE CONTRACTOR, TO CONSTRUCT THE PROJECT AS SHOWN ON THESE PLANS. DISCHARGE FROM DEWATERING WITHIN THE WORK AREA SHALL BE ROUTED TO A SMALL SETTLING BASIN OR OTHER WDFW–APPROVED DETENTION OR FILTERING SYSTEM, AND TEMPORARILY DETAINED OR FILTERED SO AS TO ALLOW THE REMOVAL OF FINE SEDIMENTS OR OTHER CONTAMINANTS PRIOR TO BEING ALLOWED TO REENTER NASON CREEK OR WETLANDS. ALL PUMPS USED BY THE CONTRACTOR FOR DEWATERING SHALL HAVE SCREENED INTAKES THAT MEET WDFW SPECIFICATIONS AND JUVENILE FISH SCREENING CRITERIA.
21. ALL EQUIPMENT CONDUCTING IN–WATER WORK, WORKING WITHIN THE ACTIVELY FLOWING CREEK CHANNEL, WORKING WITHIN THE CHANNELS OR STANDING WATER AREAS OF THE OXBOW, AND WORKING ON THE TOP OF BANK ADJACENT TO THE ACTIVELY FLOWING CREEK CHANNEL, SHALL USE VEGETABLE OIL FOR HYDRAULIC FLUID.
22. MATERIAL EXCAVATED DURING CHANNEL EXCAVATION SHALL BE STOCKPILED ON BNSF PROPERTY AT THE LOCATION SHOWN ON SHEETS G–2 AND C–3. THE MATERIAL SHALL BE PLACED ON AND COVERED BY PLASTIC SHEETING WITH A MINIMUM THICKNESS OF 10 MILS, AND SANDBAGS SHALL BE PLACED ON THE PLASTIC SHEETING TO HOLD IT IN PLACE. THE STOCKPILE SHALL REMAIN IN PLACE UNTIL TESTING FOR CONTAMINANTS HAS BEEN COMPLETED BY THE CONTRACTING AGENCY; AFTER TESTING IS COMPLETE, THE CONTRACTOR SHALL HAUL THE STOCKPILED MATERIAL TO A LEGAL DISPOSAL SITE IDENTIFIED BY THE CONTRACTOR. FOR MORE INFORMATION REFER TO SECTION 2–03.3(14)M OF THE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES

ITEM NO.	QUANTITY	UNITS	ITEM
1	LUMP SUM	LS	MOBILIZATION
2	LUMP SUM	LS	SPCC PLAN
3	0.85	AC	CLEARING
4	5,000	DOLLAR	EROSION AND WATER POLLUTION CONTROL
5	1	EA	BEAVER DAM REMOVAL
6	LUMP SUM	LS	INSTALL ACCESS ROAD
7	600	CY	GEOFOAM LIGHTWEIGHT FILL
8	1	EA	ACCESS CONTROL GATE
9	475	LF	FLOATING SILT CURTAIN
10	LUMP SUM	LS	COFFERDAMS
11	LUMP SUM	LS	OXBOW FLOW BYPASS
12	LUMP SUM	LS	DEWATERING
13	1,680	CY	CHANNEL EXCAVATION
14	1,680	CY	HAUL STOCKPILED SOIL
15	375	TON	RIPRAP – CLASS A
16	LUMP SUM	LS	SURVEYING
17	1.24	AC	SEEDING & MULCHING
18	50	EA	PLANTING – LIVE STAKES
19	170	EA	PLANTING – 10 C.I. CONTAINER
20	50	EA	PLANTING – 40 C.I. CONTAINER
21	80	SY	PRE–PLANTED COIR MAT
22	5,000	DOLLAR	MINOR CHANGE

CONTROL TABLE

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
4	1647305.75	280161.75	2150.86	REBAR W/ CAP
32	1647111.38	280228.48	2149.66	REBAR W/ CAP
33	1646754.11	280355.68	2150.36	REBAR W/ CAP
50	1647413.65	280171.58	2146.77	REBAR W/ CAP
52	1647126.90	280358.76	2142.02	REBAR W/ CAP
9024	1648396.19	280194.23	2155.46	MON – 2" ALUM. DISK
9025	1648396.84	279890.30	2163.51	MON – 2" ALUM. DISK
9033	1648397.25	279706.07	2157.37	MON – 3" BRASS DISK

PROJECT LINE COORDINATES

STATION	NORTHING	EASTING
100+00	280387.82	1646700.16
104+00	280253.83	1647077.05
108+00	280119.83	1647453.94
112+00	279985.84	1647830.83
116+00	279851.84	1648207.71
118+00	279784.84	1648396.16

CHANNEL LINE COORDINATES

STATION	NORTHING	EASTING
0+00	280413.77	1646771.29
0+50	280366.65	1646754.57
1+00	280319.53	1646737.86

RECLAMATION
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FCRPS HABITAT IMPROVEMENT PROGRAM

WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

SUMMARY OF QUANTITIES, GENERAL NOTES & SURVEY CONTROL

REV. NO.

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013–05–08

SUMMARY OF QUANTITIES, GENERAL NOTES & SURVEY CONTROL

SHEET G–3

SHEET 3 OF 21

DATE AND TIME PLOTTED
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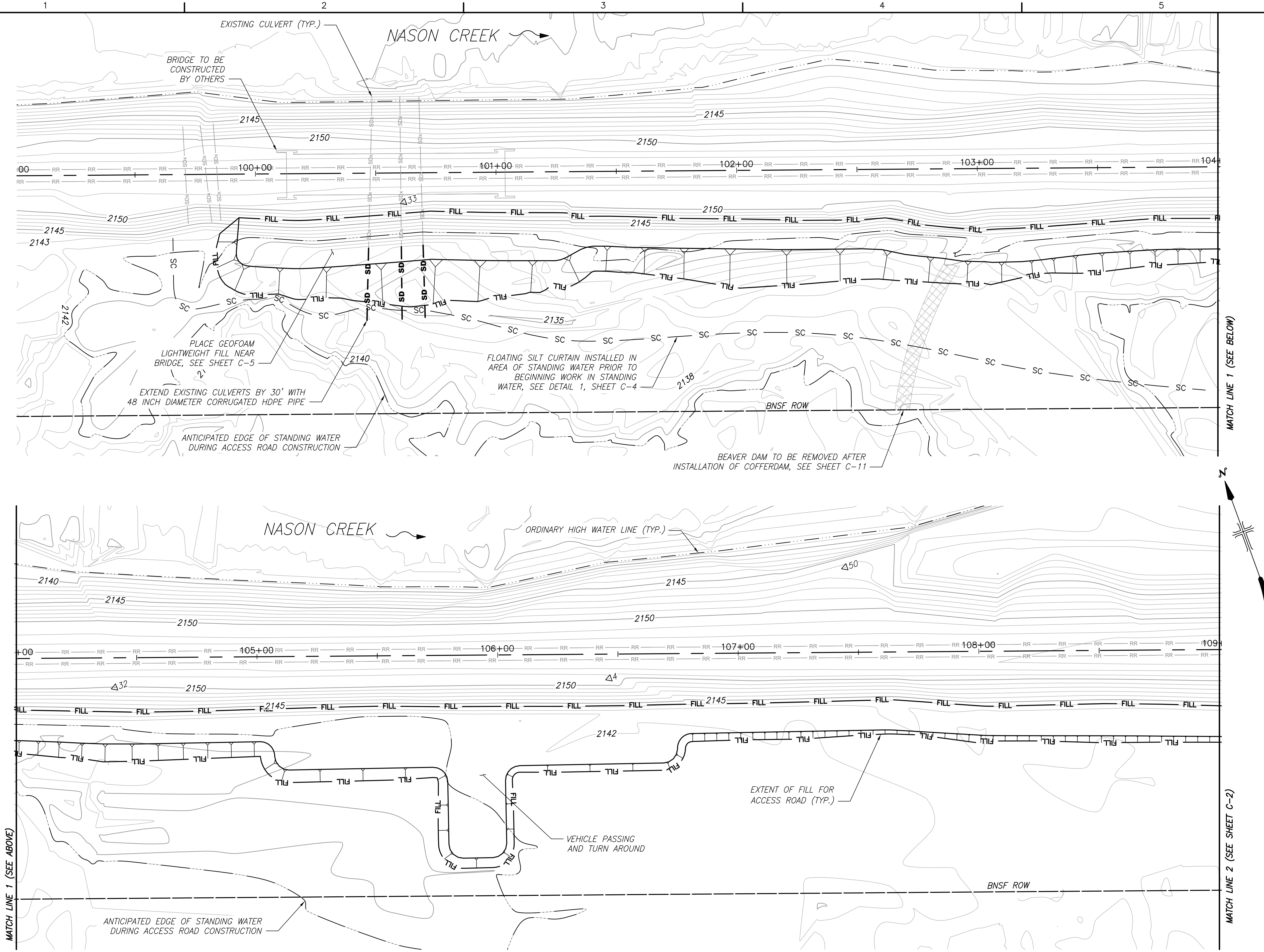

NASON CREEK
EXISTING CULVERT (TYP.)
BRIDGE TO BE CONSTRUCTED BY OTHERS
2145
2150
100+00
101+00
102+00
103+00
104
FILL
SC
SD
2143
2142
2140
2135
2138
PLACE GEOFOAM LIGHTWEIGHT FILL NEAR BRIDGE, SEE SHEET C-5
EXTEND EXISTING CULVERTS BY 30' WITH 48 INCH DIAMETER CORRUGATED HDPE PIPE
ANTICIPATED EDGE OF STANDING WATER DURING ACCESS ROAD CONSTRUCTION
FLOATING SILT CURTAIN INSTALLED IN AREA OF STANDING WATER PRIOR TO BEGINNING WORK IN STANDING WATER, SEE DETAIL 1, SHEET C-4
BNSF ROW
BEAVER DAM TO BE REMOVED AFTER INSTALLATION OF COFFERDAM, SEE SHEET C-11
MATCH LINE 1 (SEE BELOW)
N
NASON CREEK
ORDINARY HIGH WATER LINE (TYP.)
105+00
106+00
107+00
108+00
109
EXTENT OF FILL FOR ACCESS ROAD (TYP.)
VEHICLE PASSING AND TURN AROUND
ANTICIPATED EDGE OF STANDING WATER DURING ACCESS ROAD CONSTRUCTION
BNSF ROW
MATCH LINE 1 (SEE ABOVE)
MATCH LINE 2 (SEE SHEET C-2)

ACCESS PLAN

SCALE OF FEET: 20 0 20 40 60

C-1

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ACCESS PLAN

REV NO

DRAWN N. TRUSCOTT
ACCEPTED NAME TITLE
BOISE, ID 2013-05-08

ACCESS PLAN

SHEET C-1
SHEET 4 OF 21

DATE AND TIME PLOTTED May 8, 2013 03:05
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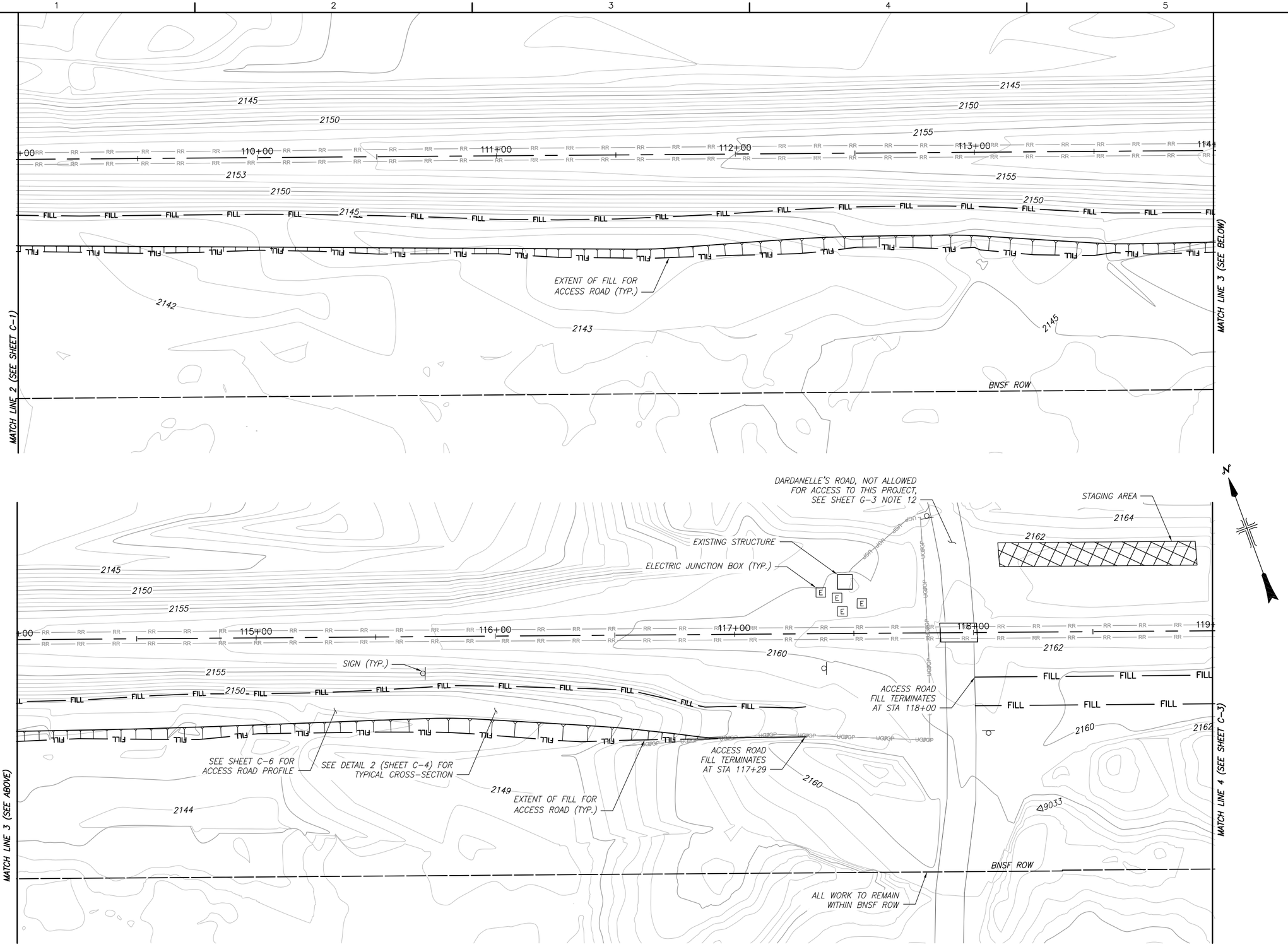

ACCESS PLAN

SCALE OF FEET: 20 0 20 40 60

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ACCESS PLAN

SHEET C-2
SHEET 5 OF 21

DATE AND TIME PLOTTED
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ECAVATED SOIL STOCKPILE, SEE NOTE 22 ON SHEET G-3

+00 120+00 121+00 122+00 123+00 124+

2165

FILL 2160 2162 2164 2165 2167

EXTENT OF FILL FOR ACCESS ROAD (TYP.)

PLACE 4" OF BALLAST ON TOP OF EXISTING GROUND FROM ENTRANCE TO DARDANELLE'S ROAD, SEE DETAIL 5 SHEET C-4

MATCH LINE 4 (SEE SHEET C-2)

MATCH LINE 5 (SEE BELOW)

BNSF ROW

EDGE OF PAVEMENT (TYP.)

CHELAN COUNTY ROW

2167 2169

CONTINUES FOR 900 FEET

ECAVATED SOIL STOCKPILE, SEE NOTE 22 ON SHEET G-3

+00 125+00 126+00 127+00 128+00 129+00

2166 2168

12'

ACCESS ROAD AT LOCATION STAKED BY CONTRACTING OFFICER

PLACE 8" LAYER OF BALLAST AS SHOWN, SEE DETAIL 4 SHEET C-4

ACCESS CONTROL GATE, PER STANDARD PLAN L-70.10-01

2170

TREE TO BE REMOVED (TYP.)

TREE TO REMAIN (TYP.)

ACCESS ROAD BEGINS AT LOCATION STAKED BY CONTRACTING OFFICER (SEE NOTE 4 SHEET C-4)

R = 35'

R = 15'

MATCH LINE 5 (SEE ABOVE)

BNSF ROW

EDGE OF PAVEMENT (TYP.)

HIGH MOUNTAIN MEADOWS ROAD

INTERSECTION WITH COULTER CREEK RD APPROXIMATELY 0.25 MILES

2170

ACCESS PLAN

SCALE OF FEET 20 0 20 40 60

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ACCESS PLAN

SHEET C-3

SHEET 6 OF 21

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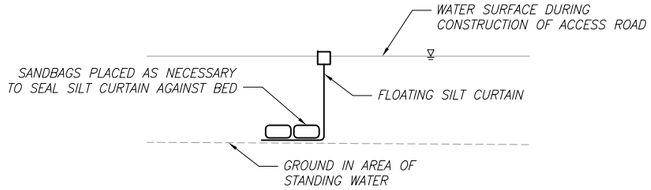
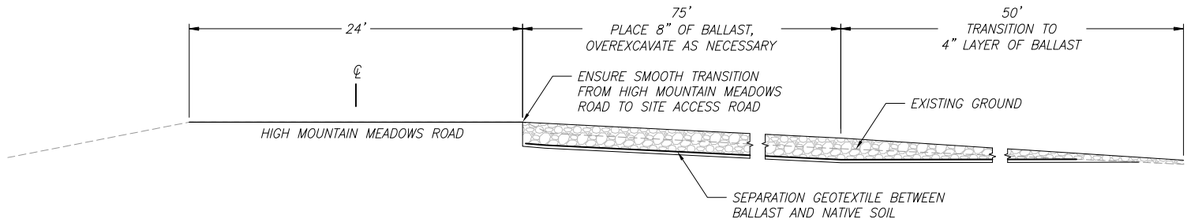
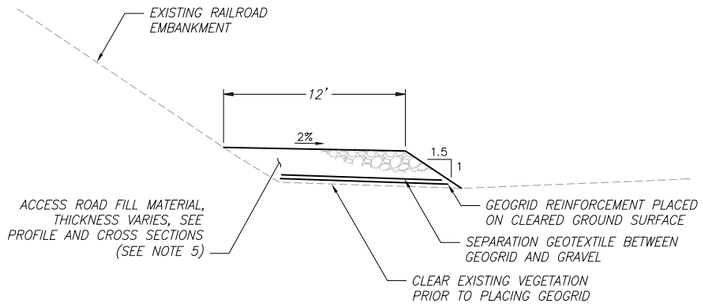


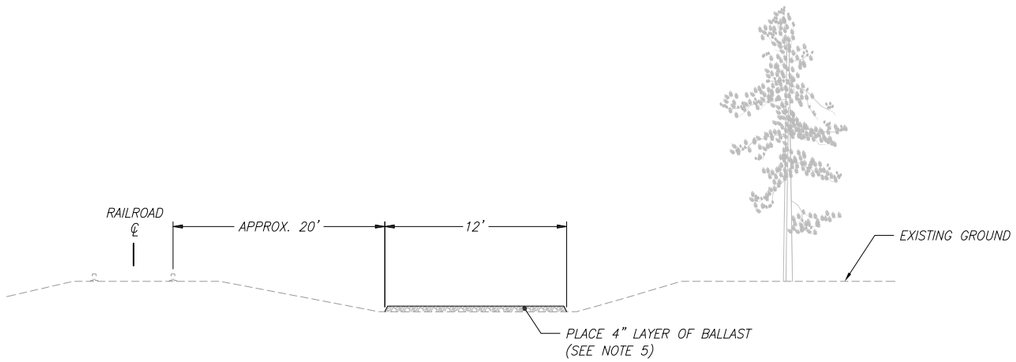
1 C-4 **FLOATING SILT CURTAIN DETAIL**
SCALE: 1" = 3'



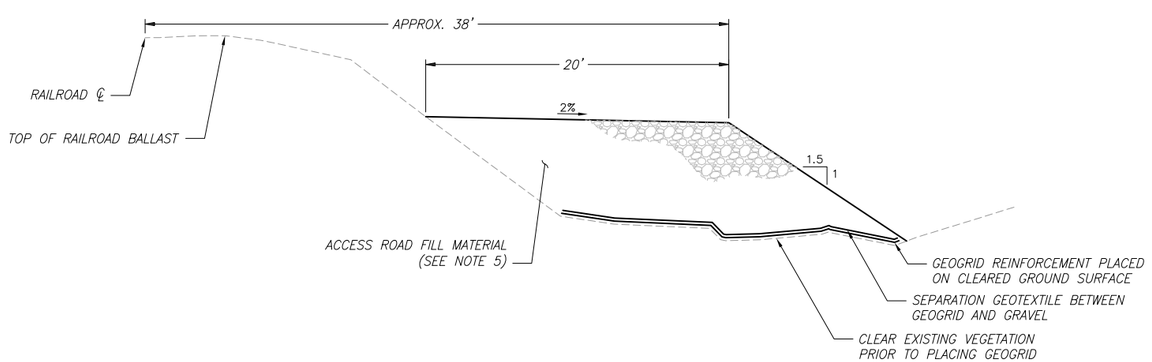
4 C-4 **ACCESS ROAD ENTRANCE DETAIL (PROJECT LINE STATION 126+00 TO 126+50)**
SCALE: NOT TO SCALE



2 C-4 **ACCESS ROAD – TYPICAL DETAIL (PROJECT LINE STATION 101+75 TO 117+29)**
SCALE: 1" = 5'



5 C-4 **ACCESS ROAD – TYPICAL DETAIL (PROJECT LINE STATION 118+00 TO 125+50)**
SCALE: NOT TO SCALE



3 C-4 **ACCESS ROAD – TYPICAL DETAIL (PROJECT LINE STATION 99+95 TO 100+00 AND 100+45 TO 100+72)**
SCALE: 1" = 5'

NOTES

1. THE CONTRACTOR SHALL NOT DAMAGE OR REMOVE VEGETATION OUTSIDE THE LIMITS OF FILL SHOWN ON SHEETS C-1, C-2 AND C-3 UNLESS APPROVED BY THE CONTRACTING OFFICER.
2. ALL WORK CONDUCTED BY THE CONTRACTOR SHALL COMPLY WITH BNSF SAFETY REQUIREMENTS.
3. FLOATING SILT CURTAIN SHALL BE INSTALLED PRIOR TO BEGINNING CONSTRUCTION OF ACCESS ROAD IN AREAS OF STANDING WATER.
4. THE LOCATION OF THE ACCESS ROAD ENTRANCE, ACCESS ROAD, AND TURN AROUND MAY BE SLIGHTLY ADJUSTED BY THE CONTRACTING OFFICER DEPENDING ON SITE CONDITIONS.
5. FILL FOR ACCESS ROAD SHALL BE BALLAST AND SHALL MEET REQUIREMENTS IN SECTION 9-03.9(1) OF THE STANDARD SPECIFICATIONS; TOTAL VOLUME REQUIRED FOR CONSTRUCTION OF ACCESS ROAD IS 3,000 CY.
6. A BNSF FLAGGER SHALL BE PRESENT ANYTIME THE CONTRACTOR USES THE ACCESS ROAD AND IS WITHIN 25 FEET OF THE TRACK. THE CONTRACTOR SHALL COMMUNICATE WITH THE CONTRACTING OFFICER TO ARRANGE FOR A FLAGGER TO BE PRESENT DURING THESE TIMES.
7. WORK WITHIN 4 FEET OF THE TRACKS IS CONSIDERED FOULING THE TRACK AND REQUIRES THE USE OF SPECIAL SAFETY RULES PER BNSF REQUIREMENTS. THE CONTRACTOR SHALL COMMUNICATE WITH THE CONTRACTING OFFICER REGARDING TIMES WHEN WORKING FOUL OF THE TRACK IS REQUIRED AND SHALL COMPLY WITH BNSF SAFETY REQUIREMENTS AT ALL TIMES.

ACCESS ROAD DETAILS & NOTES

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FCRPS HABITAT IMPROVEMENT PROGRAM

WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

ACCESS ROAD DETAILS & NOTES

REV NO

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

ACCESS ROAD DETAILS & NOTES

SHEET C-4
SHEET 7 OF 21

DATE AND TIME PLOTTED
May 8, 2013 03:05
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FISHER, MARTIN

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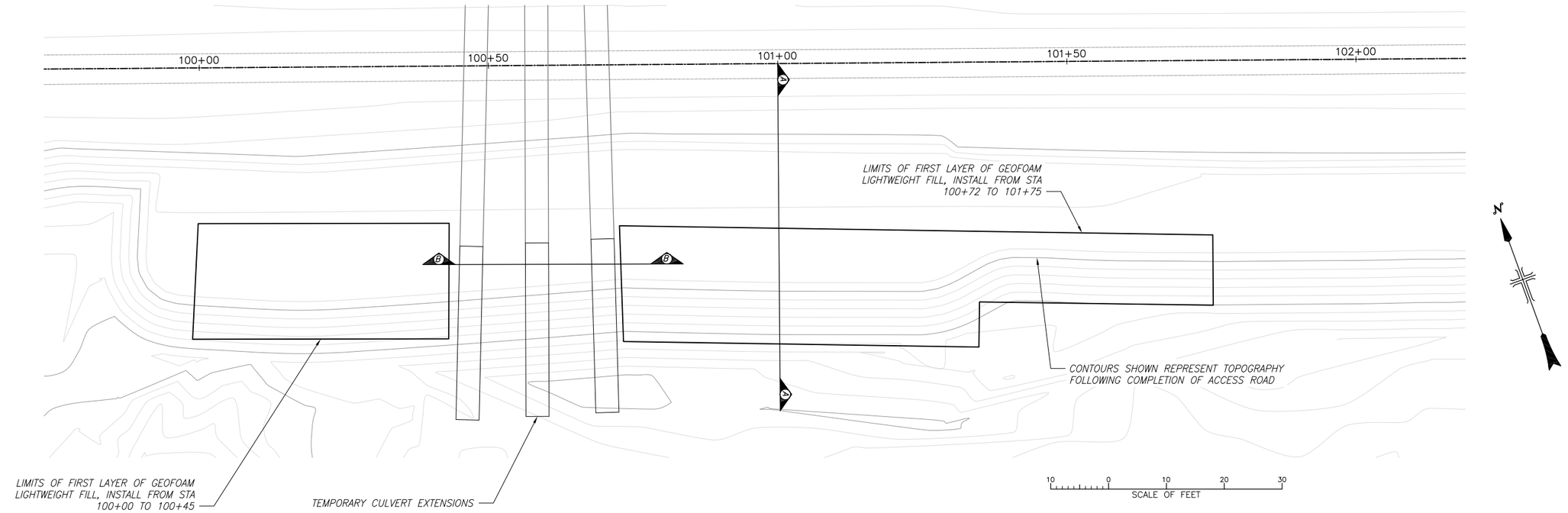
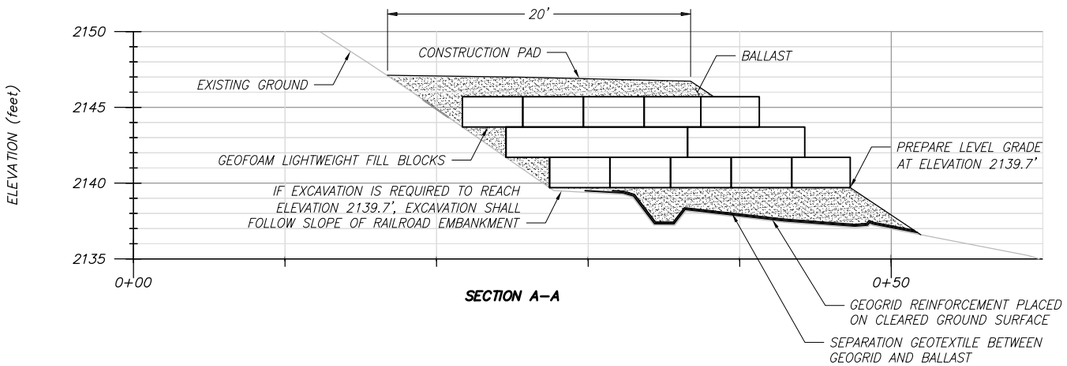
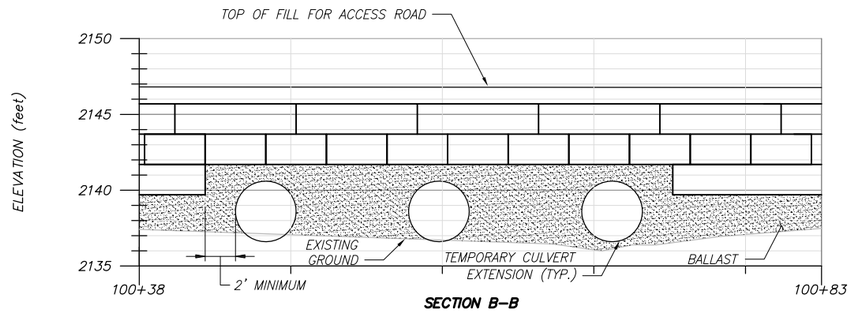




SECTION A–A



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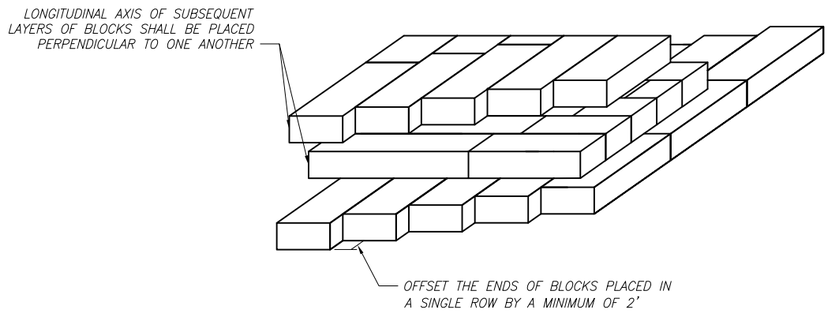

1 / C–5 GEOFOAM LIGHTWEIGHT FILL BLOCKS – PLACEMENT DETAIL
SCALE: NTS

NOTES

1. GEOFOAM LIGHTWEIGHT FILL SHALL MEET REQUIREMENTS DESCRIBED IN THE SPECIAL PROVISIONS.
2. THE BOTTOM LAYER OF GEOFOAM LIGHTWEIGHT FILL BLOCKS SHALL BE PLACED AT AN ELEVATION OF 2139.7'. IF THE NATIVE SOIL IS DEEMED UNACCEPTABLE FOR A BASE MATERIAL BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL OVEREXCAVATE AS NECESSARY TO ALLOW FOR PLACEMENT OF AN 8" LAYER OF BALLAST.
3. FOLLOWING COMPLETION OF BRIDGE DECK INSTALLATION BY BNSF, ALL GEOFOAM LIGHTWEIGHT FILL SHALL BE REMOVED; SEE SHEET C–12 FOR ACCESS ROAD REMOVAL.

GEOFOAM LIGHTWEIGHT FILL PLAN & DETAILS

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GEOFOAM LIGHTWEIGHT FILL PLAN & DETAILS

REV NO

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013–05–08

GEOFOAM LIGHTWEIGHT FILL PLAN & DETAILS

SHEET C–5
SHEET 8 OF 21

DATE AND TIME PLOTTED
May 8, 2013 07:05
PLOTTED BY
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AutoCAD Rel. 18.0s
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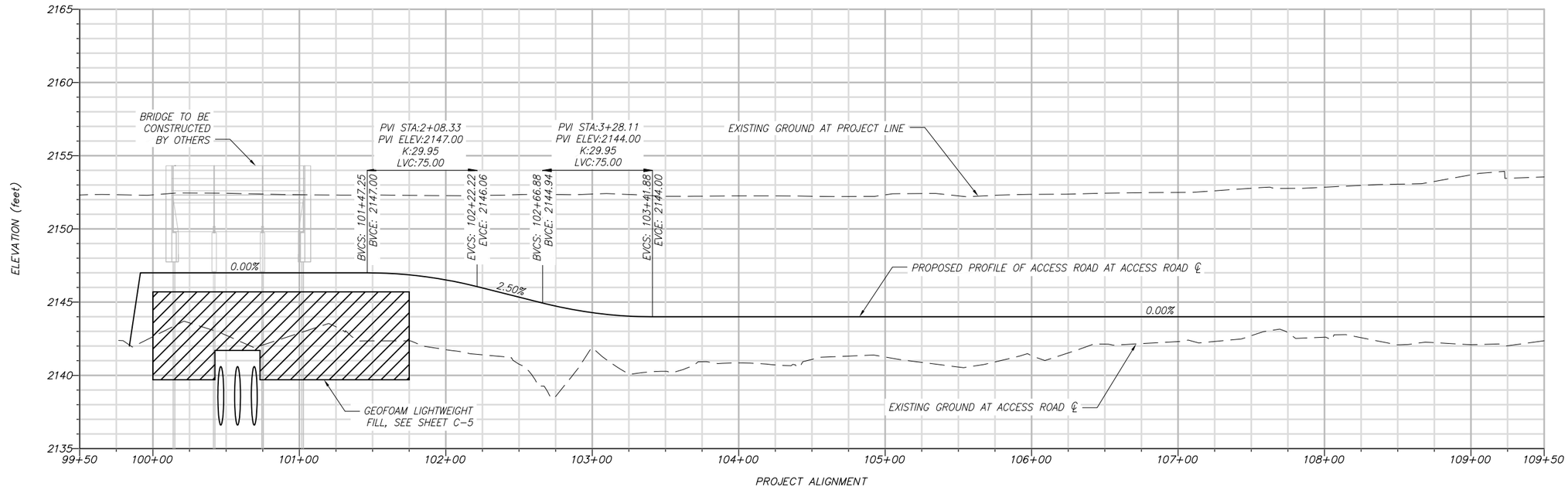

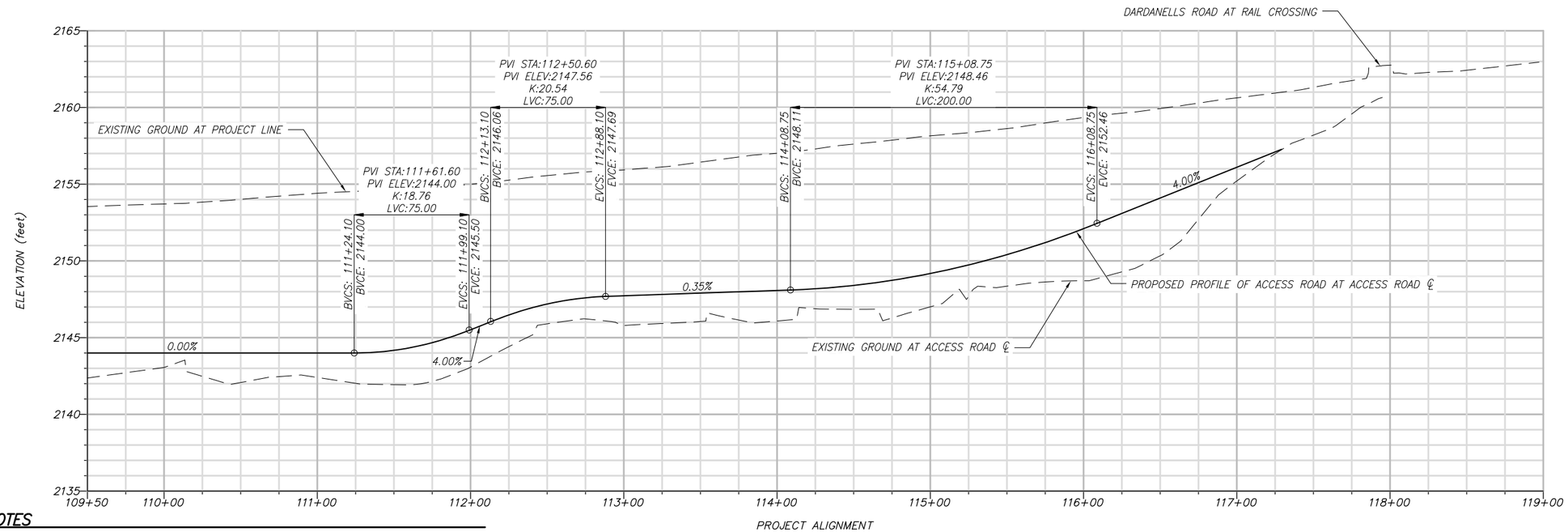

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ACCESS ROAD PROFILE

REV. NO

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

ACCESS ROAD PROFILE

SHEET C-6
SHEET 9 OF 21

DATE AND TIME PLOTTED
May 8, 2013 0305
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FISHER, MARTIN

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AutoCAD Rel. 18.0s
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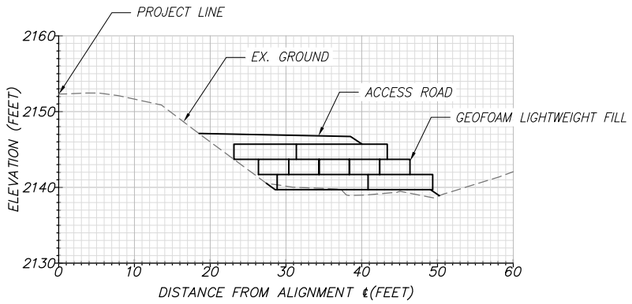

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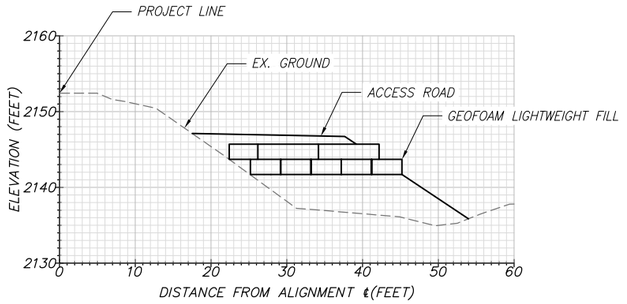

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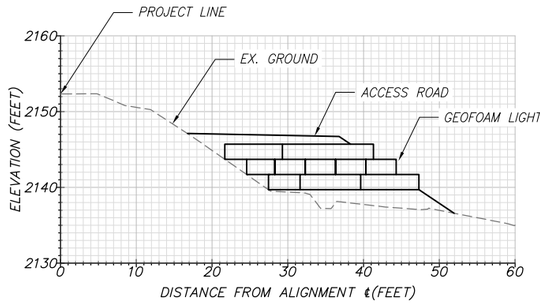

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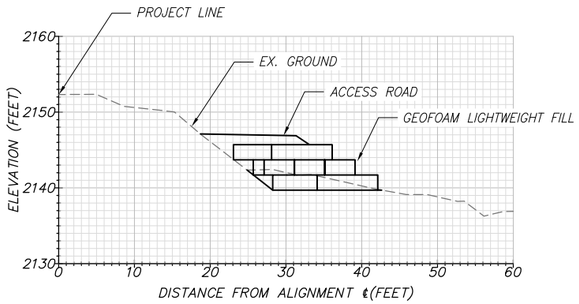

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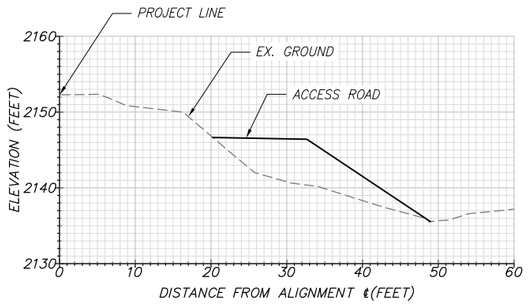

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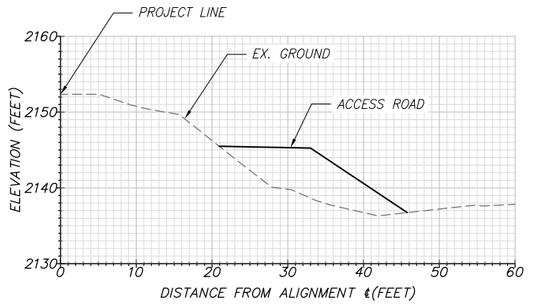

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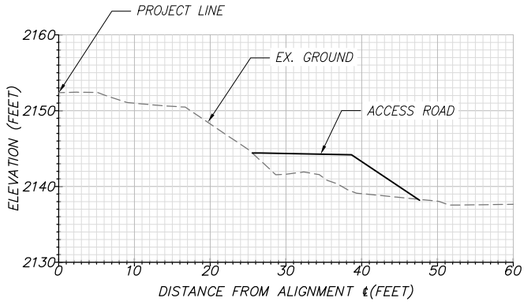

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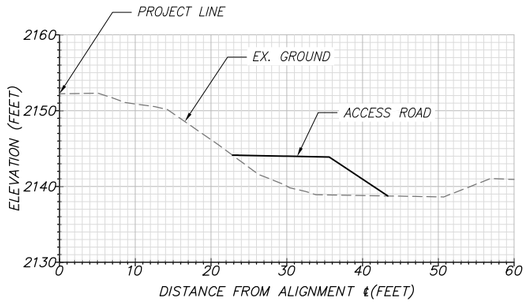

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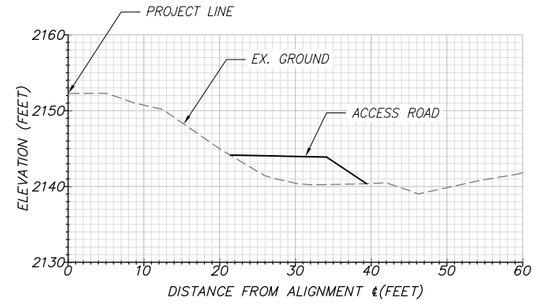

SECTION 104+00

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5/8/2013

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WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

ACCESS ROAD CROSS-SECTIONS

REV. NO.

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

ACCESS ROAD
CROSS-SECTIONS

SHEET C-7

SHEET 10 OF 21

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May 8, 2013 03:05
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FISHER, MARTIN

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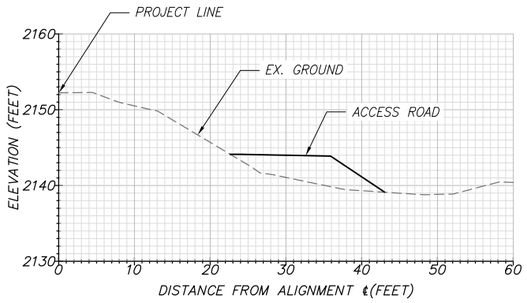

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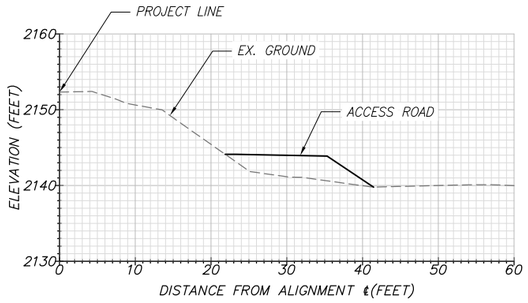

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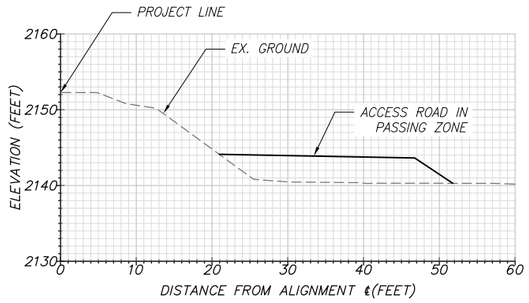

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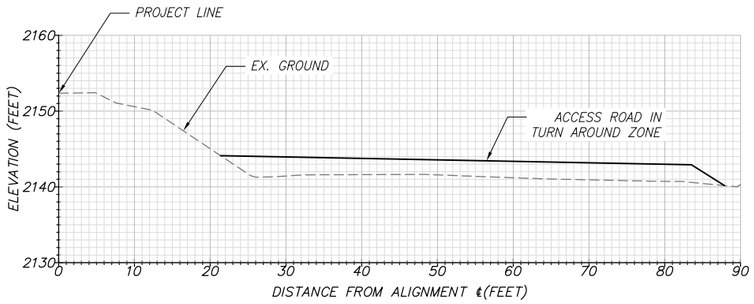

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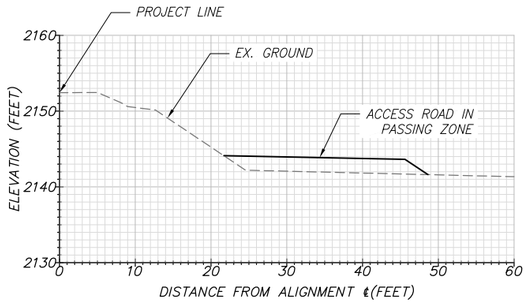

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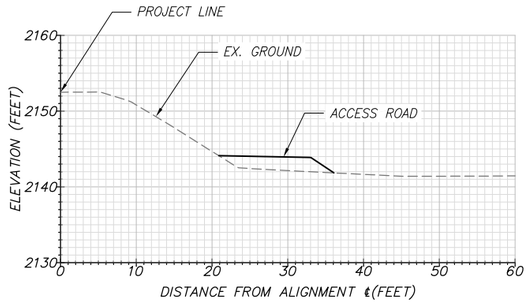

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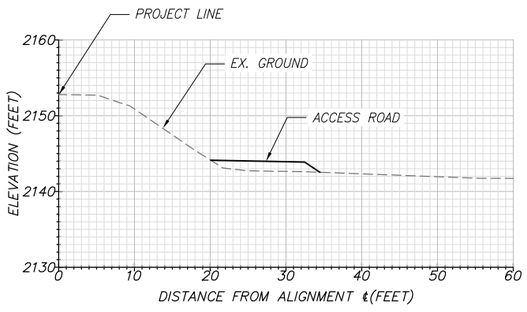

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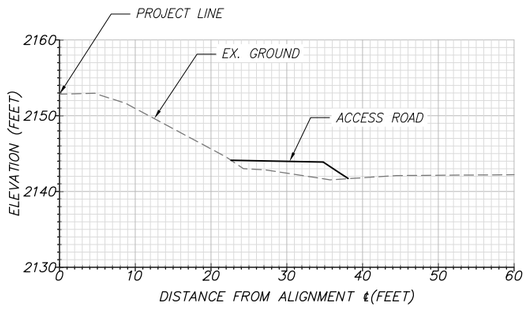

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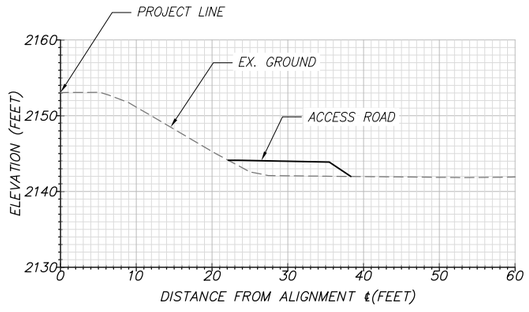

SECTION 108+50

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WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

ACCESS ROAD CROSS-SECTIONS

REV. NO.

DRAWN
D. STRATTEN

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

ACCESS ROAD
CROSS-SECTIONS

SHEET C-8

SHEET 11 OF 21

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May 8, 2013 03:05
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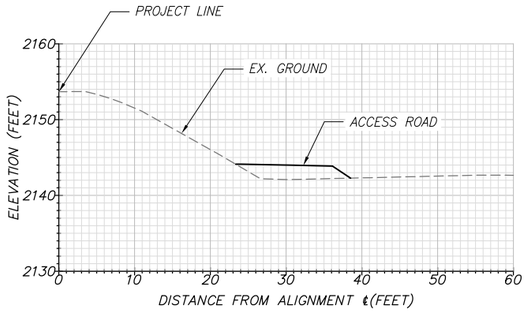

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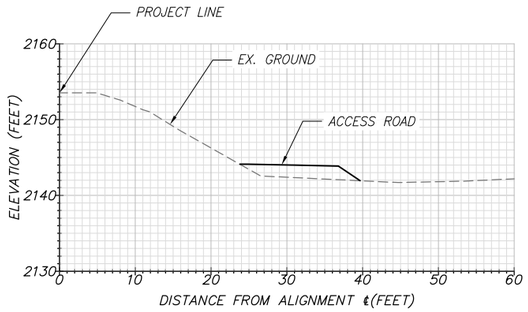

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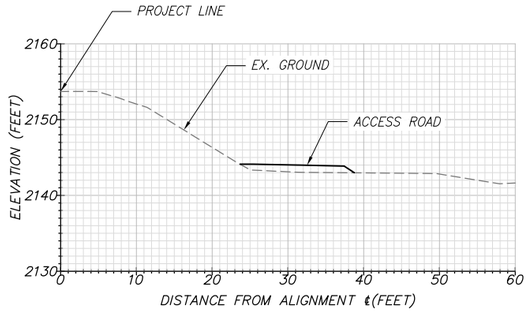

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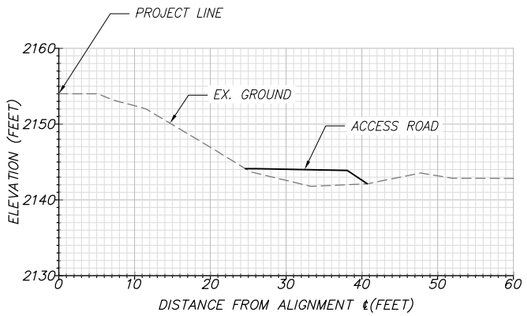

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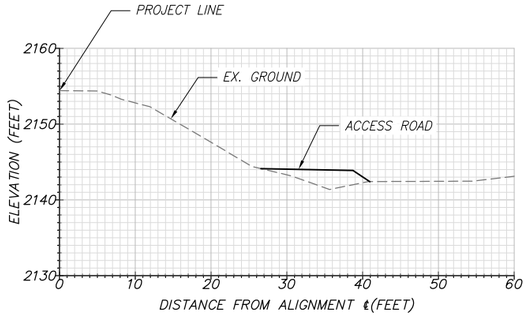

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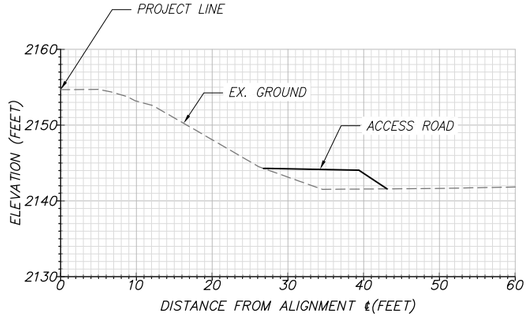

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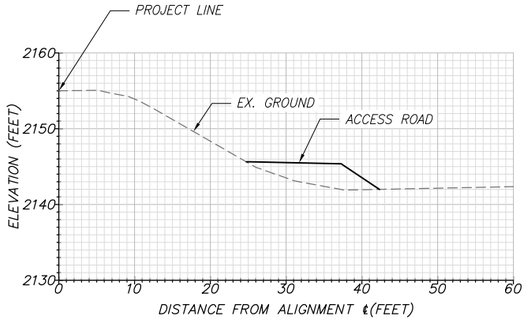

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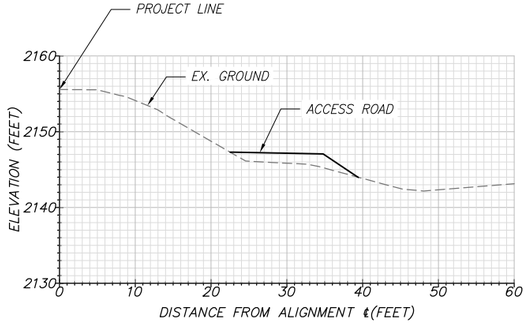

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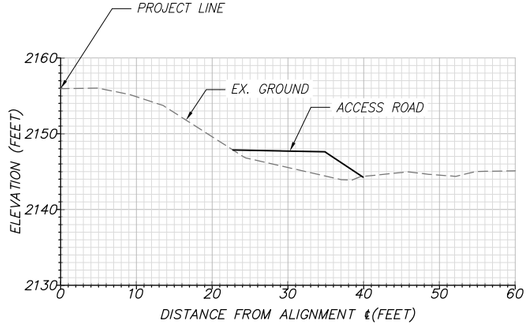

SECTION 113+00

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WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

ACCESS ROAD CROSS-SECTIONS

REV. NO.

DRAWN
N. TRUSCOTT

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

ACCESS ROAD
CROSS-SECTIONS

SHEET C-9

SHEET 12 OF 21

DATE AND TIME PLOTTED
May 8, 2013 03:05
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FISHER, MARTIN

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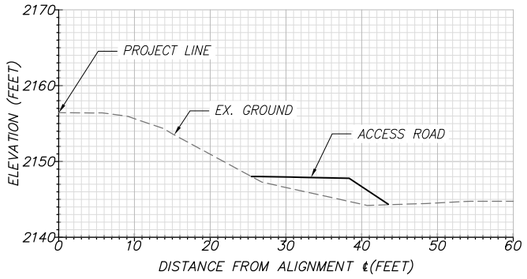

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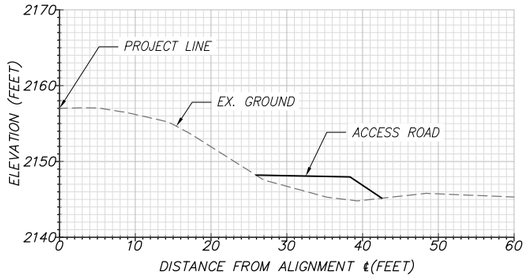

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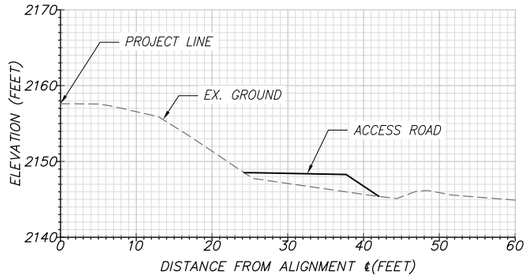

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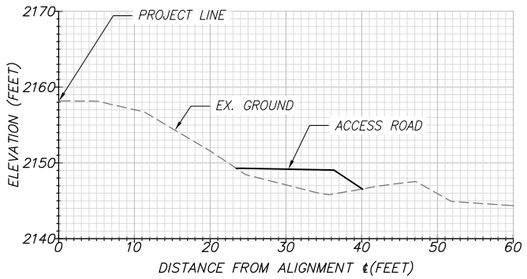

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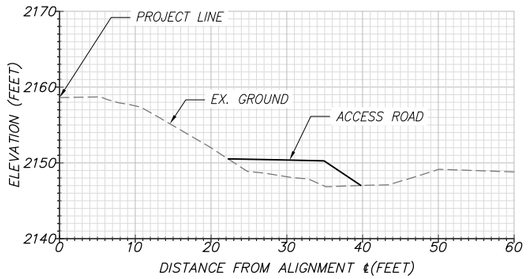

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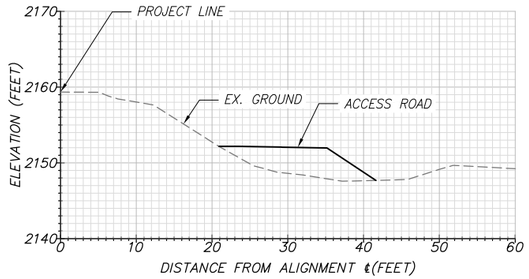

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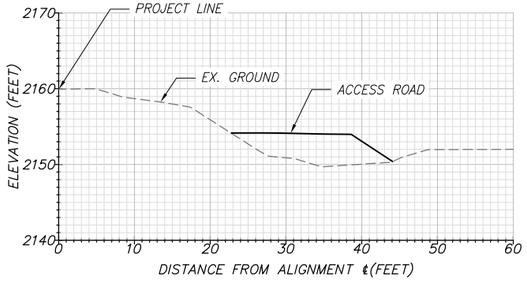
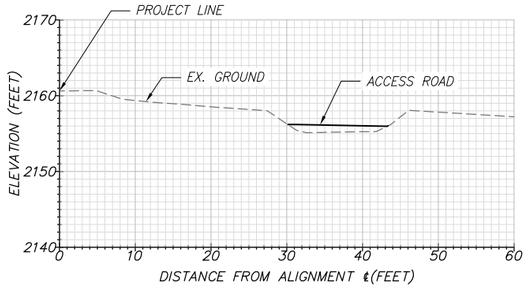


SECTION 116+50



SECTION 117+00

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING TO RAILROAD AS A RESULT OF CONSTRUCTION ACTIVITIES. ALL WORK CONDUCTED BY THE CONTRACTOR SHALL COMPLY WITH BNSF SAFETY REQUIREMENTS.

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WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

ACCESS ROAD CROSS-SECTIONS

REV. NO.

DRAWN
D. STRATTEN

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

ACCESS ROAD
CROSS-SECTIONS

SHEET C-10

SHEET 13 OF 21

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NASON CREEK

NASON CREEK COFFERDAM, SEE DETAIL 1, THIS SHEET FOR CONSTRUCTION AND NOTE 18 ON SHEET G–3 FOR INSTALLATION RESTRICTIONS

ORDINARY HIGH WATER LINE (TYP.)

BRIDGE CONSTRUCTED BY OTHERS

EXISTING 4' DIAMETER CMP CULVERT TO REMAIN (TYP.)

98+00 99+00 100+00 101+00 102+00 103+00

0+50 CHANNEL LINE

PROJECT LINE

1+00

2150 2145 2140

PUMP AND PIPES TO CONVEY GROUNDWATER SEEPAGE FROM WITHIN WORK AREA TO SETTLING BASIN

OXBOW COFFERDAM, SEE DETAIL 1, THIS SHEET FOR CONSTRUCTION AND NOTE 18 ON SHEET G–3 FOR INSTALLATION RESTRICTIONS

BNSF ROW

20' x 20' x 3' SETTLING BASIN CONSTRUCTED BY CONTRACTOR SEE DETAIL 2, THIS SHEET

PUMP AND PIPE TO CONVEY FLOW FROM UPSTREAM OF COFFERDAM AROUND EXCAVATION AT BRIDGE. SIZE WILL BE DEPENDENT ON FLOW PRESENT DURING CONSTRUCTION AND MAY VARY WHILE COFFERDAM IS IN PLACE

ALL WORK TO REMAIN WITHIN BNSF ROW

ANTICIPATED EDGE OF WATER DURING EXCAVATION

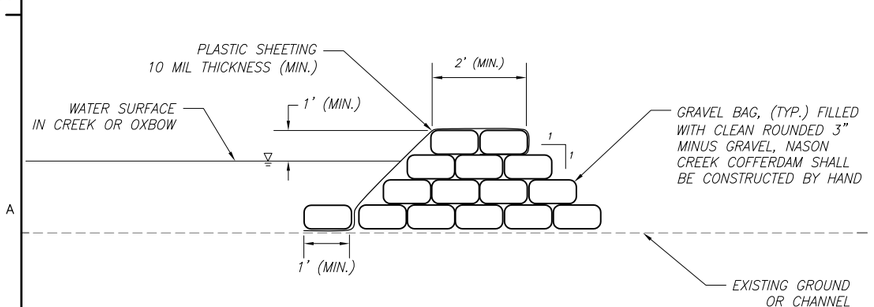
REMOVE BEAVER DAM FOLLOWING CONSTRUCTION OF OXBOW COFFERDAM

N

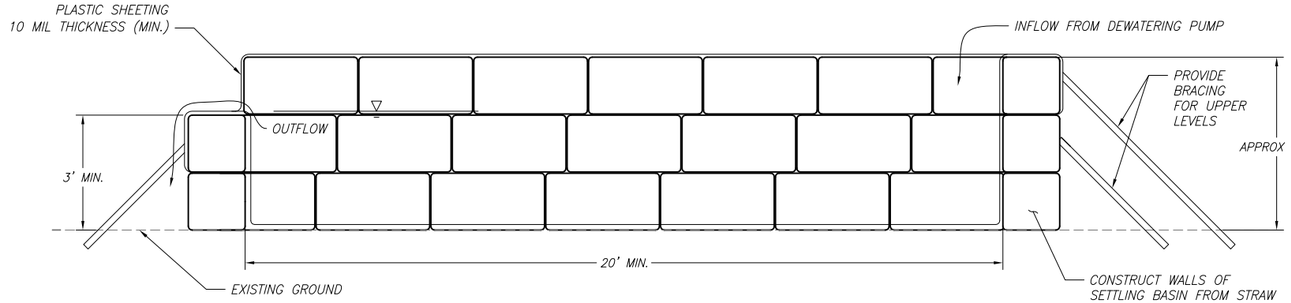
20 0 20 40 60
SCALE OF FEET

NOTES

1. CONTRACTOR SHALL NOTIFY CONTRACTING AGENCY 5 DAYS PRIOR TO CONSTRUCTION OF COFFERDAMS TO SCHEDULE FISH REMOVAL IN CONJUNCTION WITH CONSTRUCTION OF COFFERDAMS.
2. WORK AREA SHALL BE SUFFICIENTLY DEWATERED FOR CONTRACTOR TO PERFORM, AND CONTRACTING OFFICER TO INSPECT, ALL WORK. THE DISCHARGE FROM PUMP SHALL BE ROUTED THROUGH A SYSTEM OF PIPES TO A CONSTRUCTED SETTLING BASIN TO ALLOW FOR SETTLING OF PARTICLES PRIOR TO OVERFLOWING BACK TO EXISTING WETLAND. THE LOCATION OF THE SETTLING BASIN SHOWN ON THIS SHEET IS APPROXIMATE AND IS SUBJECT TO CHANGE BY THE CONTRACTING OFFICER.
3. ALL PUMP INTAKES SHALL BE SCREENED FOR JUVENILE FISH PROTECTIONS AS REQUIRED BY WDFW.
4. CONTRACTOR SHALL SUBMIT A COFFERDAM PLAN, A FLOW BYPASS PLAN, AND A DEWATERING PLAN AT LEAST 10 DAYS PRIOR TO WORK COVERED BY THAT PLAN. PLANS SHALL INCLUDE MATERIALS LIST AND PROPOSED DESIGN FOR REVIEW AND APPROVAL.



1 / C–11 COFFERDAM DETAIL – TYPICAL SECTION
SCALE: NOT TO SCALE



2 / C–11 SETTLING BASIN DETAIL – TYPICAL SECTION
SCALE: 1" = 2'

FLOW BYPASS & SITE DEWATERING

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FLOW BYPASS & SITE DEWATERING

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FLOW BYPASS & SITE DEWATERING

SHEET C–11

SHEET 14 OF 21

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NASON CREEK

EXCAVATE MATERIAL FROM RAILROAD EMBANKMENT, SEE SHEET C-13 FOR PROFILE AND SHEET C-14 FOR CROSS-SECTION

CHANNEL LINE

CHANNEL LINE CROSSES PROJECT LINE AT STATION 100+58.36 (CENTER OF BRIDGE SPAN)

PROJECT LINE

0+00

0+50

1+00

100+00

101+00

102+00

2140

2145

2150

2152

2138

2139

33

EXCAVATE MATERIAL RECENTLY PLACED AS ACCESS ROAD BACK TO ORIGINAL GROUNDLINE

LIMIT OF EXCAVATION (TYP)

EXCAVATED MATERIAL SHALL BE STOCKPILED AT LOCATION SHOWN ON SHEET G-2 AND C-3, SEE NOTE 6 BELOW

BNSF ROW

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION STAKING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITION OF RAILROAD AND BRIDGE. ANY DAMAGE THAT OCCURS AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. SEE SHEET C-13 FOR CHANNEL PROFILE AND SHEET C-14 FOR CROSS-SECTION OF EXCAVATION UNDER BRIDGE.
4. CONTRACTOR SHALL TAKE SPECIAL CARE TO AVOID DAMAGE TO BRIDGE PILES, ABUTMENTS, AND ABUTMENT BACKFILL; SEE SHEET C-14 FOR EXTENT OF BACKFILL.
5. THIS GRADING PLAN SHOWS FINISHED GROUND AFTER EXCAVATION UNDER BRIDGE AND REMOVAL OF TEMPORARY ACCESS ROAD.
6. MATERIAL EXCAVATED DURING CHANNEL EXCAVATION SHALL BE STOCKPILED ON BNSF PROPERTY AT THE LOCATION SHOWN ON SHEETS G-2 AND C-3. THE MATERIAL SHALL BE PLACED ON AND COVERED BY PLASTIC SHEETING WITH A MINIMUM THICKNESS OF 10 MILS, AND SANDBAGS SHALL BE PLACED ON THE PLASTIC SHEETING TO HOLD IT IN PLACE. THE STOCKPILE SHALL REMAIN IN PLACE UNTIL TESTING FOR CONTAMINANTS HAS BEEN COMPLETED BY THE CONTRACTING AGENCY; AFTER TESTING IS COMPLETE, THE CONTRACTOR SHALL HAUL THE STOCKPILED MATERIAL TO A LEGAL DISPOSAL SITE IDENTIFIED BY THE CONTRACTOR. FOR MORE INFORMATION REFER TO SECTION 2-03.3(14)M OF THE SPECIAL PROVISIONS.

10 0 10 20 30
SCALE OF FEET

N

GRADING PLAN

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GRADING PLAN

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GRADING PLAN

SHEET C-12

SHEET 15 OF 21

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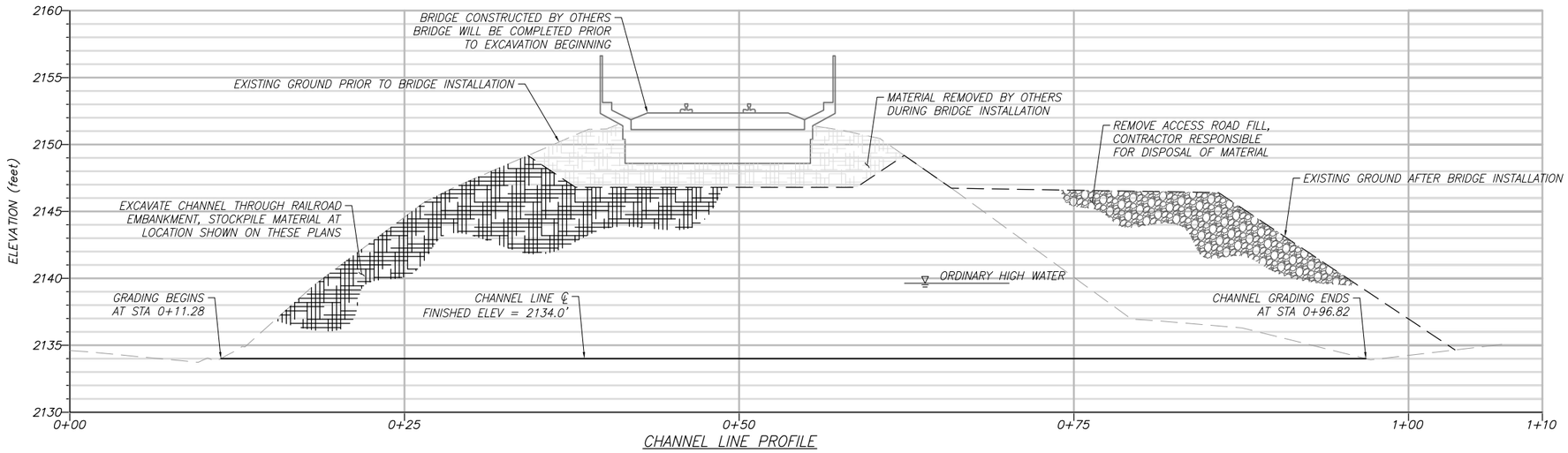

CHANNEL LINE PROFILE

NOTES

1. BRIDGE WILL BE CONSTRUCTED BY BNSF UNDER SEPARATE CONTRACT. THE EXCAVATION UNDER BRIDGE WILL OCCUR AFTER THE BRIDGE IS COMPLETED. THE CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY BRIDGE AND/OR RAILROAD COMPONENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS. CONTRACTOR MAY BE HELD FINANCIALLY RESPONSIBLE FOR COSTS ASSOCIATED WITH RAIL SHUTDOWN DUE TO DAMAGE CAUSED BY THE CONTRACTOR.

2. MATERIAL EXCAVATED DURING CHANNEL EXCAVATION SHALL BE STOCKPILED ON BNSF PROPERTY AT THE LOCATION SHOWN ON SHEETS G-2 AND C-3. THE MATERIAL SHALL BE PLACED ON AND COVERED BY PLASTIC SHEETING WITH A MINIMUM THICKNESS OF 10 MILS, AND SANDBAGS SHALL BE PLACED ON THE PLASTIC SHEETING TO HOLD IT IN PLACE. THE STOCKPILE SHALL REMAIN IN PLACE UNTIL TESTING FOR CONTAMINANTS HAS BEEN COMPLETED BY THE CONTRACTING AGENCY; AFTER TESTING IS COMPLETE, THE CONTRACTOR SHALL HAUL THE STOCKPILED MATERIAL TO A LEGAL DISPOSAL SITE IDENTIFIED BY THE CONTRACTOR. FOR MORE INFORMATION REFER TO SECTION 2-03.3(14)M OF THE SPECIAL PROVISIONS.

CHANNEL GRADING PROFILE

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CHANNEL GRADING PROFILE

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CHANNEL GRADING PROFILE

SHEET C-13

SHEET 16 OF 21

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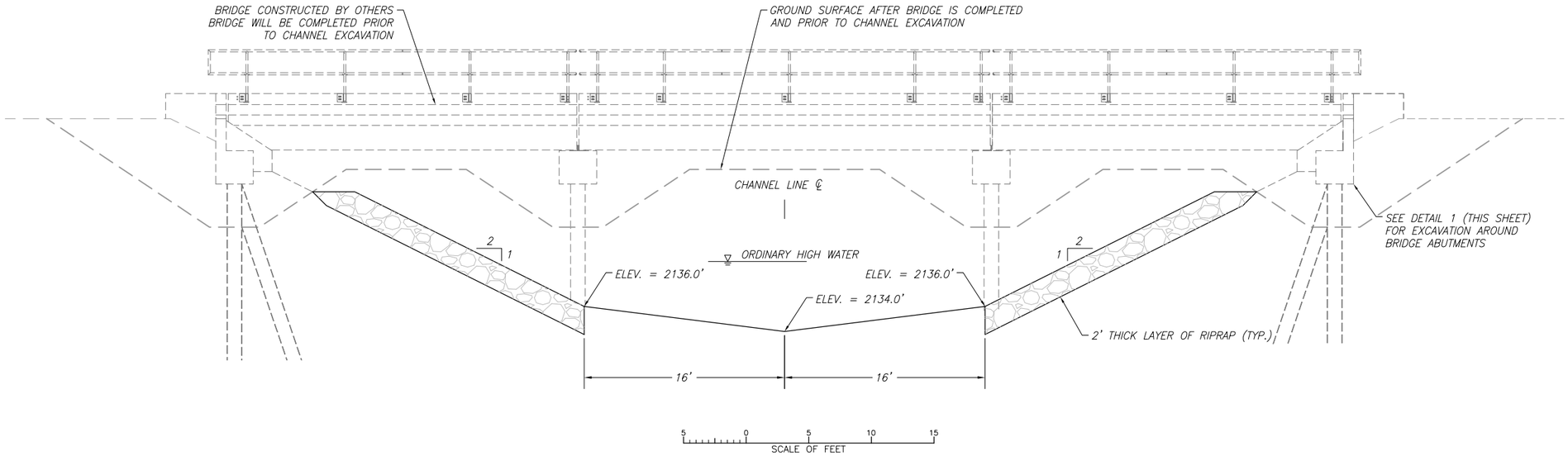


CHANNEL CROSS SECTION AT PROJECT LINE

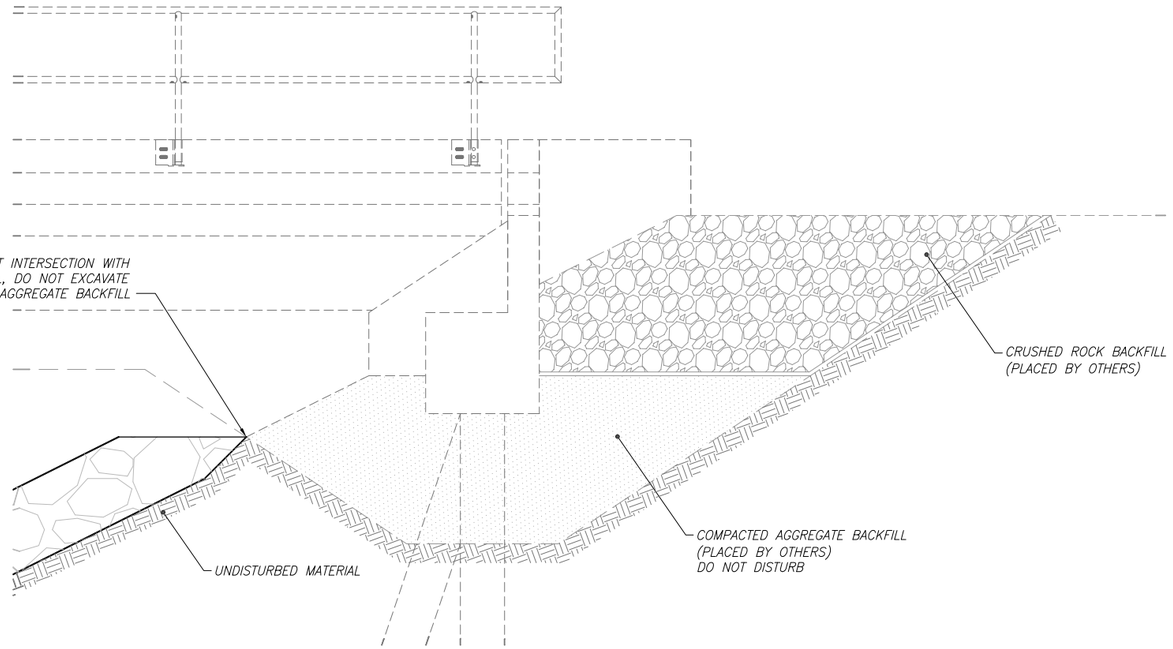
NOTES

1. BRIDGE WILL BE CONSTRUCTED BY BNSF UNDER SEPARATE CONTRACT. THE EXCAVATION UNDER BRIDGE WILL OCCUR AFTER THE BRIDGE IS COMPLETED. THE CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY BRIDGE AND/OR RAILROAD COMPONENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS. CONTRACTOR MAY BE HELD FINANCIALLY RESPONSIBLE FOR COSTS ASSOCIATED WITH RAIL SHUTDOWN DUE TO DAMAGE CAUSED BY THE CONTRACTOR.

2. RIPRAP FOR BANK PROTECTION AT BRIDGES SHALL BE "CLASS A" PER SECTION 9–13.4 OF THE STANDARD SPECIFICATIONS (GRADATION SHOWN BELOW):

DIAMETER (INCHES)	PERCENT PASSING
18	100
16	80 – 95
12	50 – 80
8	15 – 50
4	15 MAX

3. MATERIAL EXCAVATED DURING CHANNEL EXCAVATION SHALL BE STOCKPILED ON BNSF PROPERTY AT THE LOCATION SHOWN ON SHEETS G–2 AND C–3. THE MATERIAL SHALL BE PLACED ON AND COVERED BY PLASTIC SHEETING WITH A MINIMUM THICKNESS OF 10 MILS, AND SANDBAGS SHALL BE PLACED ON THE PLASTIC SHEETING TO HOLD IT IN PLACE. THE STOCKPILE SHALL REMAIN IN PLACE UNTIL TESTING FOR CONTAMINANTS HAS BEEN COMPLETED BY THE CONTRACTING AGENCY; AFTER TESTING IS COMPLETE, THE CONTRACTOR SHALL HAUL THE STOCKPILED MATERIAL TO A LEGAL DISPOSAL SITE IDENTIFIED BY THE CONTRACTOR. FOR MORE INFORMATION REFER TO SECTION 2–03.3(14)M OF THE SPECIAL PROVISIONS.



1 / C–14 BRIDGE ABUTMENT EXCAVATION DETAIL
SCALE: 1" = 2'

CHANNEL GRADING DETAILS

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CHANNEL GRADING DETAILS

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CHANNEL GRADING DETAILS

SHEET C–14

SHEET 17 OF 21

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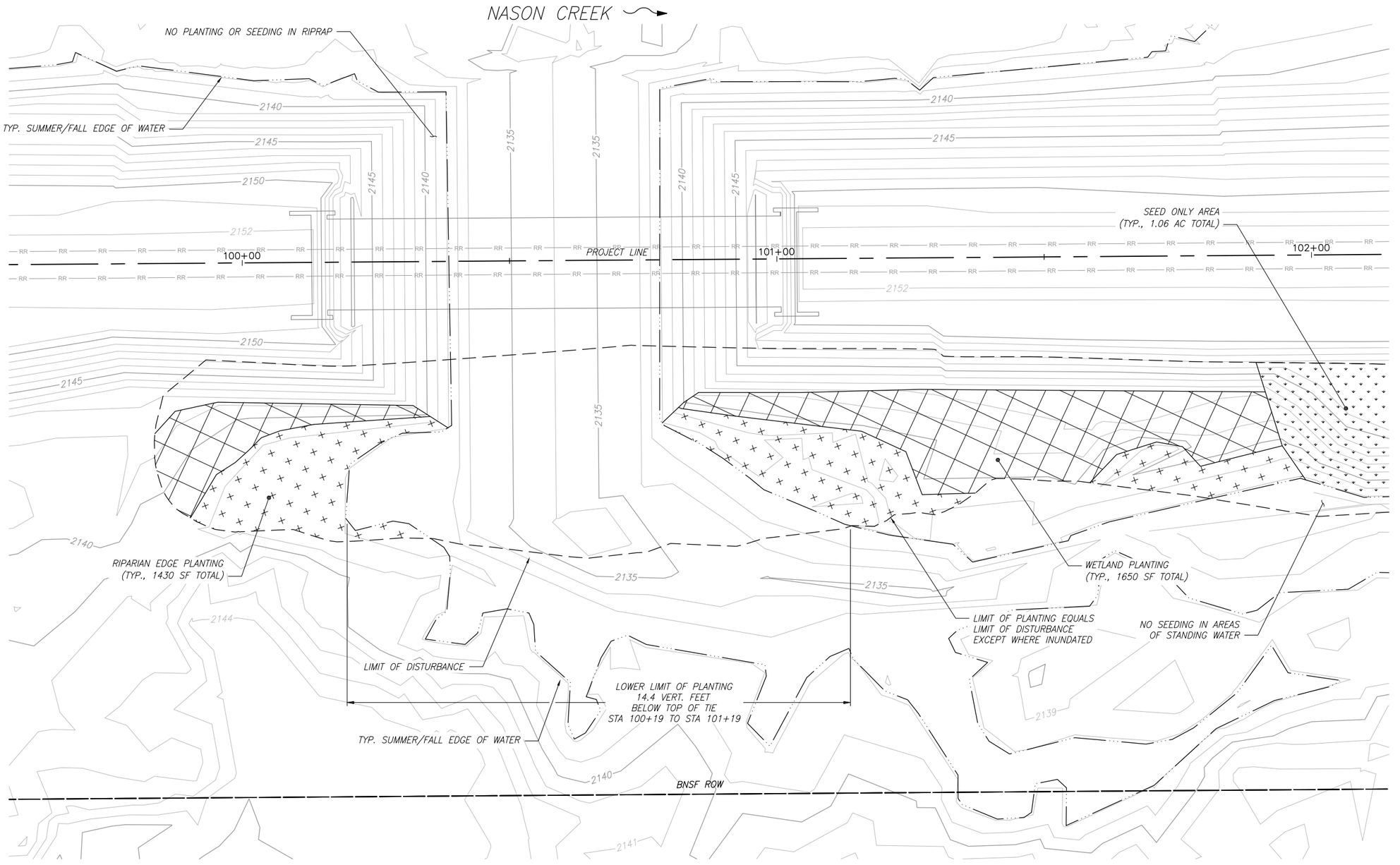

PLANTING NOTES

1. NOT ALL SEEDING AREAS ARE SHOWN ON THIS SHEET. FOLLOWING CONSTRUCTION, THE PORTION OF THE ACCESS ROAD WEST OF DARDANELLE'S, THE STAGING AREA, AND THE AREA DISTURBED FROM STOCKPILING EXCAVATED MATERIAL SHALL BE SEEDED ACCORDING TO THE SEED MIX AND APPLICATION RATES SHOWN ON SHEET L-2.
2. SEE SHEET L-2 FOR PLANT SPECIES, SIZES, AND QUANTITIES IN RIPARIAN EDGE AND WETLAND PLANTING AREAS.

PLANTING PLAN

10 0 10 20 30
SCALE OF FEET

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PLANTING PLAN

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PLANTING PLAN

SHEET L-1

SHEET 18 OF 21

PLANT SCHEDULE

RIPARIAN EDGE	ID	SPECIES NAME	COMMON NAME	TYP. SPACING	QUANTITY	SIZE
1430 SQ FT	CMAT	SEE COIR MAT PLANT LIST (THIS SHEET)	PRE-PLANTED COIR MAT	AT DIRECTION OF C.O.	80 SY	N/A
	CAOB	CAREX OBNUPTA	SLOUGH SEDGE	2'	100	10 C.I. CONT.
	SCMI	SCIRPUS MICROCARPUS	PANTICLED BULRUSH	2'	70	10 C.I. CONT.
WETLAND						
1650 SQ FT	COSE	CORNUS SERICEA	RED-OSIER DOGWOOD	4'	30	40 C.I. CONT.
	SALA	SALIX LUCIDA SSP. LASIANDRA	PACIFIC WILLOW	4'	30	36" LIVE STAKE
	SASI	SALIX SITCHENSIS	SITKA WILLOW	4'	20	36" LIVE STAKE
	SPDO	SPIREA DOUGLASII	DOUGLAS SPIREA	4'	20	40 C.I. CONT.

PLANT SCHEDULE NOTES

1. DENSITY AND DISTRIBUTION OF PLANTS SHALL DEPEND ON SITE CONDITIONS AND SHALL BE SET AT THE DIRECTION OF THE CONTRACTING OFFICER.
2. PLANT MATERIAL WILL BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH ALL OTHER MATERIALS REQUIRED TO INSTALL PLANTS AS SHOWN ON THESE PLANS, INCLUDING WOOD CHIP MULCH (5 CY) AND PLANT TUBES (50).

PRE-PLANTED COIR MAT SPECIES SELECTION

ID	SPECIES NAME	COMMON NAME
CA	CAREX AQUATILIS	WATER SEDGE
CL	CAREX LANGUINOSA	WOOLY SEDGE
CN	CAREX NEBRASCENSIS	NEBRASKA SEDGE
CU	CAREX UTRICULATA	BEAKED SEDGE
JB	JUNCUS BALTICUS	BALTIC RUSH

PRE-PLANTED COIR MAT NOTES

1. PRE-PLANTED COIR MATS WILL BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACTOR AND WILL CONTAIN AT LEAST 3 SPECIES FROM THE TABLE ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL OTHER MATERIAL REQUIRED TO INSTALL SEDGE MATS AS SHOWN ON THESE PLANS, INCLUDING WOODEN STAKES (128).
2. PLANTS SHALL BE MATURE ENOUGH AS TO PROVIDE COVERAGE TO APPROXIMATELY 50 PERCENT OF THE COIR MAT.
3. SEE PRE-PLANTED COIR MAT INSTALLATION DETAILS (SHEET L-4) FOR INSTALLATION DETAILS.

SEED MIX

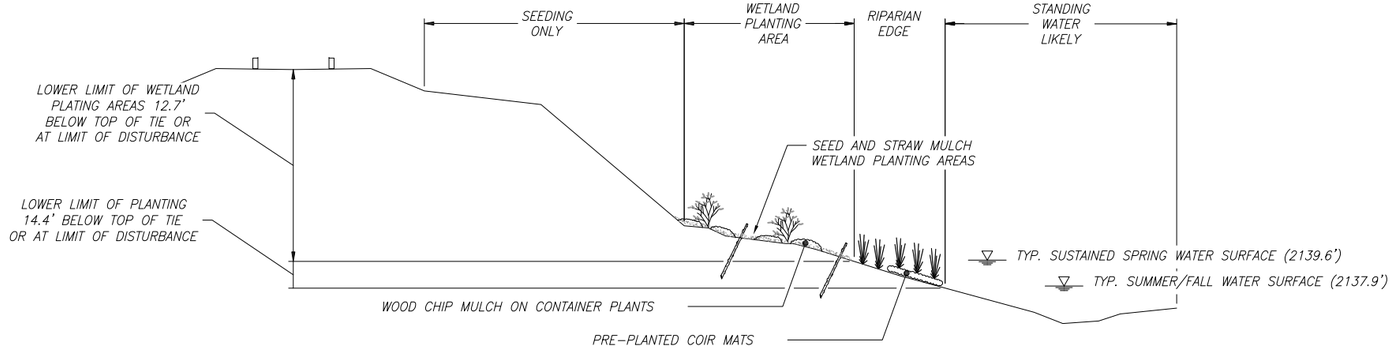
SEED MIX	SPECIES NAME	COMMON NAME	LBS PLS/ACRE
0.97 ACRES	ACHNATHERUM HYMENOIDES	INDIAN RICEGRASS	12
	AGROPYRON SPICATUM	BLUEBUNCH WHEATGRASS	12
	ELYMUS TRACHYCAULUS	SLENDER WHEATGRASS	8
	FESTUCA IDAHOENSIS	IDAHO FESCUE	6
	TRITICUM AESTIVUM X SECALE CEREALE	STERILE TRITICALE	60
	POA SECUNDA	SANDBERG BLUEGRASS	4

SEEDING NOTES

1. FOLLOWING CONSTRUCTION, THE PORTION OF THE ACCESS ROAD WEST OF DARDANELLE'S ROAD, THE STAGING AREA, AND THE AREA DISTURBED FROM STOCKPILING EXCAVATED MATERIAL SHALL BE SEEDED ACCORDING TO THE SEED MIX AND APPLICATION RATES SHOWN ON THIS SHEET.
2. ALL SEEDING AREAS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 8-01.3 OF THE STANDARD SPECIFICATIONS. SEEDING AREAS NEED NOT BE CULTIVATED, BUT SHALL BE RAKED OR CHAINED TO ENSURE A FRIABLE SURFACE FREE OF SOIL CLUMPS LARGER THAN 2 INCHES IN DIAMETER.
3. APPLICATION OF SEED SHALL BE FOLLOWED BY THE APPLICATION OF STRAW MULCH APPLIED AT A RATE OF 2 TONS/ACRE (2.48 TONS TOTAL).
4. THE SEED MIX SPECIFIED ABOVE WILL BE PROVIDED TO THE CONTRACTOR AT NO ADDITIONAL COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL OTHER MATERIALS REQUIRED TO SEED AS SHOWN ON THESE PLANS.

TYPICAL PLANTING CROSS-SECTION NOTES

1. THIS TYPICAL CROSS-SECTION IS INTENDED AS A GENERAL GUIDE TO PLANTING NEAR THE BREACH OF THE RAIL PRISM. SEE SHEET L-1 FOR LOCATION AND EXTENT OF ALL PLANTING AREAS.
2. PLANT INSTALLATION SHALL OCCUR UNDER THE DIRECTION OF CONTRACTING OFFICER. LOCATION AND EXTENT OF PLANTING AREAS MAY CHANGE BASED ON SITE CONDITIONS.
3. THE ANTICIPATED WATER SURFACE ELEVATION SHOWN ON THIS SHEET IS AN ESTIMATE OF LIKELY CONDITIONS AT THE TIME OF PLANTING. CONDITIONS MAY VARY. RIPARIAN EDGE PLANTINGS MAY BE INSTALLED IN WATER UP TO 4 INCHES DEEP.
4. PLANTINGS SHALL MAINTAIN A 25 FOOT OFFSET FROM THE PROJECT LINE (CENTER OF TRACKS).



1 / L-2 TYPICAL PLANTING CROSS-SECTION
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PLANT SCHEDULE & DETAILS

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D. STRATTEN

ACCEPTED
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BOISE, ID 2013-05-08

PLANT SCHEDULE & DETAILS

SHEET L-2

SHEET 19 OF 21

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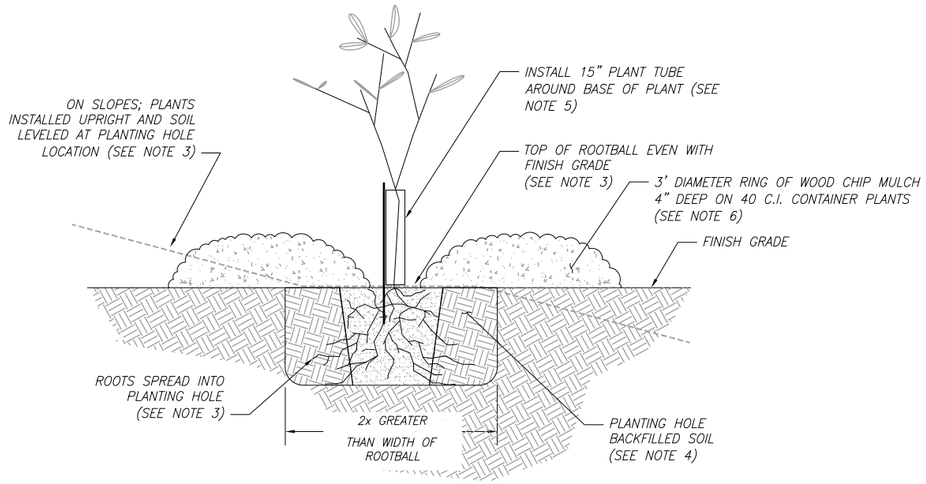
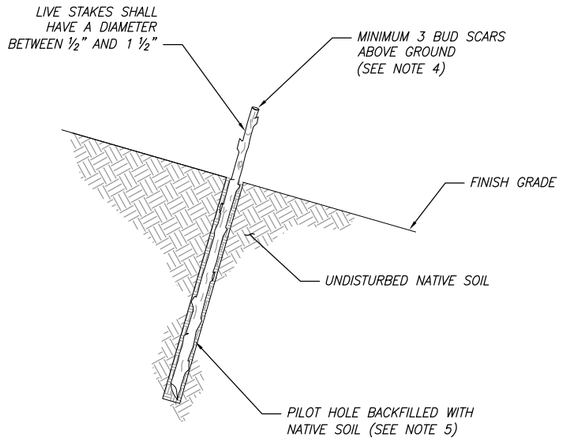


1 / L-3 *40 CUBIC INCH CONTAINER PLANT INSTALLATION*
NOT TO SCALE

CONTAINER PLANT INSTALLATION NOTES:

1. PRIOR TO INSTALLATION OF CONTAINER PLANT, CLEANLY PRUNE ANY BROKEN BRANCHES AND SCARIFY OUTER 1" OF ROOTBALL. CLEANLY PRUNE BROKEN, DEAD, OR DISEASED ROOTS. ROOTBOUND PLANTS SHALL BE REJECTED.
2. EXCAVATE CIRCULAR PLANTING HOLE WITH VERTICAL SIDES. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE.
3. PLACE ROOTBALL ON UNDISTURBED NATIVE SOIL AT BASE OF PLANTING HOLE AND SPREAD ROOTS OUT TO SIDES OF HOLE. CLEANLY TRIM ANY ROOTS THAT ARE TOO LONG TO LAY STRAIGHT IN PLANTING HOLE. PLANTS SHALL BE UPRIGHT, PLUMB, AND TOP OF ROOTBALL SHALL BE EVEN WITH FINISH GRADE. WHEN PLANTING ON SLOPES, CREATE LEVEL PLANTING SURFACE TO ENSURE COVER OF ROOTS ON DOWNHILL SIDE OF PLANT.
4. BACKFILL PLANTING HOLE WITH SOIL EXCAVATED FROM PLANTING HOLE AND TAMP SOIL AROUND ROOTS. ANY TRASH OR DEBRIS FOUND IN EXCAVATED SOIL SHALL NOT BE USED TO BACKFILL THE PLANTING HOLE. BACKFILL SOIL SHALL MAKE GOOD CONTACT WITH THE ROOTBALL, LEAVING NO VOIDS.
5. EACH CONTAINER PLANT SHALL HAVE A 15" TRANSLUCENT PLASTIC GROW TUBE INSTALLED AROUND THE BASE OF THE PLANT PER MANUFACTURER'S INSTRUCTIONS.
6. ALL 40 CUBIC INCH CONTAINER STOCK PLANTS SHALL BE MULCHED WITH A 3 FOOT DIAMETER 4 INCH DEEP RING OF WOOD CHIP MULCH. MULCH SHALL BE KEPT OFF OF THE BASE OF PLANTS.
7. WITHIN 4 HOURS OF PLANT INSTALLATION, THOROUGHLY WATER IN EACH INSTALLED PLANT.



2 / L-3 *LIVE STAKE INSTALLATION*
NOT TO SCALE

LIVE STAKE INSTALLATION NOTES:

1. LIVE STAKES SHALL BE AS DESCRIBED IN SECTION 9-14.6 OF THE STANDARD SPECIFICATIONS. LIVE STAKES SHALL BE COLLECTED FROM PLANTS WITHIN THE NASON CREEK WATERSHED.
2. LIVE STAKES SHALL BE BETWEEN 1/2" AND 1 1/2" DIAMETER AND OF SPECIES AND LENGTH INDICATED ON THE PLANT SCHEDULE (THIS SHEET).
3. LIVE STAKES WHICH ARE NOT PLANTED WITHIN 8 HOURS OF CUTTING SHALL BE SOAKED IN WATER FOR 24-72 HOURS PRIOR TO INSTALLATION. STAKES WHICH HAVE DEVELOPED ROOTS SHALL NOT BE USED.
4. IF NECESSARY, CREATE PILOT HOLE IN SOIL PRIOR TO INSTALLATION.
5. INSTALL STAKES PERPENDICULAR TO FINISH GRADE WITH BUDS ORIENTED UPWARD. IF STAKES MUST BE POUNDED IN, USE DEAD-BLOW HAMMER. INSTALL STAKES SUCH THAT 2 FEET MINIMUM OF THE LENGTH OF THE ENTIRE STAKE IS IN SOIL AND SUCH THAT A MINIMUM OF 3 BUD SCARS REMAIN ABOVE FINISH GRADE. AVOID DAMAGING THE BUDS PRIOR TO AND DURING STAKE INSTALLATION.
6. AFTER INSTALLATION, BACKFILL AND WASH SOIL INTO PILOT HOLE SUCH THAT SOIL MAKES GOOD CONTACT WITH THE STAKE, LEAVING NO VOIDS.
7. WITHIN 4 HOURS OF INSTALLATION, THOROUGHLY WATER IN EACH INSTALLED STAKE.

RECLAMATION
Managing Water in the West

MARTIN K. FISHER — STATE OF WASHINGTON — 31205 — REGISTERED PROFESSIONAL ENGINEER
5/8/2013

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U.S. DEPARTMENT OF THE INTERIOR
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COLUMBIA SNAKE RIVER SALMON RECOVERY PROGRAM - WASHINGTON
FCRPS HABITAT IMPROVEMENT PROGRAM

WENATCHEE SUBBASIN

LOWER WHITE PINE OXBOW RECONNECTION PROJECT

PLANT SCHEDULE & DETAILS

REV. NO.

DRAWN
D. STRATTEN

ACCEPTED
NAME
TITLE

BOISE, ID 2013-05-08

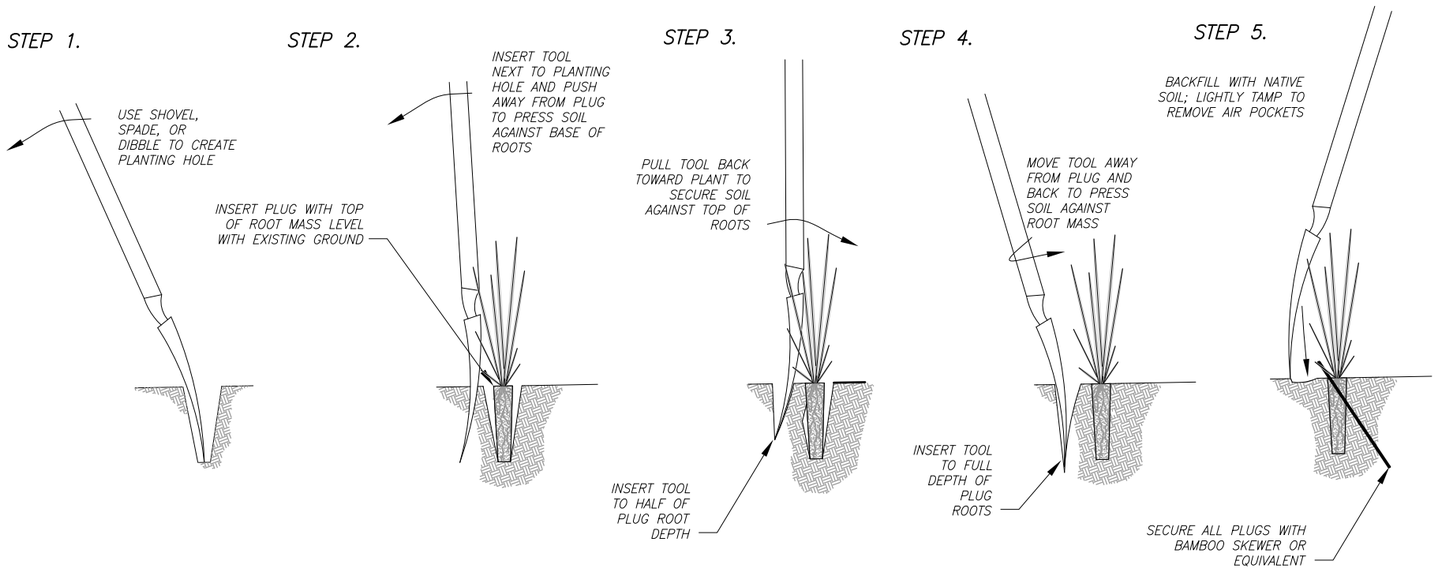
PLANT SCHEDULE & DETAILS

SHEET L-3

SHEET 20 OF 21

DATE AND TIME PLOTTED
May 8, 2013 05:05
PLOTTED BY
FISHER, MARTIN

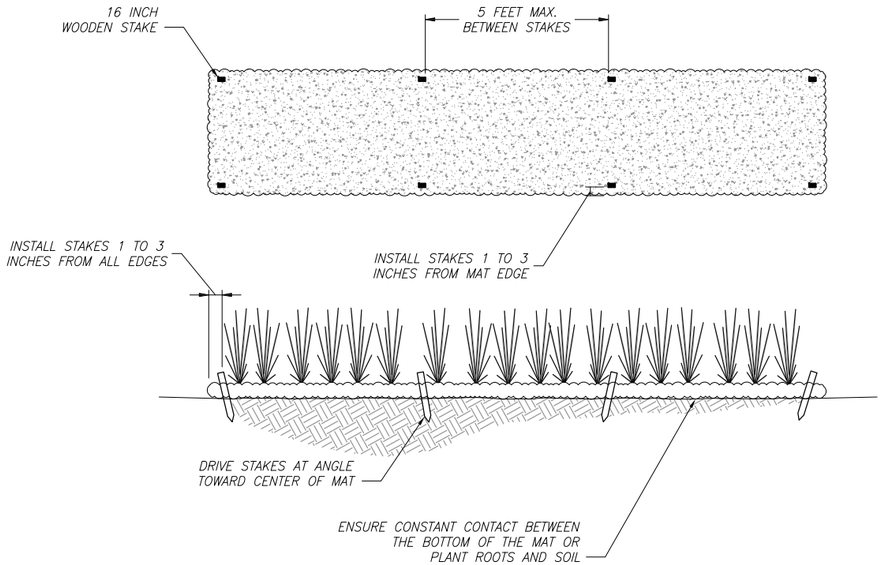
CAD SYSTEM
AutoCAD Rel. 18.0s
CAD FILENAME
LWP_Planting.dwg



1 / L-4 *10 CUBIC INCH CONTAINER PLANT INSTALLATION*
NOT TO SCALE

10 CUBIC INCH PLANT INSTALLATION NOTES:

1. *USE A SHOVEL, SPADE OR DIBBLE TO CREATE A PLANTING HOLE LARGE ENOUGH TO ACCOMODATE THE ROOT MASS AND SOIL OF THE PLUG WITHOUT BENDING ROOTS AND SUCH THAT THE TOP OF THE ROOT MASS CAN BE PLACED LEVEL WITH THE EXISTING GROUND.*
2. *PLACE THE PLUG INTO THE PLANTING HOLE WITH THE TOP OF THE ROOT MASS LEVEL WITH EXISTING GROUND. INSERT TOOL NEXT TO THE PLANTING HOLE TO THE DEPTH OF THE PLANTING HOLE. PUSH TOOL AWAY FROM PLANTING HOLE TO MOVE SOIL AGAINST THE BASE OF THE PLUG'S ROOT MASS.*
3. *INSERT TOOL TO HALF OF PLUG'S ROOT DEPTH. PULL TOOL TOWARD THE PLANTING HOLE TO SECURE SOIL AGAINST THE TOP OF THE ROOTS.*
4. *INSERT TOOL TO FULL DEPTH OF PLUG ROOTS. MOVE TOOL AWAY FROM PLANTING HOLE AND BACK TOWARD PLANTING HOLE TO PRESS SOIL AGAINST ROOT MASS.*
5. *BACKFILL WORK HOLE WITH NATIVE SOIL. REPEAT ON OTHER SIDES OF PLUG AS NEEDED TO ENSURE NO VOIDS AROUND THE ROOT MASS.*
6. *SECURE PLUG WITH A BAMBOO SKEWER, OR BIODEGRADABLE EQUIVALENT, THROUGH THE TOP OF THE ROOT MASS AND INTO THE NATIVE SOIL.*



2 / L-4 *PRE-PLANTED COIR MAT INSTALLATION DETAIL*
NOT TO SCALE

PRE-PLANTED COIR MATS INSTALLATION NOTES:

1. *PRE-PLANTED COIR MAT DELIVERY SHALL BE SCHEDULED TO COINCIDE WITH IMMEDIATE JOB SITE INSTALLATION. IF MATS CANNOT BE IMMEDIATELY INSTALLED, THEY SHALL BE STORED IN A SHADY LOCATION FOR NO MORE THAN THREE DAYS AND SHALL BE KEPT THOROUGHLY SATURATED AND COVERED DURING THAT TIME.*
2. *PLANTING AREAS SHALL BE CLEARED OF LARGE ROCKS, TREE BRANCHES, OR OTHER OBJECTS THAT WOULD PREVENT THE MAT FROM MAKING DIRECT CONTACT WITH THE SOIL. VERY ROUGH GROUND SHALL BE SMOOTHED PRIOR TO MAT INSTALLATION.*
3. *MATS SHALL BE MOVED TO THE INSTALLATION SITE, UNROLLED AND STAKED DOWN. ENSURE THAT THE PLANT ROOTS AND THE BOTTOM OF THE MAT ARE IN DIRECT CONTACT WITH THE SOIL PRIOR TO STAKING. LEAVE NO VOIDS.*
4. *ALL EDGES SHALL BE STAKED WITH 16" WOODEN STAKES SPACED AT A MAXIMUM OF EVERY 5 FEET ALONG THE EDGE OF THE MAT. STAKES SHALL BE INSTALLED 1 TO 3 INCHES FROM THE EDGE OF THE MAT.*
5. *STAKES SHALL BE INSTALLED AT AN ANGLE TOWARD THE CENTER OF THE MAT. FOUR INCHES OF EACH STAKE SHALL REMAIN ABOVE THE SURFACE OF THE MAT.*
6. *MATS MAY BE INSTALLED IN UP TO 4 INCHES OF STANDING WATER.*

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