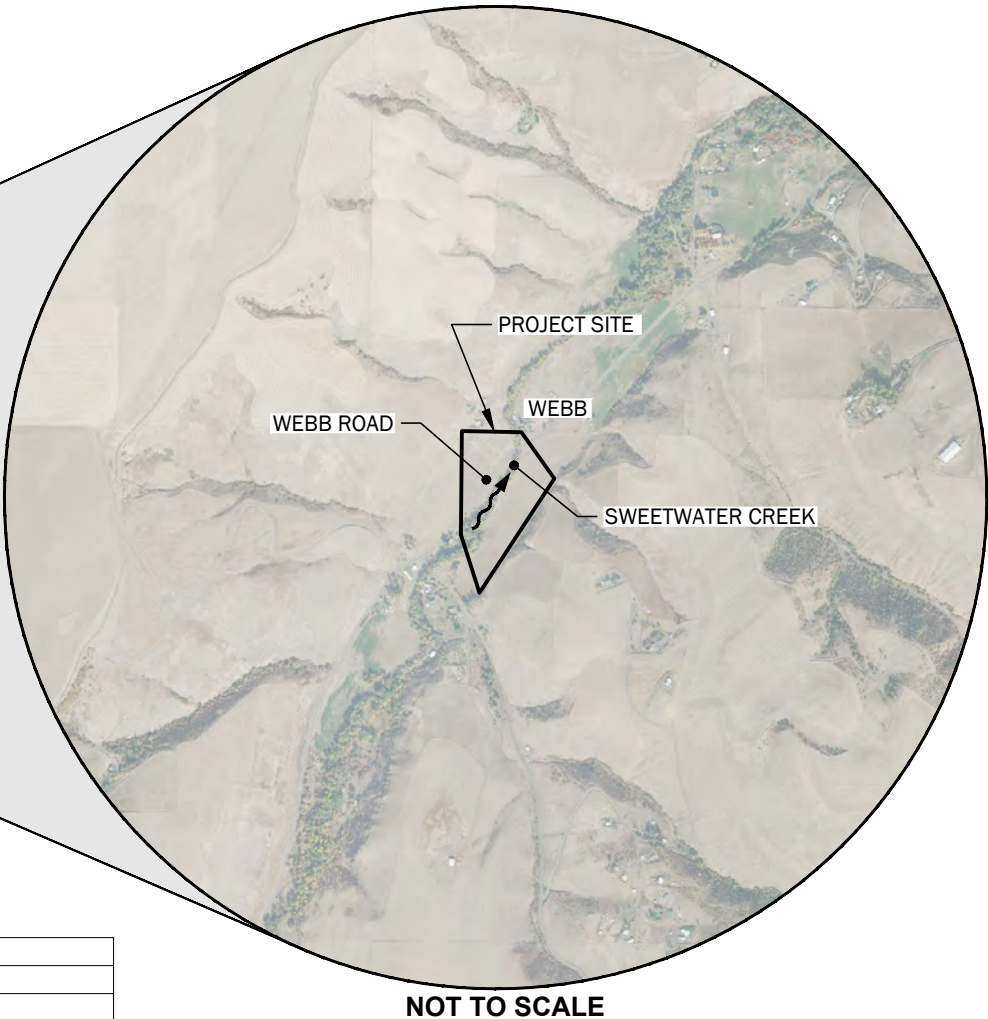
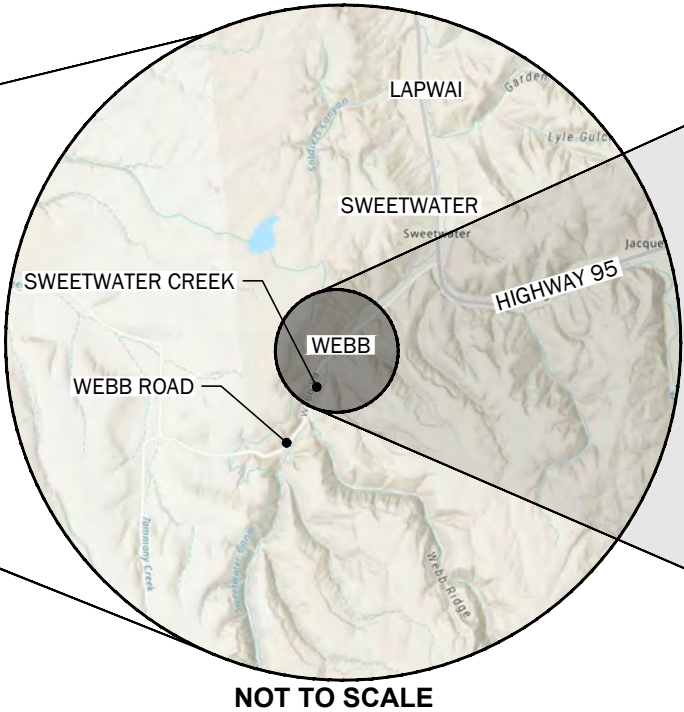
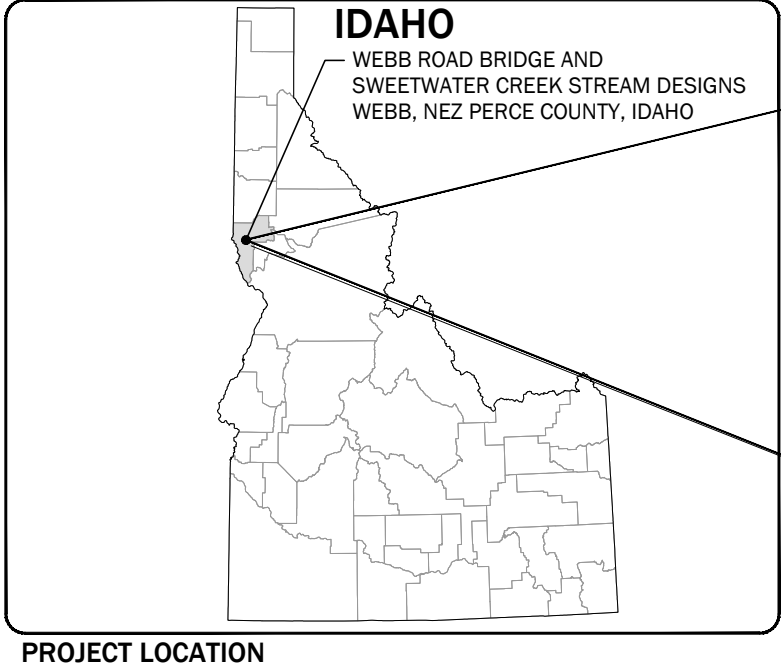


WEBB ROAD BRIDGE AND SWEETWATER CREEK STREAM DESIGNS ISSUE FOR BID SET WEBB, NEZ PERCE COUNTY, IDAHO



SHEET INDEX		
Sheet Number	Drawing Number	Sheet Title
Stream and Floodplain		
1	1.0	Cover Sheet
2	1.1	General Construction Notes and Legend
3	2.0	Existing Conditions Plan
4	3.0	Construction Access and Staging Plan
5	3.1	Season 1_Phase 1 Water Management & TESC Plan
6	3.2	Season 1_Phase 2 Water Management & TESC Plan
7	3.3	Season 2_Phase 1 Water Management & TESC Plan
8	3.4	Season 2_Phase 2 Water Management & TESC Plan
9	3.5	Temporary Water Management & TESC Details
10	4.0	Site Grading Plan
11	4.1	Main Channel Plan & Profile
12	4.2	Main Channel Plan & Profile
13	4.3	Side Channel Plan & Profile
14	4.4	Grading Cross Sections
15	4.5	Typical Sections
16	4.6	Typical Sections
17	4.7	Scour Countermeasure Details
18	4.8	Interim Grading Detail
19	5.0	Habitat Structures Plan
20	5.1	Habitat Structures Details
21	5.2	Habitat Structures Details
22	5.3	Habitat Structures Details

23	6.0	Revegetation Plan
24	6.1	Revegetation Details
25	7.0	HIP - General Conservation Measures
26	7.1	HIP - General Conservation Measures
27	7.2	HIP - General Conservation Measures
28	7.3	HIP - General Conservation Measures
Roadway		
29	8.1	Existing Roadway Conditions
30	8.2	Roadway Plan & Profile
31	8.3	Edge of Pavement Plan
32	8.4	Approach & Driveway Detail
33	8.5	Approach & Driveway Detail
34	8.6	Guardrail Detail
35	8.7	Typical Roadway Sections
36	8.8	Typical Roadway Sections
37	8.9	Roadway Erosion and Sediment Control Plan
38	8.10	Traffic Detour Plan
39	8.11	Civil Details
Bridge		
40	9.0	Situation and Layout
41	9.1	General Notes
42	9.2	Suggested Construction Sequence
43	9.3	Foundation Plan
44	9.4	Abutment Details (Sheet 1 of 3)
45	9.5	Abutment Details (Sheet 2 of 3)

46	9.6	Abutment Details (Sheet 3 of 3)
47	9.7	Wingwall Details (Sheet 1 of 2)
48	9.8	Wingwall Details (Sheet 2 of 2)
49	9.9	Framing Plan
50	9.10	Typical Section
51	9.11	Girder Details (Sheet 1 of 2)
52	9.12	Girder Details (Sheet 2 of 2)
53	9.13	End Diaphragm Details
54	9.14	Railing Details
55	9.15	Approach Slab Details (Sheet 1 of 2)
56	9.16	Approach Slab Details (Sheet 2 of 2)
57	9.17	Metal Reinforcement

CONTACT INFORMATION

NEZ PERCE TRIBE
SHAWN KASCHMITTER
DFRM WATERSHED DIVISION OFFICE,
SWEETWATER, IDAHO 83530
PH: (208) 621-4728

GEOENGINEERS INC.
RYAN S. CARNIE, PE
412 EAST PARKCENTER BLVD. SUITE 305
BOISE, IDAHO 83706
PH: (208) 258-8326



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

COVER SHEET

DRAWING NUMBER:

1.0

SHEET: 1 OF 57

Plotted: 10/09/2025 2:12:20 | d:\reference P:\0571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 1_1.0 (Cover Sheet).dwg

Plotted: 10/08/2025, 2:1:20 | d:\lawrence P:\00571039\CAD\000\Stream Restoration Design\01_100_Percent\057103900_Sht 2_1.1 (General Const Notes & Legend).dwg

GENERAL NOTES:

1. THESE DESIGNS AND DRAWINGS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE NEZ PERCE TRIBE AND THEIR AUTHORIZED AGENTS. NO OTHER PARTY MAY RELY ON THE PRODUCT OF OUR SERVICES UNLESS GEOENGINEERS INC. (GEOENGINEERS) AGREES IN WRITING IN ADVANCE OF SUCH USE.
2. THE DRAWINGS CONTAINED WITHIN SHOULD NOT BE APPLIED FOR ANY PURPOSE OR PROJECT EXCEPT THE WEBB ROAD BRIDGE SWEETWATER CREEK STREAM DESIGN AS SHOWN IN THE PROJECT AREA LOCATED ON DRAWING 1.0.
3. THESE DESIGNS AND DRAWINGS ARE COPYRIGHTED BY GEOENGINEERS, INC. ANY USE, ALTERATION, DELETION, OR EDITING OF THIS DOCUMENT WITHOUT EXPLICIT WRITTEN PERMISSION FROM GEOENGINEERS, INC. IS STRICTLY PROHIBITED. ANY OTHER UNAUTHORIZED USE OF THIS DOCUMENT IS PROHIBITED.
4. GEOMORPHIC CONDITIONS CAN CHANGE AND THESE DESIGNS ARE BASED ON CONDITIONS THAT EXISTED AT THE TIME THE DESIGN WAS PERFORMED. THE RESULTS OF THESE DESIGNS MAY BE AFFECTED BY THE PASSAGE OF TIME, BY MANMADE EVENTS SUCH AS CONSTRUCTION ON OR ADJACENT TO THE SITE, OR BY NATURAL EVENTS SUCH AS FLOODS, EARTHQUAKES, SLOPE INSTABILITY OR GROUNDWATER FLUCTUATIONS. ALWAYS CONTACT GEOENGINEERS BEFORE APPLYING THESE DESIGNS TO DETERMINE IF THEY REMAIN APPLICABLE.
6. ALL RIVERS, STREAMS, ROCKS AND FISH PASSAGE STRUCTURES ARE POTENTIALLY DANGEROUS. THESE PROPOSED IMPROVEMENTS ARE INTENDED TO ADDRESS STREAM CONVEYANCE AND AQUATIC HABITAT CONSTRAINTS. THESE STRUCTURES ARE INHERENTLY DANGEROUS TO PEOPLE IN OR AROUND THEM. THE NEZ PERCE TRIBE AND THE TRIBAL ALLOTMENT OWNERS SHOULD ADDRESS SAFETY CONCERNS APPROPRIATELY.
7. THE PROJECT SITE IS NOT WITHIN A FEMA REGULATORY FLOODPLAIN. POTENTIAL REGULATORY CHANGES TO FLOOD ELEVATIONS AND FLOOD EXTENTS RESULTING FROM THE PROPOSED ENHANCEMENTS HAVE NOT BEEN ADDRESSED BY GEOENGINEERS AS PART OF THIS PROJECT.
8. IN GENERAL, THE PROPOSED ENHANCEMENTS ARE INTENDED TO RESULT IN MORE STABLE STREAMBEDS, BANKS AND FLOODPLAINS. HOWEVER, CHANNEL EROSION, CHANNEL MIGRATION AND/OR AVULSIONS CAN BE EXPECTED TO OCCUR OVER TIME. THESE CHANNEL PROCESSES ARE NATURAL AND APPROPRIATE FOR THIS STREAM SYSTEM.
9. DESIGN SPECIFICS FOR STRUCTURES SHALL BE CONFIRMED AND/OR VERIFIED BY A QUALIFIED ENGINEER PRIOR TO OR DURING CONSTRUCTION AT EACH PROPOSED STRUCTURE LOCATION.
10. THESE DRAWINGS WERE ORIGINALLY PRODUCED IN COLOR.

CONSTRUCTION NOTES:

1. ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
2. ALL MATERIAL AND WORKMANSHIP FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS OF PROJECT PERMITS, APPROVING AGENCIES, IDAHO TRANSPORTATION DEPARTMENT SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS AS SET FORTH HEREIN.
3. ALL FEDERAL, STATE AND LOCAL PERMITS SHALL BE OBTAINED BY PRIOR TO CONSTRUCTION ACTIVITY COMMENCEMENT.
4. THE CONTRACTOR SHALL INSTALL AND MAINTAIN APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT THE WHOLE PROJECT SITE, INCLUDING THOSE ASSOCIATED WITH CONSTRUCTION ACCESS, STAGING AND STOCKPILE AREAS THROUGHOUT THE PROJECT'S CONSTRUCTION PERIOD. TEMPORARY CONSTRUCTION AND PERMANENT EROSION CONTROL MEASURES SHALL BE DESIGNED, CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH BONNEVILLE POWER HIP GUIDELINES AS IDENTIFIED ON THESE CONSTRUCTION DRAWINGS.
5. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE CONSTRUCTION AREAS AND ACCESS ROUTES TO MINIMIZE DISTURBANCE OF THE EXISTING VEGETATION AND LANDSCAPE. ALL PUBLIC AND PRIVATE PROPERTY EITHER INSIDE OR OUTSIDE THE CONSTRUCTION LIMITS IMPACTED BY CONSTRUCTION SHALL BE RESTORED WITH REVEGETATION PLANTING AS SHOWN ON THESE DRAWINGS AND AS SPECIFIED IN THE PROJECT SPECIFICATIONS. NO CONSTRUCTION-RELATED MATERIALS, DEBRIS, GARBAGE, EQUIPMENT, FUEL, PROVISIONS OF ANY KIND SHALL REMAIN ON SITE AFTER CONSTRUCTION. NO STOCKPILES OR EXCAVATIONS ARE TO REMAIN AFTER CONSTRUCTION UNLESS AUTHORIZED BY THE NEZ PERCE TRIBE. THE SITE WILL BE GRADED TO APPEAR NATURAL AND CONFORM TO THE NATURAL TOPOGRAPHY.
6. CONSTRUCTION SHALL MINIMIZE DISTURBANCE TO, AND MAXIMIZE REUSE OF, EXISTING RIPARIAN VEGETATION TO REMAIN AND SALVAGE AS IDENTIFIED IN THE PROJECT SPECIFICATIONS.
7. CONSTRUCTION RECORDS AND AS-BUILT INFORMATION SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR AND SUPPLIED TO THE OWNER AND GEOENGINEERS. SUBMITTAL OF RECORD INFORMATION IS A CONDITION OF FINAL ACCEPTANCE.
9. THIS DESIGN HAS BEEN PERFORMED AND THESE PLANS HAVE BEEN PREPARED WITH THE EXPRESS UNDERSTANDING THAT GEOENGINEERS WILL BE ON-SITE DURING CONSTRUCTION TO HELP THE CONTRACT INTERPRET THE DESIGN PLANS AND INTENT.
10. THE PROJECT FOLLOWS ITD 2023 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, THE 2024 SUPPLEMENTALS FOR STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND PROJECT SPECIFIC SUPPLEMENTAL SPECIFICATIONS.
11. IMPLEMENTATION OF THE COMPLETED PROJECT WILL BE COMPLETED IN TWO IN-WATER WORK SEASONS AND A TEMPORARY CONDITION WILL EXIST BETWEEN THE CONSECUTIVE CONSTRUCTION PHASE SEQUENCES

LEGEND (EXISTING)

EXISTING MAJOR (5-FT) CONTOUR LINE

EXISTING MINOR (1-FT) CONTOUR LINE

SWEETWATER CREEK ALIGNMENT

THALWEG

EXISTING THALWEG

SITE BOUNDARY

OHW

EXISTING ORDINARY HIGH WATERMARK (OHWM)

X

EXISTING FENCE

FLOW DIRECTION

SURVEY BENCHMARK

CROSS-SECTION CALLOUT

LEGEND (PROPOSED)

PROPOSED MAJOR (5-FT) CONTOUR LINE

PROPOSED MINOR (1-FT) CONTOUR LINE

APPROXIMATE PROJECT BOUNDARY

EXCAVATION LIMITS

TEMPORARY CONSTRUCTION ACCESS

TEMPORARY CONSTRUCTION STAGING

TEMPORARY STOCKPILING LOCATION

PROJECT DISTURBANCE LIMITS

PRIMARY CHANNEL

SECONDARY CHANNELS

PROPOSED STREAMBED MATERIAL (RIFFLE)

CONSTRUCTED RIFFLE GRADING LIMITS

APPROXIMATE AREA OF POTENTIAL EFFECT (APE)

SILT FENCE

FISH EXCLUSION NET

TEMPORARY CHECK DAM

TEMPORARY WATER MANAGEMENT ROUTE

TEMPORARY DEWATERING PUMP

TEMPORARY DIVERSION PIPE

TEMPORARY EARTHEN PLUG

UPLAND PLANTING

RIPARIAN PLANTING

TYPICAL LWM W/ ROOTWAD

TYPICAL LWM WITHOUT ROOTWAD

PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

GENERAL CONSTRUCTION NOTES
AND LEGEND

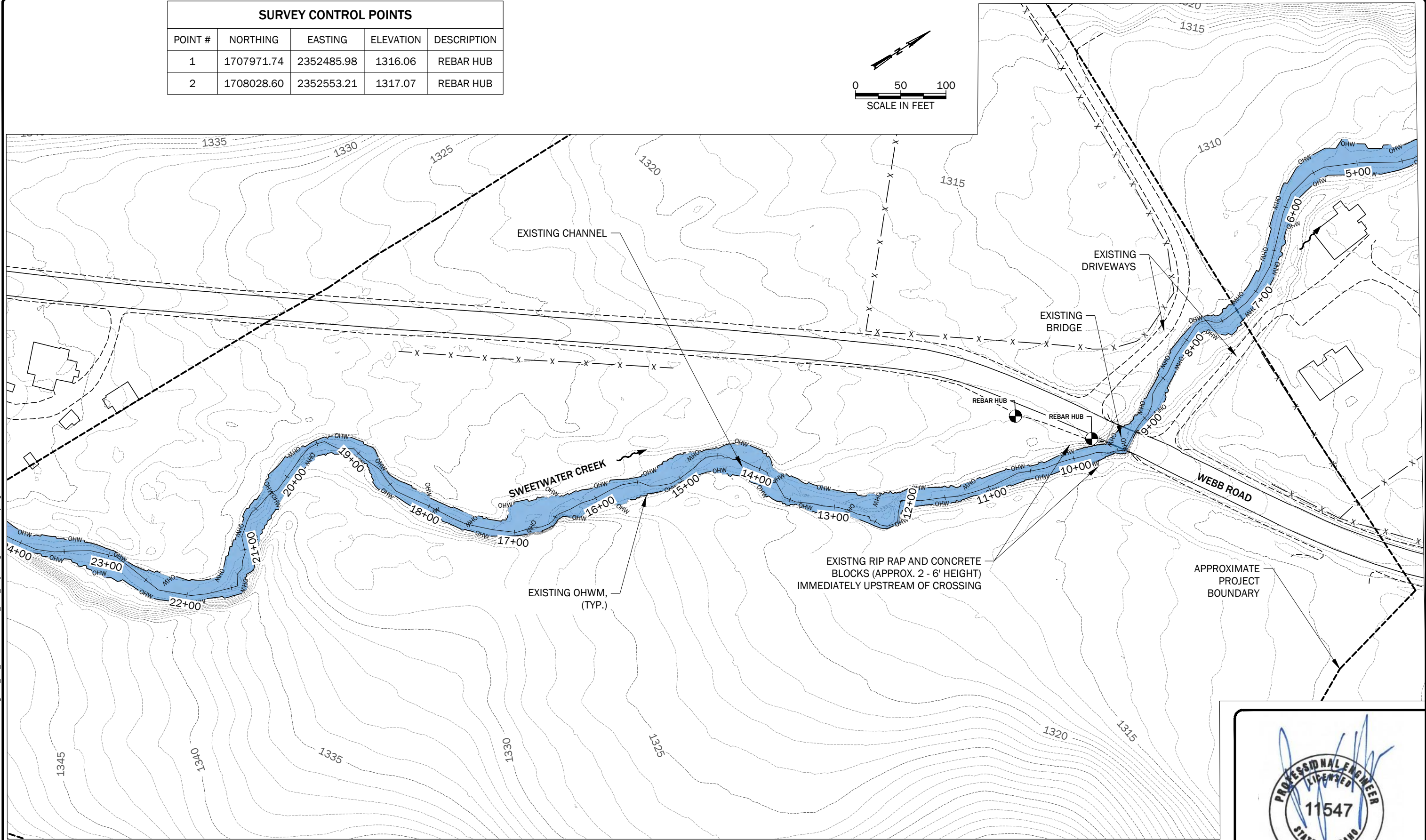
DRAWING NUMBER:

1.1

SHEET: 2 OF 57



SURVEY CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1707971.74	2352485.98	1316.06	REBAR HUB
2	1708028.60	2352553.21	1317.07	REBAR HUB



PLAN VIEW



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

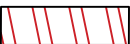
EXISTING CONDITIONS PLAN

DRAWING NUMBER:

2.0

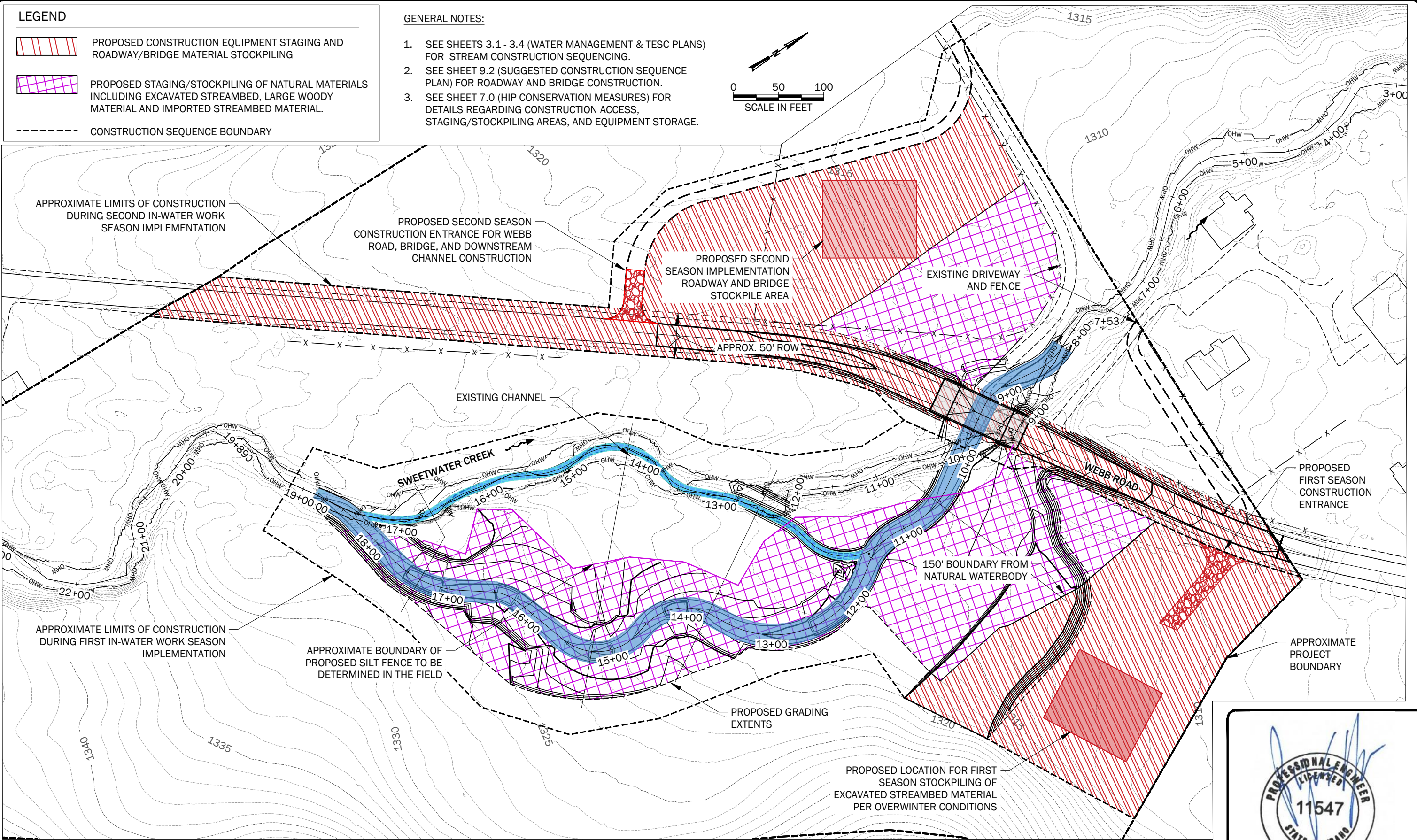
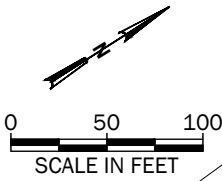
SHEET: 3 OF 57

LEGEND

-  PROPOSED CONSTRUCTION EQUIPMENT STAGING AND ROADWAY/BRIDGE MATERIAL STOCKPILING
-  PROPOSED STAGING/STOCKPILING OF NATURAL MATERIALS INCLUDING EXCAVATED STREAMBED, LARGE WOODY MATERIAL AND IMPORTED STREAMBED MATERIAL.
-  CONSTRUCTION SEQUENCE BOUNDARY

GENERAL NOTES:

1. SEE SHEETS 3.1 - 3.4 (WATER MANAGEMENT & TESC PLANS) FOR STREAM CONSTRUCTION SEQUENCING.
2. SEE SHEET 9.2 (SUGGESTED CONSTRUCTION SEQUENCE PLAN) FOR ROADWAY AND BRIDGE CONSTRUCTION.
3. SEE SHEET 7.0 (HIP CONSERVATION MEASURES) FOR DETAILS REGARDING CONSTRUCTION ACCESS, STAGING/STOCKPILING AREAS, AND EQUIPMENT STORAGE.



PLAN VIEW



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

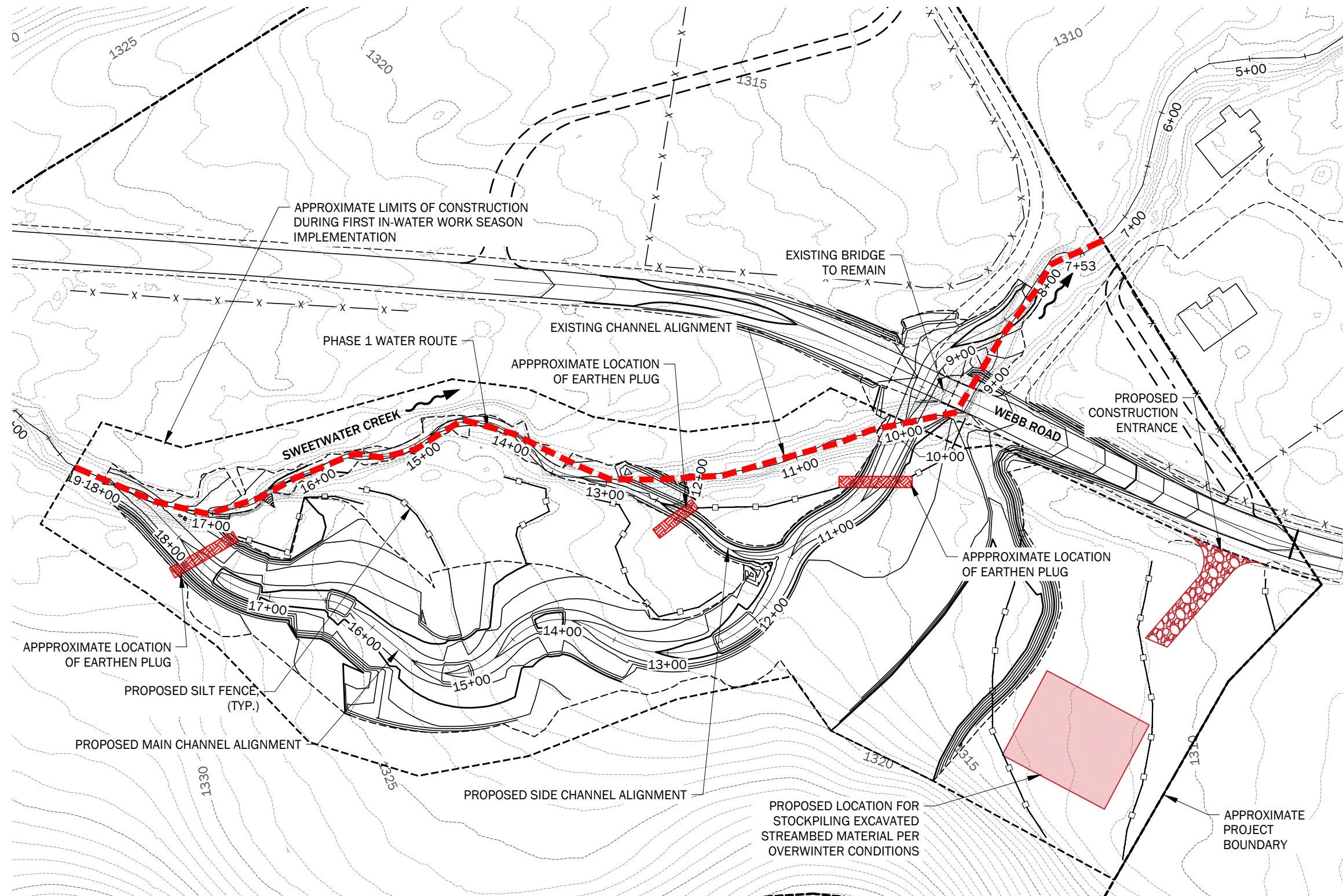
CONSTRUCTION ACCESS AND STAGING PLAN

DRAWING NUMBER:

3.0

SHEET: 4 OF 57

Plotted: 10/08/2025, 21:21 | d:\awrence P:\00571033\CAD\00\Stream Restoration Design\01_100_Percent\057103300_Sht 5.3.1 [Season 1_Phase 1 Water Management & TESC Plan].dwg



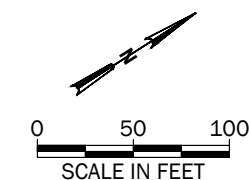
PLAN VIEW

CONSTRUCTION NOTES:

1. BEGIN CONSTRUCTION MOBILIZATION
2. INSTALL CONSTRUCTION ACCESS DRIVEWAY AND ESTABLISH STAGING AREAS. (SEE SHEET 3.5 FOR DETAILS)
3. INSTALL TEMPORARY EARTHEN PLUGS OUTSIDE OF EXISTING OHWM (APPROXIMATELY 30' OFFSET FROM EXISTING RIPARIAN BUFFER)
4. INSTALL SILT FENCES AS SHOWN
5. BEGIN PROPOSED MAIN CHANNEL AND SIDE CHANNEL EXCAVATION OUTSIDE OF EXISTING OHWM.
6. BEGIN SCREENING AND STOCKPILING OF PROPOSED STREAMBED MATERIAL AND LWM

GENERAL NOTES:

1. SEE SHEETS 7.0 - 7.3 (HIP GENERAL CONSERVATION MEASURES) FOR DETAILS RELATED TO:
 - TIMING OF IN-WATER WORK
 - EROSION CONTROL
 - WORK AREA ISOLATION
 - FISH SALVAGE
 - DEWATERING
 - STAGED REWATERING & CONSERVATION MEASURES



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



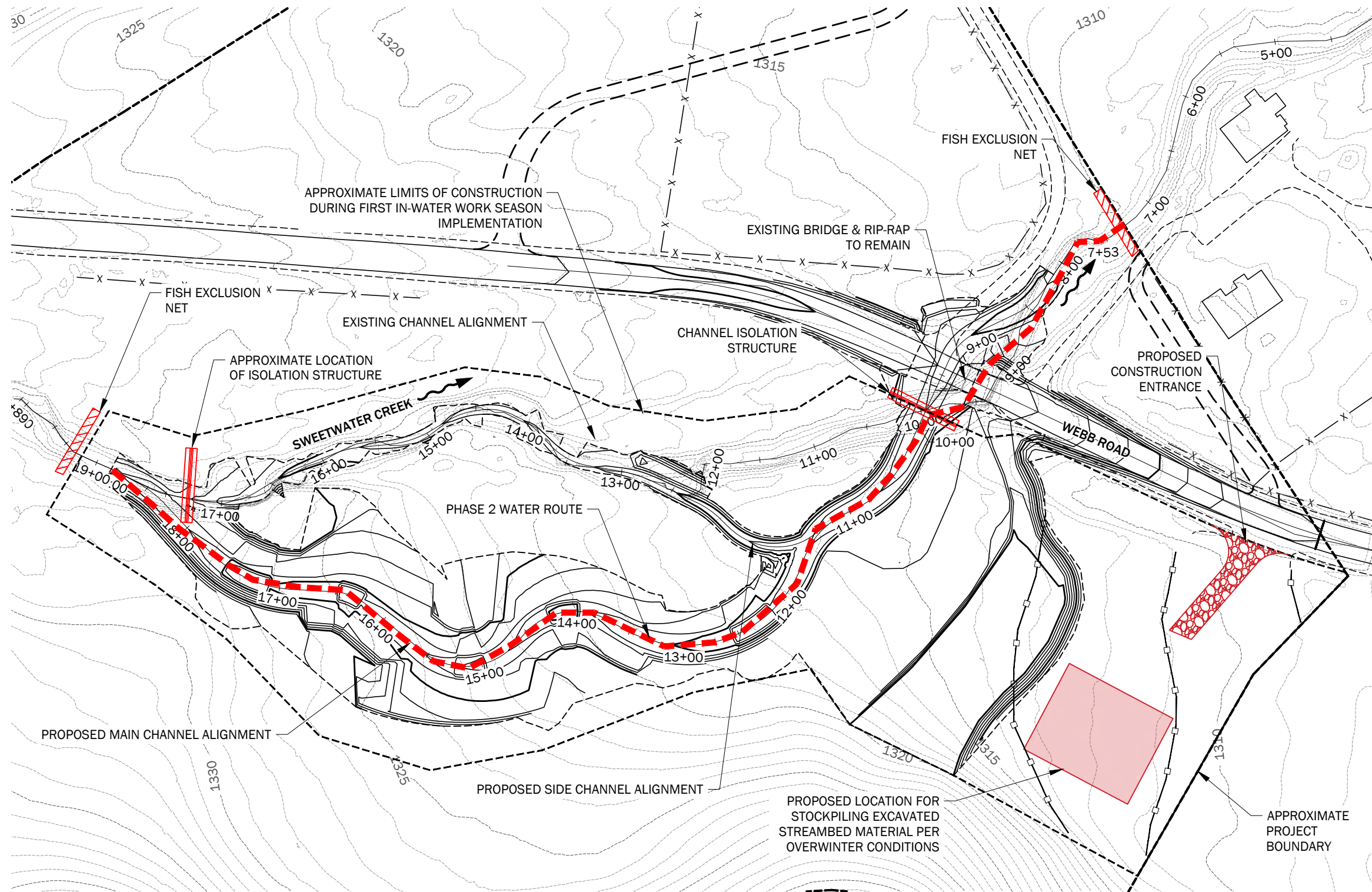
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO
SEASON 1_PHASE 1 WATER MANAGEMENT & TESC PLAN

DRAWING NUMBER:

3.1

SHEET: 5 OF 57

Plotted: 10/08/2025, 21:21 | d:\lawrence P:\00571033\CAD\00\Stream Restoration Design\01_100_Percent\057103300_Sht 6.3.2 [Season 1_Phase 2 Water Management & TESC Plan].dwg



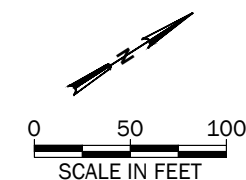
PLAN VIEW

CONSTRUCTION NOTES:

1. INSTALL UPSTREAM AND DOWNSTREAM FISH EXCLUSION NETS AND CONDUCT FISH SALVAGE
2. INSTALL CHANNEL ISOLATION STRUCTURES AS SHOWN
3. COMPLETE FIRST SEASON GRADING AND INSTALLATION OF STREAMBED MATERIAL UPSTREAM OF EXISTING BRIDGE INCLUDING: PROPOSED MAIN CHANNEL, SIDE CHANNEL AND EXISTING CHANNEL
4. INSTALL UPSTREAM LWM SHOWN WITHIN FIRST SEASON CONSTRUCTION LIMITS
5. REMOVE CHANNEL ISOLATION STRUCTURES AND RELEASE FLOWS INTO EXISTING CHANNEL PER HIP CONSERVATION MEASURES
6. REMOVE FISH EXCLUSION NETS
7. COMPLETE ALL FIRST SEASON SITE RESTORATION AND REVEGETATION MEASURES UPON CESSATION OF WORK FOR OVER WINTER CONDITIONS PER HIP GENERAL CONSERVATION MEASURES

GENERAL NOTES:

1. SEE SHEETS 7.0 - 7.3 (HIP GENERAL CONSERVATION MEASURES) FOR DETAILS RELATED TO:
 - TIMING OF IN-WATER WORK
 - EROSION CONTROL
 - WORK AREA ISOLATION
 - FISH SALVAGE
 - DEWATERING
 - STAGED REWATERING & CONSERVATION MEASURES



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



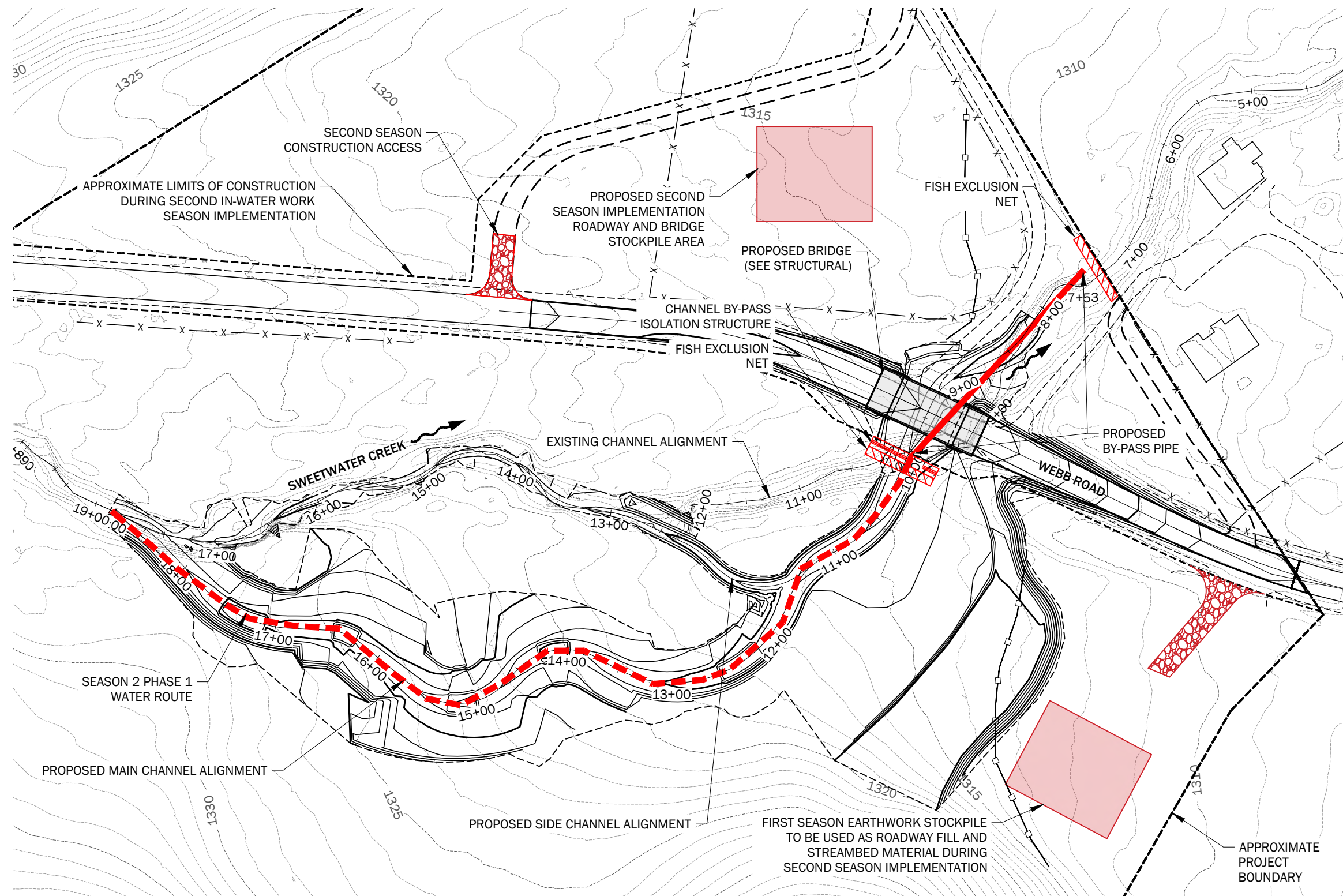
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO
SEASON 1_PHASE 2 WATER MANAGEMENT & TESC PLAN

DRAWING NUMBER:

3.2

SHEET: 6 OF 57

P:\00571033\Stream Restoration Design\01_100_Percent\057103300_Sht 7.3.3 [Season 2_Phase 1 Water Management & TESC Plan].dwg
Plotted: 10/08/2025, 21:21 | d:\awrence P:\00571033\Stream Restoration Design\01_100_Percent\057103300_Sht 7.3.3 [Season 2_Phase 1 Water Management & TESC Plan].dwg



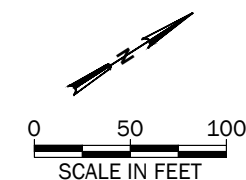
PLAN VIEW

CONSTRUCTION NOTES:

1. INSTALL FISH EXCLUSION NETS UPSTREAM AND DOWNSTREAM AS SHOWN
2. INSTALL CHANNEL BY-PASS PIPE AND ISOLATION STRUCTURE, SEE STRUCTURAL FOR BY-PASS PIPE DETAILS
3. BEGIN BRIDGE DEMO
4. COMPLETE SCOUR COUNTERMEASURES INSTALLATION AND ASSOCIATED GRADING
5. BEGIN DOWNSTREAM CHANNEL EXCAVATION AND STREAMBED INSTALLATION
6. INSTALL DOWNSTREAM LWM STRUCTURES WITHIN SECOND SEASON CONSTRUCTION LIMITS
7. COMPLETE BRIDGE CONSTRUCTION
8. REMOVE CHANNEL BY-PASS ISOLATION STRUCTURE AND RELEASE FLOWS INTO CONNECTED STREAM PER HIP GENERAL CONSERVATION MEASURES
9. REMOVE FISH EXCLUSION NETS

GENERAL NOTES:

1. SEE SHEETS 7.0 - 7.3 (HIP - GENERAL CONSERVATION MEASURES) FOR DETAILS RELATED TO:
 - TIMING OF IN-WATER WORK
 - EROSION CONTROL
 - WORK AREA ISOLATION
 - FISH SALVAGE
 - DEWATERING
 - STAGED REWATERING & CONSERVATION MEASURES



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



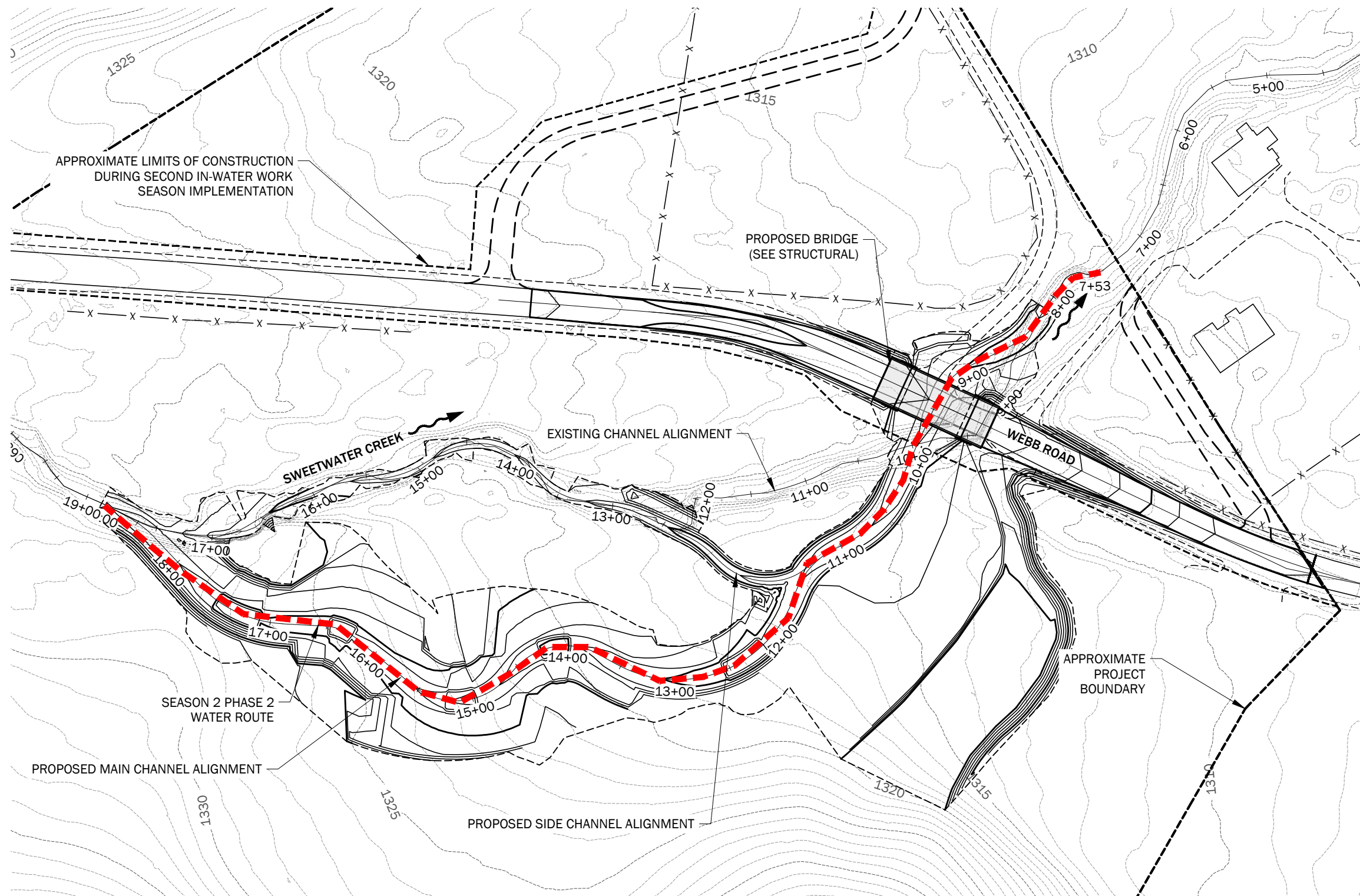
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO
SEASON 2_PHASE 1 WATER MANAGEMENT & TESC PLAN

DRAWING NUMBER:

3.3

SHEET: 7 OF 57

Plotted: 10/08/2025, 21:22 | d:\lawrence P:\00571033\CAD\00\Stream Restoration Design\01_100_Percent\057103300_Sht 8_3.dwg [Season 2_Phase 2 Water Management & TESC Plan].dwg



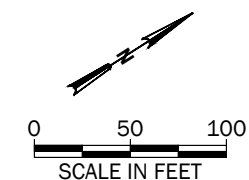
PLAN VIEW

CONSTRUCTION NOTES:

1. COMPLETE ROADWAY CONSTRUCTION AND ASSOCIATED GRADING
2. REMOVE ALL TESC MEASURES
3. COMPLETE RIPARIAN ZONE REVEGETATION AND UPLAND SEEDING INCLUDING SEEDING OF ALL DISTURBED AREAS PER HIP GENERAL CONSERVATION MEASURES

GENERAL NOTES:

1. SEE SHEETS 7.0 - 7.3 (HIP GENERAL CONSERVATION MEASURES) FOR DETAILS RELATED TO:
 - TIMING OF IN-WATER WORK
 - EROSION CONTROL
 - WORK AREA ISOLATION
 - FISH SALVAGE
 - DEWATERING
 - STAGED REWATERING & CONSERVATION MEASURES



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: DWL/RSC
DRAWN BY: DWL/SCY
APPROVED BY: RSC
REVISION NO.:
DATE: 07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



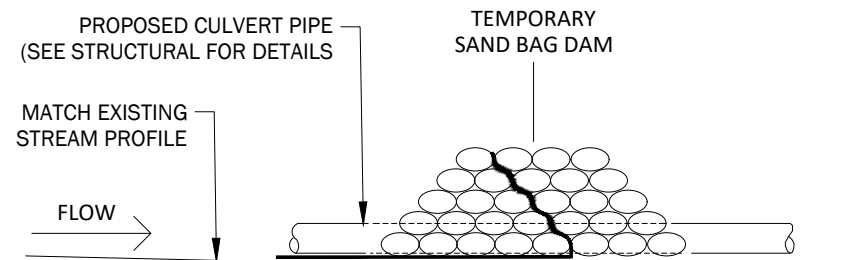
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO
SEASON 2_PHASE 2 WATER MANAGEMENT & TESC PLAN

DRAWING NUMBER:

3.4

SHEET: 8 OF 57

Plotted: 10/08/2025, 21:22 | d:\lawrence P:\0571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 9_3.5 [Temporary Water Management & TESC Details].dwg

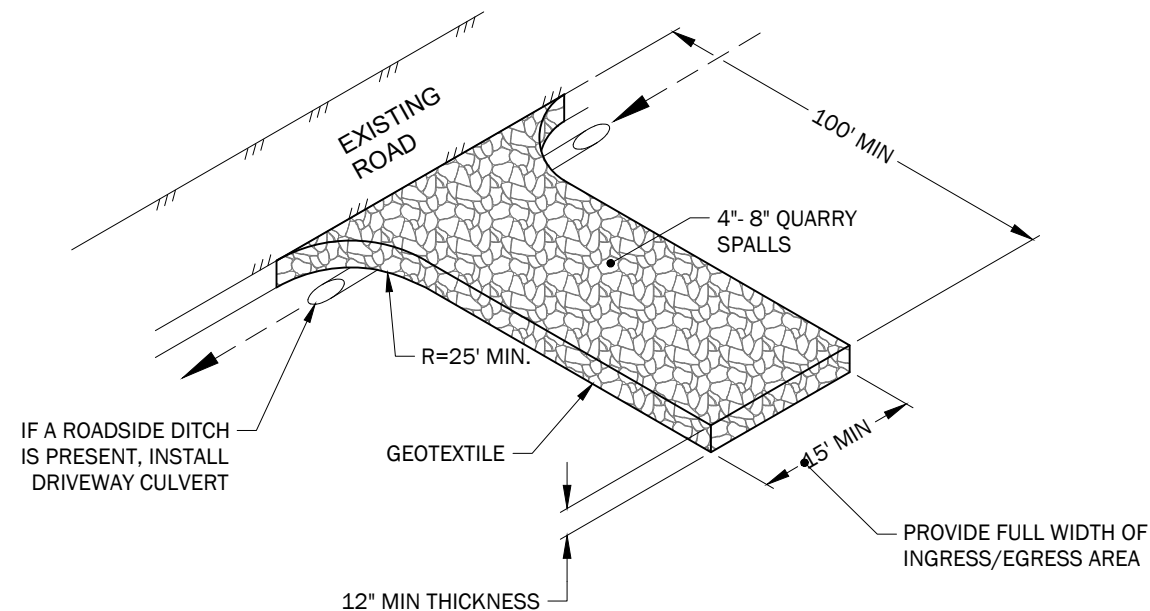


- NOTES:
1. PLASTIC LINER SHALL BE CUT FOR INSERTION OF BYPASS PIPE AND SEALED.
 2. TEMPORARY BY-PASS ISOLATION STRUCTURE TO BE INSTALLED DURING SEASON 2, PHASE 1 CONSTRUCTION

CHANNEL BYPASS ISOLATION STRUCTURE

SCALE: NOT TO SCALE

1
3.5

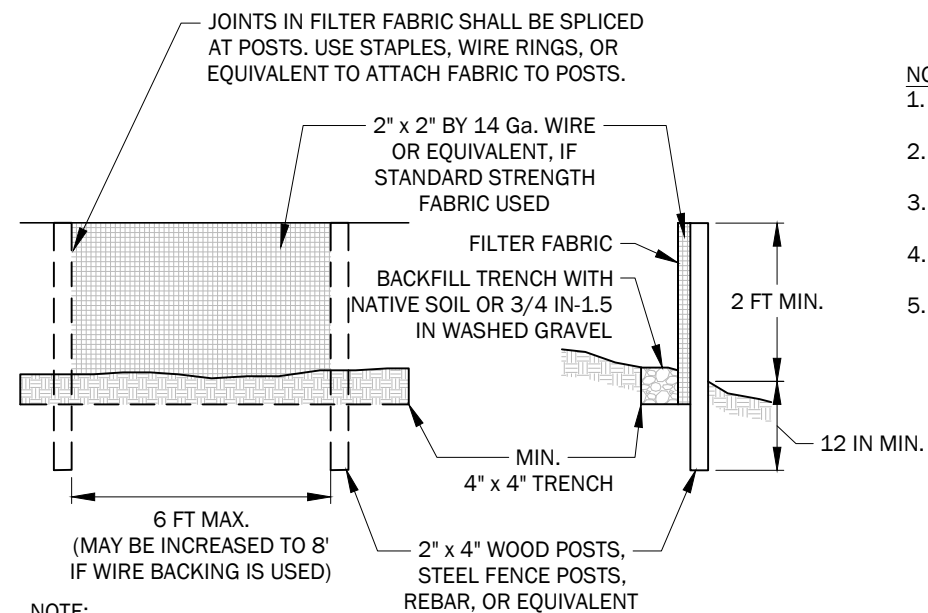


- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF- WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

SCALE: NOT TO SCALE

2
3.5



- NOTE:
1. FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

SEDIMENT FENCE DETAIL

SCALE: NOT TO SCALE

3
3.5

NOTES:

1. SEDIMENT FENCE TO HAVE STITCHED LOOPS AROUND 2" x 2" POSTS.
2. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
3. 3'MIN x 2" x 2" FIR, PINE OR STEEL FENCE POSTS.
4. POSTS TO BE INSTALLED ON DOWNHILL SIDE OF SLOPE.
5. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

TEMPORARY WATER MANAGEMENT & TESC DETAILS

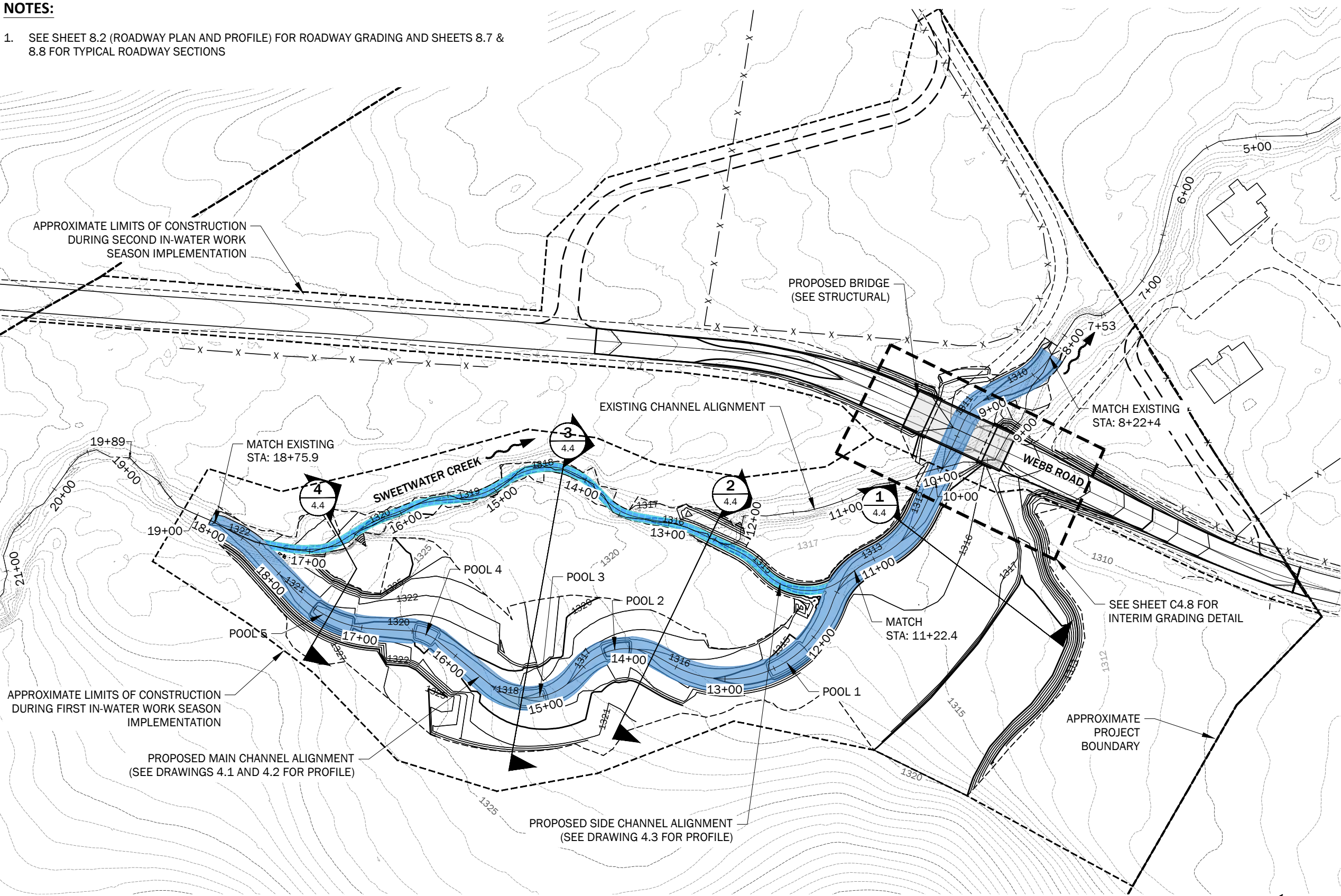
DRAWING NUMBER:

3.5

SHEET: 9 OF 57

NOTES:

1. SEE SHEET 8.2 (ROADWAY PLAN AND PROFILE) FOR ROADWAY GRADING AND SHEETS 8.7 & 8.8 FOR TYPICAL ROADWAY SECTIONS



PLAN VIEW



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

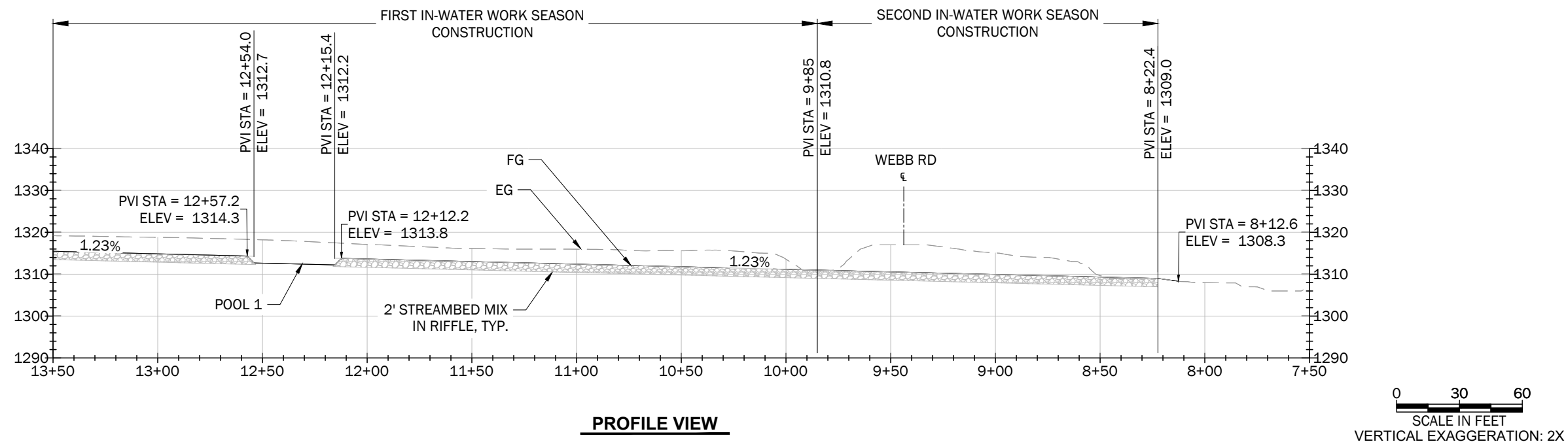
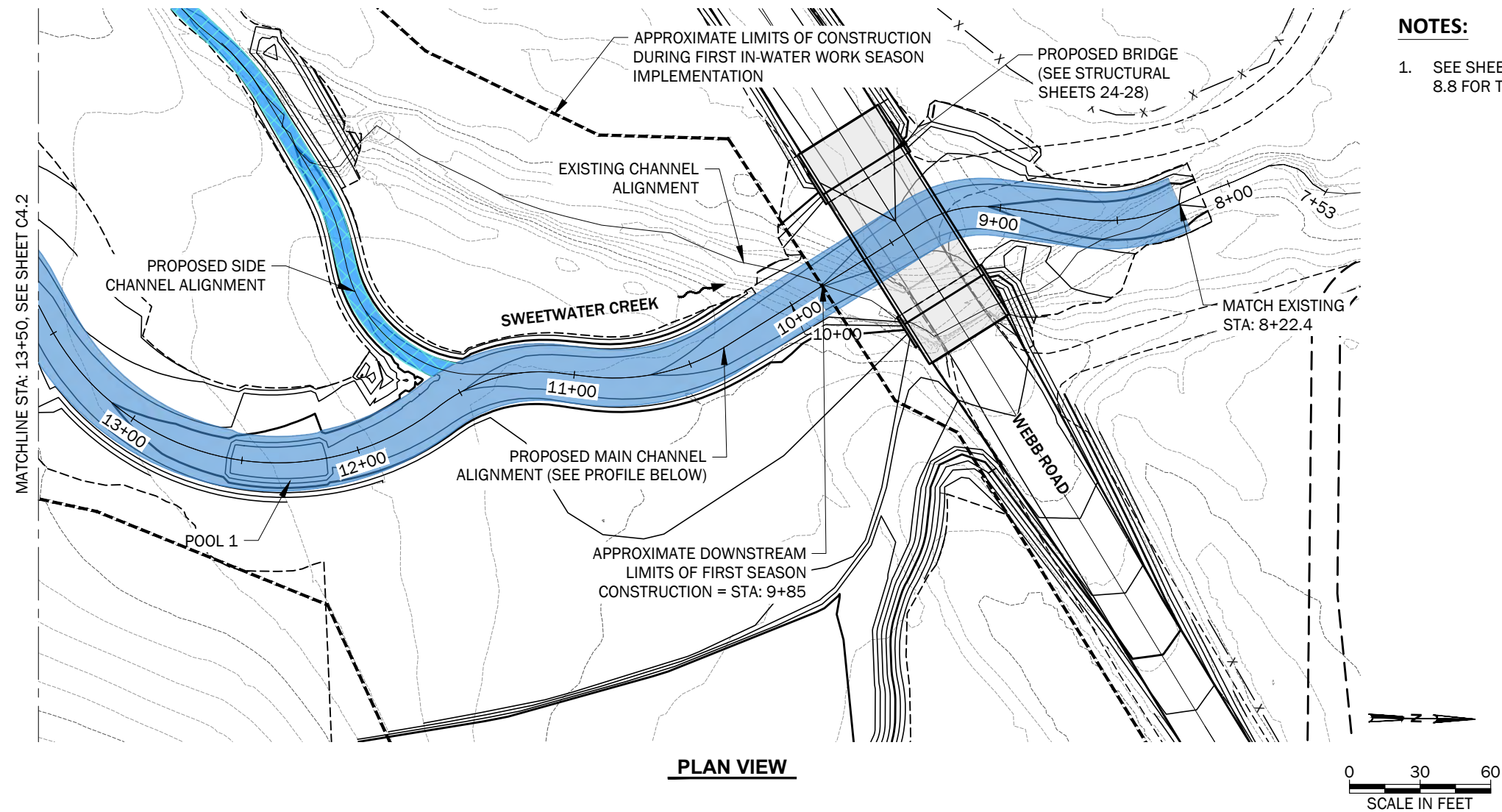
SITE GRADING PLAN

DRAWING NUMBER:

4.0

SHEET: 10 OF 57

Plotted: 10/09/2025 2:12:23 | d:\lawrence P\00571033\CAD\000\Stream Restoration Design\01_00_Percent057103300_Sht 11 4.1 Main Channel Plan & Profile.dwg



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

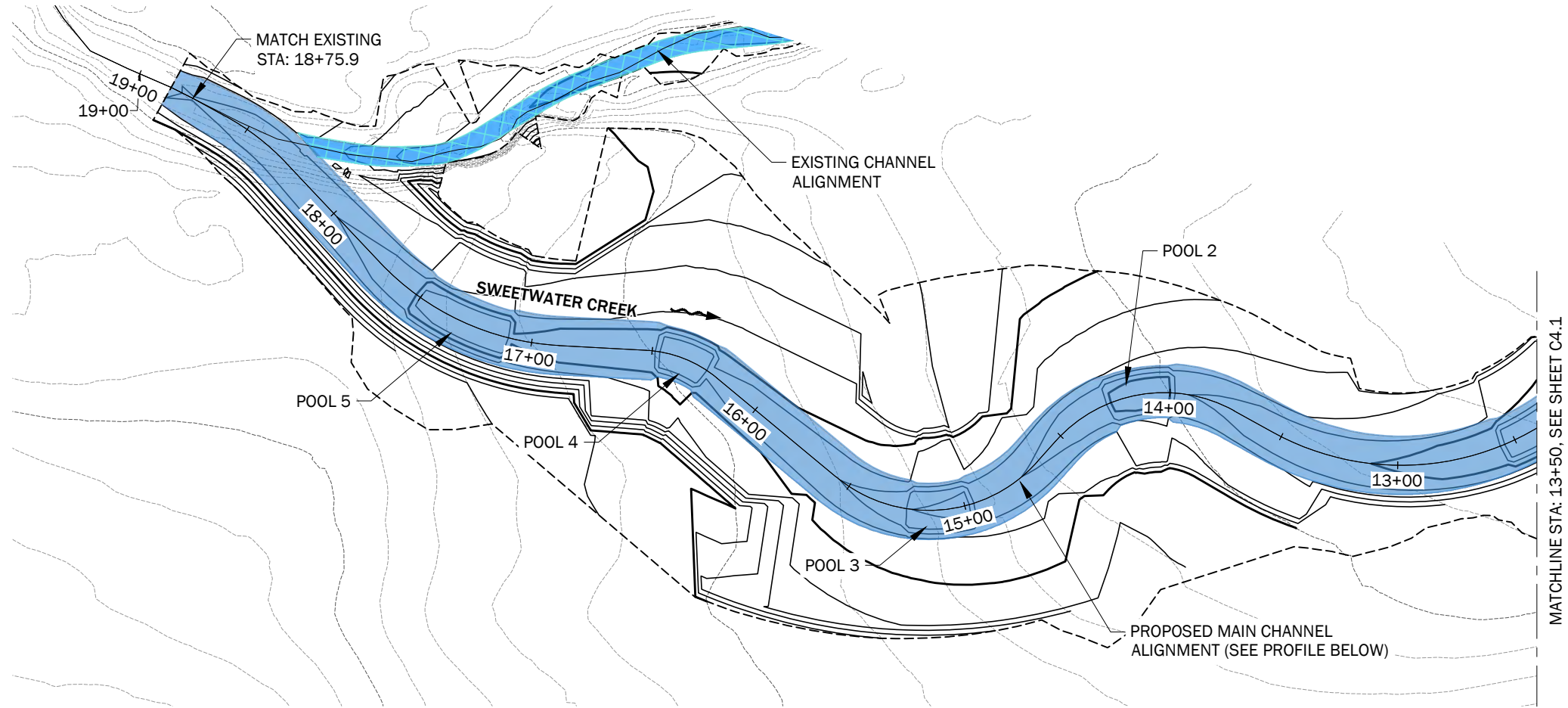
MAIN CHANNEL PLAN & PROFILE

DRAWING NUMBER:

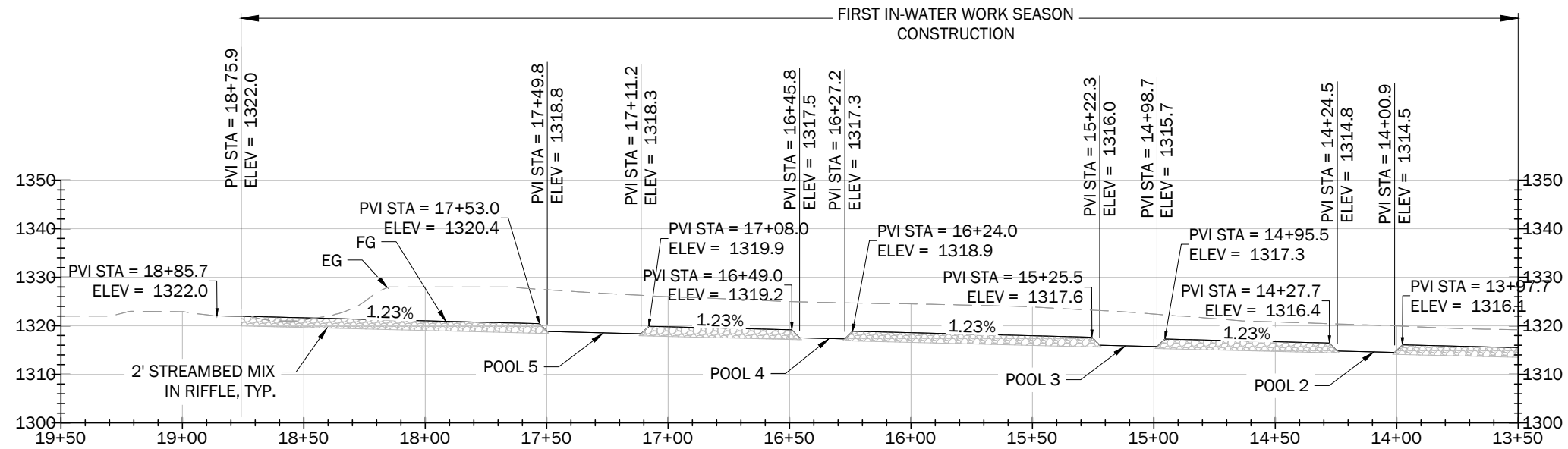
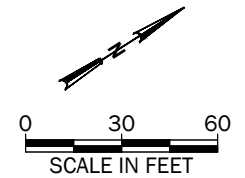
4.1

SHEET: 11 OF 57

Plotted: 10/08/2025 2:12:23 | d:\lawrence P:\00571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 12 4.2 Main Channel Plan & Profile.dwg



PLAN VIEW



PROFILE VIEW



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

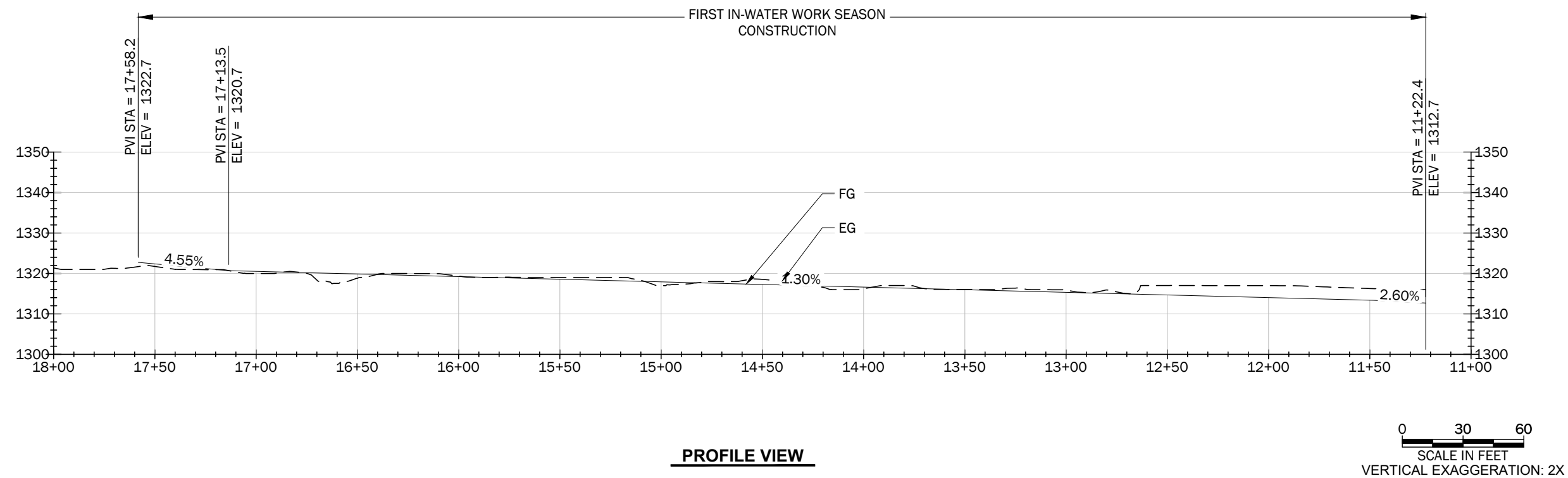
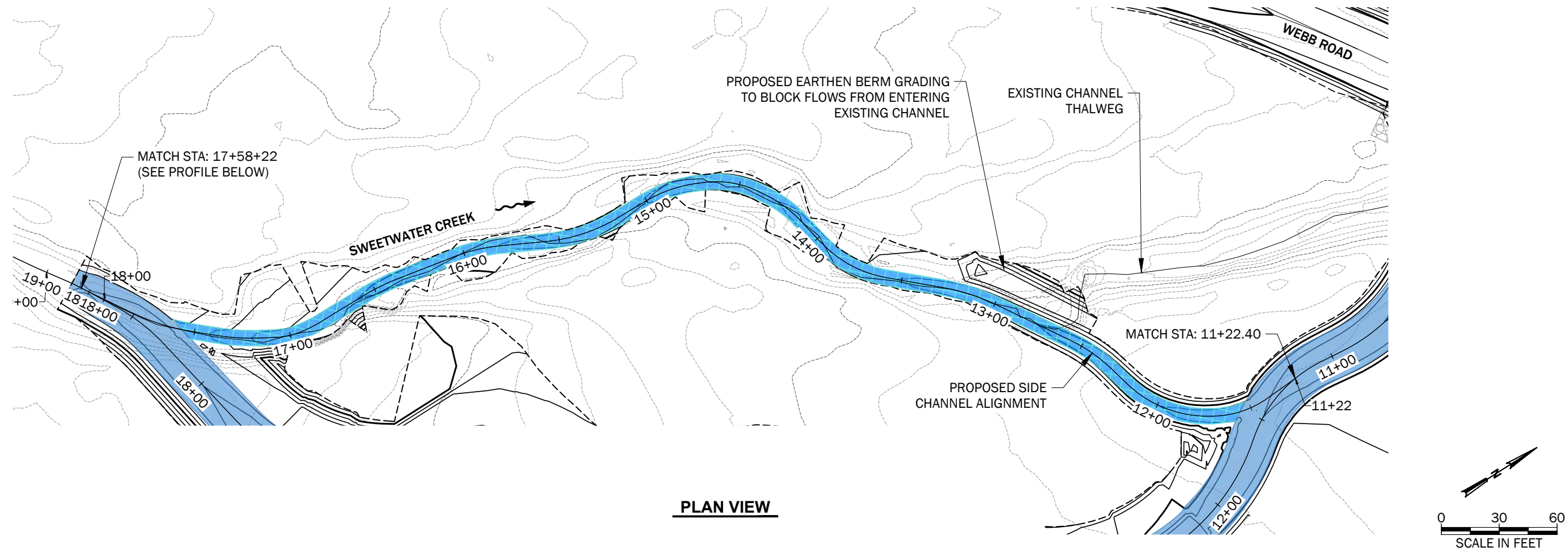
MAIN CHANNEL PLAN & PROFILE

DRAWING NUMBER:

4.2

SHEET: 12 OF 57

Plotted: 10/08/2025 2:12:23 | d:\lawrence P:\0571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 13 4.3 Side Channel Plan & Profile.dwg



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

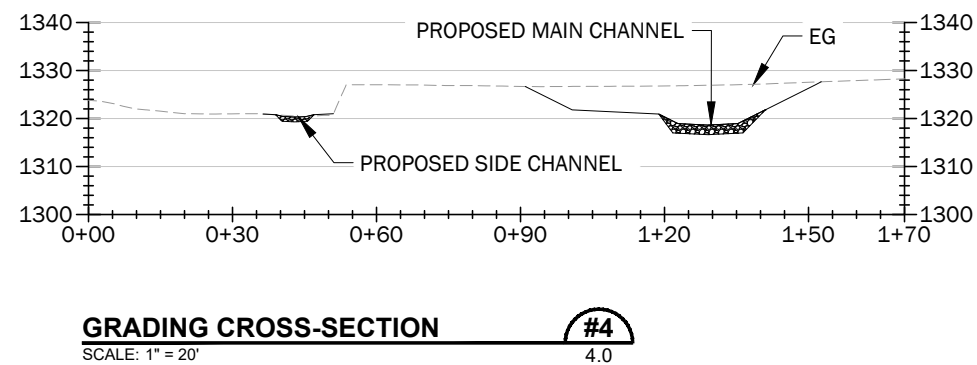
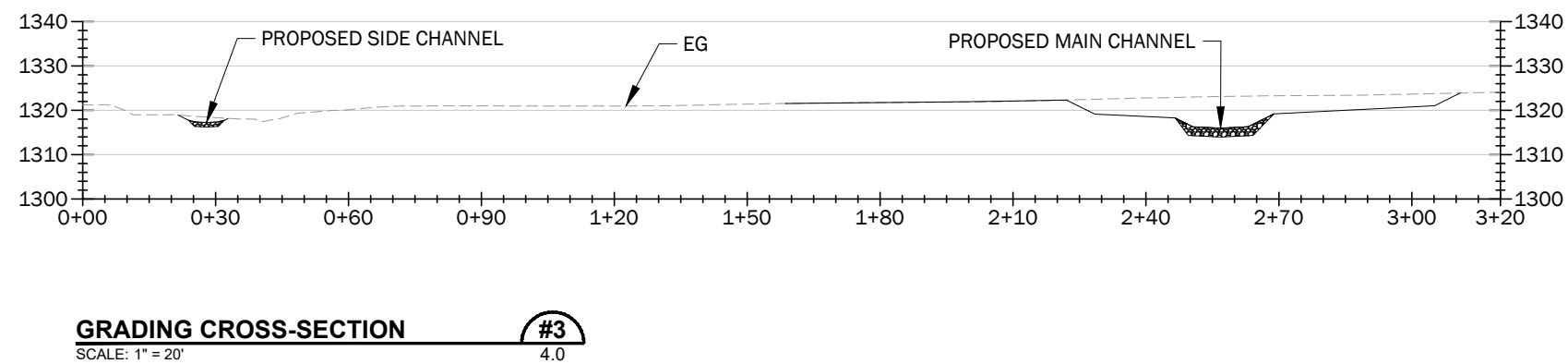
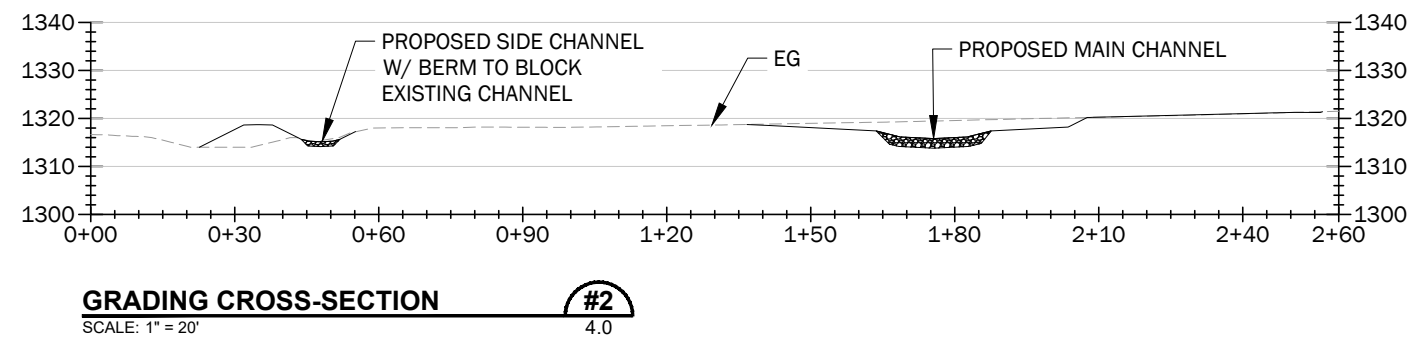
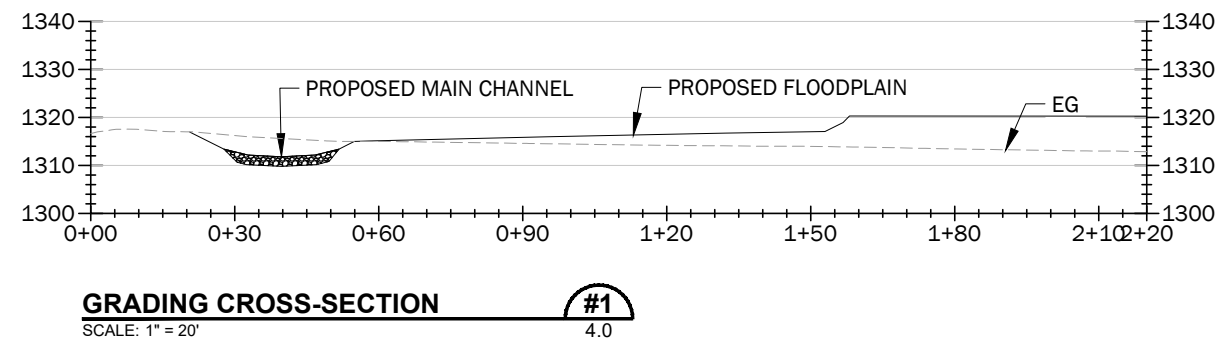
SIDE CHANNEL PLAN & PROFILE

DRAWING NUMBER:

4.3

SHEET: 13 OF 57

Plotted: 10/09/2025 2:12:24 | d:\lawrence P:\0571039\CAD\000\Stream Restoration Design\01_100_Percent\057103900_Sht 14_4.4 [Grading Cross Sections].dwg



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



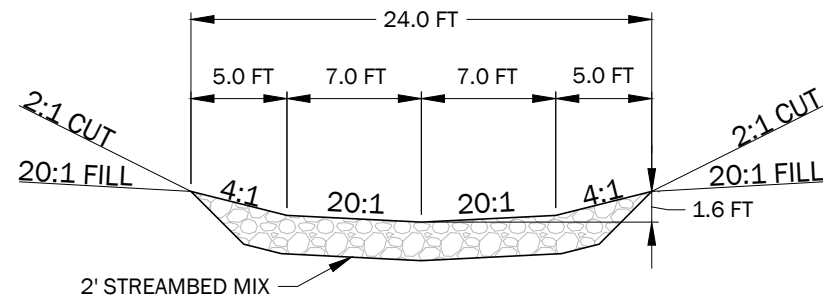
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

GRADING CROSS SECTIONS

DRAWING NUMBER:

4.4

SHEET: 14 OF 57



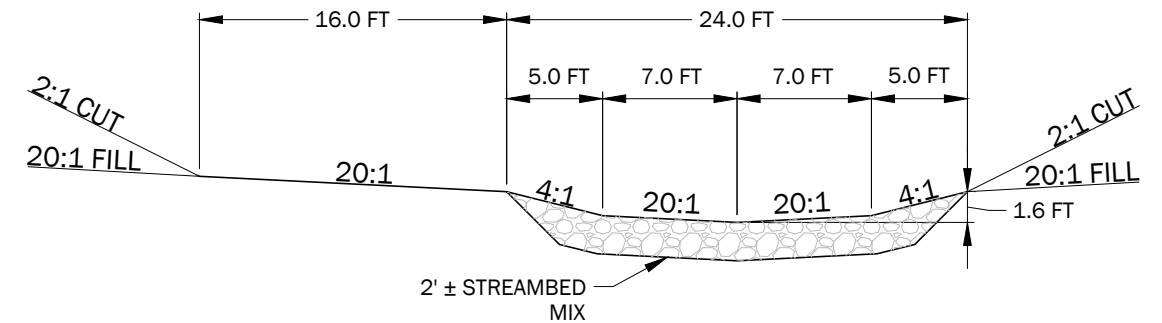
TYPICAL SECTION A - RIFFLE

MAIN CHANNEL ALIGNMENT

STA: 8+22.6 - 9+28.7

STA: 9+58.7 - 11+40.0

STA: 17+91.0 - 18+75.9



TYPICAL SECTION C - POOL TRANSITION W/ FLOODPLAIN LEFT

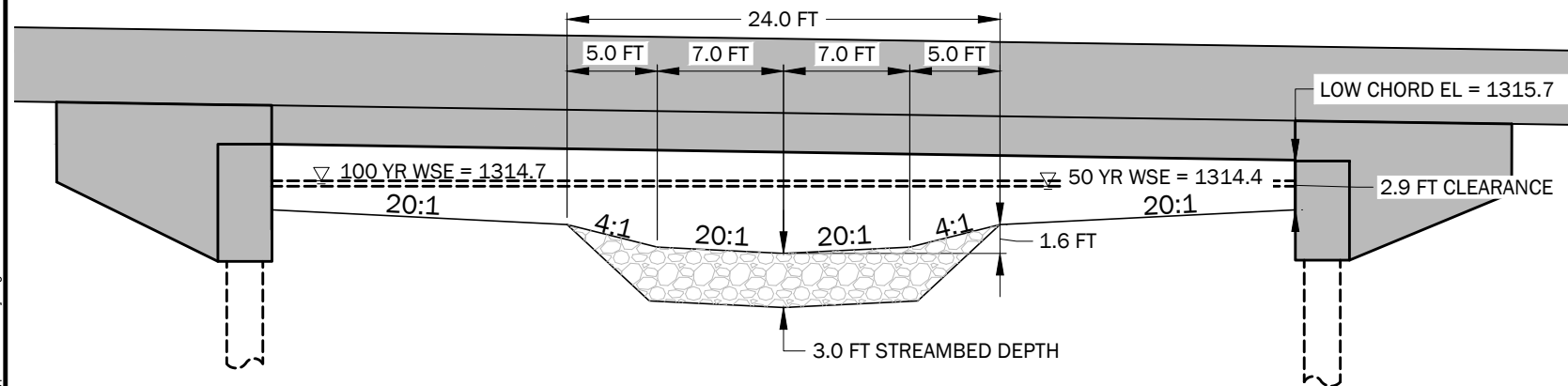
MAIN CHANNEL ALIGNMENT

STA: 11+50.0 - 12+12.2

STA: 12+57.2 - 13+22.5

STA: 16+73.5 - 17+08.0

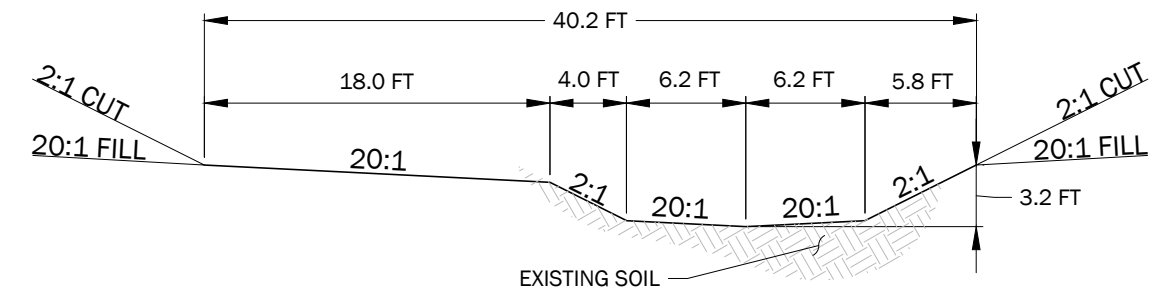
STA: 17+53.0 - 17+91.0



TYPICAL SECTION B - RIFFLE @ BRIDGE CROSSING

MAIN CHANNEL ALIGNMENT

STA: 9+28.7 - 9+58.7



TYPICAL SECTION D - POOL W/ FLOODPLAIN LEFT

MAIN CHANNEL ALIGNMENT

STA: 12+12.2 - 12+57.2

STA: 14+95.5 - 15+25.5

STA: 17+08.0 - 17+53.0

STREAMBED MIX GRADATION

Streambed Cobbles						
Streambed Material Size	18"	8"	6"	4"		
Percent Passing	95-100%	80-95%	60-80%	40-60%		
Streambed Sediment						
Streambed Material Size	2.5"	2"	1"	0.75"	0.19"	0.02"
Percent Passing	80-100%	65-80%	50-65%	35-50%	15-35%	10 MAX



Plotted: 10/09/2025 2:12:24 | d:\awrence P:\0571039\CAD\000\Stream Restoration Design\01_100_Percent\057103900_Sht 15 4.5 [Typical Sections].dwg

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

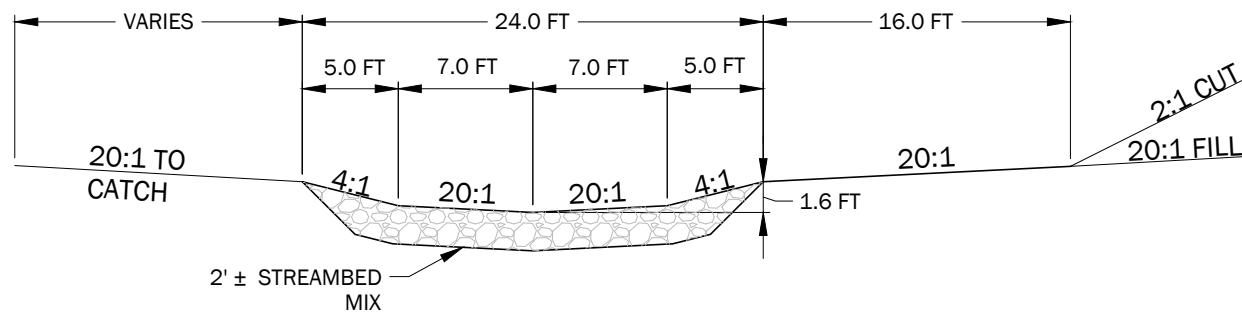
TYPICAL SECTIONS

DRAWING NUMBER:

4.5

SHEET: 15 OF 57

Plotted: 10/08/2025, 2:12:24 | d:\lawrence P:\00571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 16 4.6 [Typical Sections].dwg



TYPICAL SECTION E - POOL TRANSITION W/ FLOODPLAIN RIGHT

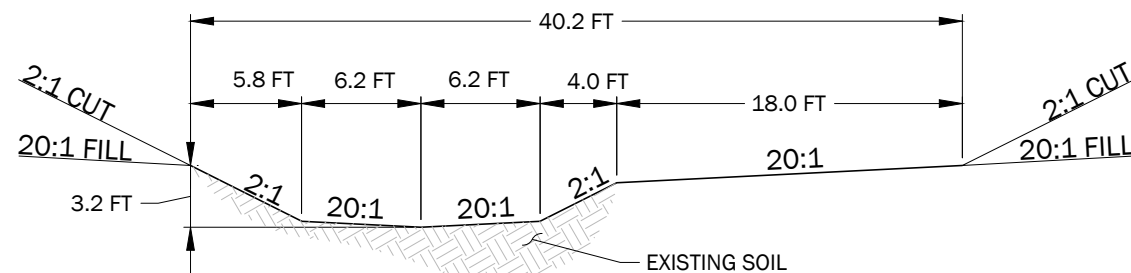
MAIN CHANNEL ALIGNMENT

STA: 13+22.5 - 13+9.7

STA: 14+27.7 - 14+56.6

STA: 15+79.8 - 16+24.1

STA: 16+49.1 - 16+73.5



TYPICAL SECTION F - POOL W/ FLOODPLAIN RIGHT

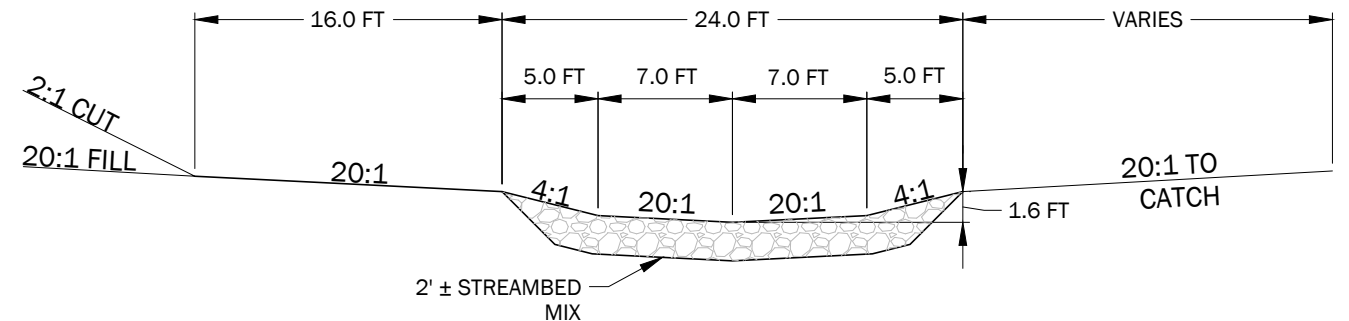
MAIN CHANNEL ALIGNMENT

STA: 13+97.7 - 14+27.7

STA: 16+24.1 - 16+49.1

STREAMBED MIX GRADATION

Streambed Cobbles						
Streambed Material Size	18"	8"	6"	4"		
Percent Passing	95-100%	80-95%	60-80%	40-60%		
Streambed Sediment						
Streambed Material Size	2.5"	2"	1"	0.75"	0.19"	0.02"
Percent Passing	80-100%	65-80%	50-65%	35-50%	15-35%	10 MAX

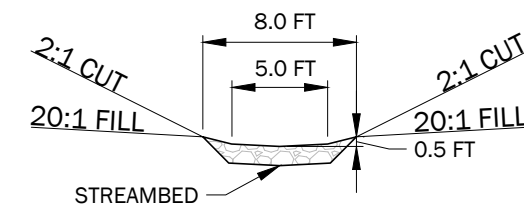


TYPICAL SECTION G - POOL TRANSITION W/ FLOODPLAINS

MAIN CHANNEL ALIGNMENT

STA: 14+56.6 - 14+95.5

STA: 15+25.5 - 15+79.8

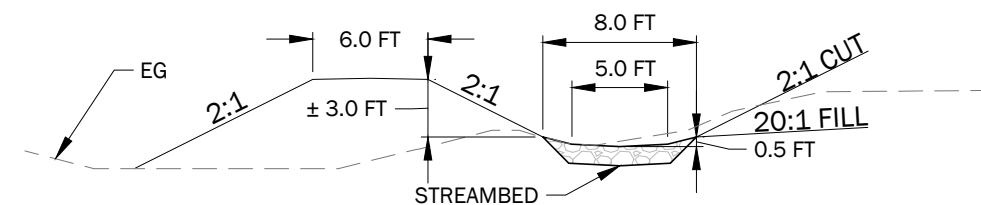


TYPICAL SECTION H - SIDE CHANNEL

SIDE CHANNEL ALIGNMENT

STA: 11+22.4 - 12+50

STA: 13+25 - 18+08.8



TYPICAL SECTION J - SIDE CHANNEL W/ BERM

SIDE CHANNEL ALIGNMENT

STA: 12+50 - 13+25



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

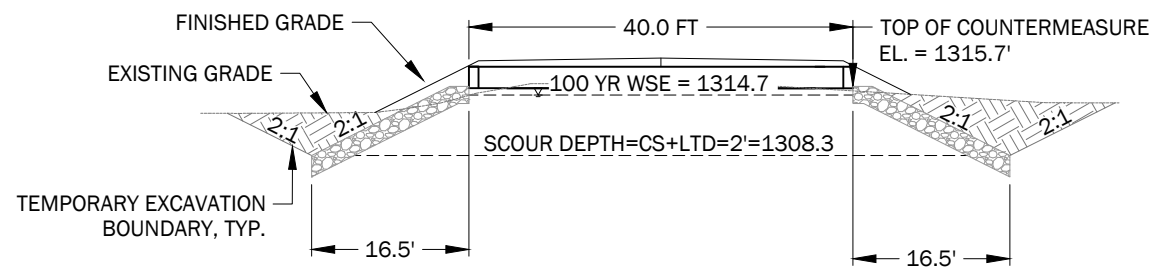
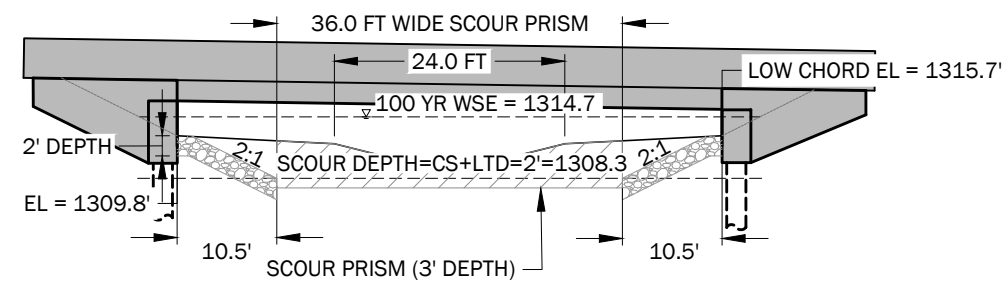
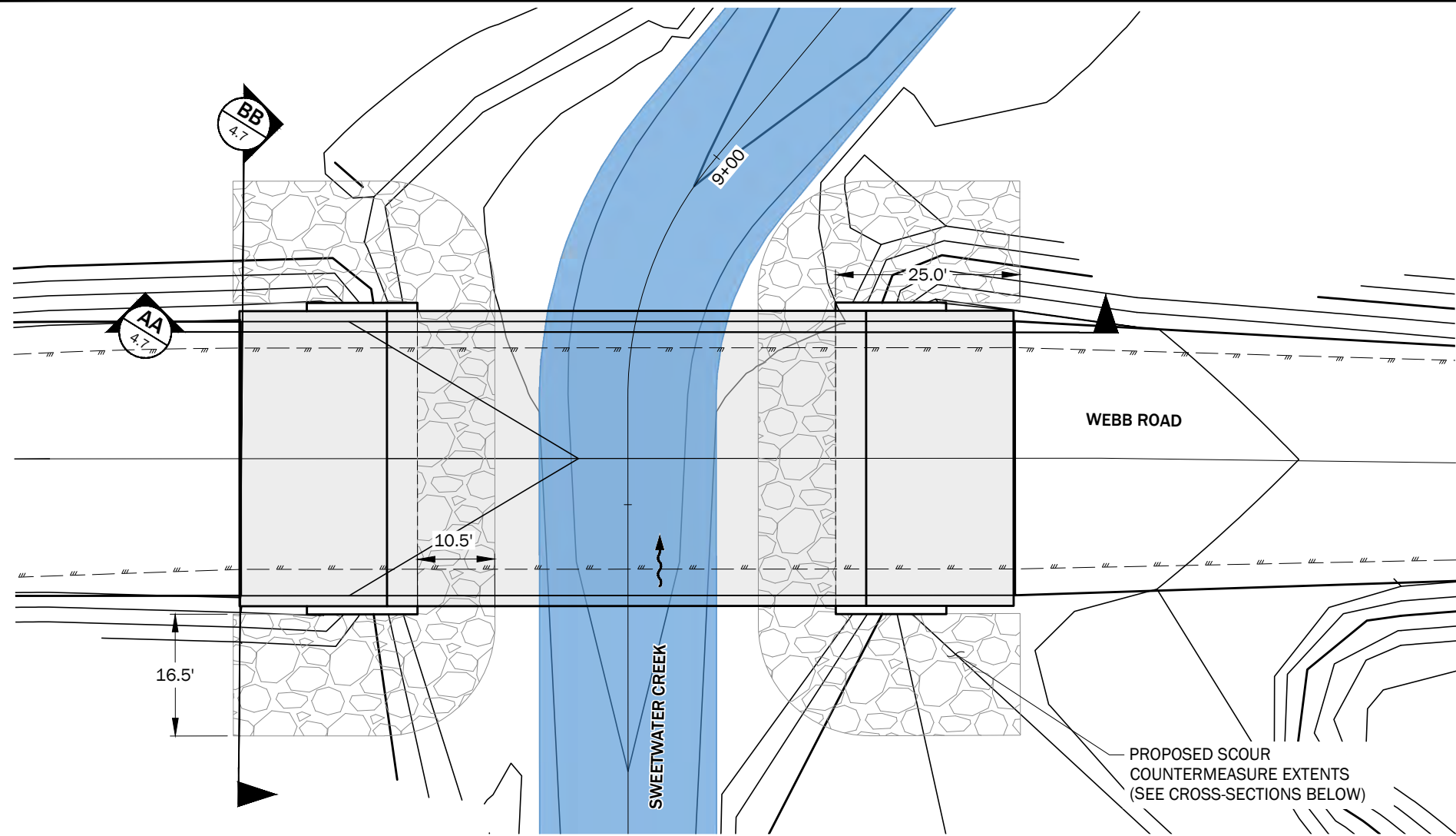
TYPICAL SECTIONS

DRAWING NUMBER:

4.6

SHEET: 16 OF 57

Plotted: 10/08/2025 21:46 | d:\lawrence P:\00571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 17 4.7 [Scour Countermeasure Details].dwg



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

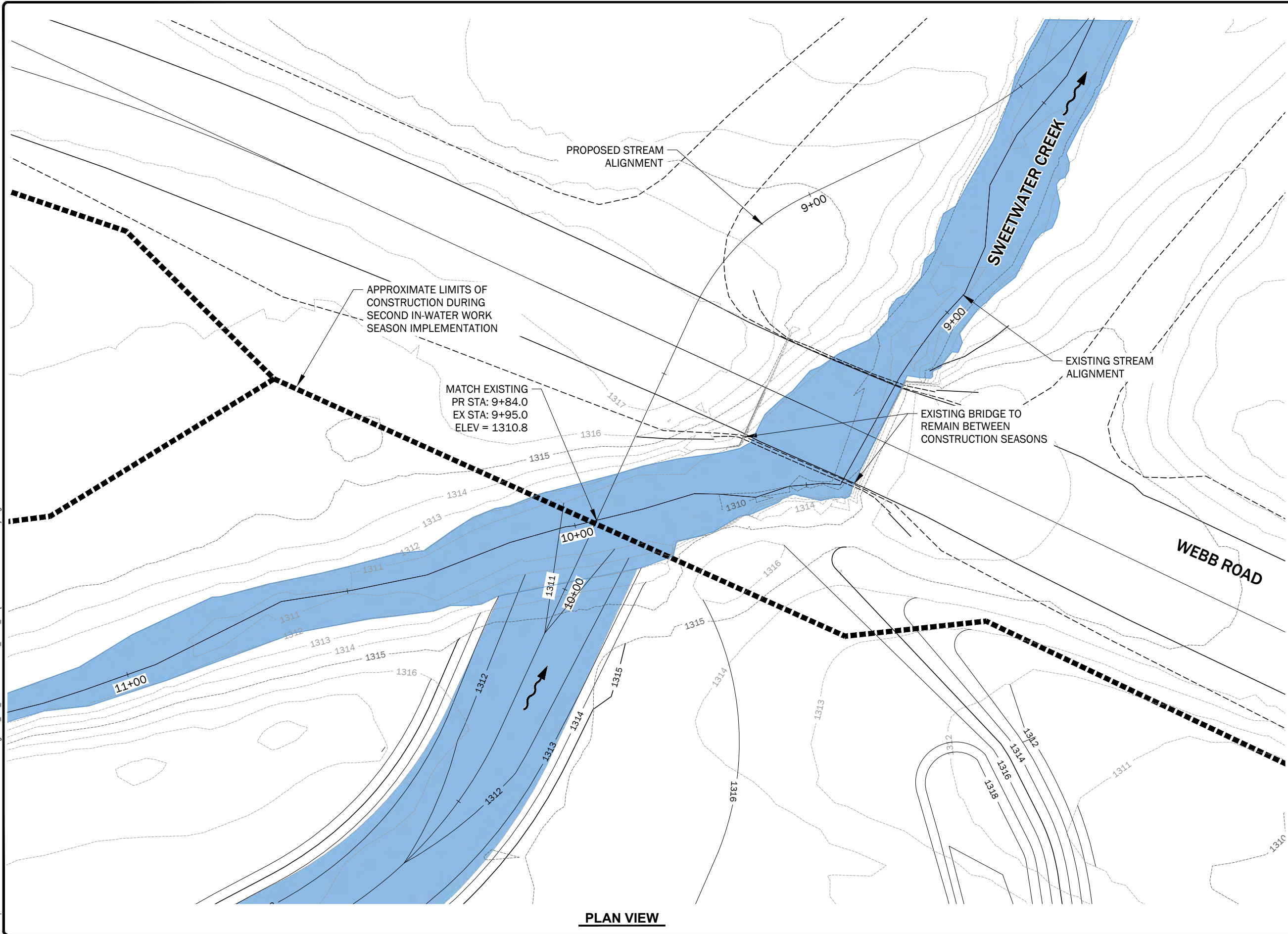
SCOUR COUNTERMEASURE DETAILS

DRAWING NUMBER:

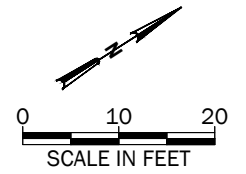
4.7

SHEET: 17 OF 57

Plotted: 10/08/2025, 2:12:25 | d:\lawrence P\1010571033\CAD\00\Stream Restoration Design\01_100_Percent\0571033000_Sht 18_4.8 INTERIM GRADING DETAIL.dwg



PLAN VIEW



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

INTERIM GRADING DETAIL

DRAWING NUMBER:

4.8

SHEET: 18 OF 57

LWM STRUCTURE CONTROL TABLE								
STRUCTURE #	STATION RANGE	OFFSET	STRUCTURE #	STATION	OFFSET	STRUCTURE #	STATION	OFFSET
1.1 *	16+82 - 17+15 *	3.5' R *	3.1	16+95	7' R	5.1	17+48	30' R
1.2	15+06 - 15+30	9' L	3.2	14+90	8' L	5.2	16+50	57' R
1.3	13+01 - 13+28	9' L	3.3	13+88	7' R	5.3	15+62	33' R
1.4	10+98 - 11+23	10' R	3.4	12+07	8' L	5.4	15+37	33' L
2.1	17+10 - 17+60	10' L	3.5 *	13+21 *	7' R *	5.5	14+70	47' L
2.2	16+06 - 15+56	9' R	4.1	18+07	15' R	5.6	14+28	57' R
2.3	13+97 - 14+45	10' R	4.2	9+16	11' R	5.7	13+64	30' R
2.4	12+14 - 12+64	11' L	4.3	9+04	11' R	5.8	12+34	30' R

NOTES:

- LWM STRUCTURE OFFSETS ARE IN REFERENCE TO FACING DOWNSTREAM
- STRUCTURES 1.1 AND 3.5 ARE PROPOSED IN THE SIDE CHANNEL AND REFERENCE SIDE CHANNEL ALIGNMENT FOR STATION AND OFFSET.

LOG SCHEDULE

- TYPE B - 1.5' DBH X 40' LONG W/ ROOTWAD - 10 PIECES
- TYPE C - 1.5' DBH X 30' LONG W/ ROOTWAD - 60 PIECES
- TYPE D - 1.5' DBH X 30' LONG - 14 PIECES
- TYPE E - 1.5' DBH X 20' LONG - 6 PIECES
- TYPE R - 6" DBH X 10'LONG (RACKING LOG) - 102 PIECES
- TYPE P - 8" DBH X 10'LONG (VERTICAL PILE LOG) - 60 PIECES

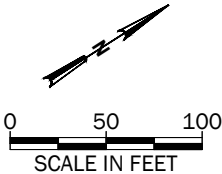
LWM LEGEND

- ① LONGITUDINAL LOGS - 4 STRUCTURES (SEE DETAIL 1/C5.1)
- ② BANK ROOTWADS - 4 STRUCTURES (SEE DETAIL 2/C5.1)
- ③ SWEEPER LOGS - 5 STRUCTURES (SEE DETAIL 1/C5.2)
- ④ APEX JAM - 3 STRUCTURES (SEE DETAIL 2/C5.2)
- ⑤ FLOODPLAIN LOGS - 8 STRUCTURES (SEE DETAIL 1/C5.3)

NOTES:

- SEE SHEET 5.1 TO 5.3 FOR LARGE WOODY MATERIAL STRUCTURE DETAILS AND CONTROL POINT INFORMATION.
- LOCATIONS AND ORIENTATION OF LARGE WOODY MATERIAL (LWM), SLASH AND HABITAT BOULDERS IS APPROXIMATE. THEY SHALL BE STAKED PER PLAN.
- BOULDERS AND VERTICAL PILE LOGS NOT SHOWN IN PLANS FOR CLARITY, SEE DETAIL SHEETS FOR LOCATIONS.
- LOW FLOW CHANNEL SHALL BE CONSTRUCTED IN THE FIELD AS DIRECTED BY THE STREAM DESIGN ENGINEER.

PLAN VIEW



Plotted: 10/09/2025 2:12:25 | d:\lawrence P:\050571039\CAD\000\Stream Restoration Design\01_100_Percent\0571039300_Sht 19_5.0 Habitat Structures Plan.dwg

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

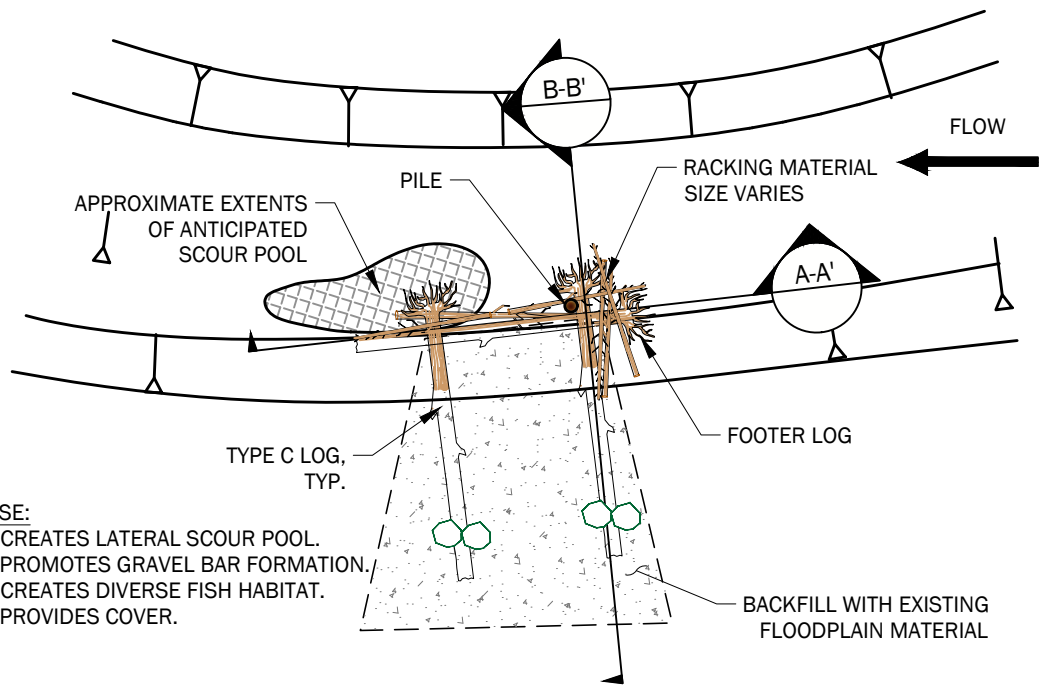
HABITAT STRUCTURES PLAN

DRAWING NUMBER:

5.0

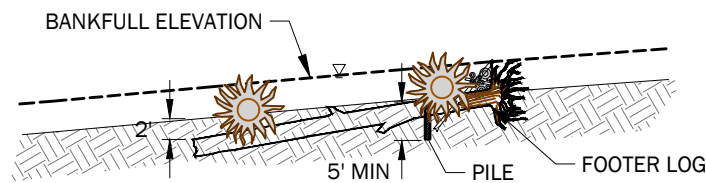
SHEET: 19 OF 57

Plotted: 10/09/2025, 2:12:26 | d:\lawrence P:\00571033\CAD\000Stream Restoration Design\01_100_Percent\057103300_Sht 20 of 51 Habitat Structures Details.dwg

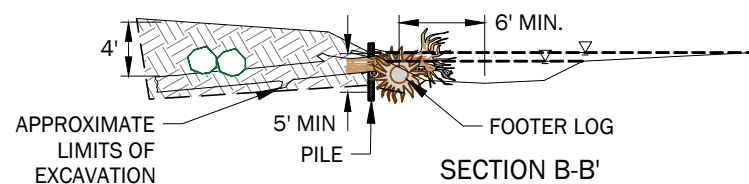


PURPOSE:

- CREATES LATERAL SCOUR POOL.
- PROMOTES GRAVEL BAR FORMATION.
- CREATES DIVERSE FISH HABITAT.
- PROVIDES COVER.



SECTION A-A'



SECTION B-B'

DESIGN SPECIFICS:

- THE TOP OF ROOTWADS SHALL NOT EXTEND MORE THAN 0.5 FT ABOVE TOP OF BANK.
- PARTIALLY BURY THE ROOTWAD ORIENTED PARALLEL TO FLOW THEN PLACE PERPENDICULAR ROOTWADS.
- PLACE VERTICAL PILE BEHIND UPSTREAM ROOTWADS. EMBED PILE INTO THE CHANNEL A MINIMUM OF 5.0 FT.
- INSTALL RACKING MEMBERS WHILE INSTALLING KEY MEMBERS.
- WEAVE RACKING MEMBERS AND SLASH MATERIAL (NOT SHOWN) INTO VOIDS BETWEEN KEY MEMBERS.
- RACKING MEMBER AND SLASH QUANTITIES MAY VARY PER STRUCTURE.
- BACKFILL STRUCTURE IN 1 FT MAXIMUM LIFTS. COMPACT EACH LIFT FOLLOWING PLACEMENT USING EXCAVATOR BUCKET.

STRUCTURE QUANTITIES

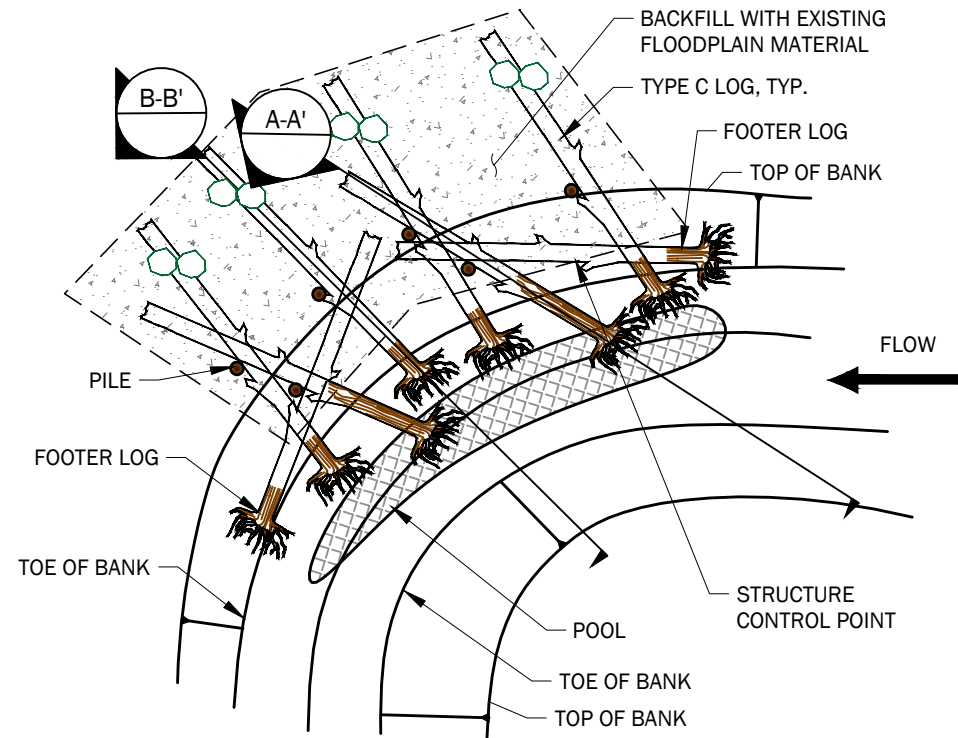
LOG TYPE	DESCRIPTION	LENGTH	QTY
C	LOG W/ ROOTWAD, DIA 18 IN	30 LF	3
P	LOG WITHOUT ROOTWAD DIA 8 IN (VERTICAL PILE LOG)	10 LF	1
R	LOG WITHOUT ROOTWAD DIA 6 IN (RACKING LOG)	10 LF	9
	WOODY MATERIAL - SLASH		3 C.Y.
	HABITAT BOULDERS		4

LONGITUDINAL LOGS

SCALE: NOT TO SCALE

1

C5.1

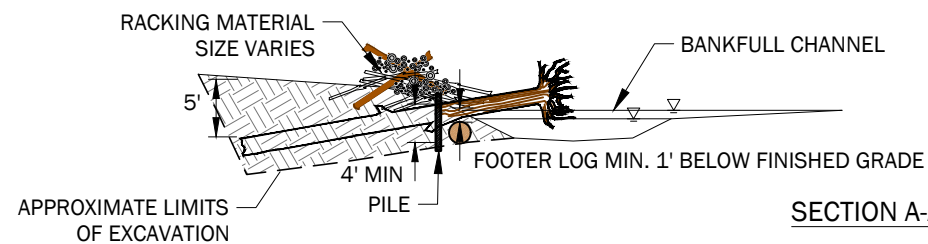


DESIGN SPECIFICS:

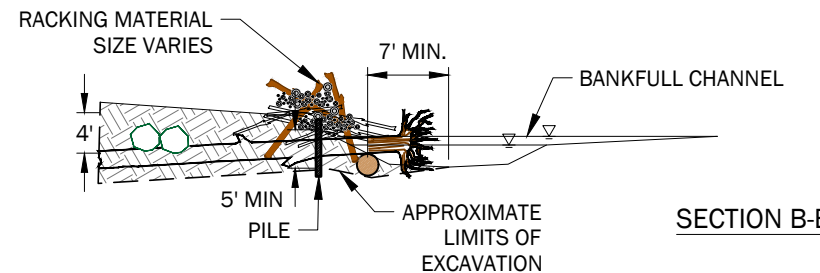
- TOP OF ROOTWAD SHOULD NOT EXTEND MORE THAN 0.5-FT ABOVE TOP OF BANK. (BANKFULL)
- PLACE ROOT WADS ALONG OUTSIDE OF BENDS.
- PLACE VERTICAL AS SHOWN. EMBED PILES INTO THE CHANNEL A MINIMUM OF 4.0 FT.
- WEAVE RACKING MEMBERS AND SLASH MATERIAL (NOT SHOWN) INTO VOIDS BETWEEN KEY MEMBERS UNTIL A MAXIMUM OF 20 PERCENT VOID SPACE IS ACHIEVED.
- RACKING MEMBER AND SLASH QUANTITIES MAY VARY PER STRUCTURE.
- BACKFILL STRUCTURE IN 1 FT MAXIMUM LIFTS. COMPACT EACH LIFT FOLLOWING PLACEMENT USING EXCAVATOR BUCKET.
- ADDITIONAL BALLASTING IS NEEDED IF TREE DIAMETER (DBH) EXCEEDS 25 INCHES.
- THE DESIGN ENGINEER SHALL MAINTAIN THE ABILITY TO MAKE ADJUSTMENTS TO THE PROPOSED STRUCTURE IF SITE CONDITIONS WARRANT.

PURPOSE:

- INCREASES POOL DEPTH.
- SLOWS LATERAL MIGRATION.
- REDUCES BANK EROSION.



SECTION A-A'



SECTION B-B'

STRUCTURE QUANTITIES

LOG TYPE	DESCRIPTION	LENGTH	QTY
C	LOG W/ ROOTWAD, DIA 18 IN	30 LF	8
P	LOG WITHOUT ROOTWAD DIA 8 IN (VERTICAL PILE LOG)	10 LF	6
R	LOG WITHOUT ROOTWAD DIA 6 IN (RACKING LOG)	10 LF	12
	WOODY MATERIAL - SLASH		8 C.Y.
	HABITAT BOULDERS		8

BANK ROOTWADS

SCALE: NOT TO SCALE

2

C5.1



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

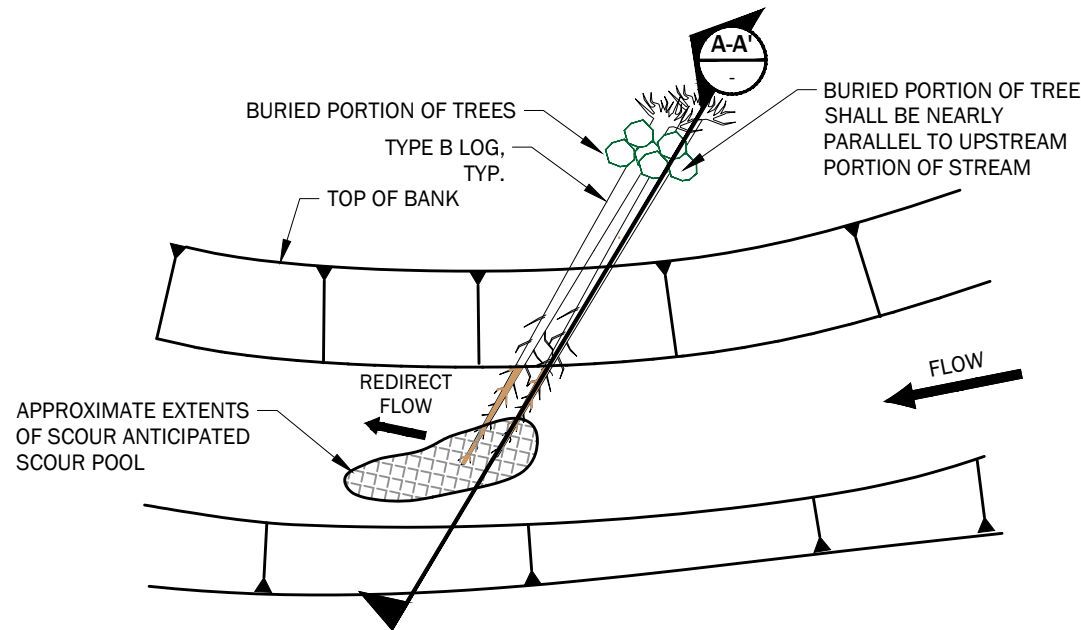
HABITAT STRUCTURES DETAILS

DRAWING NUMBER:

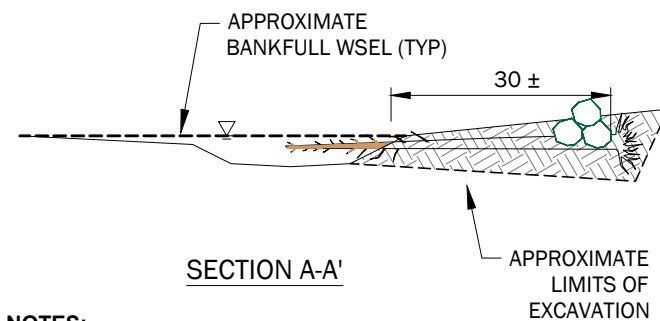
5.1

SHEET: 20 OF 57

Plotted: 10/08/2025, 2:12:27 | d:\lawrence P:\00571033\CAD\000\Stream Restoration Design\01_100_Perman057103300_Sht 21.5.2 Habitat Structures Details.dwg



PLAN



SECTION A-A'

NOTES:

PURPOSE:

- REDIRECTS FLOW.
- CREATES SCOUR.
- ENCOURAGES GRAVEL DEPOSITION.

DESIGN SPECIFICS:

- PARTIALLY BURRY LOGS A MINIMUM OF $\frac{2}{3}$ TREE LENGTH IF PLACED WITHIN THE MAIN CHANNEL.
- ROOTWAD END SHALL BE BURIED A MINIMUM OF 1 FT BELOW FINISHED GRADE.
- SWEEPERS MAY BE PLACED INDEPENDENTLY OR INCORPORATED INTO OTHER LARGE WOOD STRUCTURES.
- TREES WITH BRANCHES OR MULTIPLE TRUNKS PREFERRED.

STRUCTURE QUANTITIES

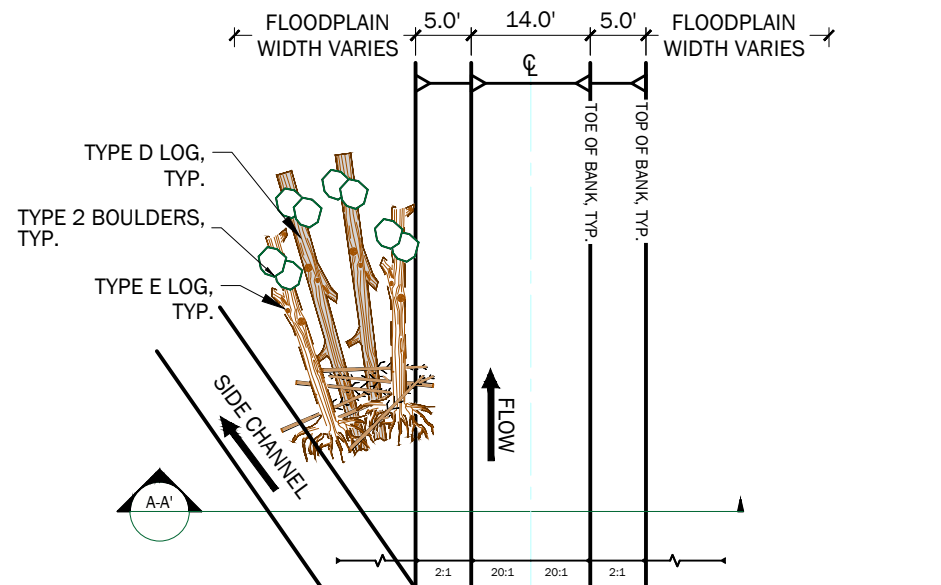
LOG TYPE	DESCRIPTION	LENGTH	QTY
B	LOG W/ ROOTWAD, DIA 18 IN	40 LF	2
	WOODY MATERIAL - SLASH		2 C.Y.
	HABITAT BOULDERS		6

SWEEPER LOGS

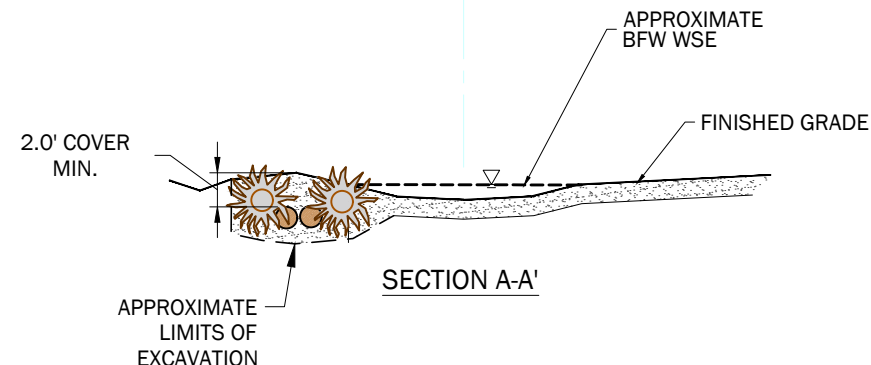
SCALE: NOT TO SCALE

1

C5.2



PLAN



SECTION A-A'

NOTES:

PURPOSE:

- PROVIDES INCREASED ROUGHNESS IN CHANNEL BANKS TO ENCOURAGE THE STREAM TO MOVE AROUND THE STRUCTURE.
- ATTENUATES CHANNEL VELOCITIES AND WILL HELP WITH BANK PROTECTION
- ENCOURAGES HYDRAULIC COMPLEXITY AND SIDE CHANNEL ACTIVITY.

DESIGN SPECIFICS:

- LOGS WILL BE ORIENTED AT THE CONFLUENCE OF THE THE PROPOSED MAIN CHANNEL AND SIDE CHANNEL TO HELP CREATE A SPLIT IN FLOW UNDER HIGH FLOW EVENTS
- THE STRUCTURE IS MOSTLY BURIED WHERE THE TOP OF THE ROOTWAD IS DESIGNED TO BE EXPOSED AT THE BANKFULL FLOW EVENT WSE
- THE STRUCTURE WILL BE SOIL BALLASTED WITH STREAM BOULDERS INCORPORATED TO PROVIDE INCREASE STABILITY.

STRUCTURE QUANTITIES

LOG TYPE	DESCRIPTION	LENGTH	QTY
D	LOG WITHOUT ROOTWAD, DIA 18 IN	30 LF	2
E	LOG W/ ROOTWAD DIA 18 IN	20 LF	2
R	LOG WITHOUT ROOTWAD DIA 6 IN (RACKING LOG)	10 LF	6
	WOODY MATERIAL - SLASH		4 C.Y.
	HABITAT BOULDERS		8

APEX JAM

SCALE: NOT TO SCALE

2

C5.2



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

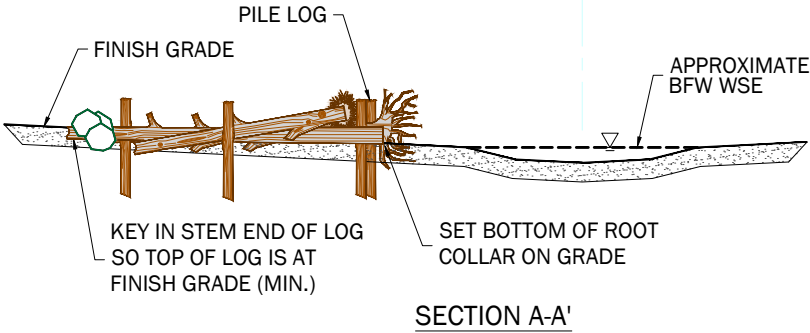
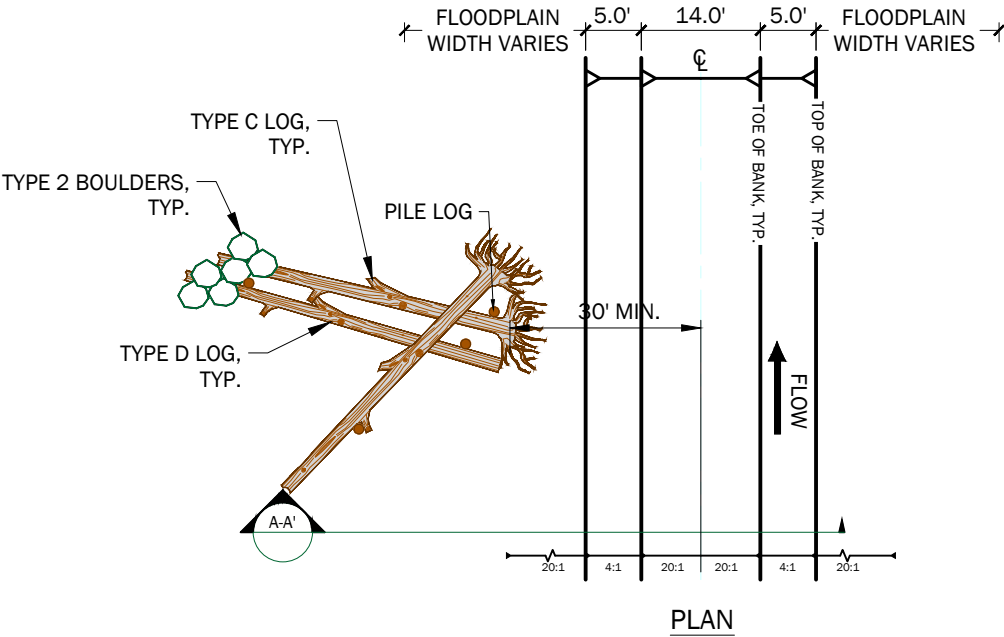
HABITAT STRUCTURES DETAILS

DRAWING NUMBER:

5.2

SHEET: 21 OF 57

Plotted: 10/09/2025 2:12:27 | d:\awrence P:\00571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 22-5.3 Habitat Structures Details.dwg



NOTES:

PURPOSE:

- ENGAGES WITH FLOODPLAINS AND CREATES HABITAT COMPLEXITY
- PROVIDES OFF CHANNEL REARING HABITAT, HYDRAULIC DIVERSITY, CREATES SHADE/COVER
- PROVIDES INCREASED HYDRAULIC ROUGHNESS AND OPPORTUNITIES FOR SMALL WOOD RECRUITMENT

DESIGN SPECIFICS:

- PARTIALLY BURIED LOGS ARE DESIGNED TO BE SELF BALLASTED WITH PILE LOGS AND STREAM BOULDERS
- STRUCTURES ARE LOCATED SO THAT THEY ARE ENGAGED WITH FLOOD EVENTS THAT OVERTOP THE BANKS
- MULTI LOG STRUCTURES WITH AND WITHOUT ROOTWADS PROPOSED THROUGHOUT THE PROJECT LIMITS TO ENGAGE WITH DIFFERENT FLOOD EVENTS.

STRUCTURE QUANTITIES

LOG TYPE	DESCRIPTION	LENGTH	QTY
C	LOG W/ ROOTWAD, DIA 18 IN	30 LF	2
D	LOG WITHOUT ROOTWAD, DIA. 18 IN	30 LF	1
P	LOG WITHOUT ROOTWAD DIA 8 IN (VERTICAL PILE LOG)	10 LF	4
	HABITAT BOULDERS		6

FLOODPLAIN LOGS

SCALE: NOT TO SCALE

1
C5.3



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

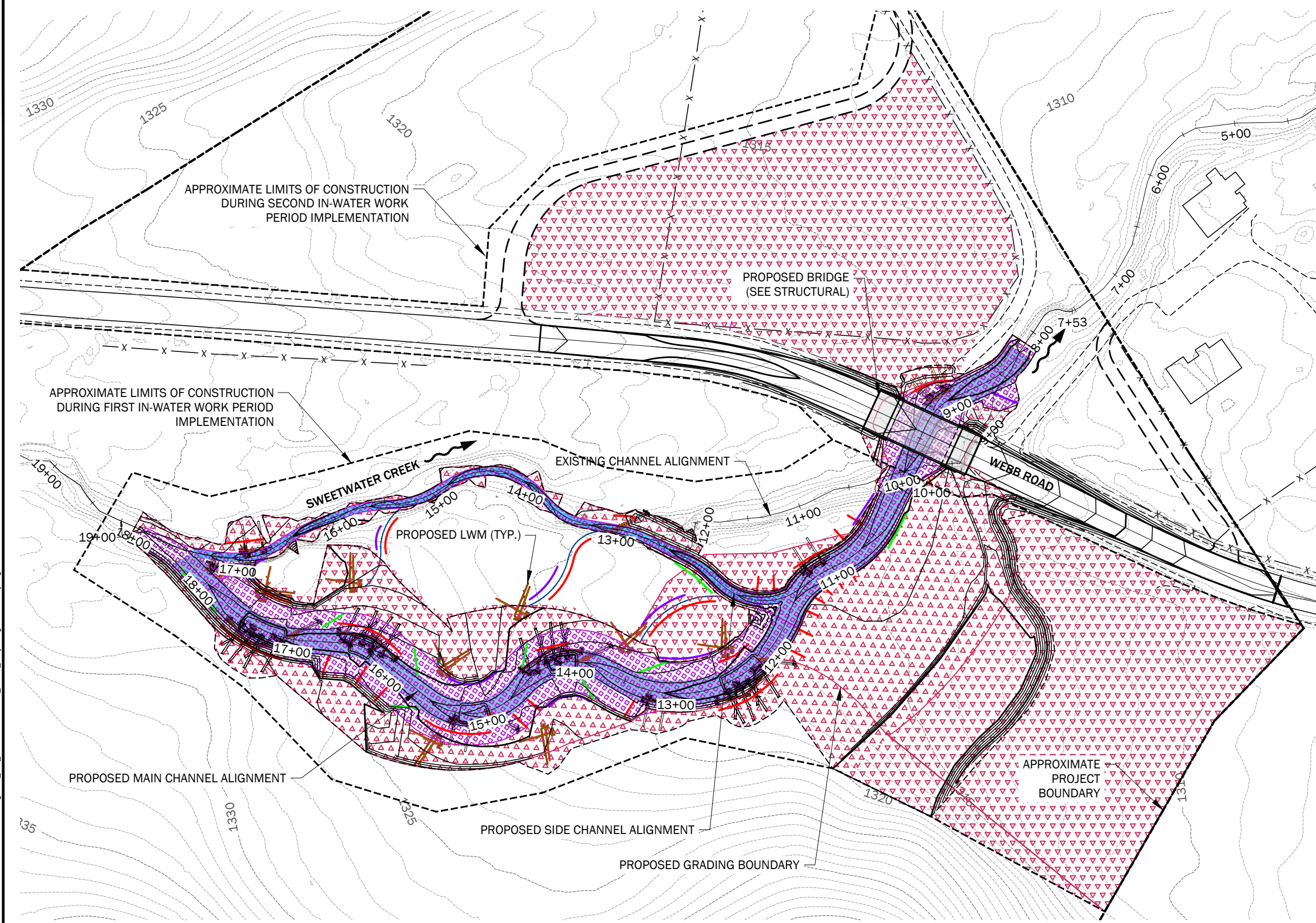
HABITAT STRUCTURES DETAILS

DRAWING NUMBER:

5.3

SHEET: 22 OF 57

Plotted: 10/08/2025, 2:12:28 | d:\lawrence P:\00571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 23 6.0 [Revegetation Plan].dwg



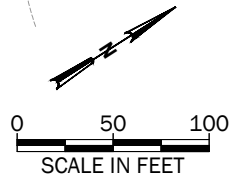
PLAN VIEW

LEGEND

- PROPOSED WILLOW TRENCHING
- PROPOSED ALDER TRENCHING
- PROPOSED COTTONWOOD TRENCHING
- PROPOSED RIPARIAN
- PROPOSED UPLAND

GENERAL NOTES:

- SEE SHEETS 3.0 -3.4 (CONSTRUCTION ACCESS AND STAGING PLAN AND TEMPORARY WATER MANAGEMENT & TESC PLAN) FOR IMPACTED AREAS AFFECTING UPLAND SEEDING
- SEE SHEET 7.3 (HIP IV - GENERAL CONSERVATION MEASURES) FOR DETAILS RELATED TO:
 - SITE RESOTRATION
 - REVEGETATION



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	
DATE:	07/18/25

PREPARED FOR:

NEZ PERCE TRIBE

WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN

WEBB, NEZ PERCE COUNTY, IDAHO

REVEGETATION PLAN

DRAWING NUMBER:

6.0

SHEET: 23 OF 57

Plotted: 10/08/2025, 21:28 | dlawrence P:\0571033\CAD\00\Stream Restoration Design\lv01_100_Percent\057103300_Sht 25 7.0 [HIP - General Conservation Measures].dwg

PROJECT DESIGN AND SITE PREPARATION.

A. ALL APPLICABLE REGULATORY PERMITS AND OFFICIAL PROJECT AUTHORIZATIONS WILL BE OBTAINED BEFORE PROJECT IMPLEMENTATION.

- ## 2. TIMING OF IN-WATER WORK.

- B. THE REGIONAL STATE BIOLOGIST SHALL APPROVE CHANGES EXCEEDING ONE WEEK TO IN-WATER WORK.

- D. LAMPREY – TO MINIMIZE DISTURBANCE TO MIGRANT ADULTS, THE PROJECT SPONSOR AND/OR THEIR CONTRACTORS WILL AVOID WORKING INSTREAM OR RIVER CHANNELS THAT CONTAIN PACIFIC LAMPREY FROM MARCH 1 TO JULY 1 IN LOW- TO MID-ELEVATION REACHES (<5,000 FEET). IN HIGH-ELEVATION REACHES (>5,000 FEET), THE PROJECT SPONSOR WILL AVOID WORKING INSTREAM OR RIVER CHANNELS FROM MARCH 1 TO AUGUST 1. IF EITHER TIMEFRAME IS INCOMPATIBLE WITH OTHER OBJECTIVES, THE AREA WILL BE SURVEYED FOR NESTS AND LAMPREY PRESENCE AND AVOIDED IF POSSIBLE. IF LAMPREYS ARE KNOWN TO EXIST, THE PROJECT SPONSOR WILL UTILIZE BEST MANAGEMENT PRACTICES (BMPS) FOR DEWATERING AND SALVAGE AS OUTLINED IN LTW 20201, OR MOST RECENT GUIDANCE. SALVAGE SHOULD INCLUDE SALVAGE OF LARVAL LAMPREY FROM SEDIMENTS. SEE CONSERVATION MEASURES FOR FISH SALVAGE AND ELECTROFISHING.

- ### 3. CONTAMINANTS.

- B. THE SITE ASSESSMENT, STORED WITH THE PROJECT FILES, WILL SUMMARIZE:

- #### 4. SITE LAYOUT AND FLAGGING.

- B. AREAS TO BE FLAGGED INCLUDE:

2. EQUIPMENT ENTRY AND EXIT POINTS;
3. ROAD AND STREAM CROSSING ALIGNMENTS;
4. STAGING, STORAGE, AND STOCKPILE AREAS; AND
5. NO-HERBICIDE-APPLICATION AREAS AND BUFFERS.

F. HELICOPTER FLIGHT PATTERNS WILL BE ESTABLISHED IN ADVANCE, AND LOCATED TO AVOID TERRESTRIAL ESA- LISTED SPECIES, INCLUDING THEIR OCCUPIED HABITAT AND APPROPRIATE BUFFERS, DURING SENSITIVE LIFE STAGES (I.E. NESTING AND CRITICAL BREEDING PERIODS). SEE SPECIES-SPECIFIC CONSERVATION MEASURES FOR EACH LISTED SPECIES THAT MAY OCCUR WITHIN THE PROJECT AREA FOR MORE INFORMATION.

C. FOR PROJECTS THAT REQUIRE EQUIPMENT AND VEHICLES TO CROSS IN THE WET:

1. THE LOCATION AND NUMBER OF ALL WET CROSSINGS MUST BE APPROVED BY BPA AND CLEARLY INDICATED ON DESIGN DRAWINGS;
2. VEHICLES AND MACHINERY WILL CROSS STREAMS AT RIGHT ANGLES TO THE MAIN CHANNEL WHENEVER POSSIBLE;
3. NO STREAM CROSSINGS WILL OCCUR 300 FEET UPSTREAM OR 100 FEET DOWNSTREAM OF AN EXISTING REDD OR SPAWNING FISH; AND
4. AFTER PROJECT COMPLETION, TEMPORARY STREAM CROSSINGS WILL BE OBLITERATED AND BANKS RESTORED.

D. ANY MATERIAL NOT USED IN RESTORATION, AND NOT NATIVE TO THE FLOODPLAIN, WILL BE REMOVED TO A LOCATION OUTSIDE OF THE 100-YEAR FLOODPLAIN FOR DISPOSAL.

F. THOROUGHLY CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER (OHW), AND AS OFTEN AS NECESSARY DURING OPERATION, TO REMAIN FREE OF GREASE.

6. ONCE THE SITE IS STABILIZED FOLLOWING CONSTRUCTION, TEMPORARY EROSION CONTROLS WILL BE REMOVED.

1. A SUPPLY OF SEDIMENT CONTROL MATERIALS; AND
2. AN OIL-ABSORBING FLOATING BOOM WHENEVER SURFACE WATER IS PRESENT.

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



HIP - GENERAL CONSERVATION MEASURES

DRAWING NUMBER:

7.0

SHEET: 25 OF 57



Plotted: 10/09/2025, 2:12:28 | d:\lawrence P:\00571039\CAD\000\Stream Restoration Design\01_100_Percent\0571039300_Sht 28_7.1 [HIP - General Conservation Measures].dwg

PROJECT DESIGN AND SITE PREPARATION (CONTINUED).

10. DUST ABATEMENT.

- A. THE PROJECT SPONSOR WILL DETERMINE THE APPROPRIATE DUST CONTROL MEASURES BY CONSIDERING SOIL TYPE, EQUIPMENT USAGE, PREVAILING WIND DIRECTION, AND THE EFFECTS CAUSED BY OTHER EROSION AND SEDIMENT CONTROL MEASURES. IN ADDITION, THE FOLLOWING CRITERIA WILL BE FOLLOWED:
- B. WORK WILL BE SEQUENCED AND SCHEDULED TO REDUCE EXPOSED BARE SOIL SUBJECT TO WIND EROSION.
- C. DUST-ABATEMENT ADDITIVES AND STABILIZATION CHEMICALS (TYPICALLY MAGNESIUM CHLORIDE, CALCIUM CHLORIDE SALTS, OR LIGNIN SULFONATE) WILL NOT BE APPLIED WITHIN 25 FEET OF A NATURAL WATERBODY OR WETLAND AND WILL BE APPLIED SO AS TO MINIMIZE THE LIKELIHOOD THAT THEY WILL ENTER STREAMS. APPLICATIONS OF LIGNIN SULFONATE WILL BE LIMITED TO A MAXIMUM RATE OF 0.5 GALLONS PER SQUARE YARD OF ROAD SURFACE, ASSUMING A 50:50 (LIGNIN SULFONATE TO WATER) SOLUTION.
- D. APPLICATION OF DUST ABATEMENT CHEMICALS WILL BE AVOIDED DURING OR JUST BEFORE WET WEATHER AND AT STREAM CROSSINGS OR OTHER AREAS THAT COULD RESULT IN UNFILTERED DELIVERY OF THE DUST ABATEMENT CHEMICALS TO A WATERBODY (TYPICALLY THESE WOULD BE AREAS WITHIN 25 FEET OF A NATURAL WATERBODY OR WETLAND; DISTANCES MAY BE GREATER WHERE VEGETATION IS SPARSE OR SLOPES ARE STEEP).
- E. SPILL CONTAINMENT EQUIPMENT WILL BE AVAILABLE DURING APPLICATION OF DUST ABATEMENT CHEMICALS.
- F. PETROLEUM-BASED PRODUCTS WILL NOT BE USED FOR DUST ABATEMENT.

11. SPILL PREVENTION, CONTROL, AND COUNTER MEASURES.

- A. A DESCRIPTION OF HAZARDOUS MATERIALS (FUEL, LUBRICANTS, HYDRAULIC FLUID³, OR OTHER CONTAMINANTS) THAT WILL BE USED, INCLUDING INVENTORY, STORAGE, AND HANDLING PROCEDURES, WILL BE AVAILABLE ON-SITE.
- B. WRITTEN PROCEDURES FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES WILL BE POSTED AT THE WORK SITE.
- C. SPILL CONTAINMENT KITS (INCLUDING INSTRUCTIONS FOR CLEANUP AND DISPOSAL) ADEQUATE FOR THE TYPES AND QUANTITY OF HAZARDOUS MATERIALS USED AT THE SITE WILL BE AVAILABLE AT THE WORK SITE.
- D. WORKERS WILL BE TRAINED IN SPILL CONTAINMENT PROCEDURES AND WILL BE INFORMED OF THE LOCATION OF SPILL CONTAINMENT KITS.
- E. ANY WASTE LIQUIDS GENERATED AT THE STAGING AREAS WILL BE TEMPORARILY STORED UNDER AN IMPERVIOUS COVER, SUCH AS A TARPULIN, UNTIL THEY CAN BE PROPERLY TRANSPORTED TO, AND DISPOSED OF, AT A FACILITY THAT IS APPROVED FOR RECEIPT OF HAZARDOUS MATERIALS.
- F. PUMPS USED ADJACENT TO WATER SHALL USE SPILL CONTAINMENT SYSTEMS.

12. INVASIVE SPECIES CONTROL.

- A. PRIOR TO ENTERING THE SITE, ALL VEHICLES AND EQUIPMENT WILL BE POWER-WASHED, ALLOWED TO DRY FULLY, AND INSPECTED TO MAKE SURE NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ADHERES TO THE SURFACE.
- B. WATERCRAFT, WADERS, BOOTS, AND ANY OTHER GEAR TO BE USED IN OR NEAR WATER WILL BE INSPECTED FOR AQUATIC INVASIVE SPECIES.
- C. WADING BOOTS WITH FELT SOLES ARE NOT TO BE USED DUE TO THEIR PROPENSITY FOR AIDING IN THE TRANSFER OF INVASIVE SPECIES UNLESS DECONTAMINATION PROCEDURES HAVE BEEN APPROVED BY THE EC LEAD.

WORK AREA ISOLATION AND FISH SALVAGE.

1. WORK AREA ISOLATION.

- A. ANY WORK AREA REQUIRING EXCAVATION OR MOBILIZATION OF SEDIMENT WITHIN THE WETTED CHANNEL WILL BE ISOLATED FROM THE ACTIVE STREAM WHENEVER ESA-LISTED FISH ARE REASONABLY CERTAIN TO BE PRESENT, OR IF THE WORK AREA IS LESS THAN 300-FEET UPSTREAM FROM KNOWN ESA-LISTED FISH SPAWNING HABITATS. IF THE WORK AREA ISOLATION PRACTICES WOULD CAUSE GREATER IMPACTS THAN IT WOULD PREVENT, IS LOCATED IN DEEP OR SWIFTLY FLOWING WATER, OR IF FISH CAN BE EFFECTIVELY EXCLUDED BY NETS OR SCREENS, THEN AN APPROVAL FROM A NMFS HABITAT BIOLOGIST MAY BE PURSUED.
- B. WORK AREA ISOLATION & FISH SALVAGE ACTIVITIES ARE CONSIDERED INCIDENTAL TO CONSTRUCTION-RELATED ACTIVITIES AND SHALL OCCUR DURING THE STATE-RECOMMENDED IN-WATER WORK WINDOWS.
- C. WHEN WORK AREA ISOLATION IS REQUIRED, DESIGN PLANS WILL INCLUDE ALL ISOLATION ELEMENTS,

FISH RELEASE AREAS, A PUMP TO BE USED TO DEWATER THE ISOLATION AREA, AND, WHEN FISH ARE PRESENT, A FISH SCREEN THAT MEETS NMFS'S FISH SCREEN CRITERIA (NMFS 20114, OR MOST CURRENT). WIDER MESH SCREENS MAY BE USED AFTER ALL FISH HAVE BEEN REMOVED FROM THE ISOLATED AREA.

- D. WORK AREA ISOLATION AND FISH CAPTURE ACTIVITIES TAKE PLACE DURING PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE, NORMALLY EARLY IN THE MORNING VERSUS LATE IN THE DAY, AND DURING CONDITIONS APPROPRIATE TO MINIMIZE STRESS TO FISH SPECIES PRESENT.

2. FISH SALVAGE.

- A. MONITORING AND RECORDING WILL TAKE PLACE FOR THE DURATION OF SALVAGE ACTIVITIES. THE SALVAGE REPORT WILL BE COMMUNICATED TO THE AGENCIES VIA THE PROJECT COMPLETION FORM (PCF).
- B. SALVAGE ACTIVATES SHOULD TAKE PLACE DURING CONDITIONS TO MINIMIZE STRESS TO FISH SPECIES, TYPICALLY PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES WHICH OCCUR IN THE MORNING VERSUS LATE IN THE DAY.
- C. A FISH BIOLOGIST WILL DETERMINE AN OPERATIONAL PLAN TO REMOVE ESA-LISTED FISH, WITH LEAST HARM TO THE FISH, BEFORE IN-WATER WORK BEGINS. THIS WILL INVOLVE EITHER PASSIVE MOVEMENT OF FISH OUT OF THE PROJECT REACH THROUGH SLOW DEWATERING, OR ACTIVELY REMOVING THE FISH FROM THE PROJECT REACH. SHOULD ACTIVE REMOVAL BE WARRANTED, A FISH BIOLOGIST WILL CLEAR THE AREA OF FISH BEFORE THE SITE IS DEWATERED USING ONE OR MORE OF A VARIETY OF METHODS INCLUDING SEINING, DIPPING, OR ELECTROFISHING, DEPENDING ON SPECIFIC SITE CONDITIONS. SALVAGE OPERATIONS WILL FOLLOW THE ORDERING, METHODS, AND CONSERVATION MEASURES SPECIFIED AS FOLLOWS:

1. SLOWLY REDUCE WATER FROM THE WORK AREA TO ALLOW SOME FISH TO LEAVE THE WORK AREA VOLITIONALLY. IF DEWATERED AREA CONTAINS LARGE FINE/ SANDY SEDIMENT DEPOSITS, LARVAL LAMPREY COULD BE PRESENT, AND POTENTIALLY IN LARGE NUMBERS. IF SO, CONSIDER ELECTROFISHING USING LAMPREY ELECTROFISHING SETTINGS (WHICH DO NOT AFFECT BONY FISH) PRIOR TO OR DURING DRAWDOWN. SEE ELECTROFISHING CONSERVATION MEASURES.
2. BLOCK NETS WILL BE INSTALLED AT UPSTREAM AND DOWNSTREAM LOCATIONS AND MAINTAINED IN A SECURED POSITION TO EXCLUDE FISH FROM ENTERING THE PROJECT AREA.
3. BLOCK NETS WILL BE SECURED TO THE STREAM CHANNEL BED AND BANKS UNTIL FISH CAPTURE AND TRANSPORT ACTIVITIES ARE COMPLETE. BLOCK NETS MAY BE LEFT IN PLACE FOR THE DURATION OF THE PROJECT TO EXCLUDE FISH AS LONG AS PASSAGE REQUIREMENTS ARE MET.
4. NETS WILL BE MONITORED HOURLY ANYTIME THERE IS INSTREAM DISTURBANCE..
5. IF BLOCK NETS REMAIN IN PLACE MORE THAN ONE DAY, THE NETS WILL BE MONITORED AT LEAST DAILY TO ENSURE THEY ARE SECURED TO THE BANKS AND FREE OF ORGANIC ACCUMULATION. IF THE PROJECT IS WITHIN BULL TROUT SPAWNING AND REARING HABITAT, THE BLOCK NETS MUST BE CHECKED EVERY 4 HOURS FOR FISH IMPINGEMENT ON THE NET.
6. CAPTURE FISH THROUGH SEINING AND RELOCATE TO STREAMS.
7. WHILE DEWATERING, ANY REMAINING FISH WILL BE COLLECTED BY HAND OR DIP NETS.
8. SEINES WITH A MESH SIZE TO ENSURE CAPTURE OF THE RESIDING ESA-LISTED FISH WILL BE USED.
9. MINNOW TRAPS WILL BE LEFT IN PLACE OVERNIGHT AND USED IN CONJUNCTION WITH SEINING.
10. ELECTROFISH TO CAPTURE AND RELOCATE FISH NOT CAUGHT DURING SEINING. THIS STEP IS TO BE USED AS A LAST RESORT; AFTER ALL PASSIVE TECHNIQUES HAVE BEEN EXHAUSTED. SEE ELECTROFISHING CONSERVATION MEASURES.

- 11. CONTINUE TO SLOWLY DEWATER THE STREAM REACH.

- 12. COLLECT ANY REMAINING FISH IN COLD-WATER BUCKETS AND RELOCATE TO THE STREAM;

- 13. LIMIT THE TIME FISH WOULD BE IN A TRANSPORT BUCKET, AND RELEASE THEM AS QUICKLY AS POSSIBLE.

- 14. THE NUMBER OF FISH WITHIN A BUCKET WILL BE LIMITED, AND FISH WILL BE OF RELATIVELY COMPARABLE SIZE TO MINIMIZE PREDATION.

- 15. AERATORS FOR BUCKETS WILL BE USED, OR THE BUCKET'S WATER WILL BE FREQUENTLY CHANGED WITH COLD, CLEAR, WATER AT 15 MINUTE, OR MORE-FREQUENT, INTERVALS.

- 16. BUCKETS WILL BE KEPT IN SHADED AREAS; OR IF IN EXPOSED AREAS, COVERED BY A CANOPY.

- 17. DEAD FISH WILL NOT BE STORED IN TRANSPORT BUCKETS, BUT WILL BE LEFT ON THE STREAMBANK TO AVOID MORTALITY COUNTING ERRORS.

- D. IN AREAS OCCUPIED BY BULL TROUT, LAMPREY, MUSSELS5, OR NATIVE FISH, THE FOLLOWING SALVAGE GUIDELINES SHALL BE MET. SEE USFWS 2010, "CONSERVATION MEASURES FOR SALVAGE OF NATIVE FISH, LAMPREY AND MUSSELS" (LTW 20206) AND GUIDANCE DEVELOPED BY THE XERCES SOCIETY

(BLEVINS ET AL. 2018, 2019) OR MOST RECENT GUIDANCE FOR ADDITIONAL INFORMATION. SALVAGE GUIDELINES ARE AS FOLLOWS:

1. CONDUCT NATIVE MUSSEL AND LAMPREY PRESENCE AND ABSENCE SURVEYS; APPROXIMATE NUMBERS FOR SALVAGE TO AID IN PLANNING FOR SALVAGE.
2. PRE-SELECT SITE(S) FOR RELEASE AND/OR MUSSEL BED RELOCATION.
3. SALVAGE OF BULL TROUT WILL NOT TAKE PLACE WHEN WATER TEMPERATURES EXCEED 15 DEGREES CELSIUS.
4. IF DRAWDOWN LESS THAN 48 HOURS, SALVAGE OF LAMPREY AND MUSSELS MAY NOT BE NECESSARY IF TEMPERATURES SUPPORT SURVIVAL IN SEDIMENTS.
5. SALVAGE MUSSELS BY HAND AFTER LOCATING BY SNORKELING OR WADING. IF MUSSELS ARE NUMEROUS (OR STAFF IS LIMITED), IT MAY BE NECESSARY TO DO THIS STEP IN THE DAYS BEFORE DRAWDOWN, AS RELOCATION/PLACEMENT CAN BE TIME CONSUMING.
6. SALVAGE LAMPREY BY ELECTROFISHING. SEE ELECTROFISHING CONSERVATION MEASURES FOR LAMPREY AND LARVAL LAMPREY DRY SHOCK SETTINGS.
7. SALVAGE BONY FISH AFTER LAMPREY WITH NETS OR ELECTROFISHING (SEE ELECTROFISHING CONSERVATION MEASURES FOR APPROPRIATE SETTINGS).
8. REGULARLY INSPECT DEWATERED SITE SINCE LAMPREY LIKELY TO EMERGE AND MUSSELS MAY BECOME VISIBLE AFTER DEWATERING.
9. MUSSELS MAY BE TRANSFERRED IN COOLERS.
10. MUSSELS WILL BE PLACED INDIVIDUALLY TO ENSURE ABILITY TO BURROW INTO NEW HABITAT.

3. ELECTROFISHING BASED ON NMFS'S ELECTROFISHING GUIDELINES (NMFS 2000⁷).

- A. INITIAL SITE SURVEYS AND EQUIPMENT SETTINGS.

1. IN ORDER TO AVOID CONTACT WITH SPAWNING ADULTS OR ACTIVE REDDS, RESEARCHERS MUST CONDUCT A CAREFUL VISUAL SURVEY OF THE AREA TO BE SAMPLED BEFORE BEGINNING ELECTROFISHING.
2. PRIOR TO THE START OF SAMPLING AT A NEW LOCATION, WATER TEMPERATURE AND CONDUCTIVITY MEASUREMENTS SHALL BE TAKEN TO EVALUATE ELECTROFISHER SETTINGS AND ADJUSTMENTS. NO ELECTROFISHING SHOULD OCCUR WHEN WATER TEMPERATURES ARE ABOVE 18° C OR ARE EXPECTED TO RISE ABOVE THIS TEMPERATURE PRIOR TO CONCLUDING THE ELECTROFISHING SURVEY.
3. WHENEVER POSSIBLE, A BLOCK NET SHOULD BE PLACED BELOW THE AREA BEING SAMPLED TO CAPTURE STUNNED FISH THAT MAY DRIFT DOWNSTREAM.
4. EACH ELECTROFISHING SESSION MUST START WITH ALL SETTINGS (VOLTAGE, PULSE WIDTH, AND PULSE RATE) SET TO THE MINIMUMS NEEDED TO CAPTURE FISH (TABLE 1).
5. EQUIPMENT MUST BE IN GOOD WORKING CONDITION AND OPERATORS SHOULD GO THROUGH THE MANUFACTURER'S PRESEASON CHECKS, ADHERE TO ALL PROVISIONS, AND RECORD MAJOR MAINTENANCE WORK IN A LOGBOOK. RECORDS FOR CONDUCTIVITY, WATER TEMPERATURE, AIR TEMPERATURE, ELECTROFISH SETTINGS, ELECTROFISHER MODEL, ELECTROFISHER CALIBRATION, FISH CONDITIONS, FISH MORTALITIES, AND TOTAL CAPTURE RATES SHALL BE INCLUDED IN THE SALVAGE LOG BOOK.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

HIP - GENERAL CONSERVATION MEASURES

DRAWING NUMBER:

7.1

SHEET: 26 OF 57

Plotted: 10/08/2025, 2:12:28 | d:\lawrence P:\00571039\CAD\000\Stream Restoration Design\01_100_Percent\0571039300_Sht 27_7.2 [HIP - General Conservation Measures].dwg

WORK AREA ISOLATION AND FISH SALVAGE (CONTINUED).

B. ELECTROFISHING TECHNIQUE.

- SAMPLING SHOULD BEGIN USING STRAIGHT DC. THE POWER NEEDS TO REMAIN ON UNTIL THE FISH IS NETTED WHEN USING STRAIGHT DC. IF FISH CAPTURE IS UNSUCCESSFUL WITH INITIAL LOW VOLTAGE, GRADUALLY INCREASE VOLTAGE SETTINGS WITH STRAIGHT DC WHILE REMAINING BELOW MAXIMUM LEVELS.
- MAXIMUM VOLTAGE WILL BE 1100 VOLTS WHEN CONDUCTIVITY IS LESS THAN 100 MILLISECONDS, 800 VOLTS WHEN BETWEEN 100 AND 300 MILLISECONDS, AND 400 VOLTS WHEN LESS THAN 300 MILLISECONDS (TABLE 1).
- IF FISH CAPTURE IS NOT SUCCESSFUL WITH THE USE OF STRAIGHT DC, THEN SET THE ELECTROFISHER TO LOWER VOLTAGES WITH PDC. IF FISH CAPTURE IS UNSUCCESSFUL WITH LOW VOLTAGES, INCREASE PULSE WIDTH, VOLTAGE, AND PULSE FREQUENCY (DURATION, AMPLITUDE, AND FREQUENCY) WITHIN MAXIMUM VALUES (TABLE 1).
- MAXIMUM PULSE WIDTH IS 5 MILLISECONDS. MAXIMUM PULSE RATE IS 70 HERTZ
- ELECTROFISHING WILL NOT OCCUR IN ONE AREA FOR AN EXTENDED PERIOD. ELECTROFISHING SHOULD BE PERFORMED IN A MANNER THAT MINIMIZES HARM TO THE FISH. STREAM SEGMENTS SHOULD BE SAMPLED SYSTEMATICALLY, MOVING THE ANODE CONTINUOUSLY IN A HERRINGBONE PATTERN (WHERE FEASIBLE) THROUGH THE WATER. CARE SHOULD BE TAKEN WHEN FISHING IN AREAS WITH HIGH FISH CONCENTRATIONS, STRUCTURE (E.G., WOOD, UNDERCUT BANKS) AND IN SHALLOW WATERS WHERE MOST BACKPACK ELECTROFISHING FOR JUVENILE SALMONIDS OCCURS. VOLTAGE GRADIENTS MAY BE HIGH WHEN ELECTRODES ARE IN SHALLOW WATER WHERE BOUNDARY LAYERS (WATER SURFACE AND SUBSTRATE) TEND TO INTENSIFY THE ELECTRICAL FIELD. NETTERS SHOULD NOT ALLOW THE FISH TO REMAIN IN THE ELECTRICAL FIELD ANY LONGER THAN NECESSARY BY REMOVING STUNNED FISH FROM THE WATER IMMEDIATELY AFTER NETTING..
- THE ANODE SHOULD NOT INTENTIONALLY CONTACT FISH. THE ZONE OF POTENTIAL INJURY FOR FISH OF 0.5 M FROM THE ANODE SHALL BE AVOIDED.
- SETTINGS WILL BE LOWERED IN SHALLOWER WATER SINCE VOLTAGE GRADIENTS ARE LIKELY TO INCREASE.
- ELECTROFISHING WILL NOT OCCUR IN TURBID WATER WHERE VISIBILITY IS POOR (I.E. UNABLE TO SEE THE BED OF THE STREAM).
- ELECTROFISHING CREWS SHOULD BE GENERALLY OBSERVANT OF THE CONDITION OF THE FISH AND CHANGE OR TERMINATE SAMPLING WHEN EXPERIENCING PROBLEMS WITH FISH RECOVERY TIME, BANDING, INJURY, MORTALITY, OR OTHER INDICATIONS OF FISH STRESS. IF MORTALITY OR OBVIOUS INJURY (DEFINED AS DARK BANDS ON THE BODY, SPINAL DEFORMATIONS, DE-SCALING OF 25% OR MORE OF BODY, AND TORPIDITY OR INABILITY TO MAINTAIN UPRIGHT ATTITUDE AFTER SUFFICIENT RECOVERY TIME) OCCURS DURING ELECTROFISHING, OPERATIONS WILL BE IMMEDIATELY DISCONTINUED, MACHINE SETTINGS, WATER TEMPERATURE, AND CONDUCTIVITY CHECKED, AND PROCEDURES ADJUSTED OR ELECTROFISHING POSTPONED TO REDUCE MORTALITY.

C. SAMPLE PROCESSING.

- FISH SHALL BE SORTED BY SIZE TO AVOID PREDATION DURING CONTAINMENT.
- SAMPLERS MUST BE AWARE OF THE CONDITIONS IN THE CONTAINERS HOLDING FISH; AIR PUMPS, WATER TRANSFERS, ETC. TO MAINTAIN SAFE CONDITIONS. ALL SAMPLING PROCEDURES MUST HAVE A PROTOCOL FOR PROTECTING HELD FISH.
- FISH SHOULD BE OBSERVED FOR GENERAL CONDITION AND INJURIES (E.G., INCREASED RECOVERY TIME, DARK BANDS, AND VISUALLY OBSERVABLE SPINAL INJURIES).
- FISH SHOULD BE PROCESSED AS SOON AS POSSIBLE AFTER CAPTURE TO MINIMIZE STRESS. THIS MAY REQUIRE A LARGER CREW SIZE. EACH FISH SHOULD BE COMPLETELY REVIVED BEFORE RELEASING AT THE LOCATION OF CAPTURE. A PLAN FOR ACHIEVING EFFICIENT RETURN TO APPROPRIATE HABITAT SHOULD BE DEVELOPED BEFORE EACH SAMPLING SESSION. EVERY ATTEMPT SHOULD BE MADE TO PROCESS AND RELEASE ESA-LISTED SPECIMENS FIRST.

D. BULL TROUT ELECTROFISHING CONSERVATION MEASURES.

- FOR SALVAGE OPERATIONS IN KNOWN BULL TROUT SPAWNING AND REARING HABITAT8, ELECTROFISHING SHALL ONLY OCCUR FROM MAY 1 TO JULY 31. IN FMO9 HABITATS, ELECTROFISHING MAY OCCUR ANY TIME OF YEAR.
- BULL TROUT ARE VERY TEMPERATURE SENSITIVE AND GENERALLY SHOULD NOT BE ELECTROFISHED OR OTHERWISE HANDLED WHEN TEMPERATURES EXCEED 15° C IN SPAWNING AND REARING HABITATS.

E. ELECTROFISHING SETTINGS FOR LARVAL LAMPREY.

- ELECTROFISHING SHOULD BE PERFORMED IN A MANNER THAT MINIMIZES HARM TO FISHES. HANDLING TECHNIQUES AS DESCRIBED IN NMFS ELECTROFISHING GUIDELINES ARE PROTECTIVE OF LAMPREY. IF THERE IS A CONFLICT BETWEEN CONSERVATION MEASURES FOR ESA-LISTED SALMONIDS AND LAMPREY/MUSSELS NOTIFY BPA EC LEAD AND PRIORITIZE PROTECTIONS TOWARDS THE ESA-LISTED FISH. VERIFY ELECTROFISHER MODEL WITH EC LEAD IF NOT ONE OF THE FOLLOWING:
 - ABP-2 “WISCONSIN” ELECTROFISHER (ETS ELECTROFISHING, VERONA, WI)
 - SMITH-ROOT LR-24 MODEL ELECTROFISHER WITH LAMPREY SETTINGS;
 - SMITH ROOT APEX BACKPACK ELECTROFISHER WITH LAMPREY SETTINGS.
- ELECTROFISHERS USED FOR LARVAL LAMPREY SAMPLING SHOULD BE SET WITH TWO WAVE FORMS, A LOWER FREQUENCY “TICKLE” WAVE FORM TO COAX LARVAL LAMPREYS OUT OF THE SUBSTRATE AND A HIGHER FREQUENCY “STUN” WAVE FORM TO IMMOBILIZE LARVAL LAMPREYS FOR NETTING (TABLE 2).
- FIRST STAGE: USE 125V DIRECT CURRENT WITH A 25 PERCENT DUTY CYCLE APPLIED AT A SLOW RATE OF 3 PULSES PER SECOND, TO INDUCE LARVAL LAMPREYS TO EMERGE FROM THE SEDIMENT. AT LOW WATER TEMPERATURE (<10C”), VOLTAGE MAY NEED TO BE RAISED (150-200V) TO MAINTAIN ITS EFFECTIVENESS (GRADUALLY INCREASE VOLTAGE TO FIND THE APPROPRIATE SETTING TO AVOID THE RISK OF ELECTRONARCOSIS). USE A PATTERN OF 3 SLOW PULSES FOLLOWED BY A SKIPPED PULSE (BURSTED PULSE) HELPS LARVAL LAMPREYS TO EMERGE.
- SECOND STAGE: IMMEDIATELY AFTER LARVAL LAMPREYS EMERGE, USE A FAST PULSE SETTING OF 30 PULSES PER SECOND TO IMMOBILIZE AND NET THEM. IT IS NOT NECESSARY TO STUN LAMPREY FOR NETTING FOR EXPERIENCED NETTERS. AVOID EXPOSING LARVAL LAMPREYS TO EXTENDED PERIODS OF ELECTROFISHING AS IT HAS ALSO BEEN LINKED TO ELECTRONARCOSIS. RECOVERY FROM ELECTRONARCOSIS TAKES ABOUT 15 MINUTES.
- USE DIP NETS TO CAPTURE LARVAL LAMPREYS WHERE THEY ARE READILY VISIBLE. WHERE NOT VISIBLE, SEINES MAY BE EFFECTIVE. USING FINE MESH NETS TO “SWEEP” THE WATER (“BLIND-NETTING”) MAY INCREASE THE NUMBER OF SMALL LARVAE COLLECTED.
- WITHIN EACH REACH, ELECTROFISHING SHOULD BE CONDUCTED IN A DOWNSTREAM TO UPSTREAM DIRECTION (FOR THE PURPOSE OF REDUCING TURBIDITY/MAINTAINING VISIBILITY) WITH ONE PERSON OPERATING THE ELECTROFISHER AND AT LEAST ONE PERSON NETTING LARVAL LAMPREYS. EACH REACH SHOULD BE THOROUGHLY AND SLOWLY SAMPLED (60-90 SEC/M), WITH MORE EFFORT DIRECTED AT SUITABLE LAMPREY REARING HABITAT AND LESS EFFORT IN AREAS WITH HARD SUBSTRATES OR HIGH WATER VELOCITY.
- MULTIPLE ELECTROFISHING PASSES SHOULD BE MADE TO ENSURE A MORE COMPLETE REMOVAL OF LARVAL LAMPREYS. A FIFTEEN-MINUTE BREAK BETWEEN PASSES SHOULD BE TAKEN TO REDUCE THE CHANCE OF ELECTRONARCOSIS. SOME RESEARCH INDICATED ON AVERAGE, ONLY 30% LAMPREY EMERGE PER PASS, THUS THE NEED FOR MULTIPLE PASSES.
- POST-DRAWDOWN: LARVAL LAMPREY MAY CONTINUE TO EMERGE FROM SEDIMENTS AFTER DRAWDOWN. THE FOLLOWING “DRY- SHOCKING” GUIDELINES CAN BE USED TO ENCOURAGE LARVAE TO EMERGE FROM THE SEDIMENTS SO THEY CAN BE SALVAGED.
 - DURING AND AFTER DEWATERING, DEWATERED AREAS WHERE LAMPREY MAY BE BURROWED SHOULD BE SHOCKED, AKA “DRY-SHOCKING.” DRY SHOCK IN DEPOSITIONAL AREAS OF FINE AND SANDY SEDIMENT FOR LARVAL LAMPREY. JUVENILES (EYED MIGRANTS) AND ADULTS ARE SOMETIMES FOUND BURIED IN ROCKIER AREAS, AND THOSE AREAS SHOULD ALSO BE SHOCKED IF OTHER THESE LIFE STAGES MAY BE PRESENT.
 - DRY-SHOCK A SQUARE METER AT A TIME. PLACE THE ANODES ABOUT 1 METER APART AND TICKLE-PULSE FOR 60 TO 90 SECONDS. REMOVE EMERGED LAMPREY ONCE THE SHOCKING HAS STOPPED. MOVE TO NEXT SQUARE METER AND CONTINUE. ADJUST TO LOCAL CONDITIONS – IN SOME INSTANCES, 60 SECONDS OF SHOCKING WILL BE SUFFICIENT; IN OTHER AREAS 90 SECONDS IS NEEDED. IN COLD TEMPERATURES, IT CAN BE BENEFICIAL TO RAISE THE VOLTAGE TO INCREASE EFFICIENCY. A GENERAL GUIDELINE IS AT TEMPERATURES LESS THAN 100C, THE VOLTAGE CAN BE INCREASED TO 150-175 V. IF EMERGENCE IS REALLY SLOW (OR ON THE LAST SALVAGE PASS PRIOR TO COMPLETE DEWATERING), THE VOLTAGE CAN BE INCREASED TO 200 V INITIALLY, AND UP TO 400 V IF LOWER VOLTAGE IS NOT EFFECTIVE (DRY SHOCKING ONLY).

4. DEWATERING.

- DEWATERING, WHEN NECESSARY, WILL BE CONDUCTED OVER A SUFFICIENT PERIOD OF TIME TO ALLOW SPECIES TO NATURALLY MIGRATE OUT OF THE WORK AREA AND WILL BE LIMITED TO THE SHORTEST LINEAR EXTENT PRACTICABLE.
- DIVERSION AROUND THE CONSTRUCTION SITE MAY BE ACCOMPLISHED WITH A COFFERDAM AND A BY-PASS CULVERT OR PIPE, OR A LINED, NON-ERODIBLE DIVERSION DITCH. WHERE GRAVITY FEED IS NOT POSSIBLE, A PUMP MAY BE USED, BUT MUST BE OPERATED IN SUCH A WAY AS TO AVOID REPETITIVE DEWATERING AND REWATERING OF THE SITE. IMPOUNDMENT BEHIND THE COFFERDAM MUST OCCUR SLOWLY THROUGH THE TRANSITION, WHILE CONSTANT FLOW IS DELIVERED TO THE DOWNSTREAM REACHES.

- ALL PUMPS WILL HAVE FISH SCREENS TO AVOID JUVENILE FISH IMPINGEMENT OR ENTRAINMENT, AND WILL BE OPERATED IN ACCORDANCE WITH NMFS’S CURRENT FISH SCREEN CRITERIA (NMFS 2011, OR MOST RECENT VERSION). IF THE PUMPING RATE EXCEEDS 3 CUBIC FEET PER SECOND (CFS), A NMFS ENGINEERING REVIEW WILL BE NECESSARY. IF THE SCREEN IS IN AN ISOLATED AREA WITH NO FISH (SALMONIDS OR LARVAL LAMPREY), A LARGER MESH SCREEN MAY BE USED.
- DISSIPATION OF FLOW ENERGY AT THE BYPASS OUTFLOW WILL BE PROVIDED TO PREVENT DAMAGE TO RIPARIAN VEGETATION AND/OR STREAM CHANNEL.
- SEEPAGE WATER WILL BE PUMPED TO A TEMPORARY STORAGE AND TREATMENT SITE OR INTO UPLAND AREAS TO ALLOW WATER TO PERCOLATE THROUGH SOIL OR TO FILTER THROUGH VEGETATION PRIOR TO REENTERING THE STREAM CHANNEL.

CONSTRUCTION AND POST-CONSTRUCTION CONSERVATION MEASURES.

1. FISH PASSAGE.

- FISH PASSAGE WILL BE PROVIDED FOR ANY ADULT OR JUVENILE FISH LIKELY TO BE PRESENT IN THE PROJECT AREA DURING CONSTRUCTION, UNLESS PASSAGE DID NOT EXIST BEFORE CONSTRUCTION, OR THE STREAM IS NATURALLY IMPASSABLE AT THE TIME OF CONSTRUCTION, OR IF IT SHALL INCREASE NEGATIVE EFFECTS ON ESA-LISTED SPECIES OR THEIR HABITAT.
- FISH PASSAGE ALTERNATIVES SHALL BE APPROVED BY BPA EC LEAD UNDER ADVISEMENT BY NMFS HABITAT BIOLOGIST.

2. CONSTRUCTION AND DISCHARGE WATER.

- SURFACE WATER MAY BE DIVERTED TO MEET CONSTRUCTION NEEDS, BUT ONLY IF DEVELOPED SOURCES ARE UNAVAILABLE OR INADEQUATE.
- DIVERSIONS WILL NOT EXCEED 10% OF THE AVAILABLE FLOW.
- ALL CONSTRUCTION DISCHARGE WATER WILL BE COLLECTED AND TREATED USING THE BEST AVAILABLE TECHNOLOGY SUITABLE FOR SITE CONDITIONS. TREATMENTS TO REMOVE DEBRIS, NUTRIENTS, SEDIMENT, PETROLEUM HYDROCARBONS, METALS AND OTHER POLLUTANTS LIKELY TO BE PRESENT WILL BE PROVIDED.

3. TIME AND EXTENT OF DISTURBANCE.

- EARTHWORK (INCLUDING DRILLING, EXCAVATION, DREDGING, FILLING AND COMPACTING) IN WHICH MECHANIZED EQUIPMENT IS USED IN STREAM CHANNELS, RIPARIAN AREAS, AND WETLANDS WILL BE COMPLETED AS QUICKLY AS POSSIBLE.
- MECHANIZED EQUIPMENT WILL BE USED IN STREAMS ONLY WHEN PROJECT SPECIALISTS BELIEVE THAT SUCH ACTIONS ARE THE ONLY REASONABLE ALTERNATIVE FOR IMPLEMENTATION, OR WOULD RESULT IN LESS SEDIMENT IN THE STREAM CHANNEL OR DAMAGE (SHORT- OR LONG-TERM) TO THE OVERALL AQUATIC AND RIPARIAN ECOSYSTEM RELATIVE TO OTHER ALTERNATIVES. TO THE EXTENT FEASIBLE, MECHANIZED EQUIPMENT WILL WORK FROM THE TOP OF THE BANK, UNLESS WORK FROM ANOTHER LOCATION WOULD RESULT IN LESS HABITAT DISTURBANCE.

4. CESSATION OF WORK.

- PROJECT OPERATIONS WILL CEASE WHEN HIGH FLOW CONDITIONS MAY RESULT IN INUNDATION OF THE PROJECT AREA, EXCEPT FOR EFFORTS TO AVOID OR MINIMIZE RESOURCE DAMAGE.
- PROJECT OPERATIONS WILL CEASE WHEN ALLOWABLE WATER QUALITY LEVELS ARE EXCEEDED AS DEFINED BY THE STATE CWA SECTION 401 WATER QUALITY CERTIFICATION OR HIP TURBIDITY MONITORING PROTOCOL. SEE CWA SECTION 401 WATER QUALITY CERTIFICATION FOR MORE INFORMATION.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

HIP - GENERAL CONSERVATION MEASURES

DRAWING NUMBER:

7.2

SHEET: 27 OF 57

Plotted: 10/08/2025 2:12:29 | d:\awrence P\00571033\CAD\000\Stream Restoration Design\01_100_Percent\057103300_Sht 28_7.3 [HIP - General Conservation Measures].dwg

CONSTRUCTION AND POST-CONSTRUCTION CONSERVATION MEASURES (CONTINUED).

5. SITE RESTORATION.

- B. ALL STREAMBANKS, SOILS, AND VEGETATION WILL BE CLEANED UP AND RESTORED AS NECESSARY USING STOCKPILED LARGE WOOD, TOPSOIL, AND NATIVE CHANNEL MATERIAL.
- C. ALL PROJECT-RELATED WASTE WILL BE REMOVED.
- D. ALL TEMPORARY ACCESS ROADS, CROSSINGS, AND STAGING AREAS WILL BE DECOMPACTED AND RE-CONTOURED. WHEN NECESSARY FOR REVEGETATION AND INFILTRATION OF WATER, COMPACTED AREAS OF SOIL WILL BE LOOSENEED.
- E. ALL DISTURBED AREAS WILL BE REHABILITATED IN A MANNER THAT RESULTS IN SIMILAR OR IMPROVED CONDITIONS RELATIVE TO PRE-PROJECT CONDITIONS. THIS WILL BE ACHIEVED THROUGH REDISTRIBUTION OF STOCKPILED MATERIALS, SEEDING, AND/OR PLANTING WITH LOCAL NATIVE SEED MIXES OR PLANTS.

6. REVEGETATION.

- A. PLANTING AND SEEDING WILL OCCUR PRIOR TO OR AT THE BEGINNING OF THE FIRST GROWING SEASON AFTER CONSTRUCTION.
- B. USE A MIX OF SPECIES, APPROPRIATE TO THE SITE THAT WILL ACHIEVE ESTABLISHMENT, SHADE, AND EROSION CONTROL OBJECTIVES. THESE WOULD, PREFERABLY BE FORB, GRASS, SHRUB, OR TREE SPECIES NATIVE TO THE PROJECT AREA OR REGION.
- C. VEGETATION, SUCH AS WILLOW, SEDGE AND RUSH MATS, WILL BE SALVAGED FROM DISTURBED OR ABANDONED FLOODPLAINS, STREAM CHANNELS, OR WETLANDS, AND REPLANTED AT THE SITE IN APPROPRIATE LOCATIONS.
- D. SHORT-TERM STABILIZATION MEASURES MAY INCLUDE THE USE OF NON-NATIVE STERILE SEED MIX (WHEN NATIVE SEEDS ARE NOT AVAILABLE), WEED-FREE CERTIFIED STRAW, JUTE MATTING, AND OTHER SIMILAR TECHNIQUES.
- E. SURFACE FERTILIZER WILL NOT BE APPLIED WITHIN 50 FEET OF ANY STREAM CHANNEL, WATERBODY, OR WETLAND.
- F. FENCING WILL BE INSTALLED AS NECESSARY TO PREVENT ACCESS TO REVEGETATED SITES BY LIVESTOCK OR UNAUTHORIZED PERSONS.
- G. INVASIVE SPECIES WILL NOT BE USED. INVASIVE PLANTS WILL BE REMOVED OR CONTROLLED UNTIL NATIVE PLANT SPECIES ARE WELL-ESTABLISHED (TYPICALLY WITHIN 3 YEARS POST-CONSTRUCTION TO ACHIEVE 70% OF PRE-PROJECT CONDITIONS).

7. SITE ACCESS AND IMPLEMENTATION MONITORING.

- A. THE PROJECT SPONSOR WILL RETAIN THE RIGHT OF REASONABLE ACCESS TO THE SITE IN ORDER TO MONITOR THE SUCCESS OF THE PROJECT OVER ITS LIFE. PROJECT SPONSOR STAFF OR THEIR DESIGNATED REPRESENTATIVE WILL PROVIDE IMPLEMENTATION MONITORING TO ENSURE:
 - a. GENERAL CONSERVATION MEASURES ARE ADEQUATELY FOLLOWED.
 - b. EFFECTS TO LISTED SPECIES ARE NOT GREATER THAN PREDICTED AND INCIDENTAL TAKE LIMITATIONS ARE NOT EXCEEDED.
 - c. TURBIDITY MONITORING IS BEING CONDUCTED IN ACCORDANCE WITH THE HIP TURBIDITY MONITORING PROTOCOL.
- B. THE PROJECT SPONSOR OR DESIGNATED REPRESENTATIVE WILL SUBMIT THE PROJECT COMPLETION FORM (PCF) TO ENSURE COMPLIANCE WITH THE APPLICABLE BIOP.

8. CWA SECTION 401 WATER QUALITY CERTIFICATION.

- A. THE PROJECT SPONSOR OR DESIGNATED REPRESENTATIVE WILL COMPLETE AND RECORD WATER QUALITY OBSERVATIONS TO ENSURE THAT IN-WATER WORK IS NOT DEGRADING WATER QUALITY.
- B. DURING CONSTRUCTION, CWA SECTION 401 WATER QUALITY CERTIFICATION PROVISIONS PROVIDED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, WASHINGTON DEPARTMENT OF ECOLOGY, OR IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY WILL BE FOLLOWED.

STAGED REWATERING PLAN AND CONSERVATION MEASURES.

- A. WHEN APPROPRIATE, THE PROJECT SPONSOR SHALL IMPLEMENT A STAGED REWATERING PLAN FOR PROJECTS THAT INVOLVE INTRODUCING STREAMFLOW INTO RECENTLY EXCAVATED CHANNELS UNDER ACTIVITY CATEGORY 2A) IMPROVE SECONDARY CHANNEL AND WETLAND HABITAT OR 2F) CHANNEL RECONSTRUCTION. THIS PLAN MAY BE ALTERED ACCORDING TO SITE SPECIFIC CONDITIONS WITH COORDINATION AND FEEDBACK FROM BPA AND THE SERVICES.
- B. THE FOLLOWING WILL BE APPLIED TO ALL REWATERING EFFORTS. COMPLEX REWATERING MAY REQUIRE ADDITIONAL NOTES OR A DEDICATED SHEET IN THE CONSTRUCTION DETAILS.

- 1. TURBIDITY MONITORING PROTOCOL WILL BE APPLIED TO REWATERING EFFORTS.
- 2. PRE-WASH THE NEWLY-EXCAVATED CHANNEL BEFORE REWATERING10. TURBID WASH WATER WILL BE DETAINED AND PUMPED TO THE FLOODPLAIN OR INTO A REACH WITH SEDIMENT CAPTURE DEVICES, RATHER THAN DISCHARGING INTO FISH-BEARING WATERS.
- 3. INSTALL SEINE NETS AT UPSTREAM END TO PREVENT FISH FROM MOVING DOWNSTREAM UNTIL 2/3 OF TOTAL FLOW IS RESTORED TO THE CHANNEL.
- 4. STARTING IN THE EARLY MORNING, INTRODUCE 1/3 OF THE FLOW INTO THE NEW CHANNEL OVER A PERIOD OF 1-2 HOURS.
- 5. INTRODUCE THE SECOND 1/3 OF THE FLOW OVER THE NEXT 1-2 HOURS. SALVAGE FISH FROM THE OLD CHANNEL AT THIS TIME, SO THAT THE OLD CHANNEL IS FISH-FREE BEFORE DROPPING BELOW 1/3 OF THE FLOW. NOTE: THE FISH WILL BE TEMPORARILY BLOCKED FROM MOVING DOWNSTREAM INTO EITHER CHANNEL UNTIL 2/3 OF THE FLOW HAS BEEN TRANSITIONED TO THE NEW CHANNEL. THIS BLOCKAGE TO DOWNSTREAM FISH PASSAGE IS EXPECTED TO PERSIST FOR ROUGHLY 12 TO 14 HOURS, BUT FISH WILL STILL BE ABLE TO VOLITIONALLY MOVE OUT OF THE CHANNEL IN THE DOWNSTREAM DIRECTION. PERFORM MONITORING AS IN #3 ABOVE.
- 6. AFTER THE SECOND 1/3 OF FLOW IS INTRODUCED OVER 2 HOURS, AND TURBIDITY IS WITHIN 10% OF THE BACKGROUND LEVEL, REMOVE SEINE NETS FROM THE NEW CHANNEL, AND ALLOW FISH TO MOVE DOWNSTREAM BACK INTO THE CHANNEL.
- 7. INTRODUCE THE FINAL 1/3 OF FLOW. ONCE 100% OF THE FLOW IS IN THE NEW CHANNEL, INSTALL PLUG TO BLOCK FLOW INTO THE OLD CHANNEL AND REMOVE SEINE NETS FROM THE OLD CHANNEL. ADDITIONAL EFFORTS TO SALVAGE LARVAL LAMPREY EMERGING FROM FINE SEDIMENT DEPOSITS SHOULD BE CONDUCTED AFTER THE FLOW IS GONE AND POSSIBLY FOR A FEW HOURS AFTER FLOW IS GONE, AS THE LARVAE WILL CONTINUE TO EMERGE.
- 8. INSTALL PLUG TO BLOCK FLOW INTO OLD CHANNEL OR BYPASS IF NOT PART OF PROJECT. REMOVE ANY SEINE NETS.
- 9. IN LAMPREY SYSTEMS, LAMPREY SALVAGE AND DRY SHOCKING MAY BE NECESSARY.

HIP TURBIDITY MONITORING PROTOCOL AND CONSERVATION MEASURES.

THE PROJECT SPONSOR IS RESPONSIBLE FOR MONITORING TURBIDITY DURING IMPLEMENTATION. IF THE GEOMORPHOLOGY OF THE PROJECT AREA (E.G., SILTY OR CLAYLIKE MATERIALS) OR THE NATURE OF THE ACTION (E.G., LARGE AMOUNTS OF BARE EARTH EXPOSURE) SHALL PRECLUDE THE SUCCESSFUL COMPLIANCE WITH THESE TRIGGERS, NOTIFY THE BPA EC LEAD IN ADVANCE OF THE LIKELIHOOD OF AN EXCEEDANCE AND SEEK ADDITIONAL RECOMMENDATIONS. TURBIDITY PROTOCOL IS AS FOLLOWS:

- A. TAKE A BACKGROUND TURBIDITY MEASUREMENT APPROXIMATELY 100 FEET UPSTREAM FROM THE PROJECT AREA USING A RECENTLY-CALIBRATED TURBIDIMETER OR ESTIMATED USING VISUAL OBSERVATIONS (FIGURE 1). NOTE THE TURBIDITY LEVEL, LOCATION, AND TIME OF THE BACKGROUND MEASUREMENT.
- B. RECORD THE TURBIDITY MEASURED USING A CALIBRATED TURBIDIMETER OR ESTIMATED BY VISUAL OBSERVATION (FIGURE 1) BEFORE WORK BEGINS AT THE DOWNSTREAM POINT, KNOWN AS THE MEASUREMENT COMPLIANCE POINT. NOTE THE TURBIDITY LEVEL, LOCATION, AND TIME. THE COMPLIANCE POINT SHALL BE LOCATED DOWNSTREAM OF THE DISTURBANCE AREA, APPROXIMATELY:
 - 1. 50 FEET DOWNSTREAM FOR STREAMS THAT ARE LESS THAN 30 FEET WIDE;
 - 2. 100 FEET DOWNSTREAM FOR STREAMS BETWEEN 30 AND 100 FEET WIDE;
 - 3. 200 FEET DOWNSTREAM FOR STREAMS GREATER THAN 100 FEET WIDE; AND
 - 4. 300 FEET FROM THE DISCHARGE POINT OR NONPOINT SOURCE FOR LOCATIONS SUBJECT TO TIDAL OR COASTAL SCOUR.
- C. TURBIDITY SHALL BE MEASURED BY TURBIDIMETER OR ESTIMATED BY VISUAL OBSERVATION (FIGURE 1) AT THE BACKGROUND AND COMPLIANCE POINTS EVERY 4 HOURS WHILE WORK IS BEING IMPLEMENTED.
- D. IF THERE IS A VISIBLE DIFFERENCE BETWEEN A COMPLIANCE POINT AND THE BACKGROUND THEN AN EXCEEDANCE (10% OR MORE) HAS OCCURRED AND MUST BE NOTED IN THE PCF. ADJUSTMENTS OR CORRECTIVE MEASURES MUST BE TAKEN IN ORDER TO REDUCE TURBIDITY.
- E. IF EXCEEDANCES OCCUR FOR MORE THAN TWO CONSECUTIVE MONITORING INTERVALS (AFTER 8 HOURS), THE ACTIVITY MUST STOP UNTIL THE TURBIDITY LEVEL RETURNS TO BACKGROUND, AND THE BPA EC LEAD MUST BE NOTIFIED AFTER THE PROJECT IS CONCLUDED. THE BPA EC LEAD SHALL DOCUMENT THE REASONS FOR THE EXCEEDANCES AND THE CORRECTIVE MEASURES TAKEN. THIS IS VERY IMPORTANT AS BPA IS REQUIRED TO REPORT TO THE SERVICES UPON ALL EXCEEDANCES.
- F. IF AT ANY TIME, MONITORING, INSPECTIONS, OR OBSERVATIONS/SAMPLES SHOW THAT THE TURBIDITY CONTROLS ARE INEFFECTIVE, IMMEDIATELY MOBILIZE WORK CREWS TO REPAIR, REPLACE, OR REINFORCE CONTROLS AS NECESSARY. DOCUMENT THOSE OCCURRENCES IN THE PROJECT COMPLETION FORM (PCF).
- G. THE PROJECT SPONSOR SHALL SUBMIT A SUMMARY OF READINGS, EXCEEDANCES, CONTROL FAILURES, ADAPTIVE MEASURES TO BPA USING THE HIP PROJECT COMPLETION FORM (PCF).



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DWL/RSC
DRAWN BY:	DWL/SCY
APPROVED BY:	RSC
REVISION NO.:	---
DATE:	07/18/25



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PERCE COUNTY, IDAHO

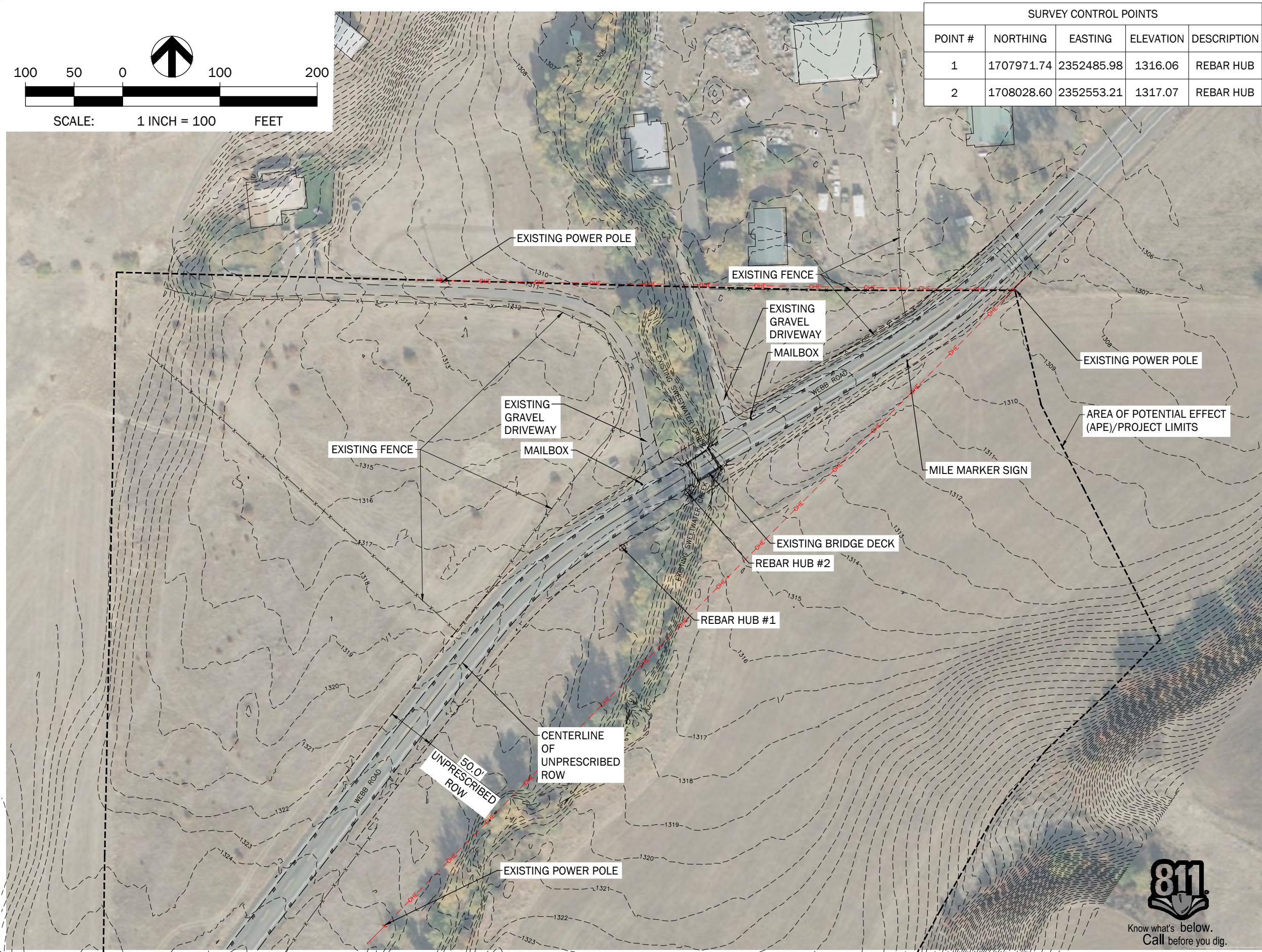
HIP - GENERAL CONSERVATION MEASURES

DRAWING NUMBER:

7.3

SHEET: 28 OF 57

P:\Sp025\Jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SC\050229 Existing Conditions.dwg
Plotted: 10/09/2025, 13:13 | wait

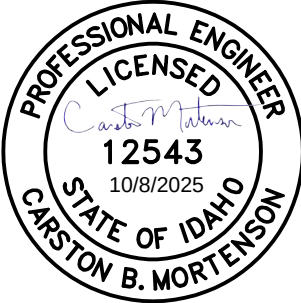


SURVEY CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1707971.74	2352485.98	1316.06	REBAR HUB
2	1708028.60	2352553.21	1317.07	REBAR HUB

LEGEND	
	EXISTING PAVEMENT
	EXISTING CENTERLINE
	EXISTING CONTOUR
	EXISTING EDGE OF GRAVEL
	EXISTING FENCE
	EXISTING GUARDRAIL
	AREA OF POTENTIAL EFFECT (APE)
	OVERHEAD POWER LINE
	POWER POLE
	SIGN
	MAILBOX

UTILITY STATEMENT
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

THE EXISTING INFORMATION SHOWN ON THESE PLANS IS PER THE SURVEY COMPLETED BY:
RESOURCE SPECIALISTS INC.
20340 EMPIRE AVE. SUITE E-8
BEND, OR 97703
(541) 678-3969
DATED: 11/19/2024
THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: EAM
DRAWN BY: TJW
APPROVED BY: CJB
REVISION NO.:
DATE: OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

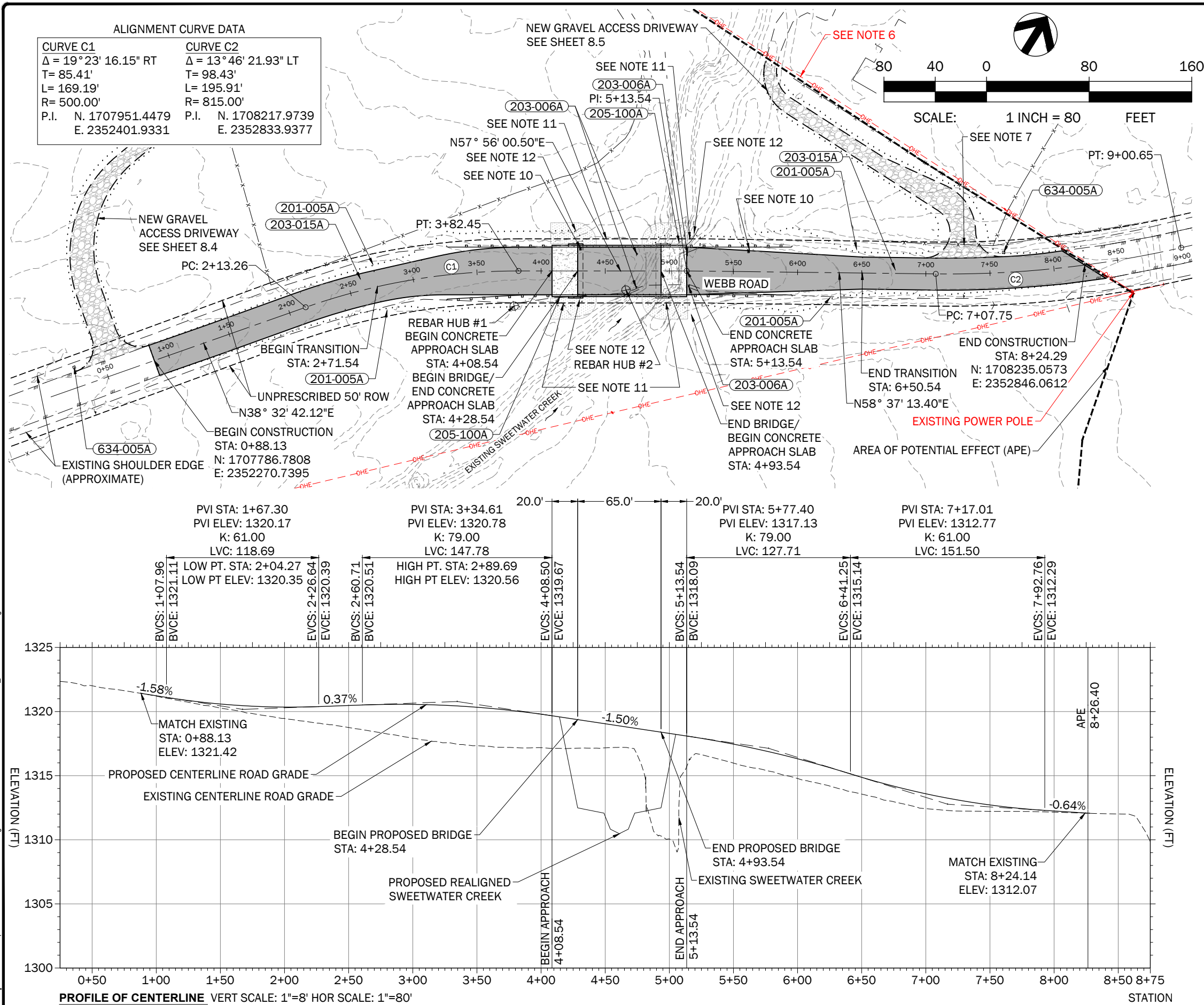
EXISTING ROADWAY CONDITIONS

DRAWING NUMBER:

8.1

SHEET: 29 OF 57

Plotted: 10/09/2025, 13:14 | wait P:\Sp25\Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.DWG\SC050239_Roadway P&P.dwg



LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE APPROACH SLAB
- PROPOSED GRAVEL DRIVEWAY
- AREA OF POTENTIAL EFFECT (APE)
- EXISTING CONTOUR
- UNPRESCRIBED R.O.W.
- EXISTING FENCE
- GUARDRAIL
- GRADING LIMITS
- EXISTING GRAVEL EDGE
- EXISTING OVERHEAD POWER LINE - IDAHO POWER
- CLEARING & GRUBBING
- REMOVAL OF SIGN
- REMOVAL OF BITUMINOUS SURFACE
- GUARDRAIL TERMINAL GRADING
- MAILBOX

NOTES

- REFER TO SHEET 8.1 (EXISTING CONDITIONS) FOR TBM INFORMATION (TYP).
- REFER TO STREAM PLANS FOR CREEK GRADING AND EARTHWORK INFORMATION.
- REFER TO BRIDGE PLANS FOR BRIDGE CONSTRUCTION.
- CONTRACTOR TO SEED AND REVEGETATE ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THAT ARE NOT SURFACED WITH GRAVEL.
- REFER TO TYPICAL ROADWAY SECTIONS, SHEETS 8.7 AND 8.8 FOR TYPICAL SECTIONS AND SURFACING.
- RETAIN AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION UNLESS NOTED OTHERWISE.**
- EXISTING FENCE MODIFICATIONS TO BE COORDINATED WITH HOMEOWNERS BY THE NEZ PERCE TRIBE.
- REMOVE EXISTING ROAD SURFACING WITHIN THE LIMITS OF THE NEW IMPROVEMENTS (TYP).
- REFER TO SHEET 8.3 (EDGE OF PAVEMENT PLAN) FOR MORE INFORMATION ON ROAD ASSOCIATED COMPONENTS.
- EXISTING MAILBOX TO BE RELOCATED. SEE THIS SHEET.
- FOR CONTINUATION OF PROPOSED GRADING, SEE SHEET 4.0 (SITE GRADING PLAN).
- FOR STREAM GRADING, SEE SHEET 4.0 (SITE GRADING PLAN).

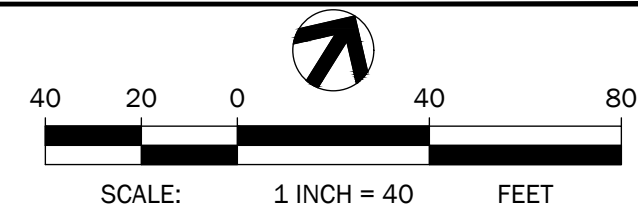
PROFESSIONAL ENGINEER
LICENSED
Carston Mortenson
12543
10/8/2025
STATE OF IDAHO
CARSTON B. MORTENSON

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: EAM		PREPARED FOR: NEZ PERCE TRIBE 
DRAWN BY: TJW		
APPROVED BY: CJB		
REVISION NO.: DATE: OCTOBER 2025		

221 N. Wall Street, Suite 500, Spokane, WA 99201 ph 509.328.2994 www.coffman.com	WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN WEBB, NEZ PIERCE COUNTY, IDAHO	DRAWING NUMBER: 8.2 SHEET: 30 OF 57
--	--	--

ROADWAY PLAN & PROFILE

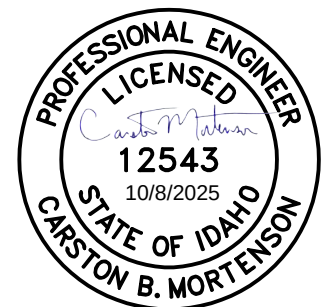


NOTES

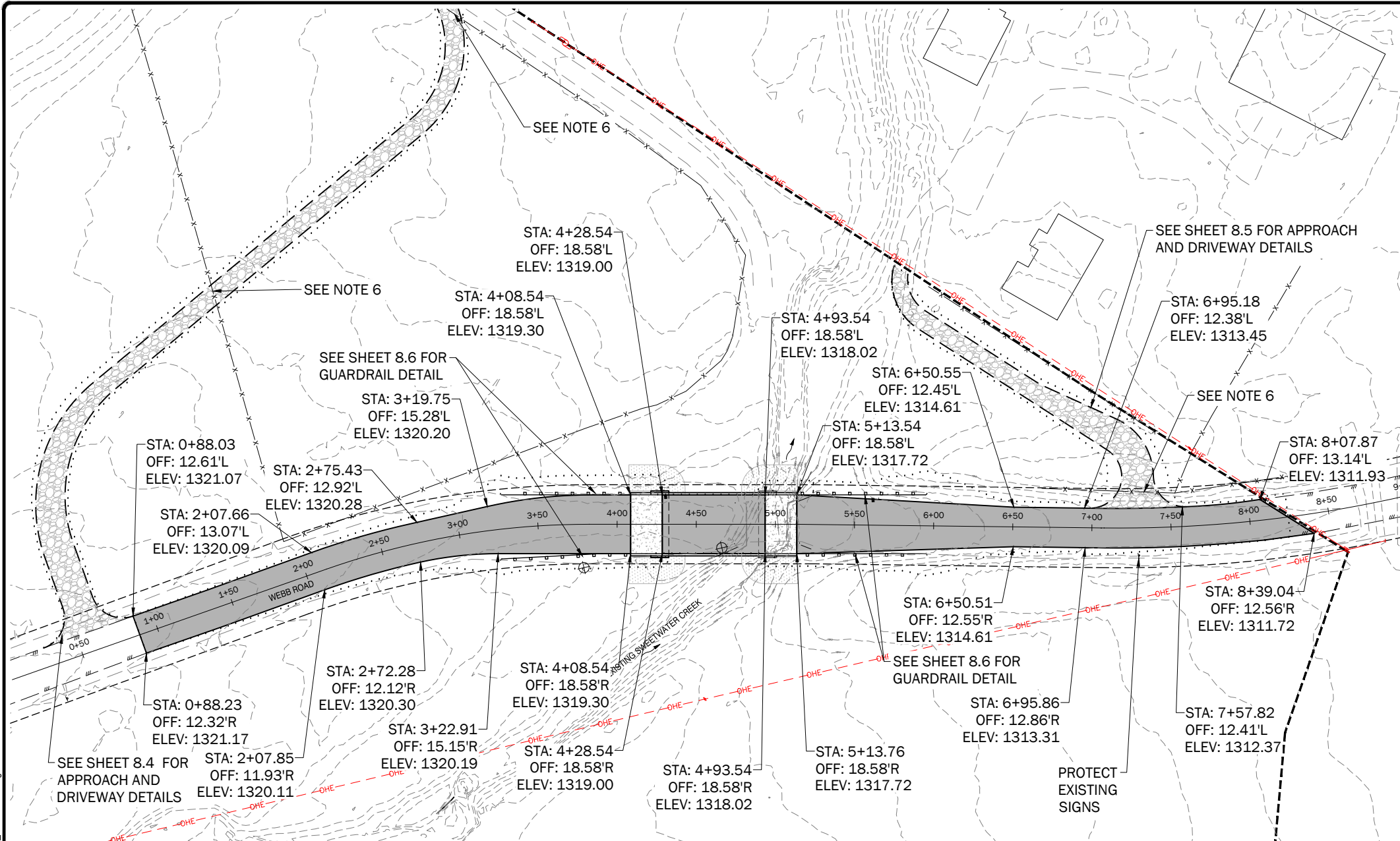
1. REFER TO ROADWAY PLANS, SHEETS 8.7 AND 8.8 FOR TYPICAL SECTIONS AND SURFACING.
2. REFER TO ROADWAY PLANS, SHEET 8.10 FOR TRAFFIC CONTROL PLAN.
3. REFER TO ROADWAY PLANS FOR PROPOSED SITE IMPROVEMENTS. CONTRACTOR SHALL PHASE CONSTRUCTION TO COORDINATE TEMPORARY SITE CONDITION WITH PROPOSED SITE IMPROVEMENTS.
4. COORDINATE WITH HOMEOWNER AND MAIL PURVEYOR FOR MAILBOX RELOCATION.
5. REFER TO STREAM PLANS FOR CREEK GRADING AND EARTHWORK INFORMATION.
6. EXISTING FENCE MODIFICATIONS TO BE COORDINATED WITH HOMEOWNERS BY THE NEZ PERCE TRIBE.

LEGEND

	PROPOSED ASPHALT PAVEMENT
	PROPOSED CONCRETE APPROACH SLAB
	PROPOSED GRAVEL DRIVEWAY
	AREA OF POTENTIAL EFFECT (APE)
	EXISTING CONTOUR
	UNPRESCRIBED R.O.W.
	EXISTING FENCE
	GUARDRAIL
	GRADING LIMITS
	OVERHEAD POWER LINE



Plotted: 10/09/2025, 13:14 | wait P:\Sp025\jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SC\050239_EOP_PLAN.dwg



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	TJW
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

EDGE OF PAVEMENT PLAN

DRAWING NUMBER:

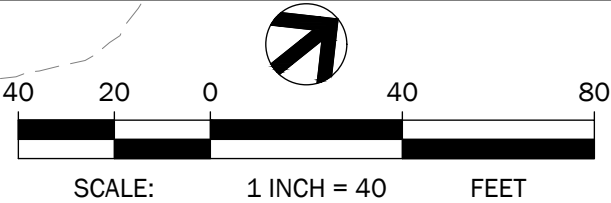
8.3

SHEET: 31 OF 57

P:\Sp25\Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.DWG\SC\050239_APPROACH DETAILS.dwg
Plotted: 10/09/2025, 13:14 | wait

ALIGNMENT CURVE DATA

CURVE C3	CURVE C4
$\Delta = 66^{\circ}51'52.41''$ RT	$\Delta = 103^{\circ}09'35.64''$ LT
T = 65.82'	T = 83.95'
L = 110.13'	L = 119.89'
R = 94.37'	R = 66.59'
P. I. N. 1707845.6576	P. I. N. 1708231.9929
E. 2352147.4931	E. 2352274.7913

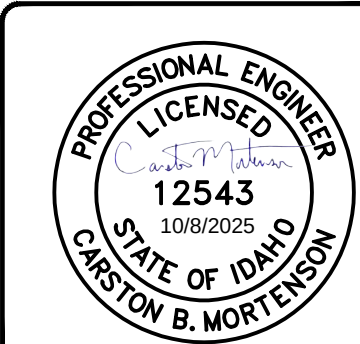
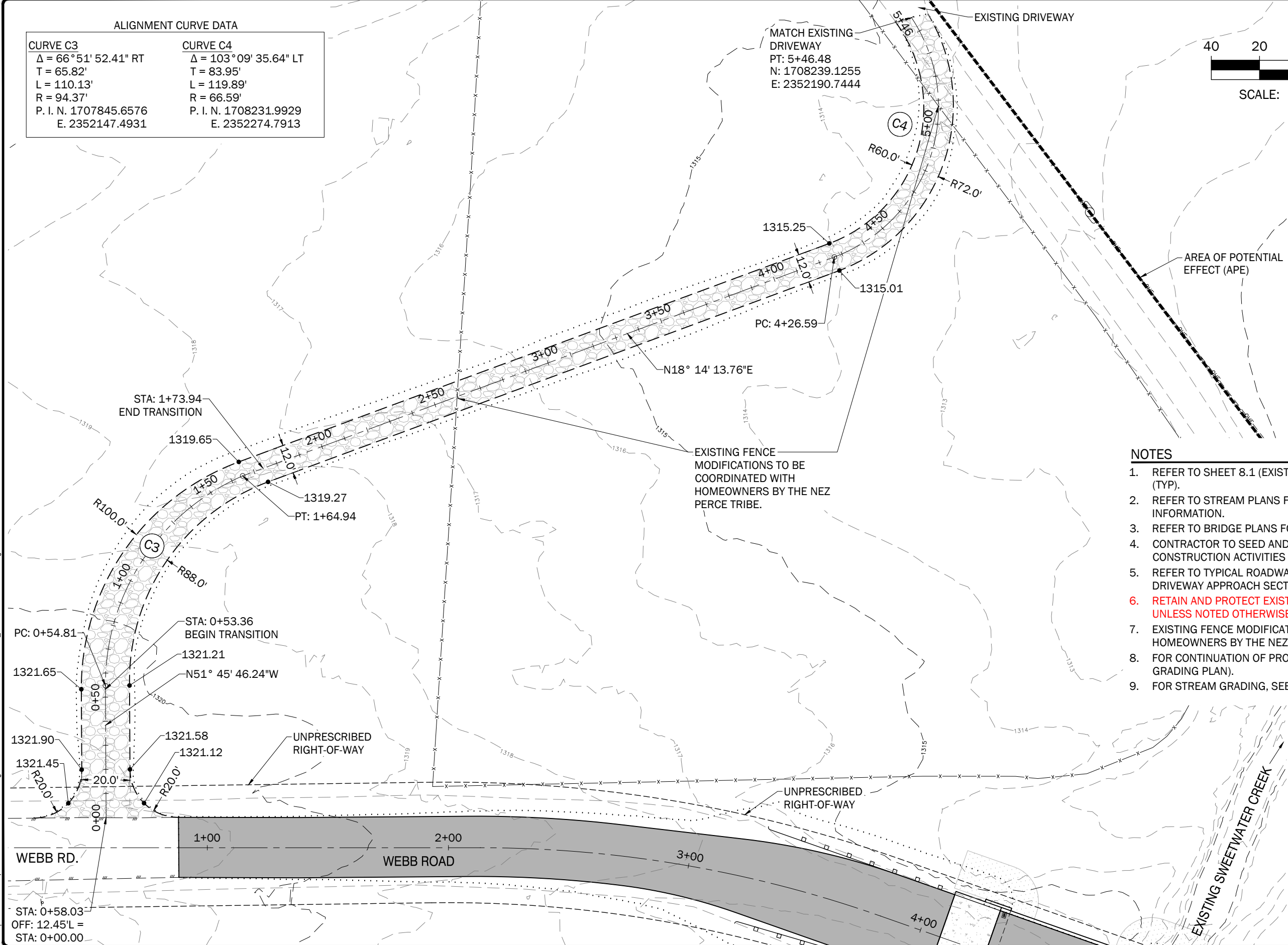


LEGEND

---	UNPRESCRIBED ROW
---	APE
- - - 2915 - - -	EXISTING CONTOUR
.....	GRADING LIMITS
-x-x-x-x-	EXISTING FENCE
---	EXISTING GRAVEL EDGE
[Pattern]	PROPOSED GRAVEL DRIVEWAY
1311.79	SPOT ELEVATION

NOTES

1. REFER TO SHEET 8.1 (EXISTING CONDITIONS) FOR TBM INFORMATION (TYP).
2. REFER TO STREAM PLANS FOR CREEK GRADING AND EARTHWORK INFORMATION.
3. REFER TO BRIDGE PLANS FOR BRIDGE CONSTRUCTION.
4. CONTRACTOR TO SEED AND REVEGETATE ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THAT ARE NOT SURFACED WITH GRAVEL.
5. REFER TO TYPICAL ROADWAY SECTIONS, SHEET 8.8 FOR TYPICAL DRIVEWAY APPROACH SECTION AND SURFACING.
6. **RETAIN AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION UNLESS NOTED OTHERWISE.**
7. EXISTING FENCE MODIFICATIONS TO BE COORDINATED WITH HOMEOWNERS BY THE NEZ PERCE TRIBE.
8. FOR CONTINUATION OF PROPOSED GRADING, SEE SHEET 4.0 (SITE GRADING PLAN).
9. FOR STREAM GRADING, SEE SHEET 4.0 (SITE GRADING PLAN).



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: EAM
DRAWN BY: KCM
APPROVED BY: CJB
REVISION NO.:
DATE: OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



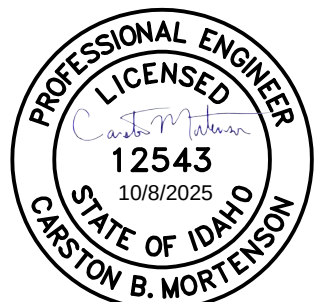
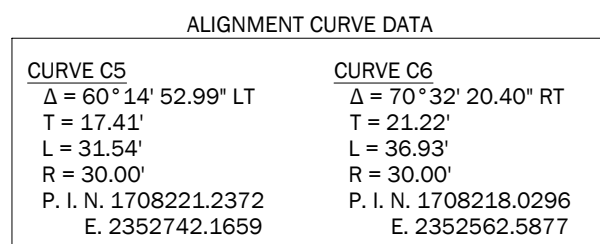
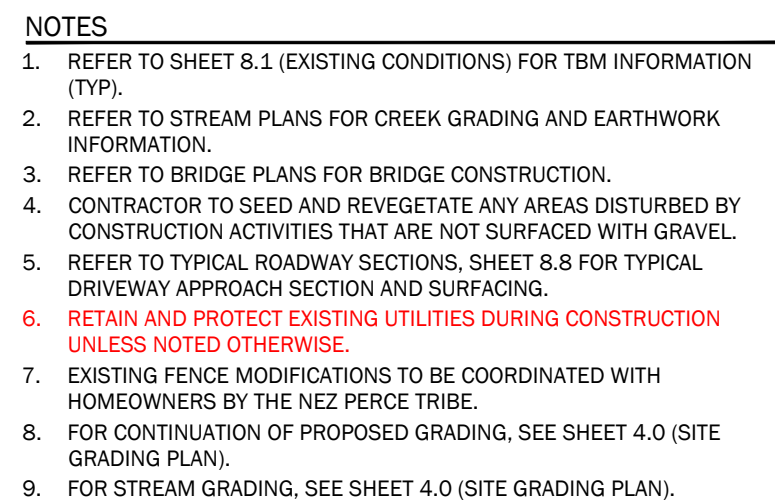
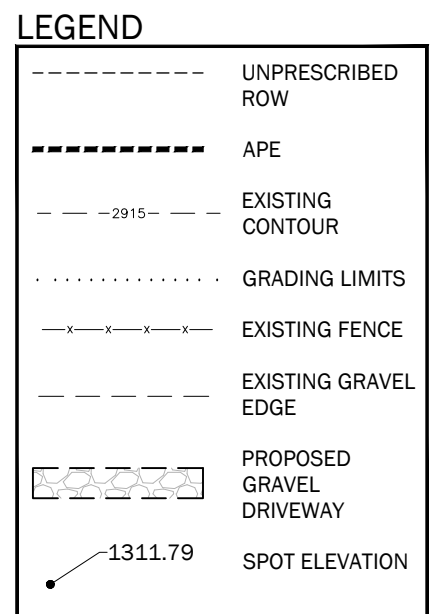
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

APPROACH & DRIVEWAY DETAIL

DRAWING NUMBER:

8.4

SHEET: 32 OF 57



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	KCM
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025

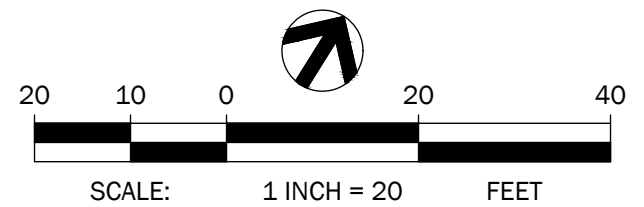
NEZ PERCE
TRIBE

APPROACH & DRIVEWAY DETAIL

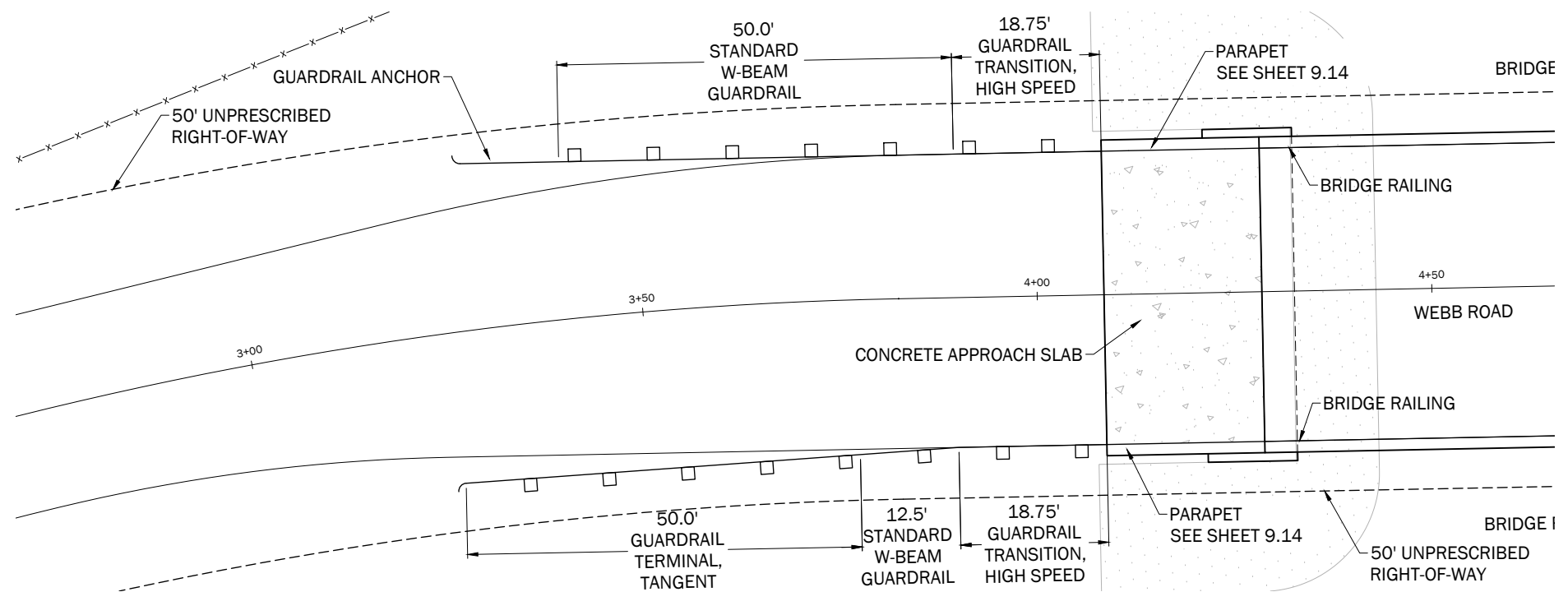
8.5

SHEET: 33 OF 57

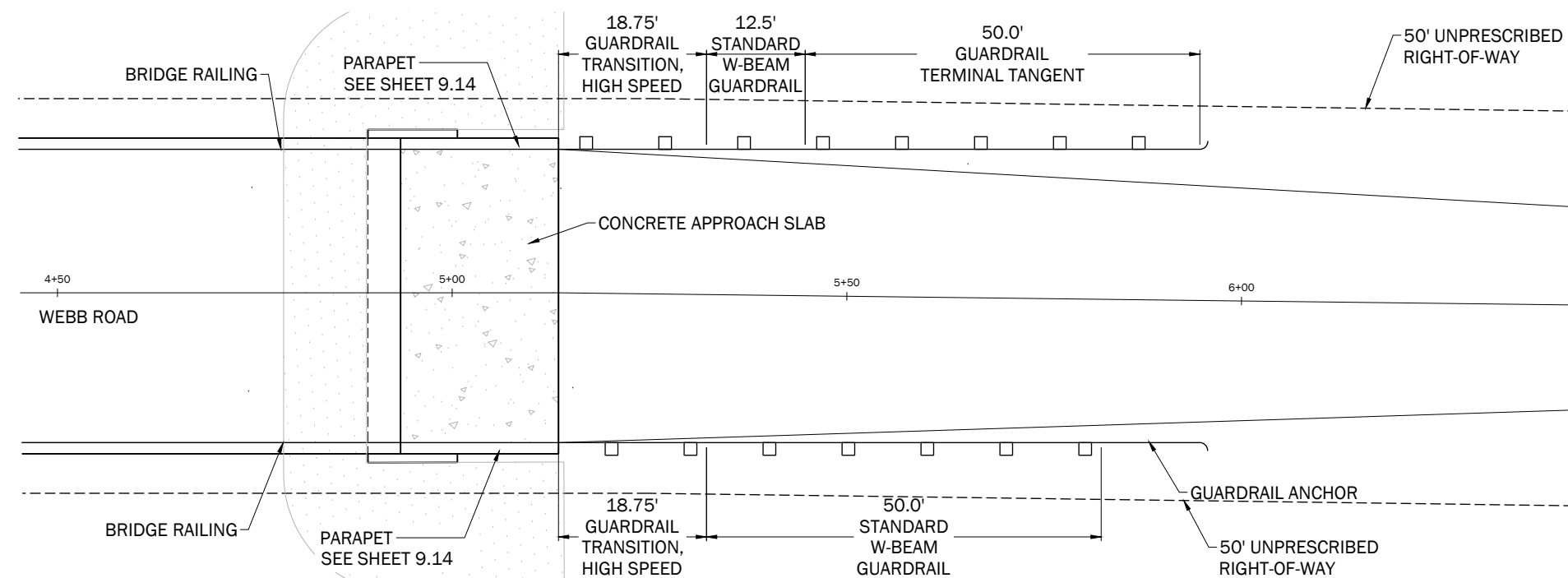
P:\Sp25\Jobs\250229 Webb Rd Bridge and Sweetwater Creek\0. DWG\SC\050229 GUARDRAIL DETAILS.dwg
Plotted: 10/09/2025, 13:14 | wait



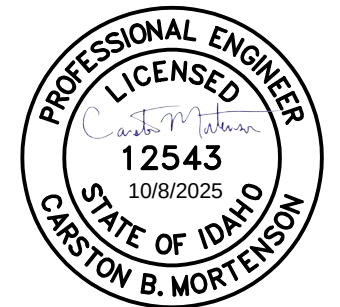
LEGEND	
	UNPRESCRIBED RIGHT-OF-WAY
	GUARDRAIL



1 WEST SIDE OF BRIDGE
SCALE: 1"=10'



2 EAST SIDE OF BRIDGE
SCALE: 1"=10'



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	TJW
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

GUARDRAIL DETAIL

DRAWING NUMBER:

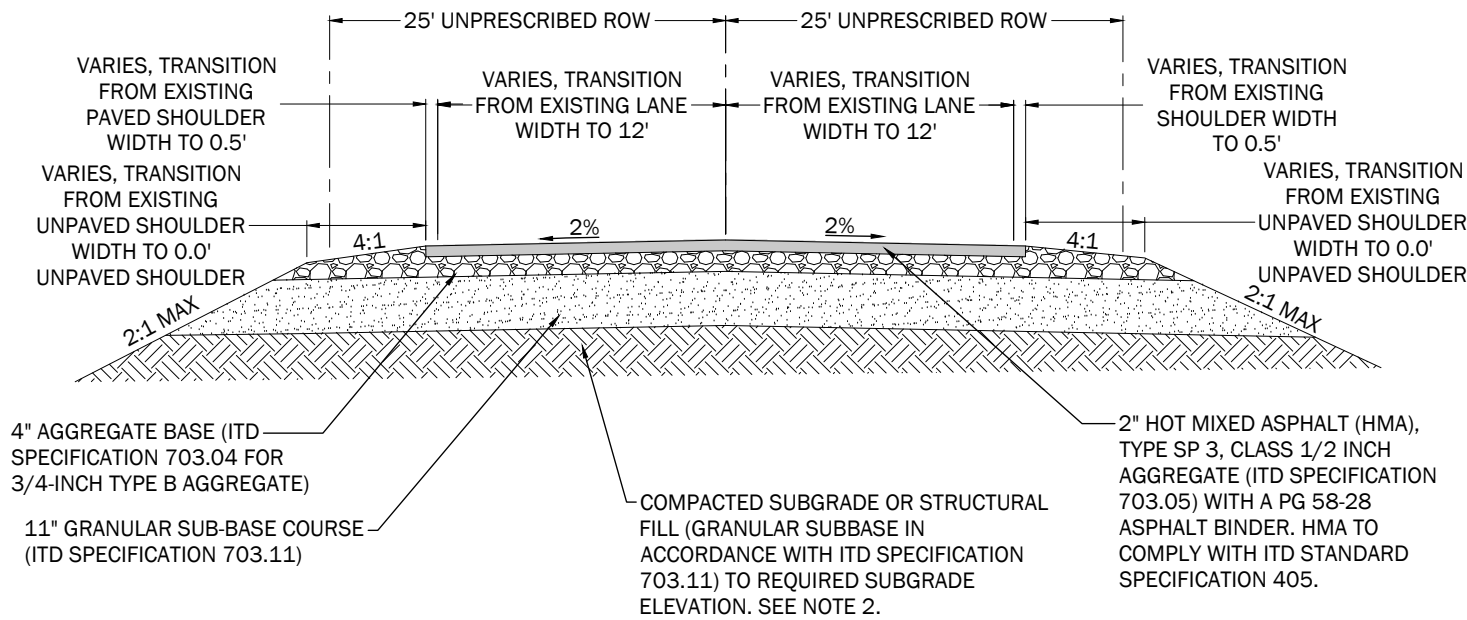
8.6

SHEET: 34 OF 57

P:\Sp25\Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.DWG\SC\050239_TYPICAL ROADWAY SECTIONS.dwg
Plotted: 10/09/2025, 13:14 | wait

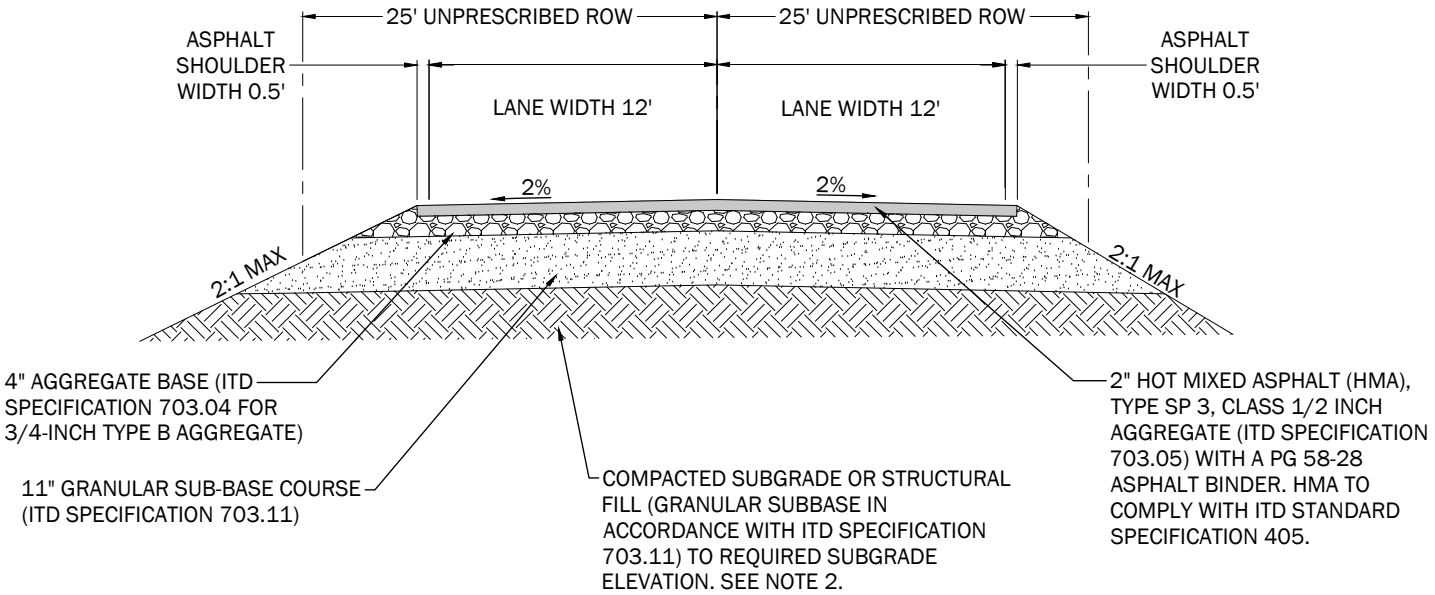
WEBB ROAD TYPICAL SECTION

NOT TO SCALE
STA 0+88.13 TO STA 1+38.12
STA 7+99.56 TO STA 8+24.56



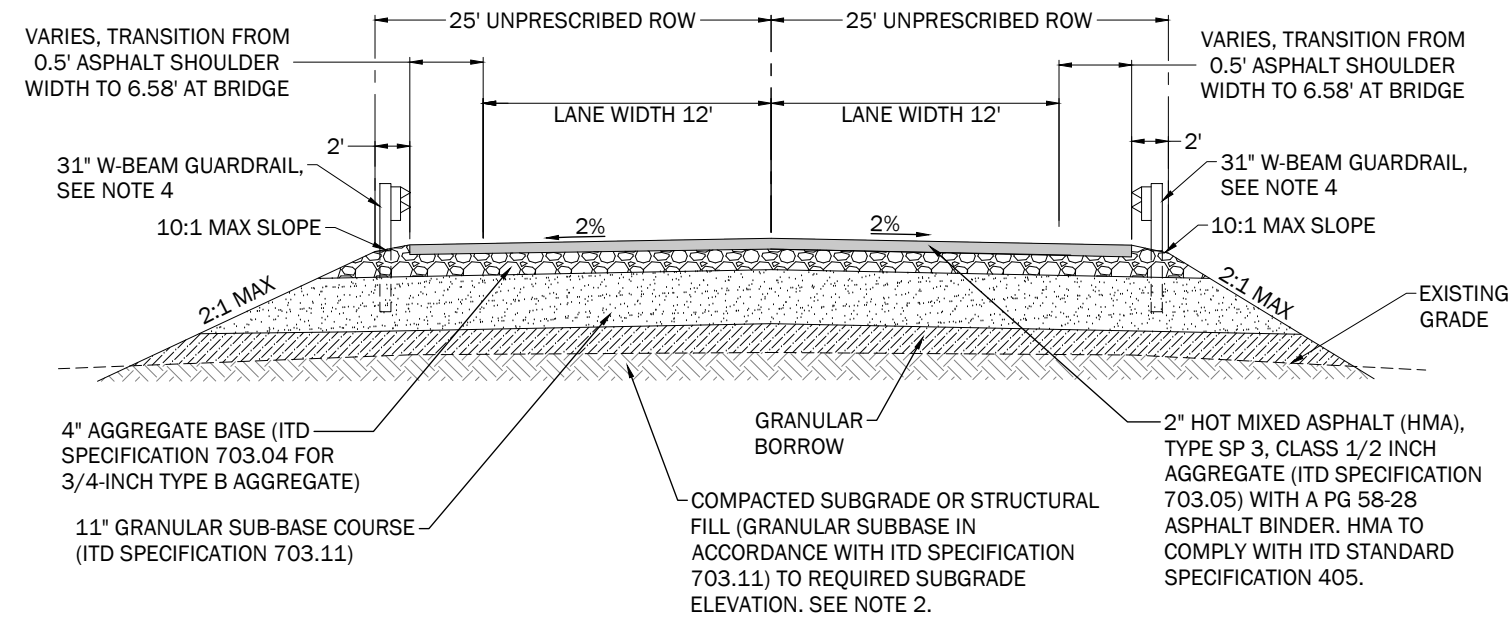
WEBB ROAD TYPICAL SECTION

NOT TO SCALE
STA 1+38.12 TO STA 2+64.40
STA 6+50.54 TO STA 7+99.56



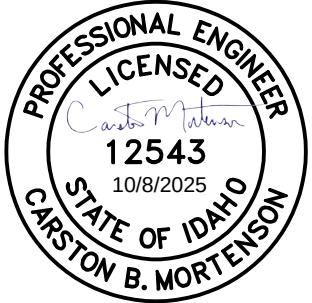
WEBB ROAD TYPICAL SECTION

NOT TO SCALE
STA 2+64.40 TO STA 4+08.54
STA 5+13.54 TO STA 6+50.54



NOTES:

1. PLACE ACCEPTABLE SOIL MATERIAL IN LAYERS TO REQUIRED SUBGRADE ELEVATION.
2. SUBGRADE OR STRUCTURAL FILL TO BE COMPACTED TO CLASS A COMPACTION PER ITD STANDARD SPECIFICATIONS. COARSE MATERIAL REQUIRES CLASS A COMPACTION METHOD SPECIFIED IN ITD STANDARDS SECTION 205, SUBSECTION G, TABLE 205.03-1.
3. COMPACTION EFFORTS AND MASS GRADING TO BE MONITORED AND TESTED BY AN EXPERIENCED SOILS TECHNICIAN.
4. EXACT LOCATION OF GUARDRAIL VARIES. SEE SHEET 8.6 FOR GUARDRAIL DETAILS.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	CBP
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

TYPICAL ROADWAY SECTIONS

DRAWING NUMBER:

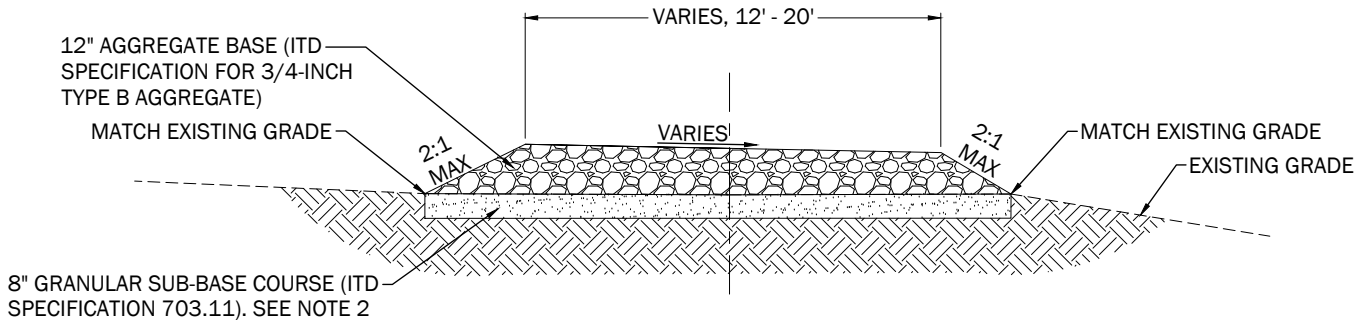
8.7

SHEET: 35 OF 57

P:\Sp025\Jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SC\050229_TYPICAL ROADWAY SECTIONS.dwg
Plotted: 10/09/2025, 13:14 | wait

DRIVEWAY APPROACH TYPICAL SECTION

NOT TO SCALE



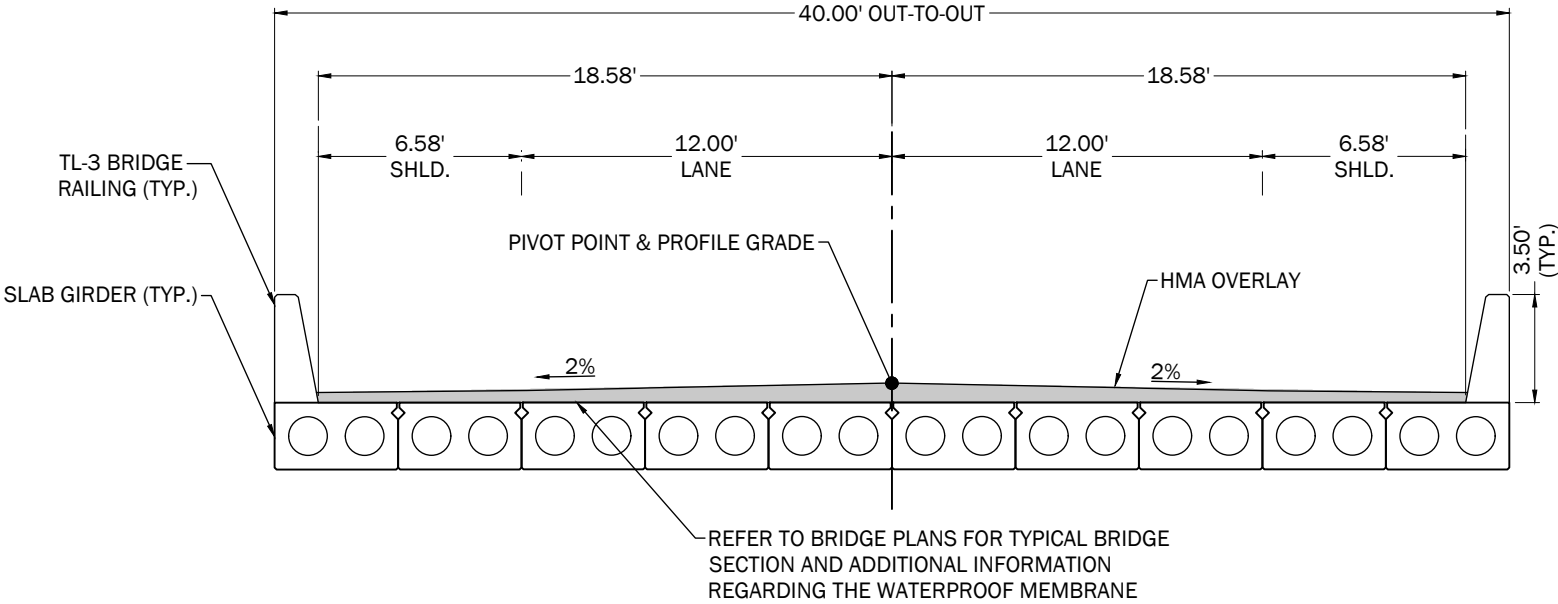
NOTES:

1. SEE SHEETS 8.4 & 8.5, APPROACH & DRIVEWAY DETAIL, FOR MORE INFORMATION.
2. REMOVE 8" OF EXISTING TOPSOIL AND REPLACE WITH GRAVEL BORROW. GRAVEL BORROW TO BE COMPACTED TO CLASS A COMPACTION PER ITD STANDARD SPECIFICATIONS. COARSE MATERIAL REQUIRES CLASS A COMPACTION METHOD SPECIFIED IN ITD STANDARDS SECTION 205, SUBSECTION G, TABLE 205.03-1.
3. COMPACTION EFFORTS AND MASS GRADING TO BE MONITORED AND TESTED BY AN EXPERIENCED SOILS TECHNICIAN.

WEBB ROAD AT BRIDGE TYPICAL SECTION

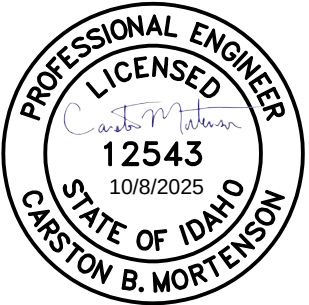
NOT TO SCALE

STA 4+28.54 TO STA 4+93.54



NOTES:

1. SEE BRIDGE PLANS FOR MORE INFORMATION ON BRIDGE DETAILS.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	TJW
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



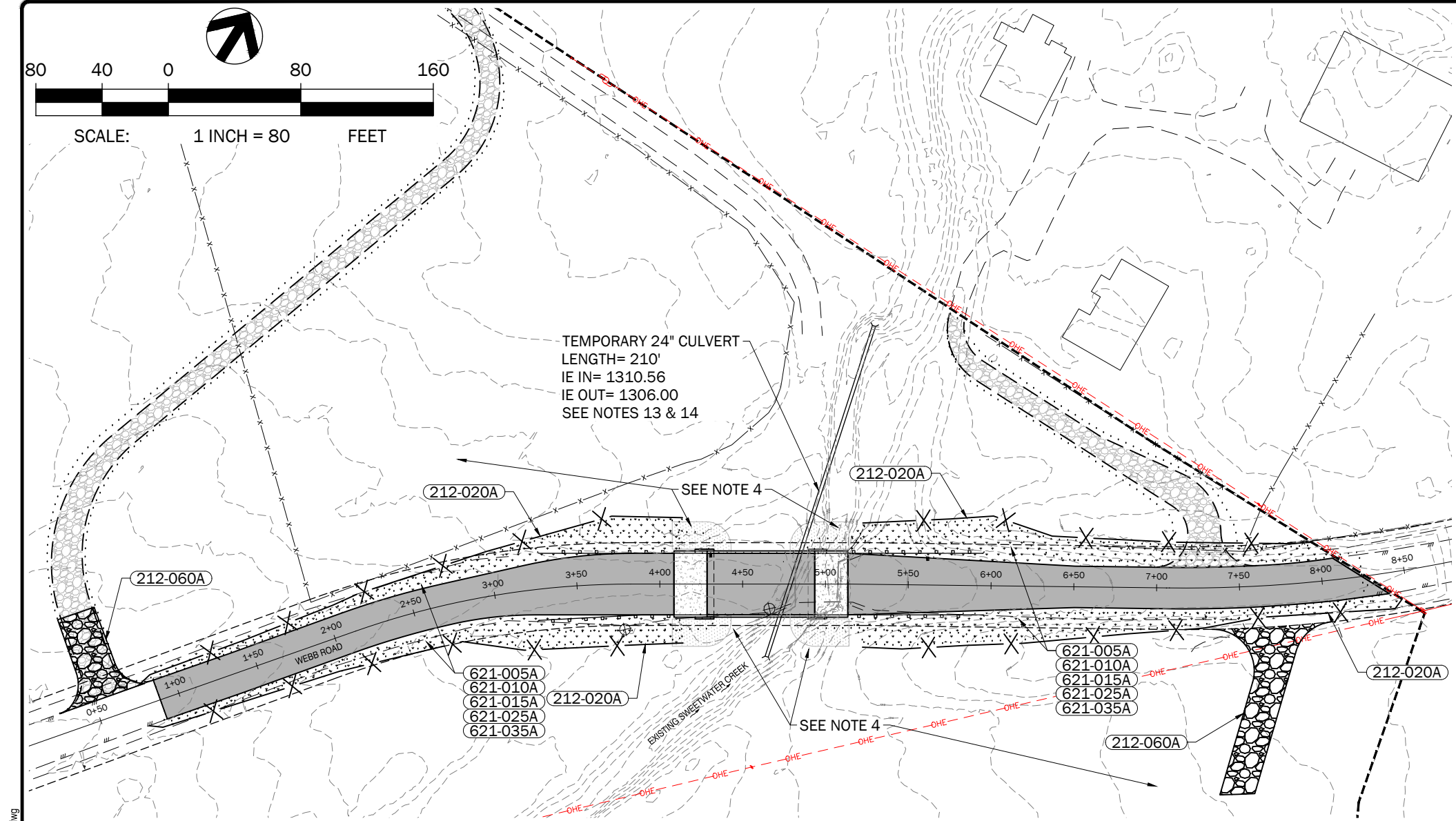
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

TYPICAL ROADWAY SECTIONS

DRAWING NUMBER:

8.8

SHEET: 36 OF 57



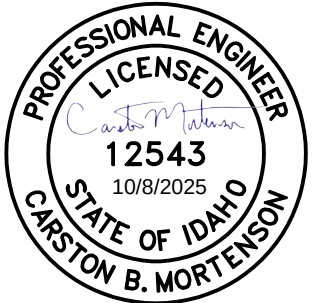
NOTES

1. REFER TO ROADWAY PLANS, SHEETS 8.7 AND 8.8 FOR TYPICAL SECTIONS AND SURFACING.
2. REFER TO ROADWAY PLANS, SHEET 8.10 FOR TRAFFIC DETOUR PLAN.
3. REFER TO ROADWAY PLANS FOR PROPOSED SITE IMPROVEMENTS. CONTRACTOR SHALL PHASE CONSTRUCTION TO COORDINATE TEMPORARY SITE CONDITION WITH PROPOSED SITE IMPROVEMENTS.
4. REFER TO SHEET 3.0 (CONSTRUCTION ACCESS AND STAGING PLAN), SHEETS 3.1-3.5 (WATER MANAGEMENT & TESC PLANS), AND SHEETS 7.0 - 7.3 (HIP-GENERAL CONSERVATION MEASURES) FOR ADDITIONAL TESC, SITE ACCESS, STAGING/STOCKPILING, AND WORK AREA ISOLATION REQUIREMENTS.
5. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR TO BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO WIND AND RUNOFF.
6. THE CONTRACTOR TO BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL FACILITIES SHOWN AS A MINIMUM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED.
7. CONTRACTOR TO TAKE WHATEVER MEASURES ARE NECESSARY TO CONTROL SITE EROSION AND TRANSPORTATION OF SEDIMENTS OFF THE SITE. MEASURES REQUIRED MAY INCLUDE SANDBAG CHECK DAMS, STRAW WATTLES, SILT FENCES, ETC. CONTRACTOR TO INSPECT AND MAINTAIN THESE MEASURES AFTER RUNOFF EVENTS.
8. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES WITHIN 30 DAYS AFTER STABILIZATION OF SITE. ALL DISTURBED AREAS NOT RECEIVING PERMANENT SURFACING OR VEGETATIVE TREATMENT TO BE STABILIZED PER SPECIAL PROVISIONS.
9. CONTRACTOR IS RESPONSIBLE FOR SUPPRESSION OF DUST IN CONFORMANCE WITH LOCAL REGULATIONS AND ITD SPECIFICATIONS.
10. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE DURING CONSTRUCTION TO BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER OR SURFACE WATER.
11. CONTRACTOR TO PROTECT SWEETWATER CREEK FROM SEDIMENT/SILT DURING CONSTRUCTION.
12. SILT FENCE AND FIBER WATTLES TO COMPLY WITH ITD STANDARD DRAWING 212-3.
13. COORDINATE ROADWAY EROSION AND SEDIMENT CONTROL MEASURES WITH THOSE SHOWN ON STREAM SHEETS 3.0 - 3.5 (CONSTRUCTION ACCESS AND STAGING PLAN, TEMPORARY WATER MANAGEMENT PLAN & TESC).
14. CONTRACTOR TO INSTALL 48-INCH DIAMETER CULVERT FOR TEMPORARY STREAM BYPASS. BYPASS FLOW OF 12 CFS IS BASED ON THE 10% EXCEEDANCE FLOW FOR JULY, AUGUST, AND SEPTEMBER.
15. CULVERTS WITH DIAMETERS BETWEEN 12" - 60" TO BE HIGH DENSITY POLYPROPYLENE, TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M3330 AND/OR ASTM F2764 OR APPROVED EQUIVALENT. MAINTAIN A MINIMUM OF 1 FOOT OF COVER OVER CULVERT.

LEGEND

	PROPOSED ASPHALT PAVEMENT		EXISTING GRAVEL EDGE
	PROPOSED CONCRETE APPROACH SLAB		GRADING LIMITS
	PROPOSED GRAVEL DRIVEWAY		SILT FENCE
	CONSTRUCTION ENTRANCE		OVERHEAD POWER LINE
	SEEDING		
	AREA OF POTENTIAL EFFECT (APE)		
	EXISTING CONTOUR		
	GRADING LIMITS		
	UNPRESCRIBED ROW		
	EXISTING FENCE		
	GUARDRAIL		

212-020A	SILT FENCE
212-060A	STABILIZED CONSTRUCTION ENTRANCE
621-005A	SEED BED PREPARATION
621-010A	SEEDING
621-015A	MULCHING
621-025A	MULCH ANCHORING (TACKIFIER)
621-035A	FERTILIZING



Plotted: 10/09/2025, 13:14 | wait P:\Sp025\Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.DWG\SC\050239_ESC_PLAN.dwg

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	CBP
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



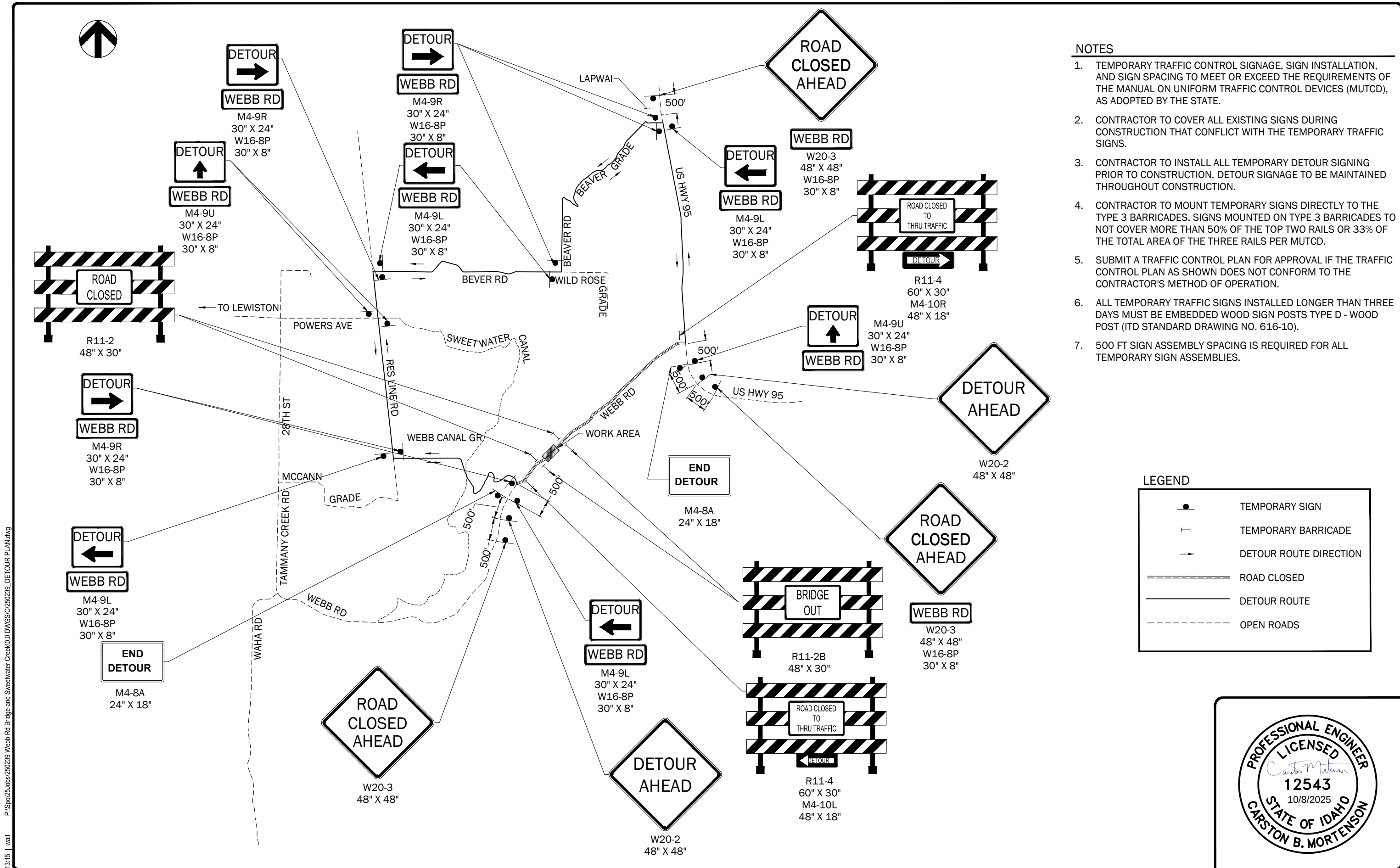
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO
**ROADWAY EROSION & SEDIMENT CONTROL
PLAN**

DRAWING NUMBER:

8.9

SHEET: 37 OF 57

Plotted: 10/09/2025, 13:15 | wait P:\Sp025\Jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SCIC\250229 DETOUR PLAN.dwg

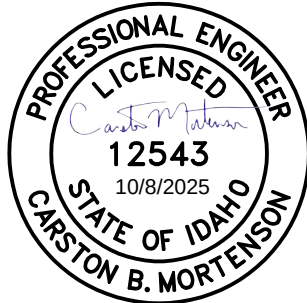


NOTES

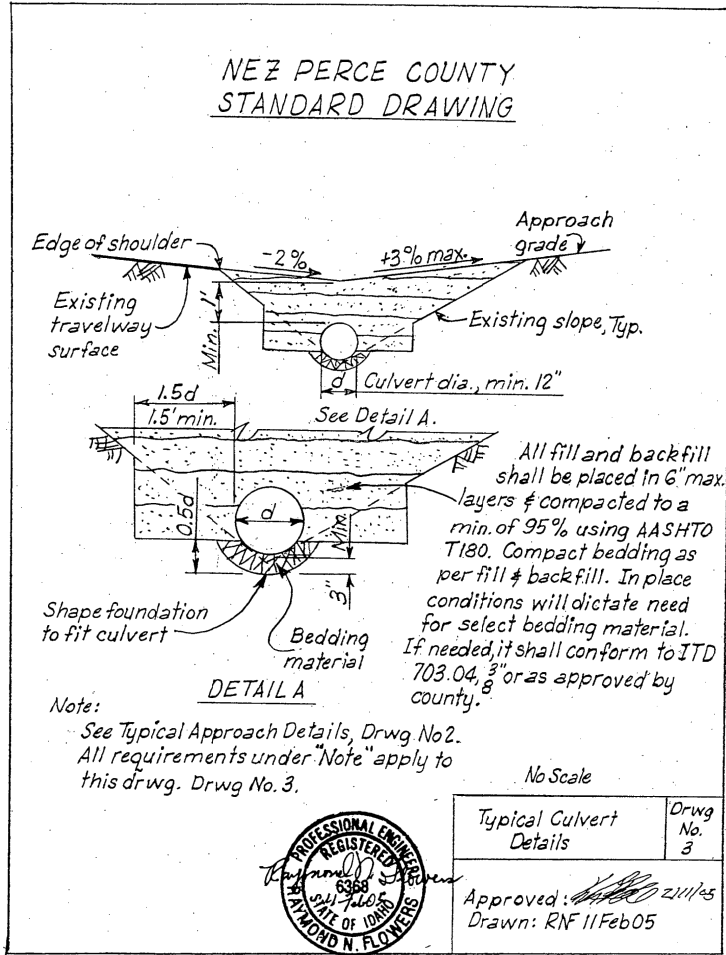
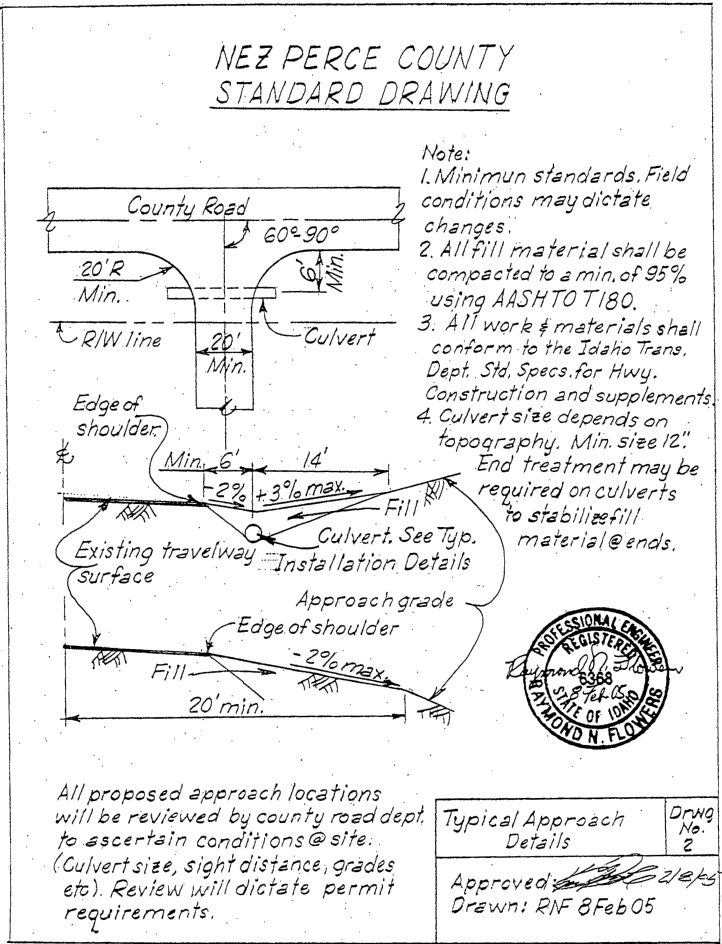
1. TEMPORARY TRAFFIC CONTROL SIGNAGE, SIGN INSTALLATION, AND SIGN SPACING TO MEET OR EXCEED THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS ADOPTED BY THE STATE.
2. CONTRACTOR TO COVER ALL EXISTING SIGNS DURING CONSTRUCTION THAT CONFLICT WITH THE TEMPORARY TRAFFIC SIGNS.
3. CONTRACTOR TO INSTALL ALL TEMPORARY DETOUR SIGNING PRIOR TO CONSTRUCTION. DETOUR SIGNAGE TO BE MAINTAINED THROUGHOUT CONSTRUCTION.
4. CONTRACTOR TO MOUNT TEMPORARY SIGNS DIRECTLY TO THE TYPE 3 BARRICADES. SIGNS MOUNTED ON TYPE 3 BARRICADES TO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS PER MUTCD.
5. SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL IF THE TRAFFIC CONTROL PLAN AS SHOWN DOES NOT CONFORM TO THE CONTRACTOR'S METHOD OF OPERATION.
6. ALL TEMPORARY TRAFFIC SIGNS INSTALLED LONGER THAN THREE DAYS MUST BE EMBEDDED WOOD SIGN POSTS TYPE D - WOOD POST (ITD STANDARD DRAWING NO. 616-10).
7. 500 FT SIGN ASSEMBLY SPACING IS REQUIRED FOR ALL TEMPORARY SIGN ASSEMBLIES.

LEGEND

	TEMPORARY SIGN
	TEMPORARY BARRICADE
	DETOUR ROUTE DIRECTION
	ROAD CLOSED
	DETOUR ROUTE
	OPEN ROADS



NO.	DATE	BY	ISSUE / DESCRIPTION	DESIGNED BY: EAM	DRAWN BY: KCM	APPROVED BY: CJB	REVISION NO.:	DATE: OCTOBER 2025	PREPARED FOR: NEZ PERCE TRIBE	WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN WEBB, NEZ PIERCE COUNTY, IDAHO	DRAWING NUMBER: 8.10
										TRAFFIC DETOUR PLAN	SHEET: 38 OF 57

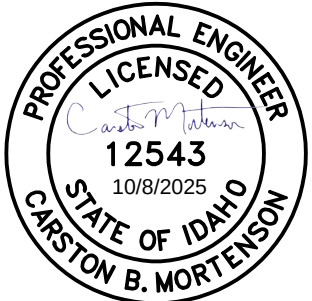


1 TYPICAL APPROACH DETAIL

SCALE: NTS

2 TYPICAL CULVERT DETAIL

SCALE: NTS



Plotted: 10/09/2025, 13:15 | wait P:\Sp25\Jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SC\0250229_CIVIL DETAIL S.dwg

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	EAM
DRAWN BY:	TJW
APPROVED BY:	CJB
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

CIVIL DETAILS

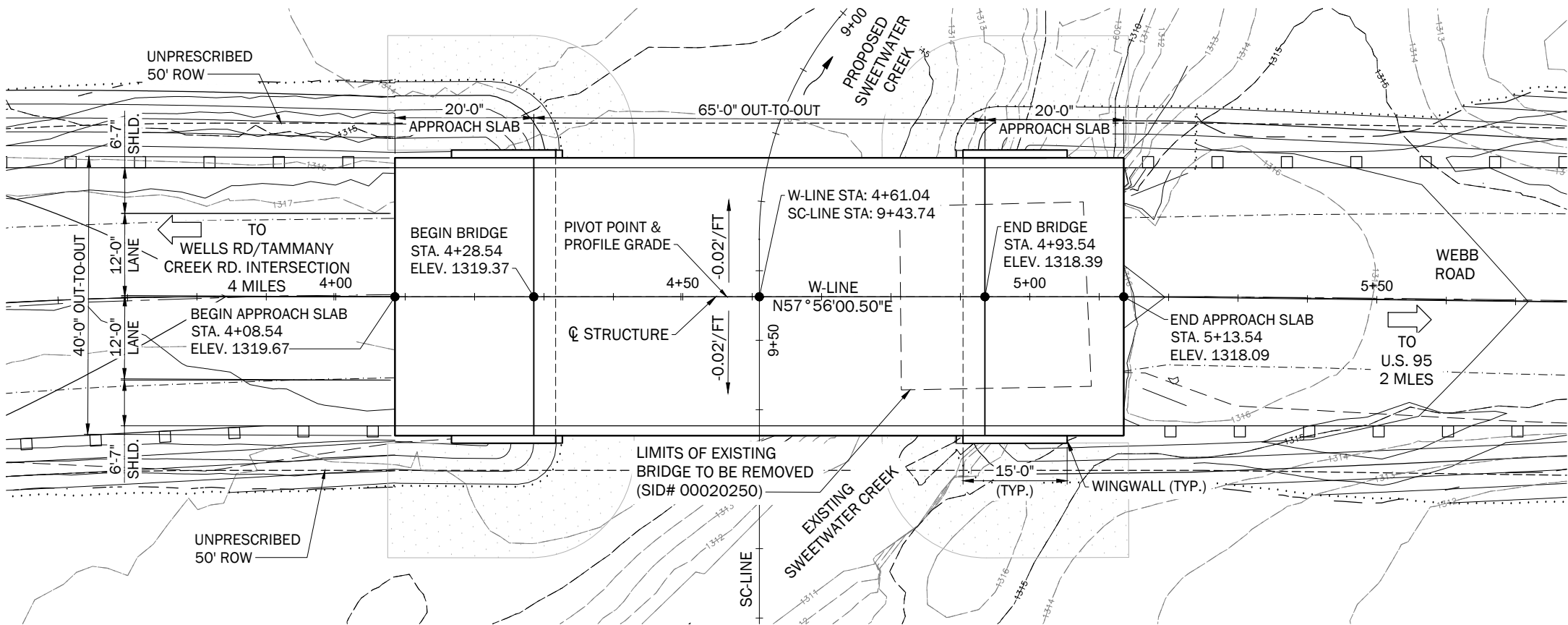
DRAWING NUMBER:

8.11

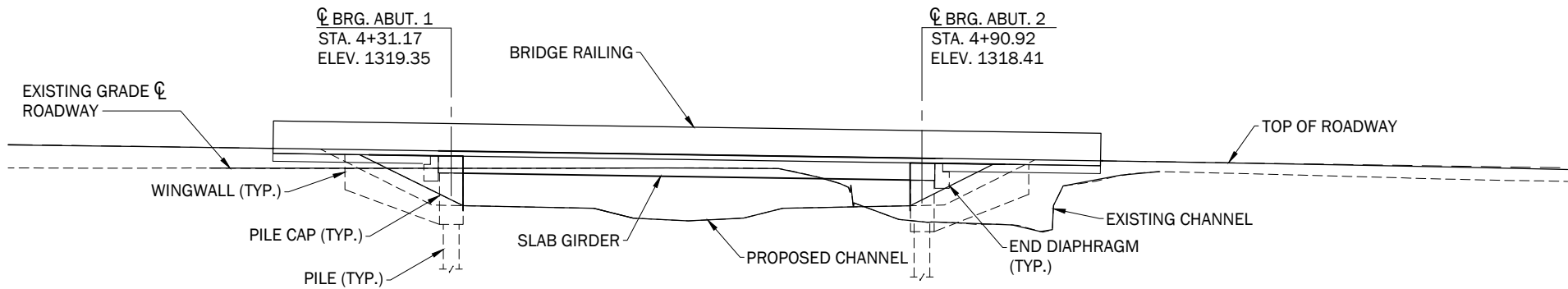
SHEET: 39 OF 57

SEC.27, T.35N., R. 4W., BOISE.M,
NEZ PIERCE COUNTY, IDAHO

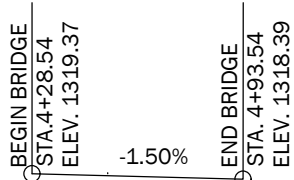
WEBB ROAD OVER SWEETWATER CREEK BRIDGE
KEY NO. 20250



PLAN VIEW



ELEVATION VIEW



W-LINE

*ELEVATIONS SHOWN ARE AT THE TOP
OF HMA AT ROADWAY CENTERLINE
ALONG W-LINE AND ARE EQUAL TO
PROFILE GRADE

NOTES:

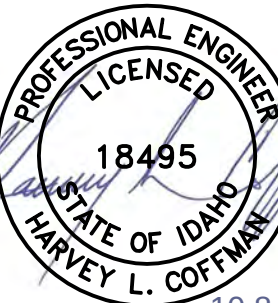
- HORIZONTAL DATUM IS BASED ON
NORTH AMERICAN DATUM OF 1983
(NAD83), IDAHO STATE PLANE
COORDINATE SYSTEM, WEST ZONE, IN
US SURVEY FEET.
- ELEVATION DATUM IS BASED ON
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD88), GEOID18.

LEGEND

- = GRADE INDEX CONTOUR
- = GRADE INTERVAL CONTOUR
- = EXISTING STRUCTURE
- = EDGE OF EXISTING ASPHALT
- = EDGE PROPOSED ASPHALT
- = GUARDRAIL

DATUM
NAVD 1988

26" VOIDED PRECAST
PRESTRESSED SLAB GIRDERS
LOADING: HL-93



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: DMS
DRAWN BY: DFP
APPROVED BY: HLC
REVISION NO.:
DATE: OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

SITUATION AND LAYOUT

DRAWING NUMBER:

9.0

SHEET: 40 OF 57

Plotted: 10/09/2025, 11:17 | diarma.profit6Sp025 Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250239-S2.dwg

DESIGN NOTES

DESIGN SPECIFICATIONS

"AASHTO LRFD BRIDGE DESIGN SPECIFICATION" 9TH EDITION AND OCTOBER 2023 ITD BRIDGE DESIGN LRFD MANUAL.

DESIGN PROCEDURES

GIRDERS DESIGNED AS SIMPLE SPANS.
RAILING IN ACCORDANCE WITH MASH TL-4. DESIGN SPEED IS 45 mph.
THE PROPRIETARY COMPUTER SOFTWARE PROGRAMS WERE USED TO FACILITATE DESIGN:

NAME	VERSION	RELEASE DATE		NAME	VERSION	RELEASE DATE
LPILE	2022.12.09	APRIL 15. 2023				
RISA 3D	22.0.2	2024				
PGSUPER	8.0.7	FEBRUARY 7, 2025				

DESIGN LOADS

PERMANENT LOADS

DC UNIT WEIGHT OF REINFORCED CONCRETE----- 0.150 kcf
42" SINGLE SLOPE CONCRETE PARAPET----- 0.518 klf/SIDE
DW INITIAL WEARING SURFACE----- 0.028 ksf
FUTURE WEARING SURFACE----- 0.035 ksf
UTILITIES----- 0.0klf/GIRDER
FUTURE UTILITIES----- 0.020 klf/GIRDER
EV UNIT WEIGHT OF SOIL----- 0.125 kcf
EH ACTIVE PRESSURE----- 0.035 kcf
AT REST PRESSURE----- 0.055 kcf

TRANSIENT LOADS

LL HL-93 INCLUDING PAIR OF DESIGN TANDEMS IN ACCORDANCE WITH
"AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" ARTICLE 3.6.1.3
IM DYNAMIC ALLOWANCE APPLIED TO TRUCK & TANDEM
LS LIVE LOAD SURCHARGE AT ABUTMENT----- 4.0 feet
LIVE LOAD SURCHARGE AT WING WALL----- 2.0 feet
TU UNIFORM TEMPERATURE RANGE----- 0° F TO 80° F
BASE SETTING TEMPERATURE----- 60° F

EXTREME LOADS

EQ SITE CLASS----- C
ACCELERATION COEFFICIENT S_{D1}----- 0.105g
SEISMIC PERFORMANCE ZONE----- 1

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

MATERIALS, CONSTRUCTION AND WORKMANSHIP WILL BE IN ACCORDANCE WITH THE STATE OF IDAHO TRANSPORTATION DEPARTMENT: 2023 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2023 SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS, AND THE PROJECT PLANS.

MATERIAL

CONCRETE: DECK, BRIDGE APPROACH SLAB AND PARAPET - CLASS 40AF----- f'c = 4.00 ksi
ABUTMENTS AND WINGWALLS - CLASS 40A----- f'c = 4.00 ksi
PRESTRESS GIRDERS----- f'c = SEE GIRDER SHEET
METAL REINFORCEMENT: AASHTO M31, GRADE 60----- fy = 60.00 ksi
PRESTRESSING REINFORCEMENT: ASHTO M203, GRADE 270 LOW RELAXATION----- fpu = 270.00 ksi
POLYSTYRENE FOAM: ASTM C578, XPS TYPE X----- Sc = 15.00 psi

PLAN DIMENSIONS AND ELEVATIONS

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
DIMENSIONS TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS NOTED OTHERWISE.
PROVIDE 2" CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BAR, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
PROVIDE REINFORCING STEEL SPLICE LENGTHS IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

CONSTRUCTION

EPOXY-COATED REINFORCEMENT IS DESIGNATED BY AN (E) AFTER THE BAR MARK.
GLASS FIBER REINFORCED POLYMER REINFORCEMENT IS DESIGNATED BY A (G) AFTER THE BAR MARK.
PROVIDE CONSTRUCTION JOINTS ONLY AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED.
CONSTRUCTION JOINTS TO HAVE CONCRETE PLACED AGAINST HARDENED CONCRETE WITH SURFACE INTENTIONALLY ROUGHENED TO AN AMPLITUDE OF ¼", OR WITH SHEAR KEYS OR SAWTEETH AS APPROVED BY THE ENGINEER.
DEWATER AS REQUIRED TO CONSTRUCT FOUNDATIONS.
DESIGN FALSEWORK, FORMWORK, TEMPORARY BRACING, ETC. BY CONTRACTOR (AS NEEDED).
SET THE ROLLER IN THE STATIC MODE FOR COMPACTING THE ASPHALT WEARING SURFACE ON THE BRIDGE.
ELEVATIONS ARE BASED ON NAVD 88 DATUM.

INCIDENTAL ITEMS

ALL ITEMS SHOWN OR NOTED ON PLANS WHICH ARE NOT SPECIFICALLY BID ITEMS ARE CONSIDERED INCIDENTAL ITEMS.
THE COST OF FURNISHING AND INSTALLING ALL INCIDENTAL ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS, UNLESS NOTED OTHERWISE.

ELASTOMERIC BEARINGS (PER GIRDER)

DESIGN PROCEDURE: METHOD A
GRADE 3 (60) DUROMETER POLYCHLOROPRENE
DESIGN LOADS (SERVICE 1):
ABUTMENT----- 77.44 kips



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: DMS
DRAWN BY: DFP
APPROVED BY: HLC
REVISION NO.:
DATE:OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

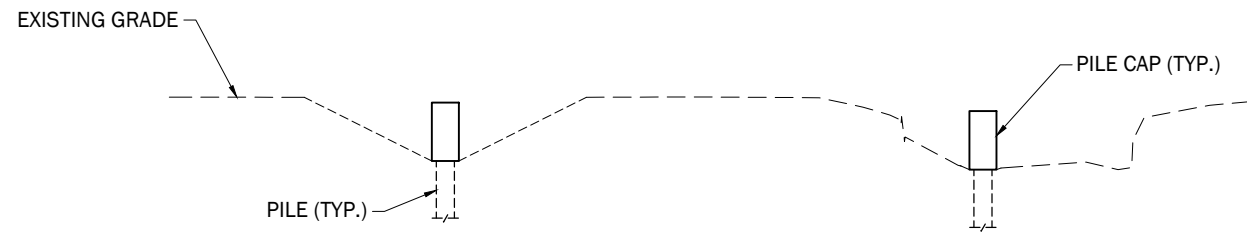
GENERAL NOTES

DRAWING NUMBER:

9.1

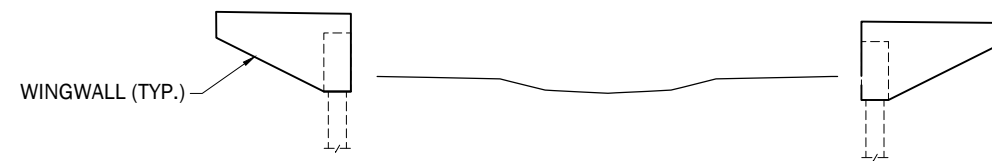
SHEET: 41 OF 57

Plotted: 10/09/2025, 11:17 | diarma.profb6sp025.jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250229-S3.dwg

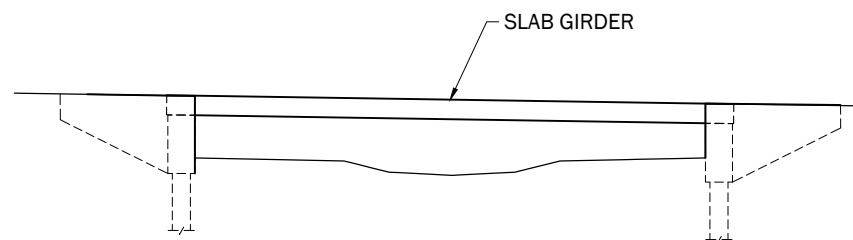


STAGE 1 - INSTALL PILES AND PILE CAPS

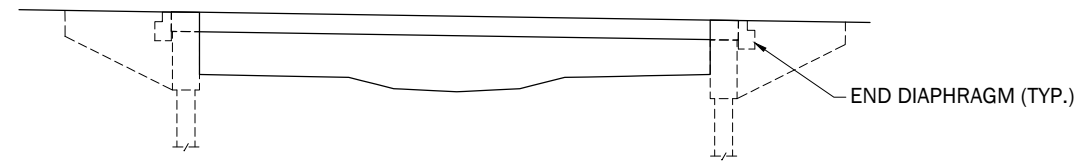
1. DEMOLISH EXISTING STRUCTURE



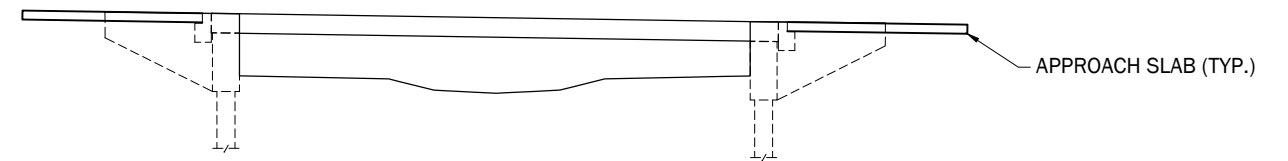
STAGE 2 - INSTALL WINGWALLS



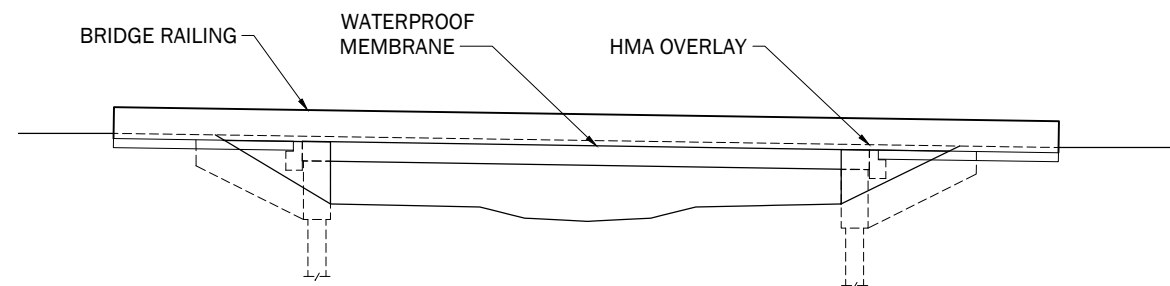
STAGE 3 - INSTALL SLAB GIRDERS, WELD GIRDER TIES, GROUT GIRDER KEYWAYS.



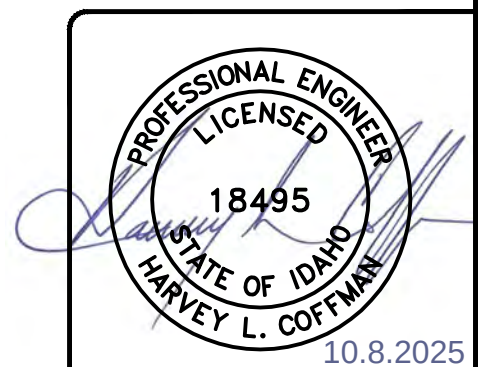
STAGE 4 - CAST END DIAPHRAGMS



STAGE 5 - INSTALL APPROACH SLABS



STAGE 6 - INSTALL CAST IN PLACE GUARDRAIL, WATERPROOF MEMBRANE AND PLACE HMA OVERLAY



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

SUGGESTED CONSTRUCTION SEQUENCE

DRAWING NUMBER:

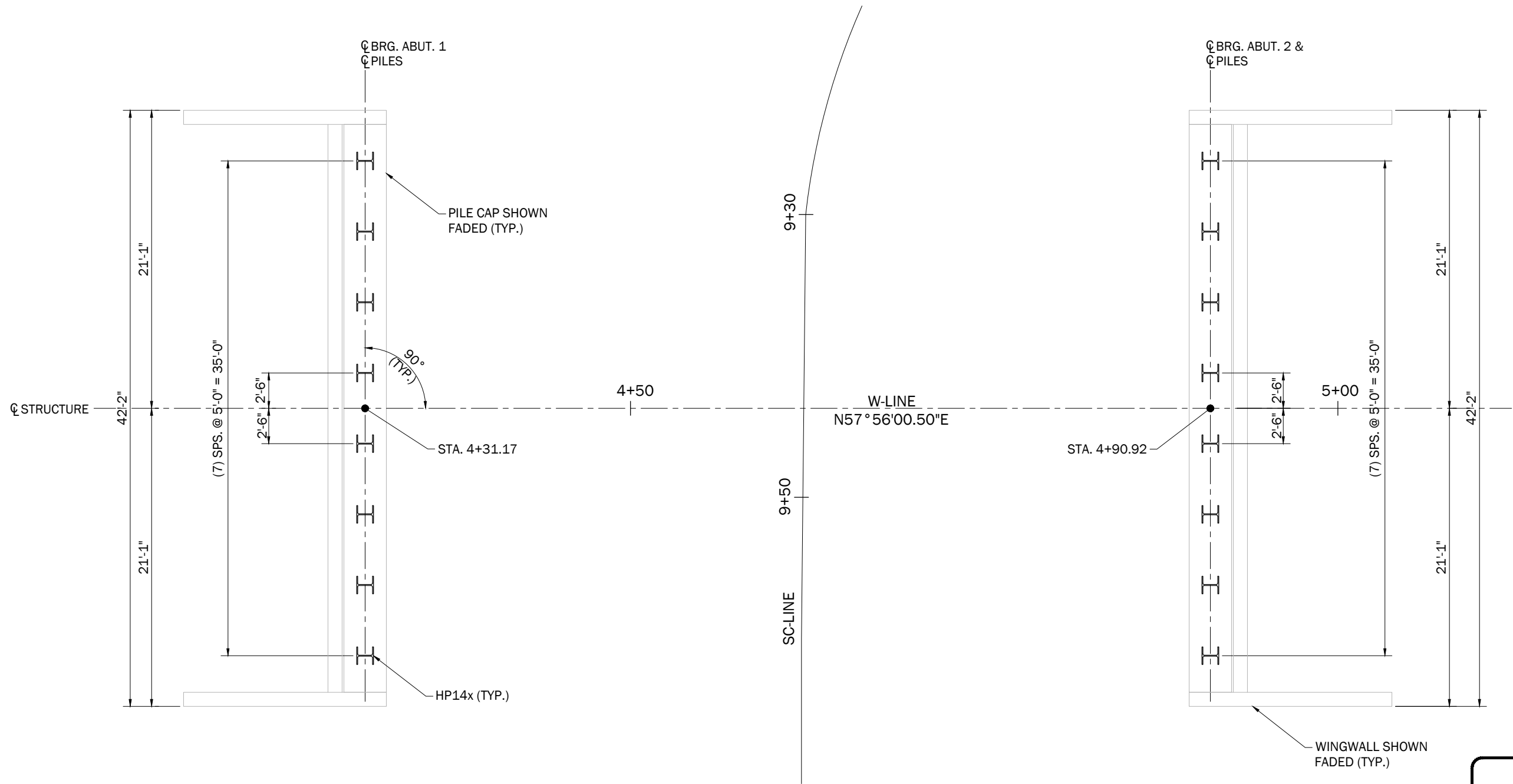
9.2

SHEET: 42 OF 57

Plotted: 10/09/2025, 11:17 | diarma.pro\666p025 Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250239-S4.dwg

NOTES:

1. SEE FOUNDATION DETAILS SHEETS FOR PILE NOTES, PILE DETAILS AND PILE SCHEDULE.



FOUNDATION PLAN

H-PILE LEGEND:

 DENOTES VERTICAL PILING



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

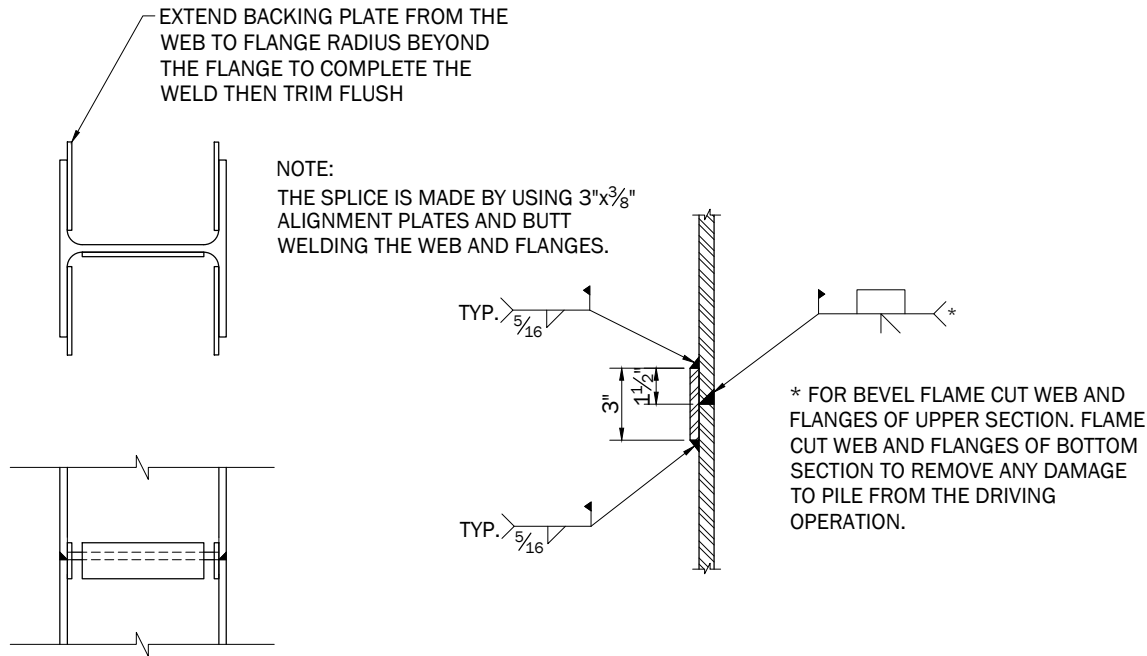
FOUNDATION PLAN

DRAWING NUMBER:

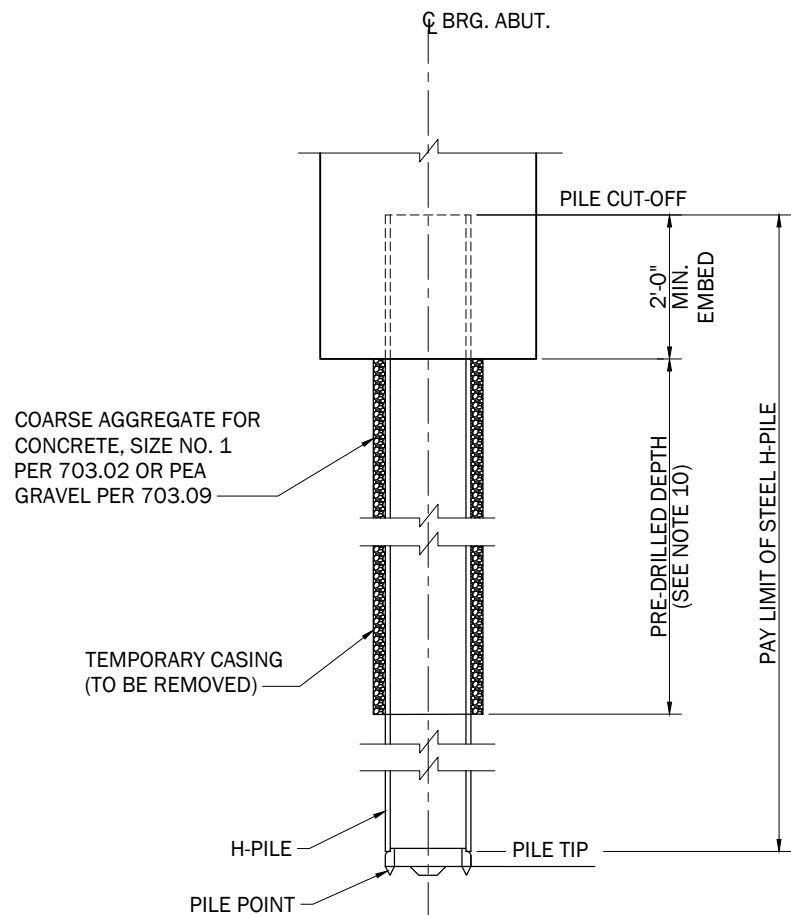
9.3

SHEET: 43 OF 57

Plotted: 10/09/2025, 11:17 | diarma.profiles\p025-jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250239-S6.dwg



H-PILE BUTT WELDED SPLICE DETAIL



SECTION THROUGH ABUTMENT

NOTES

MATERIAL SPECIFICATIONS

1. PROVIDE HP14x117 STEEL H-PILES THAT CONFORM TO ASTM A572 GRADE 50.
2. PROVIDE SPLICE PLATES OF THE SAME MATERIAL AS THE STEEL H-PILES.
3. DRIVE PILES WITH HARDENED STEEL DRIVE SHOES ACCORDING TO ITD'S QUALIFIED PRODUCTS LIST FOR CATEGORY 05 PILING AND SUB-CATEGORY H-PILE COMMON POINT WITH TEETH FOR ROCK OR GRAVEL WITH BOULDERS.
4. SPLICE PILE ACCORDING TO THE PILE SPLICE DETAIL OR PROVIDED PREFABRICATED SPLICERS ACCORDING TO IT'S QUALIFIED PRODUCTS LIST FOR CATEGORY 505 PILING AND SUB-CATEGORY "SPLICING FOR STEEL H-PILES".

WELDING

5. QUALIFICATION OF WELDERS, MATERIALS, INSPECTION, AND PROCEDURES FOR WELDING H-PILE AND SHELL PILES WITH AN O.D. EQUAL TO OR LESS THAN 18" MUST CONFORM TO THE CURRENT EDITION OF AWS D1.1.
6. ATTACH PILE POINTS AND PREFABRICATED SPLICERS BY WELDING IN ACCORDANCE WITH THE CURRENT EDITION OF AWS D1.1. SUBMIT WELDING DETAILS AND PROCEDURES FOR APPROVAL.

DRIVING DATA

7. SUBMIT THE TYPE AND OPERATION SPECIFICATION OF THE HAMMER 15 CALENDAR DAYS BEFORE PILE DRIVING BEGINS.
8. DRIVE PILES TO NOMINAL AXIAL RESISTANCE OF 320 KIPS PER PILE AS DETERMINED BY A WAVE EQUATION ANALYSIS IN ACCORDANCE WITH 505.03 PART G.
9. THE RATED ENERGY FOR THE HAMMER USED FOR DRIVING PILES IS RECOMMENDED TO BE BETWEEN 30,000 AND 50,000 FOOT-POUNDS. THE RATED ENERGY RANGE MAY BE CHANGED IF APPROVED.
10. CONTRACTOR TO PRE-DRILL TO HIGHEST PILE TIP ELEVATION PER STANDARD SPECIFICATION SECTION 520.
11. NOTIFY THE ENGINEER BEFORE FURTHER PILE DRIVING IF THE HIGHEST PILE TIP ELEVATION HAS NOT BEEN REACHED.

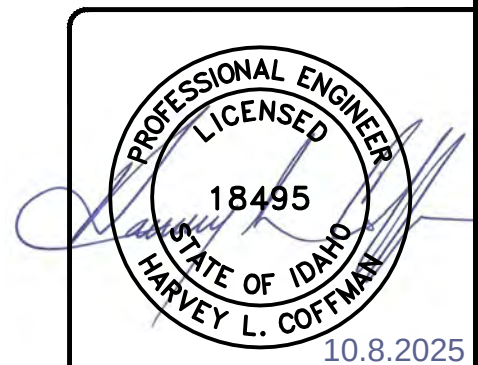
TEST PILES

12. DRIVE TEST PILES TO 1 1/2 TIMES THE ESTIMATED PILE PENETRATION LENGTH OR REFUSAL, WHICHEVER COMES FIRST. FOR EACH TEST PILE, PERFORM PILE DYNAMIC TESTING DURING INITIAL PILE DRIVING AND DURING RESTRIKE IF NECESSARY, OR AS DIRECTED.
13. IF THE TEST PILE NOMINAL AXIAL RESISTANCE IS NOT ACHIEVED, RESTRIKE THE TEST PILE TO 4 INCHES OF PENETRATION AFTER A 24 HOUR WAITING PERIOD, OR AS DIRECTED. IF THE TEST PILE ACHIEVES THE NOMINAL AXIAL RESISTANCE DURING INITIAL DRIVING, TEST PILE RESTRIKE IS NOT REQUIRED.

MISCELLANEOUS

14. PILE TIP ELEVATIONS ARE SHOWN FOR ESTIMATING PURPOSES ONLY.
15. ESTIMATED PILE LENGTHS ARE COMPUTED FROM PILE CUT-OFF AND ESTIMATED PILE TIP ELEVATIONS.

PILE SCHEDULE					
LOCATION	NO.	ELEVATION			ESTIMATED PILE LENGTH (FT)
		PILE CUT-OFF	ESTIMATED PILE TIP	HIGHEST PILE TIP	
ABUT. 1	A - K	1311.85	1274.85	1279.85	37
ABUT. 2	A - K	1310.85	1273.85	1278.85	37



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: DMS
DRAWN BY: DFP
APPROVED BY: HLC
REVISION NO.:
DATE: OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

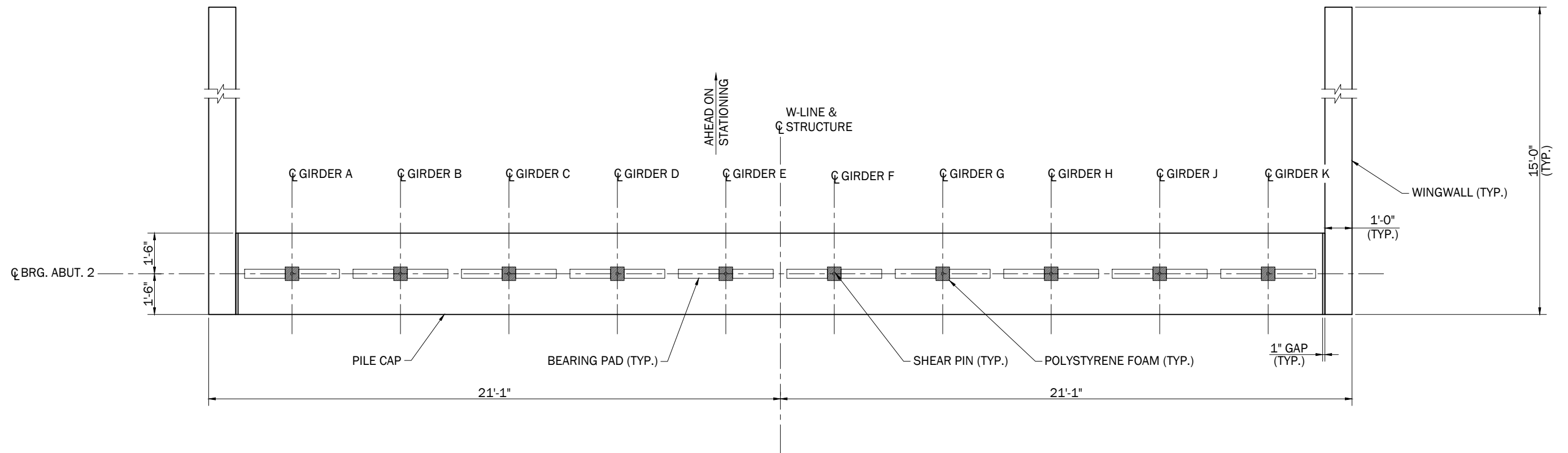
ABUTMENT DETAILS (SHEET 1 OF 3)

DRAWING NUMBER:

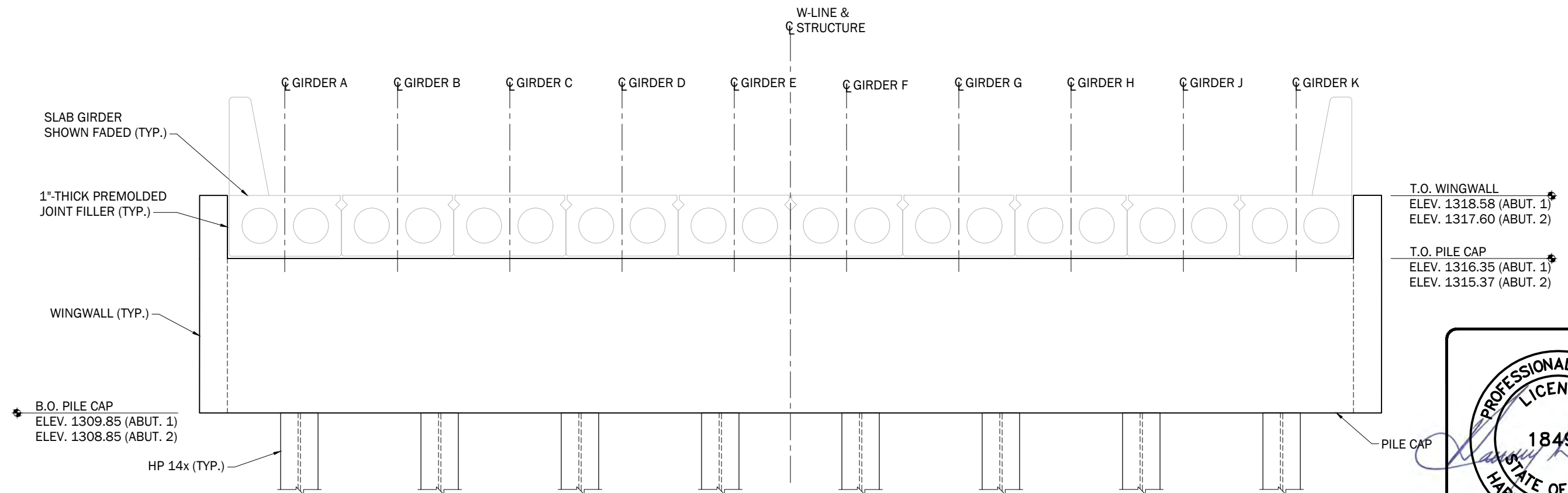
9.4

SHEET: 44 OF 57

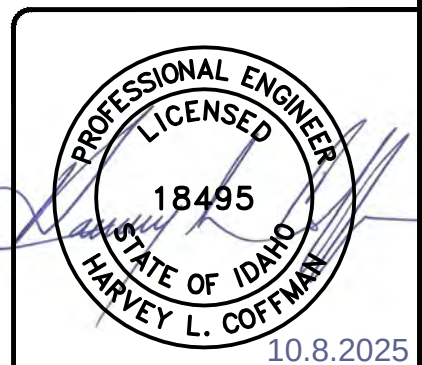
Plotted: 10/09/2025, 11:17 | diarma.profiles\p25\jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250229-S5.dwg



ABUT. PLAN
ABUT. 2 SHOWN, ABUT. 1 SIMILAR



ABUT. ELEVATION
ABUT. 2 SHOWN, ABUT. 1 SIMILAR



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

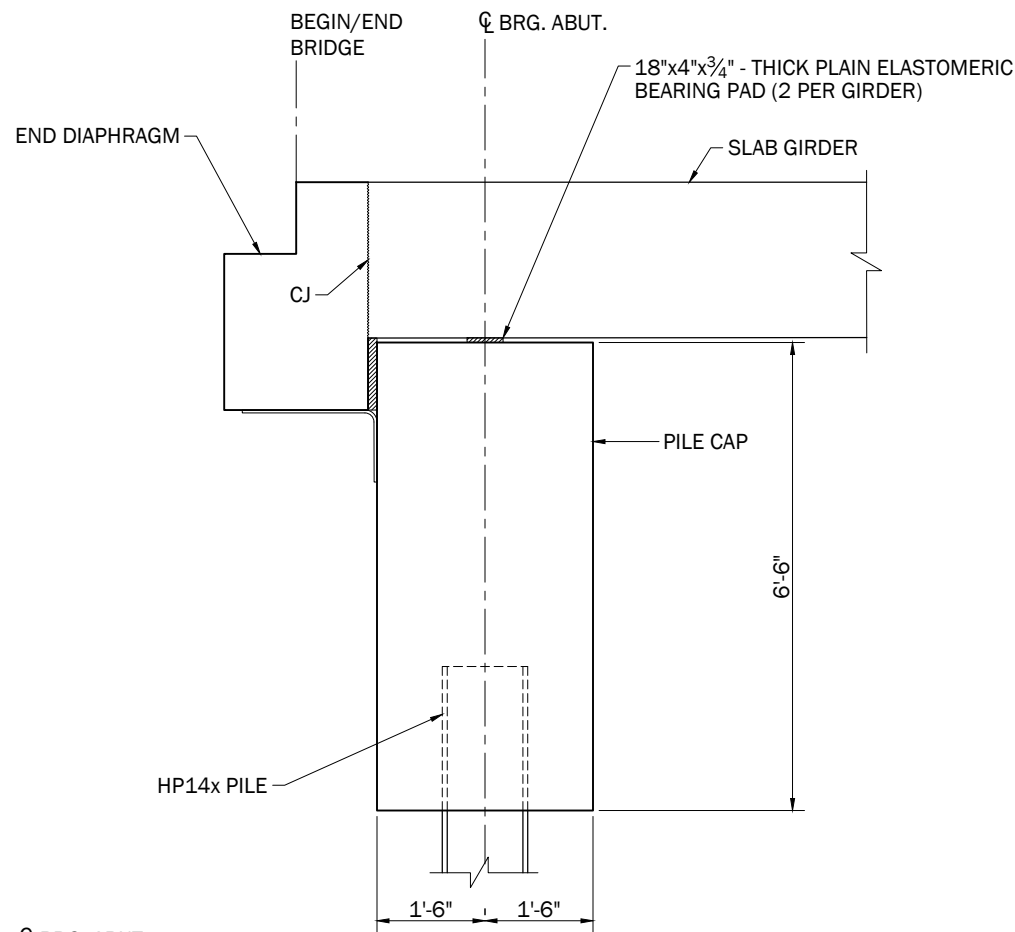
ABUTMENT DETAILS (SHEET 2 OF 3)

DRAWING NUMBER:

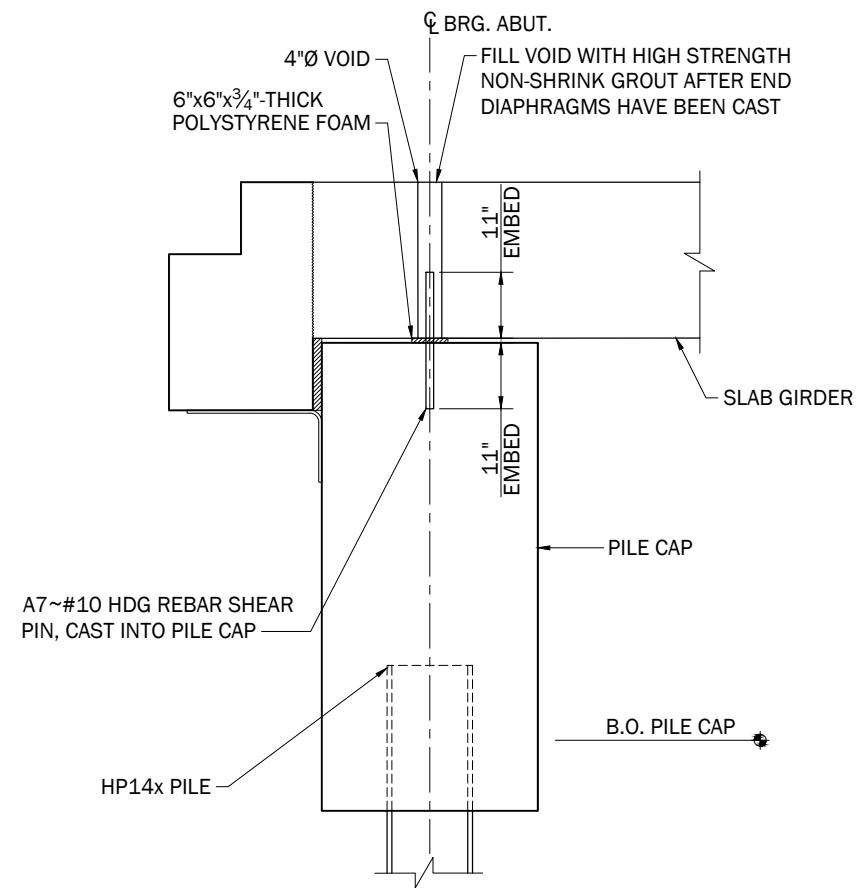
9.5

SHEET: 45 OF 57

Plotted: 10/09/2025, 11:17 | diarma.pro\665p025 jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250229-S7.dwg

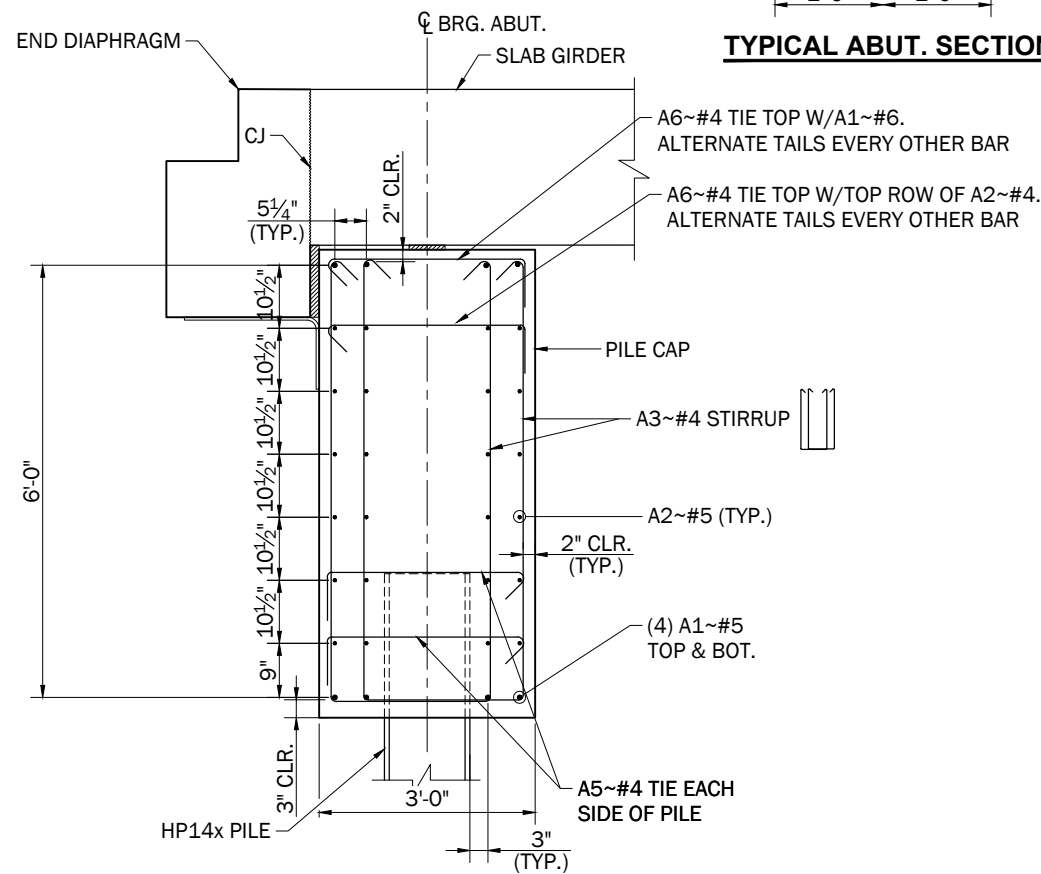


TYPICAL ABUT. SECTION



TYPICAL SECTION AT SHEAR PIN

REINFORCING NOT SHOWN FOR CLARITY



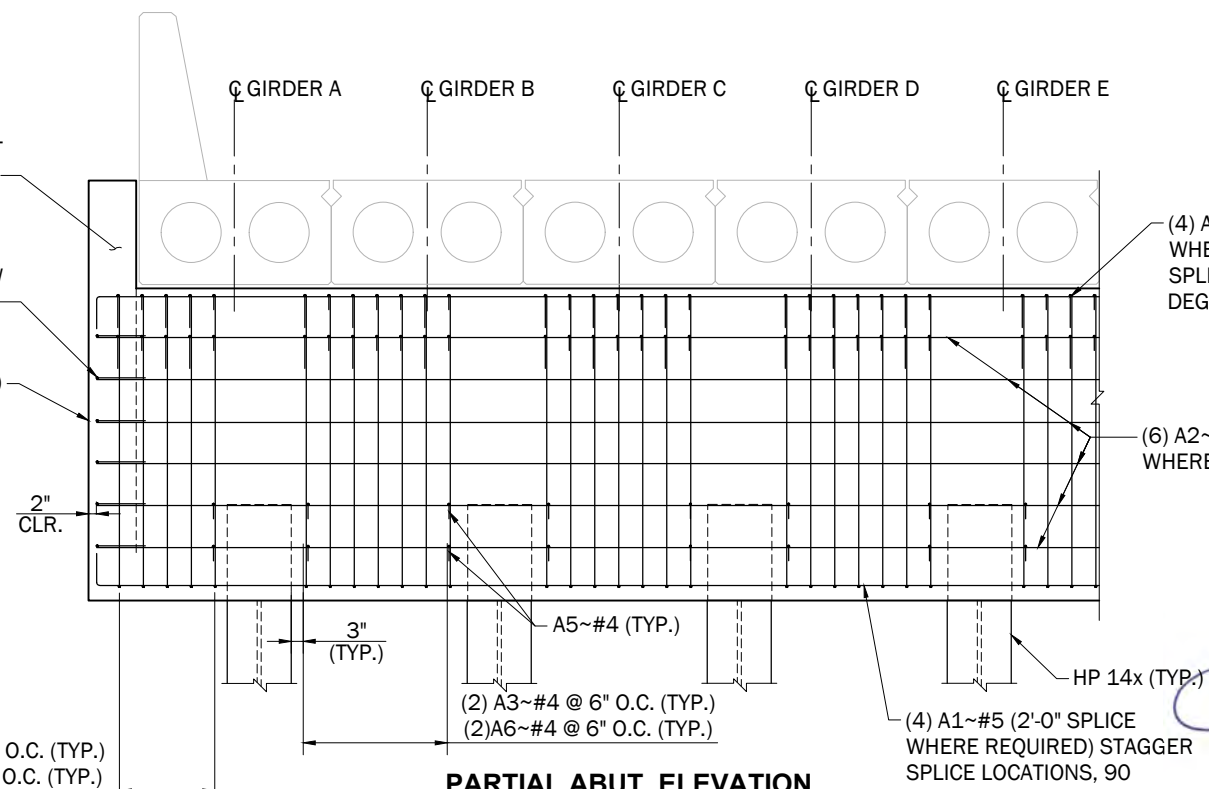
TYPICAL ABUT. SECTION (REINFORCING)

WINGWALL REINFORCEMENT NOT SHOWN FOR CLARITY

A4~#4 AT EACH ROW OF A2~#4 BARS

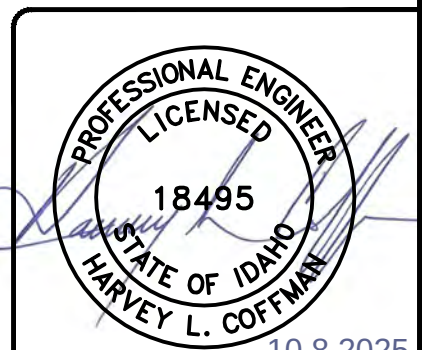
WINGWALL (TYP.)

(2) A3~#4 @ 6" O.C. (TYP.)
(2) A6~#4 @ 6" O.C. (TYP.)



PARTIAL ABUT. ELEVATION

ABUT. 2 SHOWN, ABUT. 1 SIMILAR



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



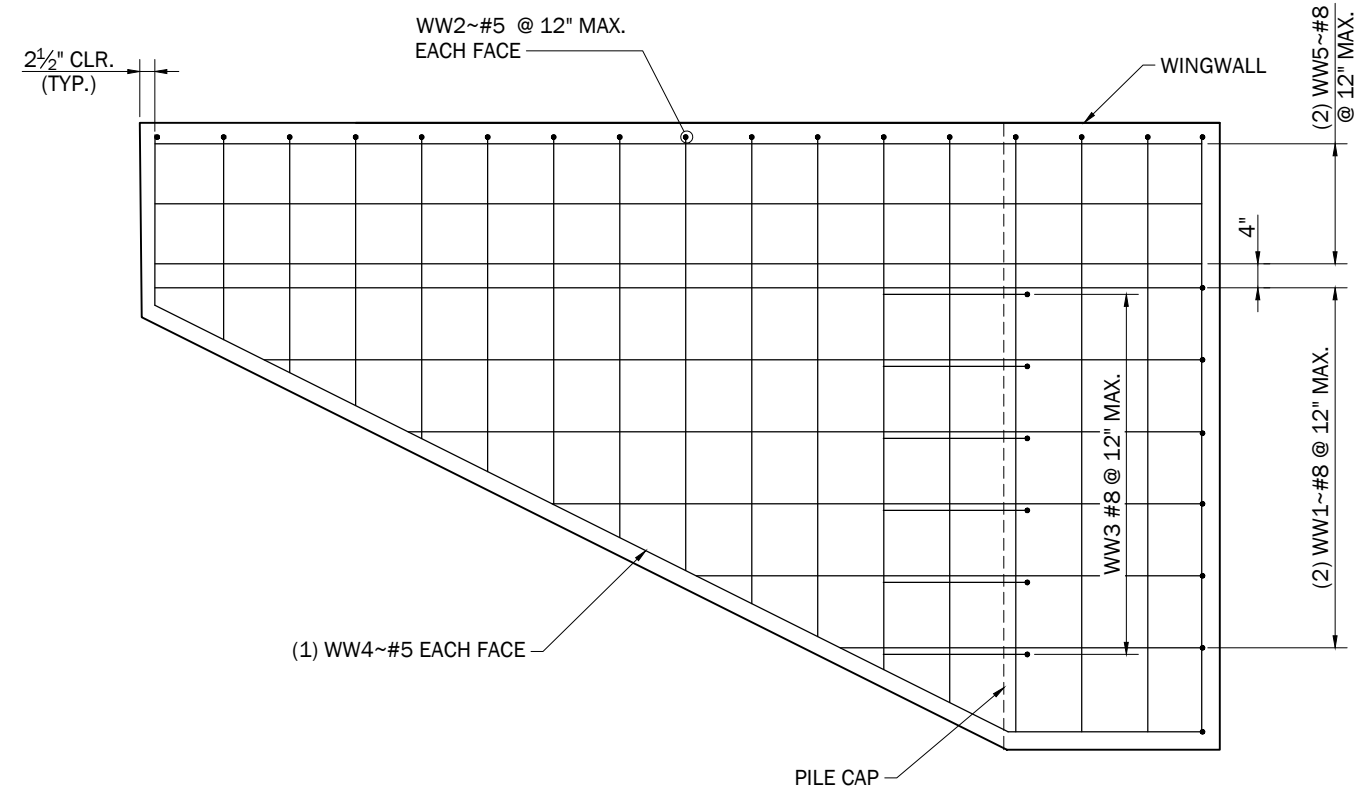
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

ABUTMENT DETAILS (SHEET 3 OF 3)

DRAWING NUMBER:

9.6

SHEET: 46 OF 57

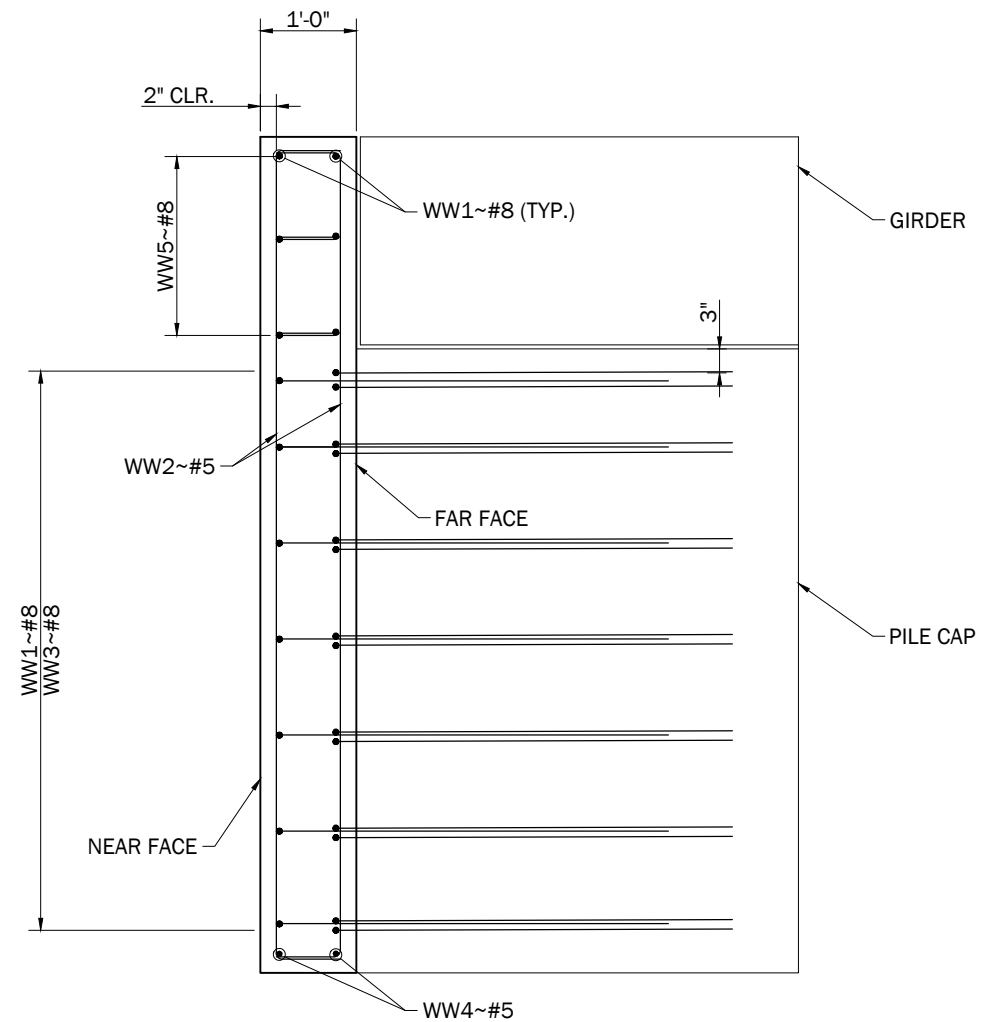


TYPICAL WINGWALL
SOUTHWEST WINGWALL
SHOWN, OTHERS SIMILAR

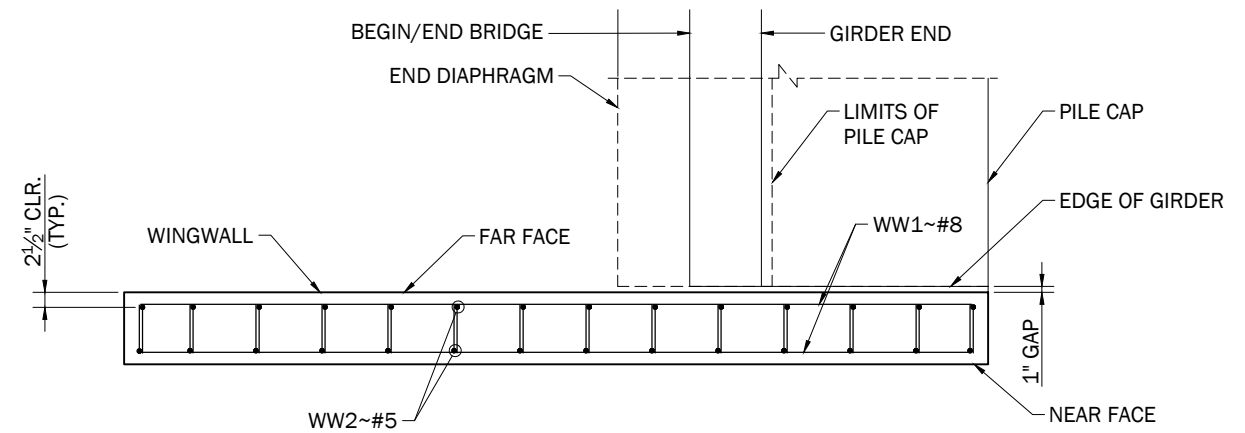


SHEET: 47 OF 57

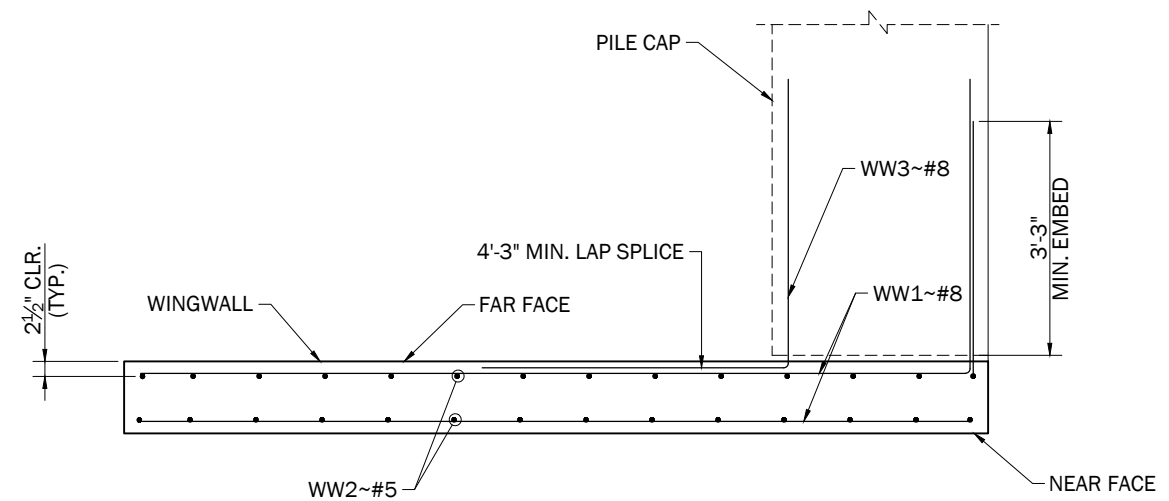
Plotted: 10/09/2025, 11:17 | diarma.profiles\p025\jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250229-S9.dwg



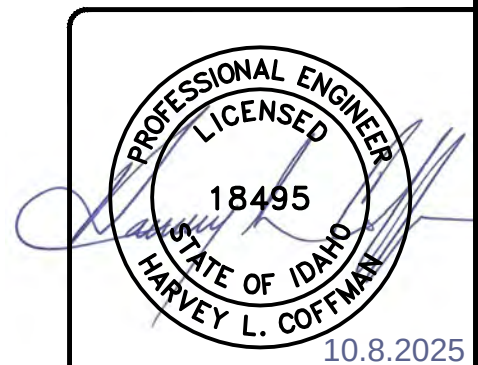
WINGWALL SECTION A-A



WINGWALL SECTION B-B



WINGWALL SECTION C-C



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

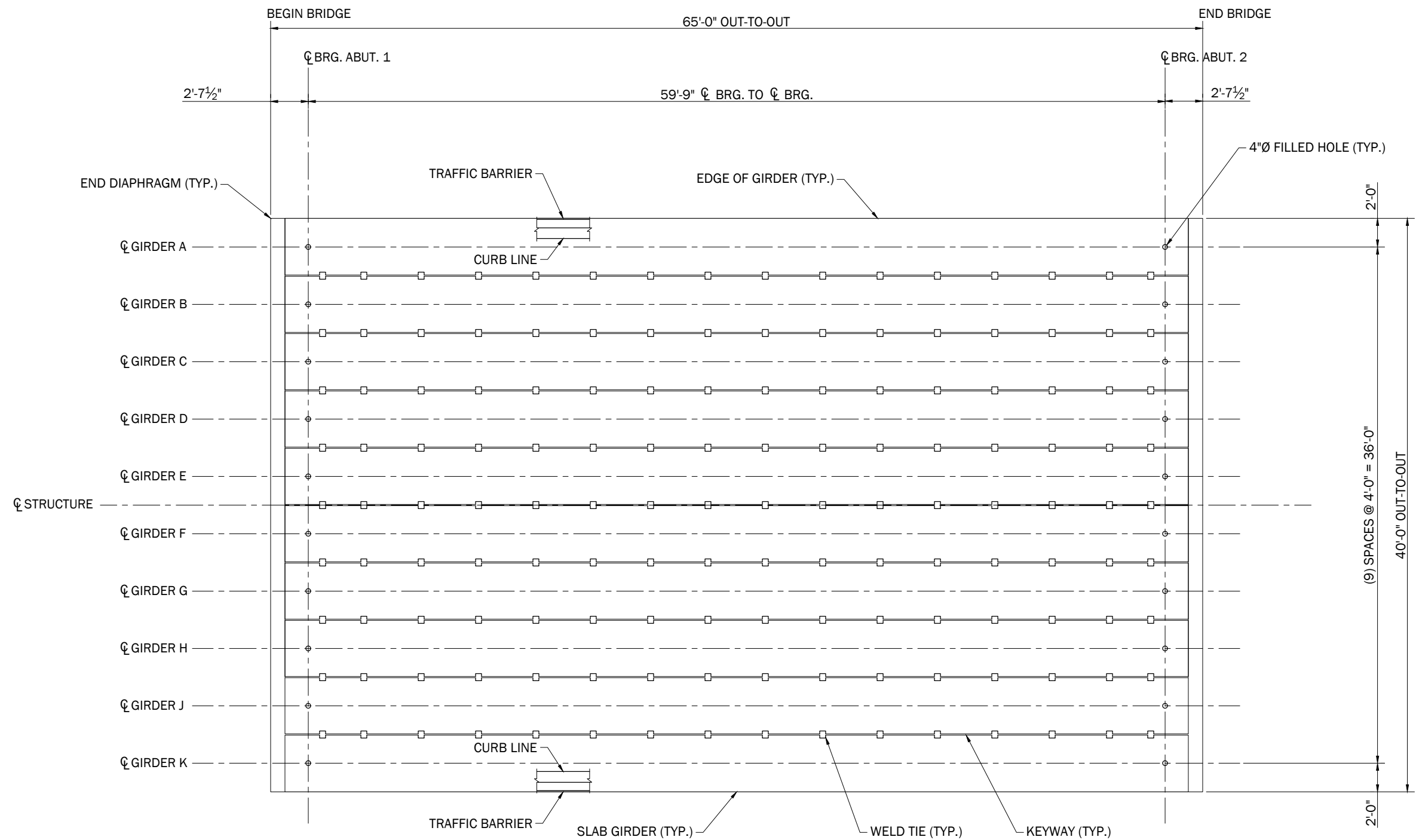
WINGWALL DETAILS (SHEET 2 OF 2)

DRAWING NUMBER:

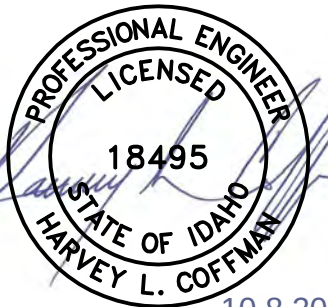
9.8

SHEET: 48 OF 57

Plotted: 10/09/2025, 11:17 | diarma.pro\666p025-jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250239-S11.dwg



FRAMING PLAN



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



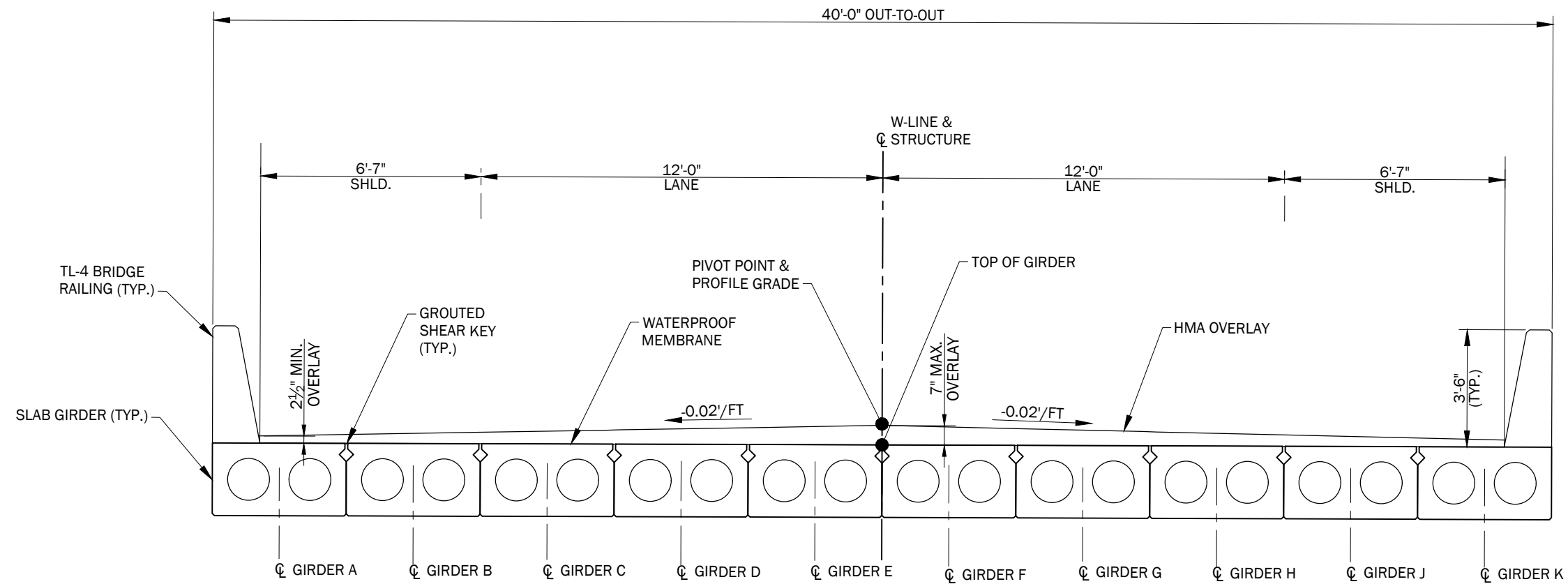
WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

FRAMING PLAN

DRAWING NUMBER:

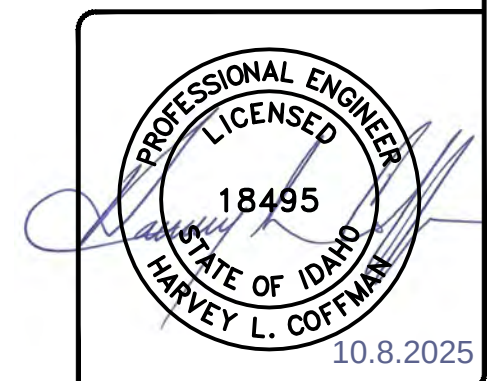
9.9

SHEET: 49 OF 57



TYPICAL SECTION

SHOWN AT BRIDGE MID-SPAN
LOOKING AHEAD ON
STATIONING



Plotted: 10/09/2025, 11:17 | diarma.profitSp25 Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250239-S12.dwg

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

TYPICAL SECTION

DRAWING NUMBER:

9.10

SHEET: 50 OF 57

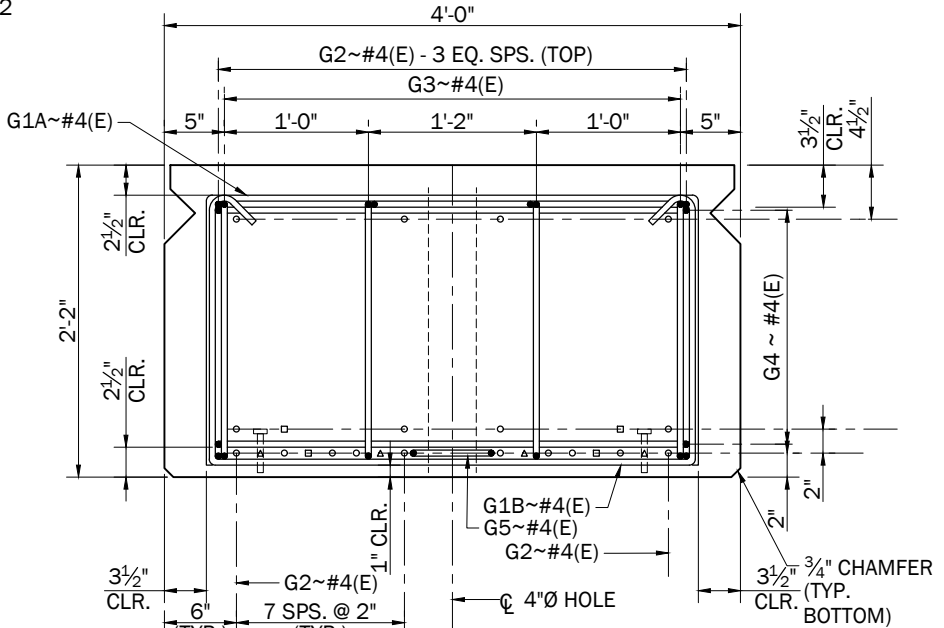
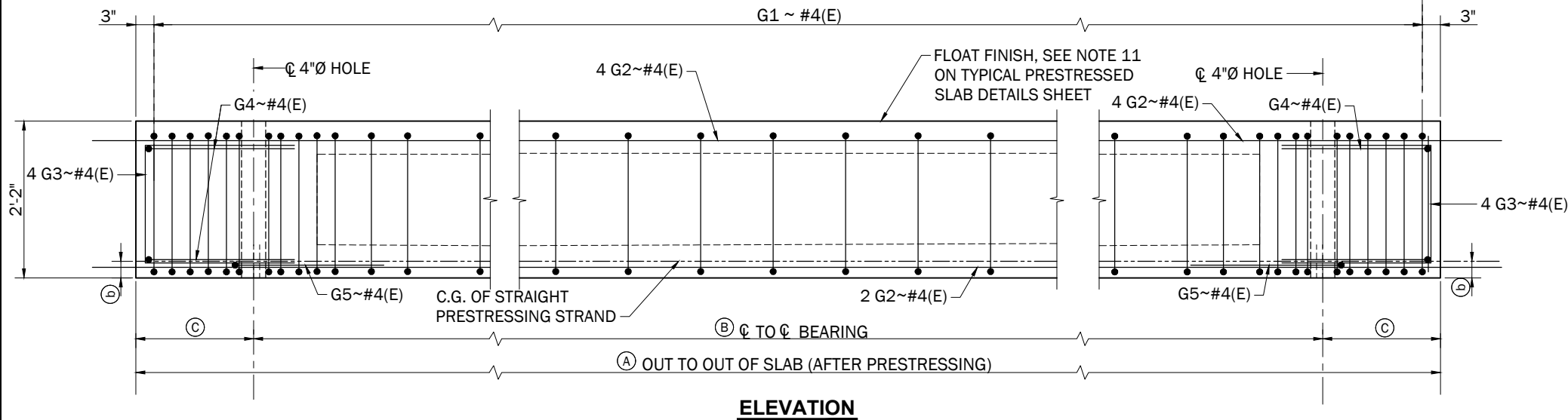
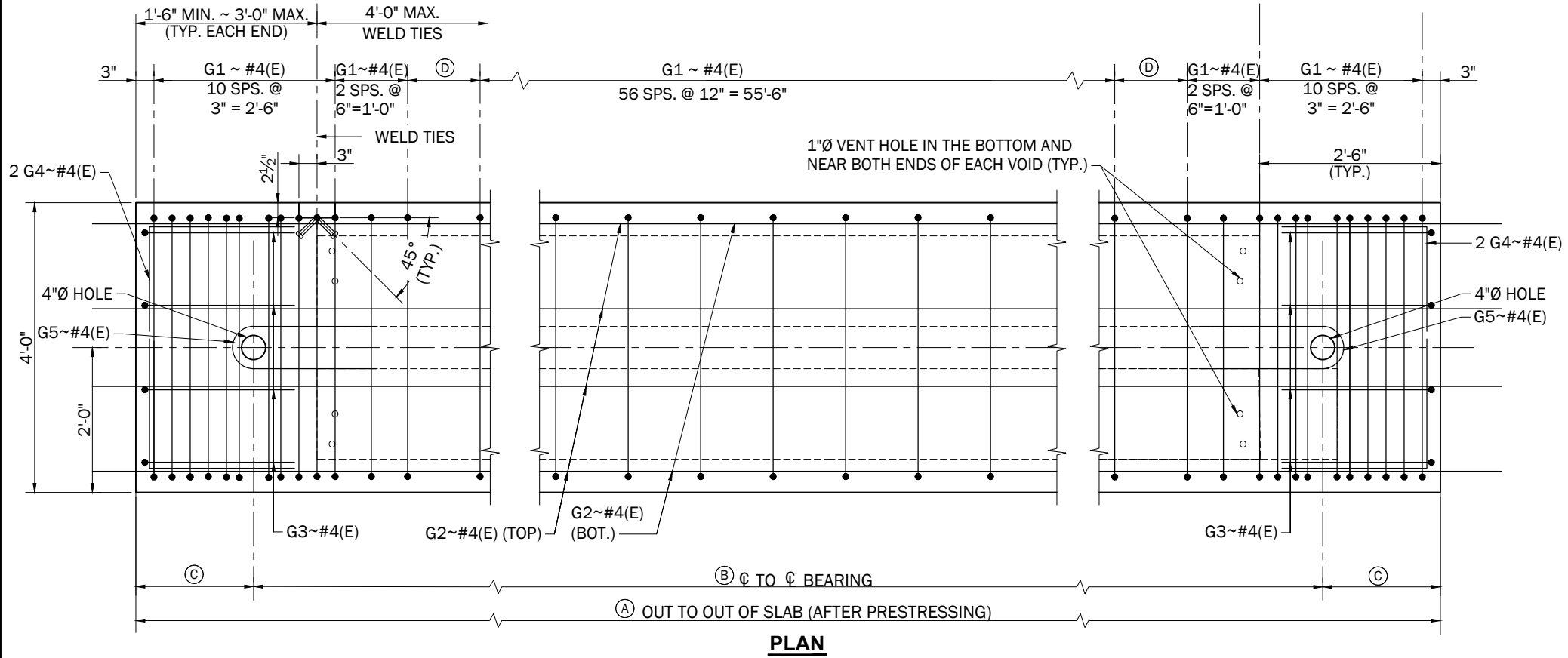
Plotted: 10/09/2025, 11:17 | diarma.profiles\p25 jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250229-S13.dwg

PRESTRESSED SLAB SCHEDULE														
SLABS		PRESTRESS FORCE ~ KIPS		PRESTRESS LOSSES ~ KSI		CONCRETE STRENGTH ~ KSI		SLAB DIMENSIONS						C.G. OF STRAND
NO.	LOCATION	INITIAL BEFORE LOSSES	FINAL AFTER LOSSES	IMMEDIATE LOSSES	FINAL TOTAL LOSSES	AT RELEASE f'ci	AT 28 DAYS f'c	Ⓐ	Ⓑ	Ⓒ		Ⓓ		Ⓑ
A - K	SPAN 1	1054.62	896.63	7.20	30.34	6	7.5	63'	59.75'	LEFT	RIGHT	LEFT	RIGHT	
										1.625'	1.625'	9"	9"	5.583"

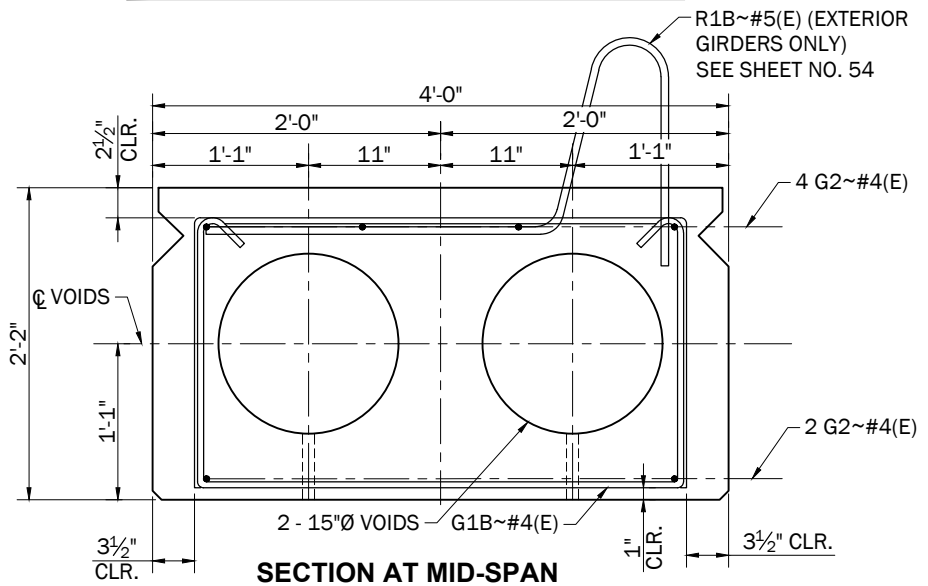
*STIRRUP AND TIE HOOK BEND DIMENSIONS.
APPROXIMATE SLAB SHIPPING WEIGHT IS 917 LB/FT.
STIRRUPS AND TIES MUST HAVE A MINIMUM 1" COVER OUTSIDE OF BARS.

NOTES

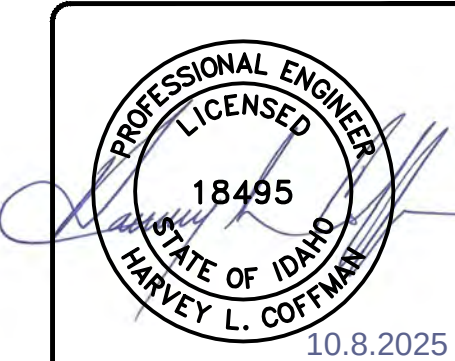
1. DIMENSIONS TO STIRRUPS AND DOWELS ARE GIVEN AT $\bar{C}$ OF SLAB.
2. FOR NOTES, BLOCKOUT, BEARING PLATE AND MISCELLANEOUS DETAILS, SEE PRESTRESSED SLAB DETAILS, SHEET NO. 52.
3. BEND DETAILS IN ACCORDANCE WITH LATEST ACI STANDARD PRACTICE.
4. REINFORCEMENT IN ACCORDANCE WITH AASHTO ARTICLE 5.9.4.4.1.
5. KEYWAY IS TYPICAL EACH SIDE OF SLAB EXCEPT EXTERIOR SIDE OF EXTERIOR SLABS. OMIT KEYWAY ON OUTSIDE OF EXTERIOR SLABS ONLY.
6. SEE STRAND DETAIL ON SHEET NO. 52



STRAND LAYOUT SECTION AT $\bar{C}$ BEARING



SECTION AT MID-SPAN



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY: DMS
DRAWN BY: DFP
APPROVED BY: HLC
REVISION NO.:
DATE: OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

GIRDER DETAILS (SHEET 1 OF 2)

DRAWING NUMBER:

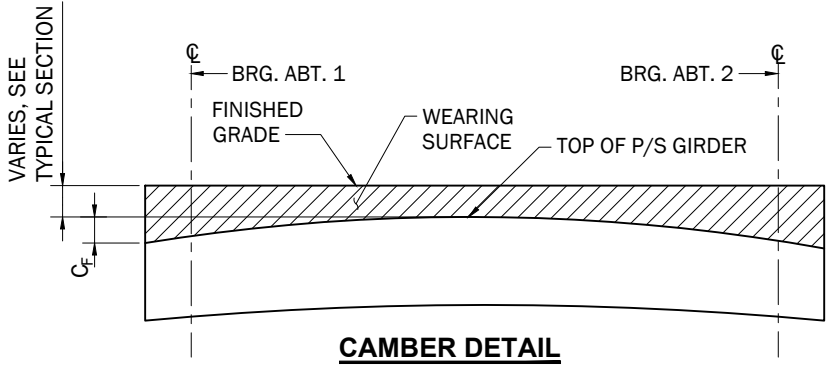
9.11

SHEET: 51 OF 57

Plotted: 10/09/2025, 11:17 | diarma.profb6d6p025 Jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\SS\250239-S14.dwg

DEFLECTION DATA ~ INCHES						
LOCATION	ΔP PRESTRESS	ΔG GIRDER	ΣΔ ** ΔP + ΔG	Δ 1 *** 1.55 ΔP + 1.65 ΔG	ΔS NON COMP. DL	C _F ΔS + ΔC
A - C, H - K	1.579	-1.079	0.501	0.795	0.892	0.786
D - G	1.587	-1.086	0.501	0.543	1.073	1.119

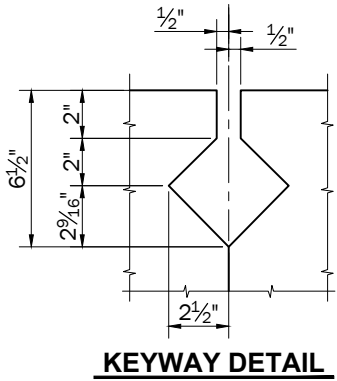
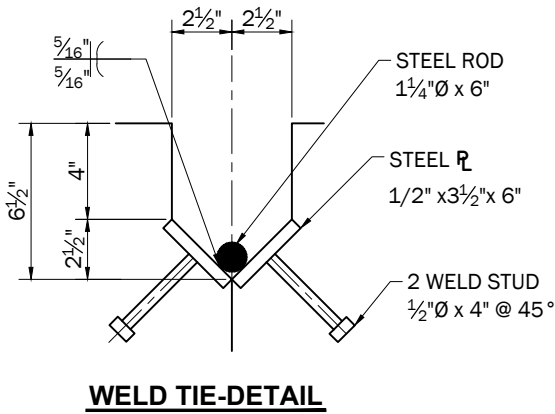
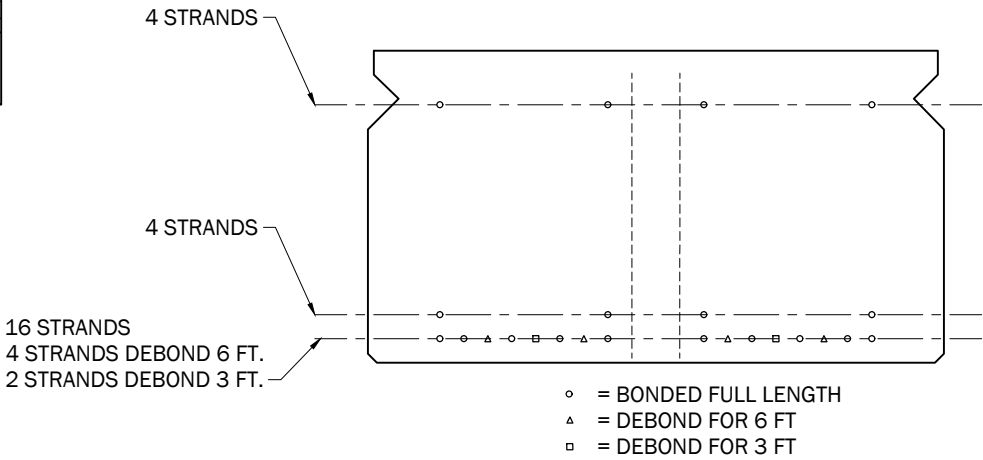
** ESTIMATED DEFLECTION OF PRESTRESSED GIRDER AT RELEASE
*** ESTIMATED DEFLECTION OF PRESTRESSED GIRDER AT ERECTION



CONSTRUCTION SEQUENCE

1. SET SLABS.
2. GROUT 4"Ø VERTICAL DOWEL HOLE AT THE ABUTMENT.
3. WELD 1¼" ROD AT WELD TIE LOCATIONS.
4. GROUT KEYWAY.

REINFORCEMENT DIAGRAM			
MARK	SIZE	GRADE	SKETCH
G1A*	#4(E)	60	VAR.
G1B*	#4(E)	60	VAR.
G2	#4(E)	60	
G3*	#4(E)	60	
G4*	#4(E)	60	
G5*	#4(E)	60	



NOTES

CONCRETE

1. PROVIDE CONCRETE STRENGTH AS SHOWN ON THE PLANS.
2. PROVIDE CONCRETE THAT CONFORMS TO SECTION 502 EXCEPT THAT ENTRAINED AIR WILL BE 5% ±1%. SELF CONSOLIDATING CONCRETE MAY BE USED IN ACCORDANCE WITH SECTION 502.

GROUT

3. PROVIDE GROUT THAT CONFORMS TO TYPE "B" CLASS I NON-METALLIC NON-SHRINK AS SPECIFIED IN SUBSECTION 705.02.
4. SANDBLAST, CLEAN, AND GROUT LEVEL WITH SURROUNDING GIRDER SURFACES, KEYWAYS AND BLOCKOUTS. PROVIDE A BACKER ROD AS A SEAL FOR THE GROUT.
5. NO VEHICULAR TRAFFIC WILL BE ALLOWED ON THE STRUCTURE UNTIL THE GROUT HAS ATTAINED A MINIMUM STRENGTH OF 4,000 PSI.

SHOP DRAWINGS

6. PROVIDE SHOP DRAWING DETAILS THAT CONFORM TO CURRENT AASHTO SPECIFICATIONS. SHOW DETENSIONING SEQUENCE AND GIRDER LIFT POINTS ON SHOP DRAWINGS.
7. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 506.03 AND 105.02.
8. KEEP THE PRESTRESSED SLAB IN A FLAT POSITION (TOP SURFACE UPWARDS) DURING TRANSPORTATION AND ERECTION AND LIFT ONLY BY MEANS OF THE LIFTING DEVICES PROVIDED. SUBMIT THE PROVISION FOR SUPPORT POINTS TO BE USED DURING TRANSPORTATION TO THE JOB SITE FOR APPROVAL.

MISCELLANEOUS GIRDER DETAILS

9. DIMENSIONS ARE HORIZONTAL DIMENSIONS. CORRECT THE FURNISHED LENGTH OF THE SLAB FOR GRADE AND ALLOWANCE MADE FOR BEAM SHORTENING.
10. FABRICATE IN ACCORDANCE WITH SECTION 506.
11. FINISH THE TOP SURFACE OF THE SLAB IN ACCORDANCE WITH SUBSECTION 502.03, PART I, PARAGRAPH 3d.
12. SLAB ERECTION ASSUMED TO OCCUR 60-90 DAYS AFTER SLAB FABRICATION.

STRAND

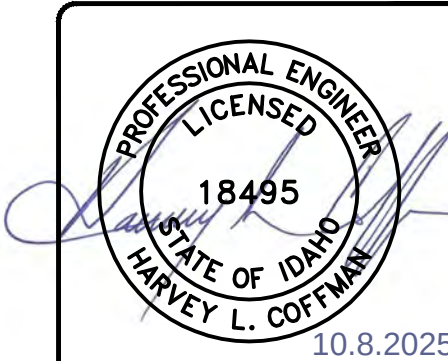
13. DESIGN BASED UPON 0.6" DIA. AASHTO M203 LOW RELAXATION STRAND.
14. DEBONDED STRANDS SHALL BE DEBONDED AT EACH GIRDER END FOR THE INDICATED LENGTH PARALLEL TO THE GIRDER CENTERLINE. DEBONDED STRANDS SHALL NOT BE EXTENDED PAST GIRDER ENDS. DEBONDED STRANDS SHALL BE SYMMETRICALLY PLACED ABOUT THE GIRDER CENTERLINE. DEBONDED LENGTHS OF PAIRS OF STRANDS THAT ARE SYMMETRICALLY POSITIONED ABOUT THE GIRDER CENTERLINE SHALL BE EQUAL.

SLAB SHIPPING

15. DO NOT SHIP PRESTRESSED CONCRETE MEMBERS UNTIL TESTS ON CONCRETE CYLINDERS MANUFACTURED FROM THE SAME CONCRETE AND CURED UNDER THE SAME CONDITIONS AS THE GIRDERS INDICATE THAT THE CONCRETE OF THE PARTICULAR MEMBER HAS ATTAINED A COMPRESSIVE STRENGTH EQUAL TO THE SPECIFIED DESIGN 28 DAY COMPRESSIVE STRENGTH.

BASIS OF PAYMENT

16. PRESTRESSING CONCRETE MEMBERS IS INCIDENTAL TO PRECAST AND PRESTRESSED PAY ITEMS IN 502.
17. SLAB GIRDER, GIRDER, SLAB, AND MEMBER ALL REFER TO THE PRESTRESSING CONCRETE MEMBER BID ITEM.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

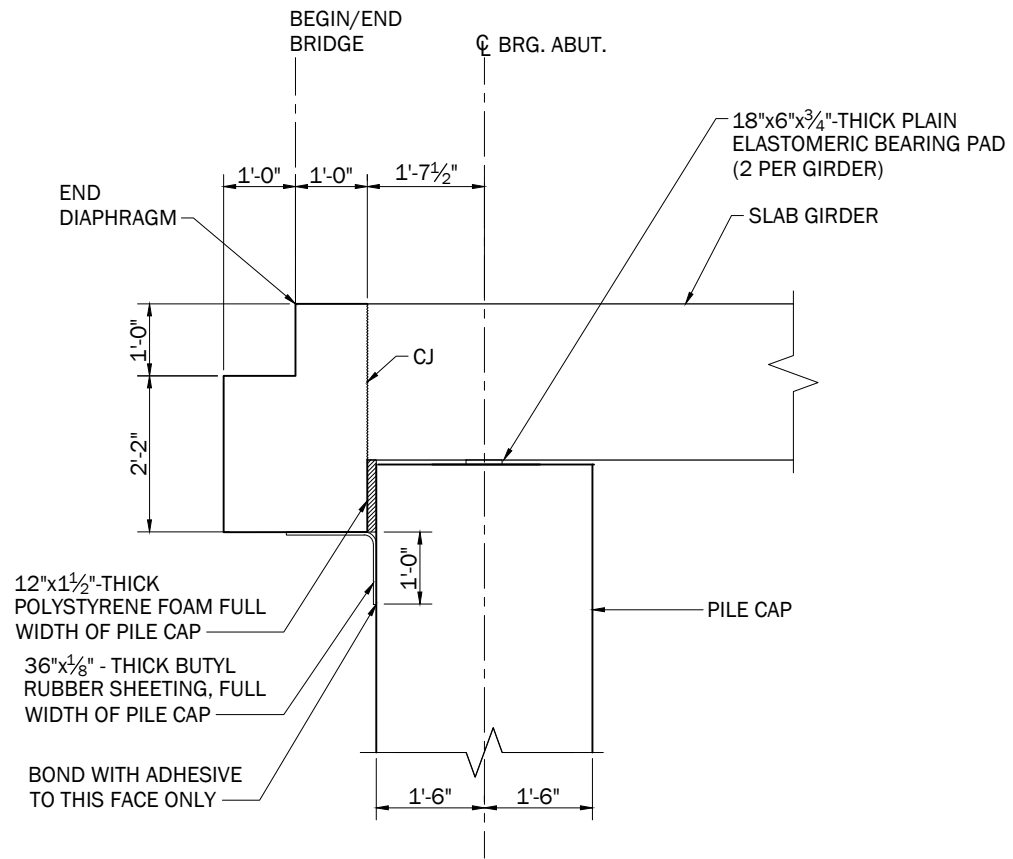
GIRDER DETAILS (SHEET 2 OF 2)

DRAWING NUMBER:

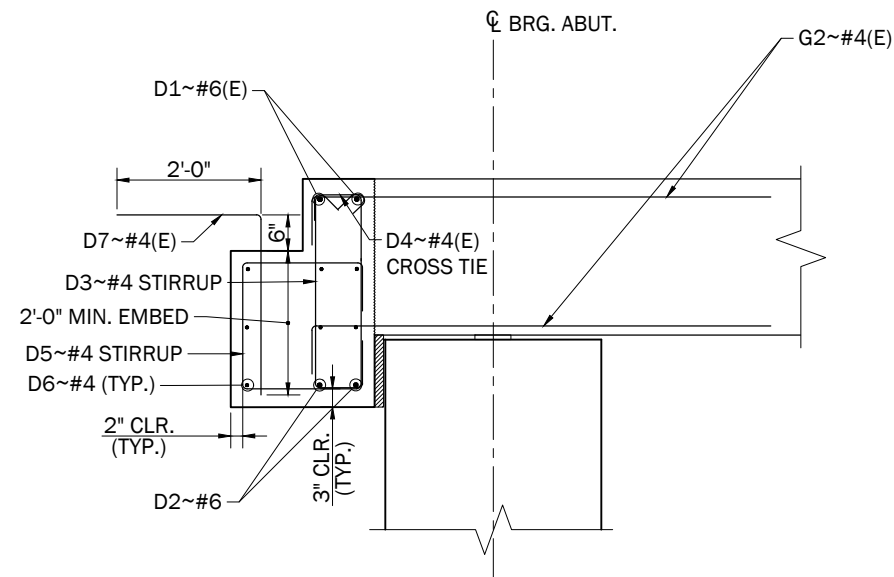
9.12

SHEET: 52 OF 57

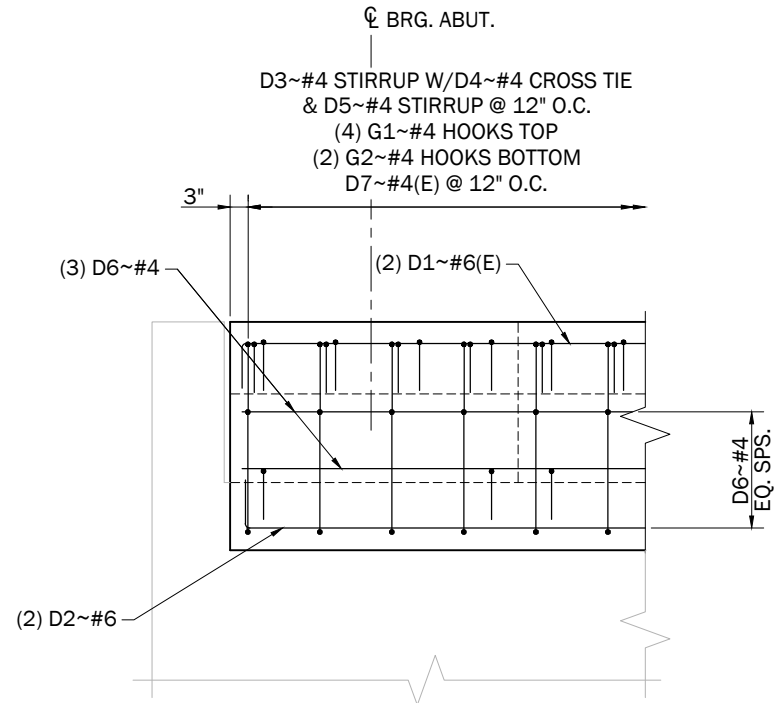
Plotted: 10/09/2025, 11:17 | diarma.profiles\p025-jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250239-S10.dwg



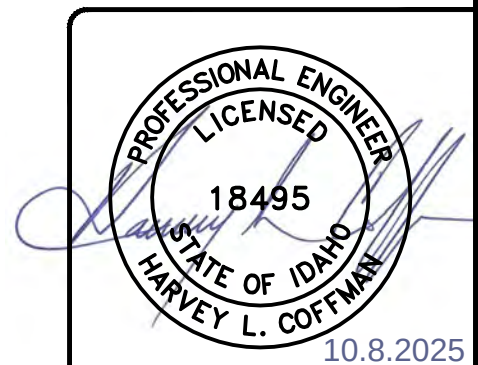
TYPICAL END DIAPH. SECTION



TYPICAL END DIAPH. SECTION REINFORCING



TYPICAL END DIAPH. ELEVATION



10.8.2025

NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

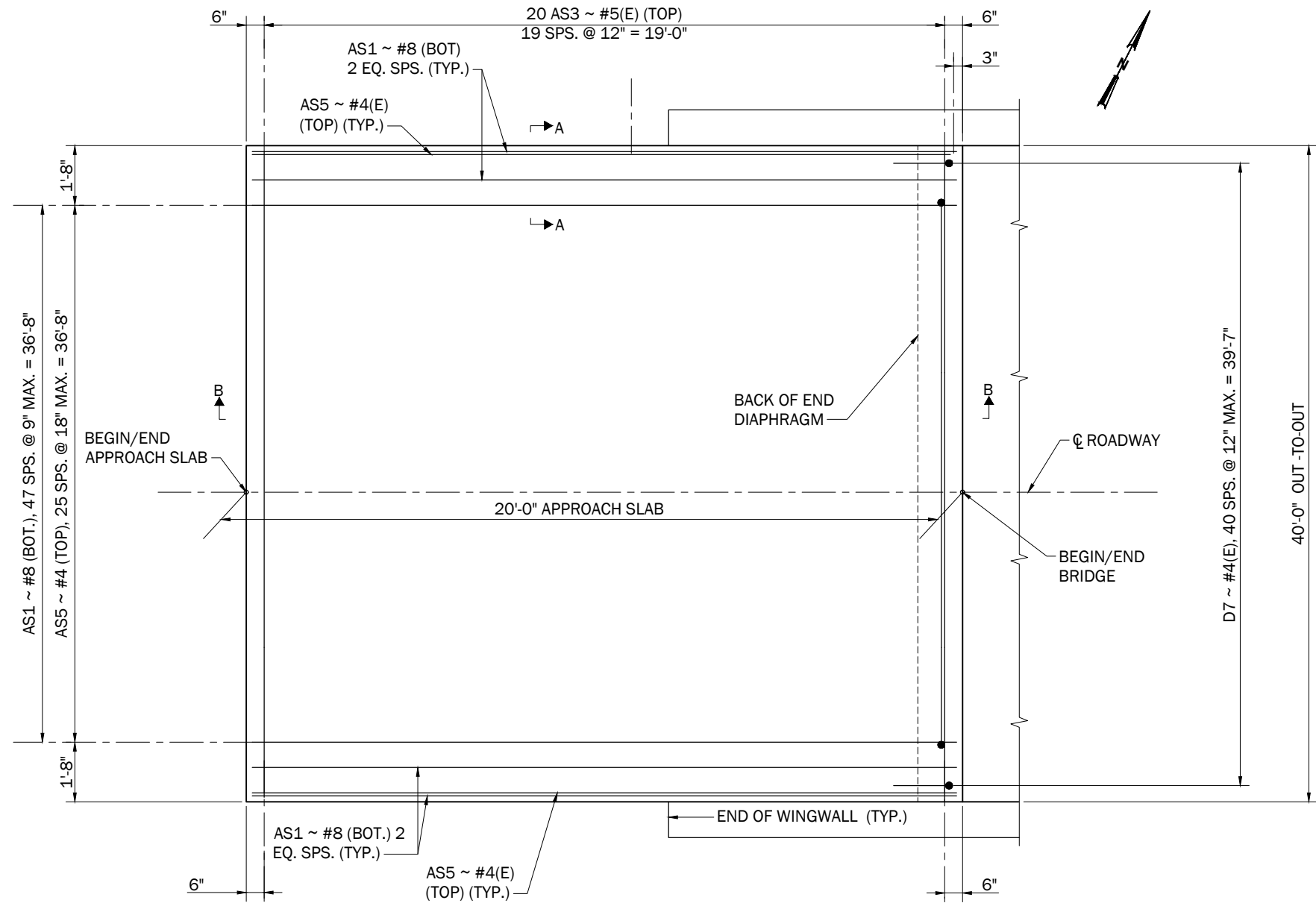
END DIAPHRAGM DETAILS

DRAWING NUMBER:

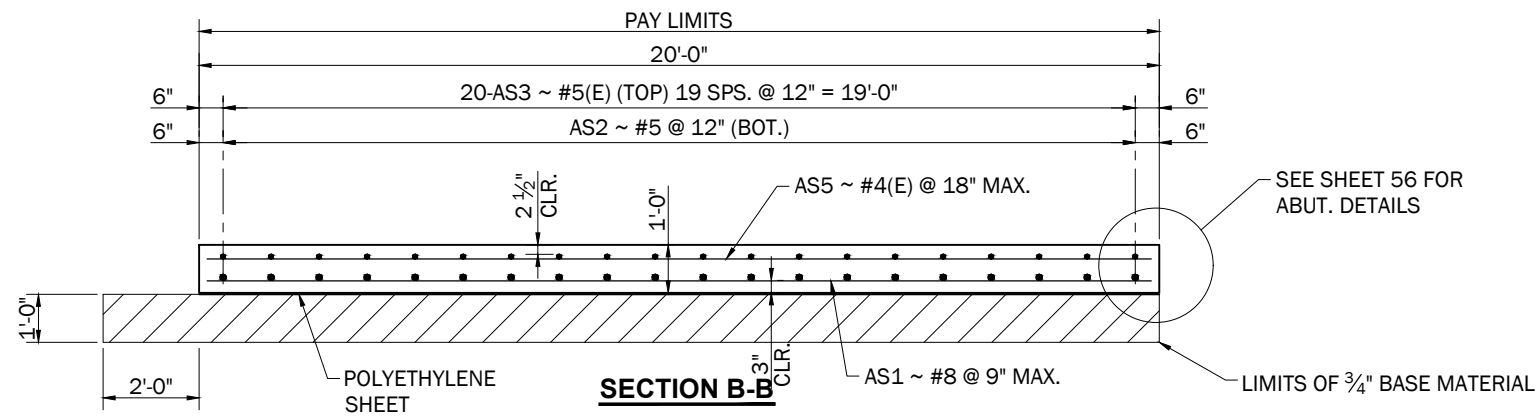
9.13

SHEET: 53 OF 57

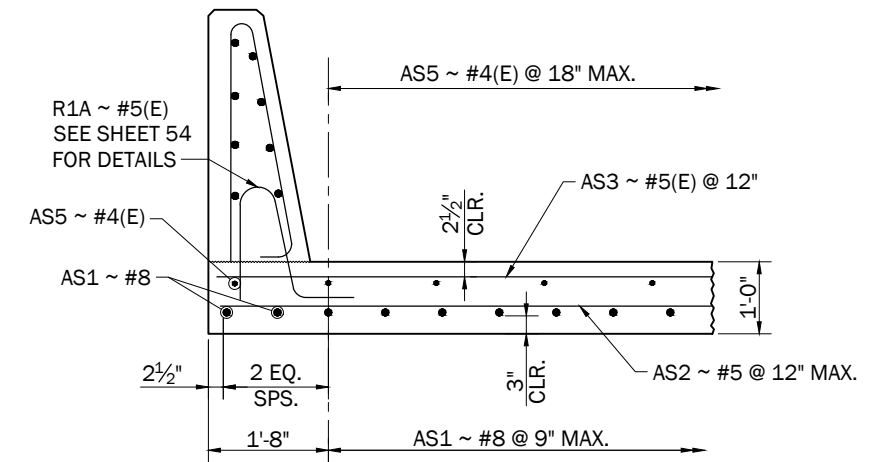
Plotted: 10/09/2025, 11:17 | diarma.profiles\p25\jobs\250229 Webb Rd Bridge and Sweetwater Creek\0 DWG\SS\250229-S16.1.dwg



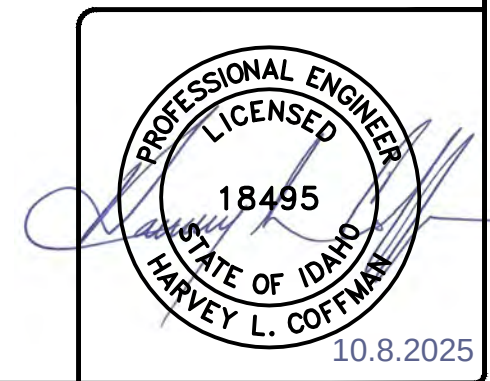
APPROACH SLAB - PLAN



SECTION B-B



SECTION A-A



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

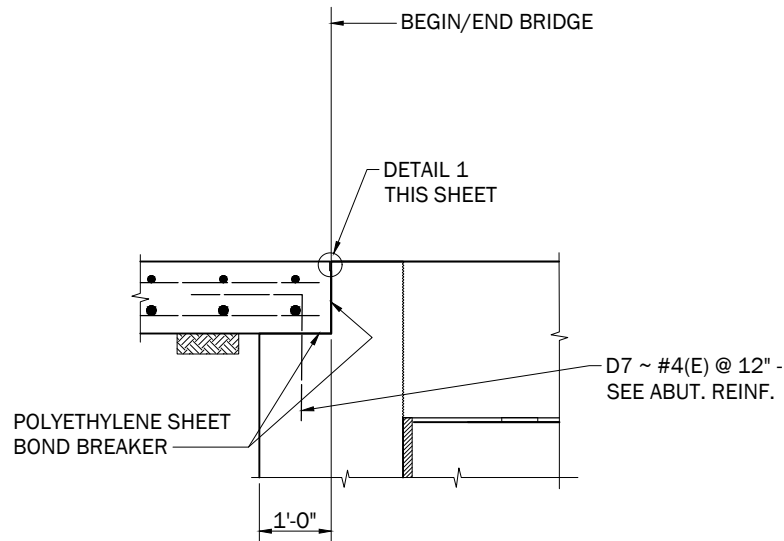
APPROACH SLAB DETAILS (SHEET 1 OF 2)

DRAWING NUMBER:

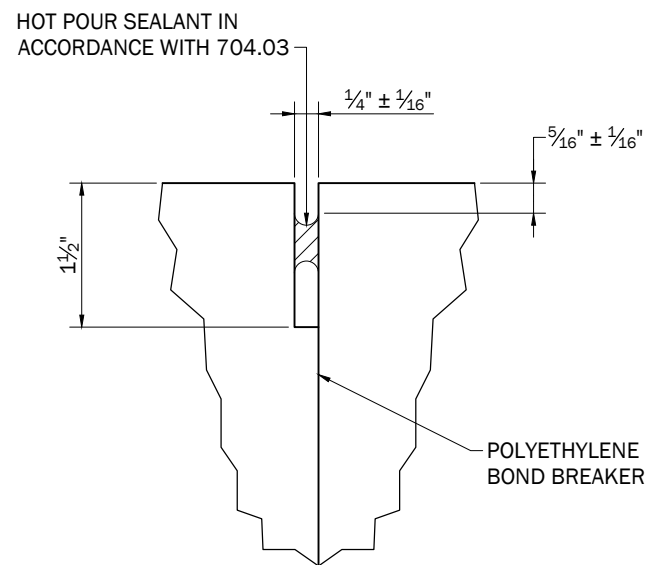
9.15

SHEET: 55 OF 57

Plotted: 10/09/2025, 11:17 | diarma.profb6Sp025 Jobs\250229 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\250229-S17.1.dwg



NO JOINT AT ABUTMENT DETAIL



DETAIL 1

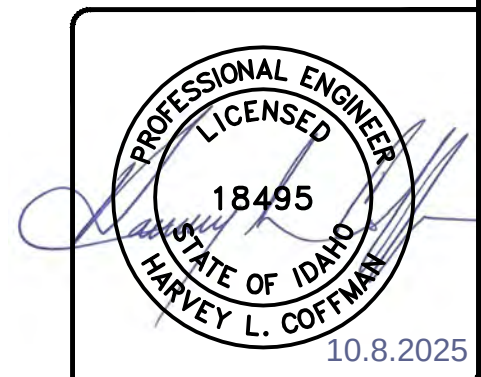
NOTES

APPROACH SLAB

1. PROVIDE CLASS 40AF CONCRETE.
2. PROVIDE REINFORCEMENT IN ACCORDANCE WITH AASHTO M31 GRADE 60 TYPE S. EPOXY COAT THE TOP MAT OF BOTH TRANSVERSE AND LONGITUDINAL REINFORCEMENT IN ACCORDANCE WITH 708.02. PROVIDE BEND DETAILS IN ACCORDANCE WITH THE LATEST A.C.I. STANDARD PRACTICE AND AASHTO SPECIFICATIONS.
3. PLACE LONGITUDINAL REINFORCEMENT PARALLEL TO THE CENTERLINE OF THE ROADWAY; PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY.
4. PROVIDE $\frac{3}{4}$ " TYPE A BASE MATERIAL COMPACTED TO MEET CLASS "A" COMPACTION REQUIREMENTS TO THE LIMITS SHOWN IN SECTION B-B ON SHEET 54. BEFORE POURING THE APPROACH SLAB. THE COST OF THE MATERIAL IS INCIDENTAL TO PAY ITEM 502-435A.
5. THE COST OF THE SUBGRADE SEPARATION GEOTEXTILE TYPE 1 IS INCIDENTAL TO PAY ITEM 502-435A.
6. PROVIDE 4 MIL (MIN.) POLYETHYLENE SHEET. THE COST IS INCIDENTAL TO PAY ITEM 502-435A.
7. PAYMENT FOR APPROACH SLAB IS PAY ITEM 502-435A.
8. APPROACH SLABS ARE TO BE TOPPED WITH ASPHALT PER ROADWAY PLANS. WATERPROOF MEMBRANE APPLIED TO BRIDGE DECK IS NOT WARRANTED FOR APPROACH SLABS.

APPROXIMATE QUANTITIES (BOTH APPROACH SLABS)

CONCRETE	-----	59 CY
PLAIN REINF.	-----	7300 LB
EPOXY REINF.	-----	2384 LB
$\frac{3}{4}$ " BASE MATERIAL	-----	65 CY
POLYETHYLENE SHEET	-----	178 SY



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE
TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

APPROACH SLAB DETAILS (SHEET 2 OF 2)

DRAWING NUMBER:

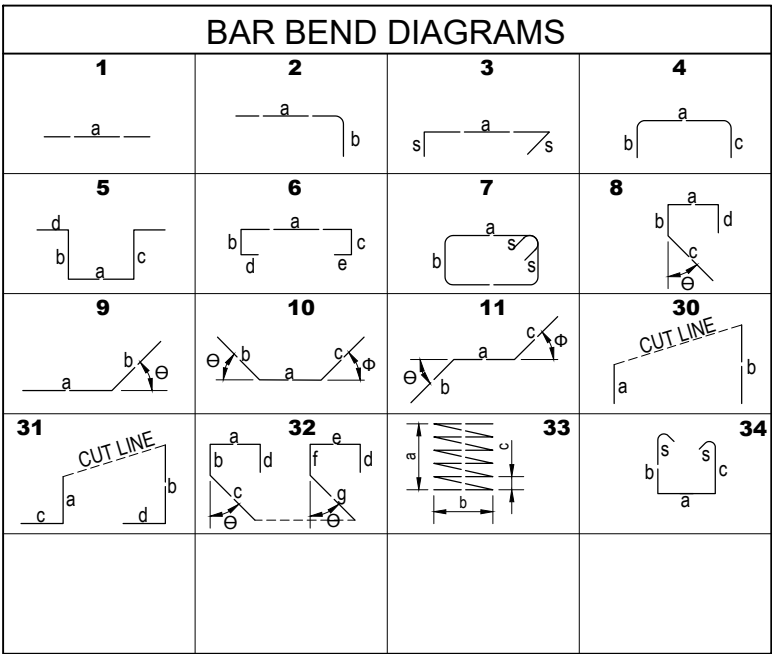
9.16

SHEET: 56 OF 57

Plotted: 10/09/2025, 11:17 | diarma.profit66p025 jobs\250239 Webb Rd Bridge and Sweetwater Creek\0.0 DWG\SS\SS\250239-S19.dwg

SUPERSTRUCTURE														
MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BARS/ SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE θ	ANGLE Φ	TOTAL LENGTH
	DIAPHRAGM													
D1	Top Long.	6	E	4	4		39'-6"	1'-0"	1'-0"					165
D2	Bottom Long.	6		4	4		39'-6"	1'-0"	1'-0"					165
D3	Stirrup	4		41	34		0'-8"	2'-8"	2'-8"					269
D4	Cross Ties	4	E	41	3		0'-8"							55
D5	Stirru	4		41	6		1'-9"	1'-8"	1'-8"	0'-8"	0'-8"			226
D6	Horizontal Bars	4		7	1		39'-6"							277
D7	Bar into Approach Slab	4	E	41	2		2'-6"	2'-0"						181

SUBSTRUCTURE														
MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BARS/ SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE θ	ANGLE Φ	TOTAL LENGTH
	PILE CAP													
A1	Long Bar. Top and Bot.	5		16	4		41'-10"	0'-10"	0'-10"					692
A2	Horizontal Bar	5		48	4		41'-10"	0'-10"	0'-10"					2076
A3	Stirrups	4		280	34		2'-3"	6'-1"	6'-1"					4195
A4	End Ties	4		12	4		2'-8"	0'-8"	0'-8"					45
A5	Ties at Piles	4		64	3		2'-8"							213
A6	Top Ties	4		280	3		2'-8"							933
	WING WALLS													
WW1	Long. Tied to Cap- Varies	8		48	2		14'-0"	4'-2"						641
					2		4'-10"	4'-2"						
WW2	Vertical In Line with Pile Cap	5		24	4		8'-3.8"	0'-8"	0'-8"					226
WW2	Vertical Along Wall - Varies	5		104	4		8'-3"	0'-8"	0'-8"					656
					4		2'-8.3"	0'-8"	0'-8"					
WW3	Hook Into Pile Cap	8		48	2		4'-3"	4'-1.5"						392
WW4	Bottom Longitudinal	5		8	1		3'-0"							24
WW5	Top Longitudinal	8		24	1		14'-7"							350



s = STANDARD HOOK END, STIRRUP HOOK, OR TIE HOOK DIMENSION

SUBSTRUCTURE BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#3		0.376	
#4	5386	0.668	3598
#5	3674	1.043	3832
#6		1.502	
#7		2.044	
#8	1383	2.670	3693
#9		3.400	
#10		4.303	
#11		5.313	
#14		7.650	
#18		13.600	
TOTAL WEIGHT			11,123

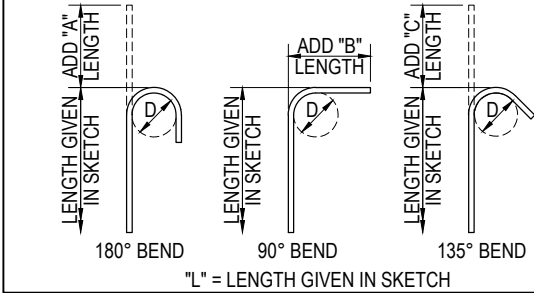
SUPERSTRUCTURE BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#4	772	0.668	516
#5		1.043	
#6	165	1.502	248
#7		2.044	
TOTAL WEIGHT			764

EPOXY COATED BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#4	236	0.668	158
#5		1.043	
#6	165	1.502	248
#7		2.044	
TOTAL WEIGHT			406

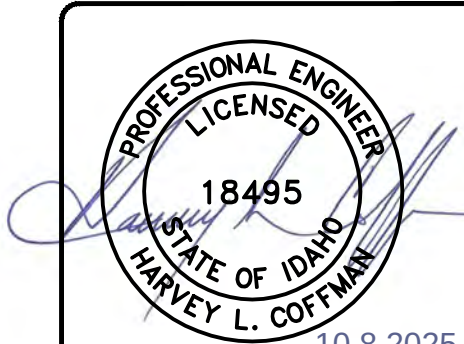
BEND DETAILS



STANDARD END HOOK DIMENSIONS				STIRRUP AND TIE HOOK DIMENSIONS		
BAR SIZE	ALL GRADES			ALL GRADES		
	D	A	B	D	B	C
#3	2¼"	5"	6"	1½"	4"	4"
#4	3"	6"	8"	2"	4½"	4½"
#5	3¾"	7"	10"	2½"	6"	5½"
#6	4½"	8"	1'-0"	4½"	1'-0"	8"
#7	5¼"	10"	1'-2"	5¼"	1'-2"	9"
#8	6"	11"	1'-4"	6"	1'-4"	10½"
#9	9½"	1'-3"	1'-7"			
#10	10¾"	1'-5"	1'-10"			
#11	1'-0"	1'-7"	2'-0"			
#14	1'-6¼"	2'-3"	2'-7"			
#18	2'-0"	3'-0"	3'-5"			

REINFORCEMENT NOTES

- PROVIDE BEND DETAILS IN ACCORDING WITH THE LATEST ACI STANDARD PRACTICE AND AASHTO SPECIFICATIONS.
- DIMENSIONS SHOWN IN THE "BAR BEND DIAGRAMS" ARE OUT TO OUT OF BEND POINTS OR HOOKS AND/OR END OF BARS UNLESS NOTED OTHERWISE. PIN DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOK ON A BAR.
- NO DEDUCTIONS FOR CURVATURE AT BENDS ARE MADE EXCEPT FOR THE ADJUSTMENTS INCLUDED IN THE ABOVE "ADD LENGTH" DIMENSIONS.
- * INDICATES STIRRUP OR TIE BAR.
- PROVIDE BARS THAT CONFORM TO AASHTO M31, GRADE 60.
- A. PROVIDE EPOXY COATED BARS DESIGNATED "E" IN THE "COAT" COLUMN.
B. PROVIDE GLASS FIBER REINFORCED POLYMER COATED BARS DESIGNATED "G" IN THE"COAT" COLUMN.
- ONLY REINFORCING STEEL TO BE PAID FOR UNDER THE BID ITEMS 503-005A, 503-010A, 503-015A & 503-20A IS SHOWN ON THIS SHEET. SEE OTHER SHEETS FOR REINFORCING STEEL INCLUDED IN OTHER PAY ITEMS.
- VERIFY THE QUANTITY, SIZE, AND SHAPE OF THE BAR REINFORCEMENT AGAINST THE STRUCTURAL DRAWINGS AND MAKE ANY NECESSARY CORRECTIONS BEFORE ORDERING, AS PER SUBSECTION 503.03 OF THE STANDARD SPECIFICATIONS.



NO.	DATE	BY	ISSUE / DESCRIPTION

DESIGNED BY:	DMS
DRAWN BY:	DFP
APPROVED BY:	HLC
REVISION NO.:	
DATE:	OCTOBER 2025



PREPARED FOR:

NEZ PERCE TRIBE



WEBB ROAD BRIDGE AND SWEETWATER CREEK DESIGN
WEBB, NEZ PIERCE COUNTY, IDAHO

METAL REINFORCEMENT

DRAWING NUMBER:

9.17

SHEET: 57 OF 57