INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SURVEY CONTROL SHEET
3	ROADWAY SUMMARY
4	TYPICAL SECTIONS
5	DEMO SHEET
6	PLAN SHEET
7	PROFILE SHEET
8	ROADWAY DETAIL
9	RIPRAP DETAIL
10	POLLUTION PREVENTION PLAN
11	SIGN SUMMARY SHEET
12	SIGN SHEET
13	TEMPORARY TRAFFIC CONTROL PLAN
14	DETOUR PLAN
15	UTILITY SHEET
1-12	BRIDGE PLANS
	STANDARD DRAWINGS

LEADING IDAHO LOCAL BRIDGE PROGRAM

PLAN AND PROFILE OF PROPOSED

CHARLIE CREEK RD
OVER SANTA CREEK

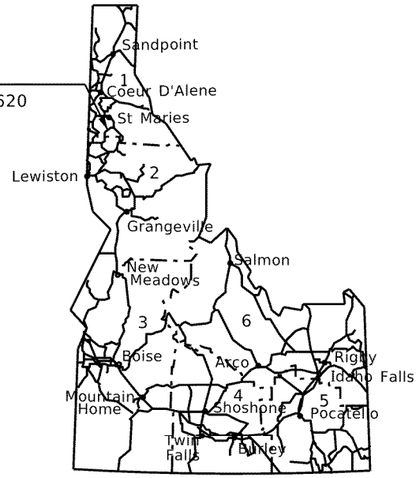
BRIDGE KEY NO. 30090

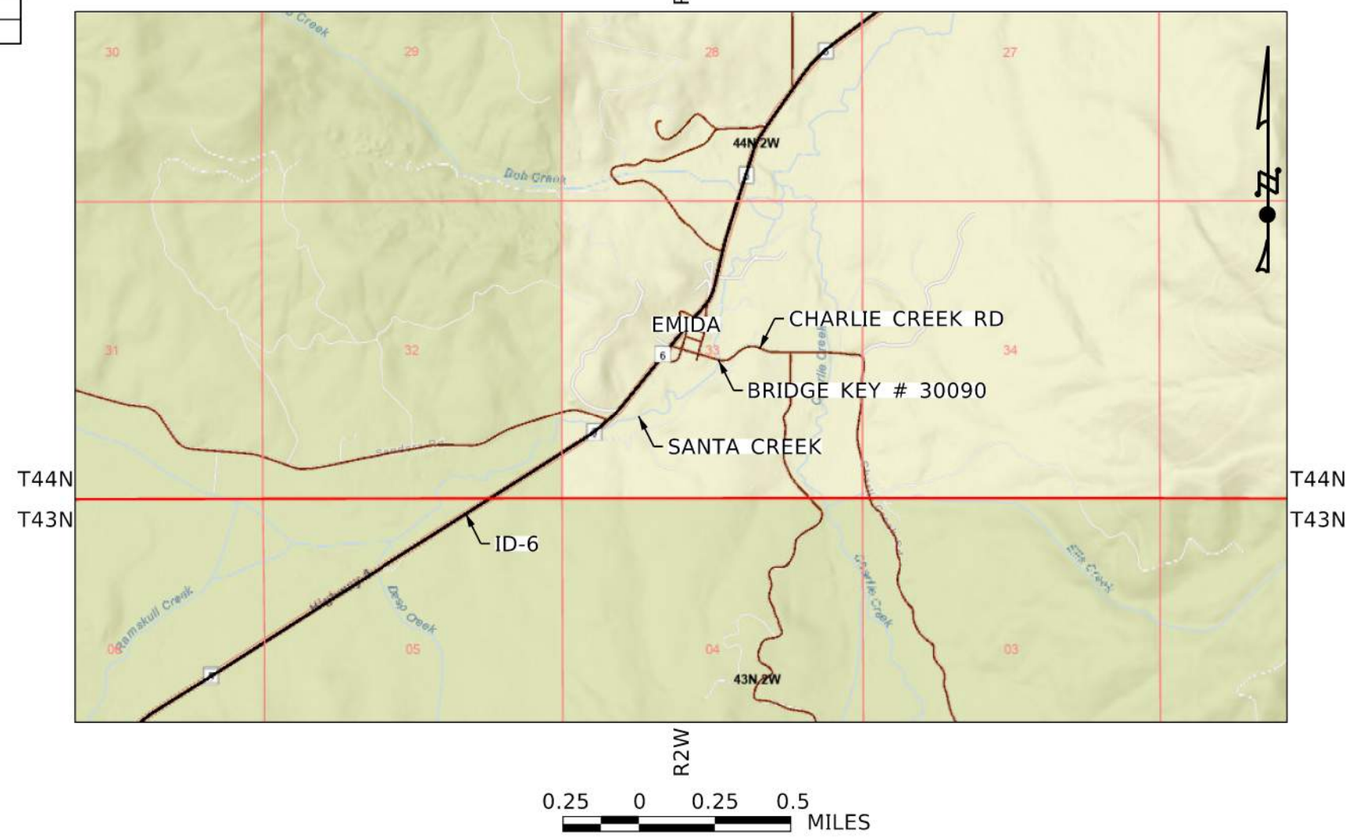
OCTOBER 2026

CHARLIE CREEK RD
OVER SANTA CREEK

SEGMENT CODE: 000620

MP 7.689





REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 TITL.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

TITLE SHEET

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	1 OF 15

PROFESSIONAL ENGINEER
LICENSED
19853
STATE OF IDAHO
MARCUS J. LEVESEY
10/27/26

NOTES:

1. THIS SURVEY WAS ESTABLISHED BY GPS CONTROL COORDINATES DERIVED FROM NGS OPUS SOLUTIONS USING A REFERENCE FRAME OF NAD83 (2011)(EPOCH: 2010.000) ALL BEARINGS REFER TO IDAHO STATE PLANE COORDINATE SYSTEM OF 1983, WEST ZONE, (1103). UNITS ARE US SURVEY FT. DISTANCES HAVE BEEN CONVERTED FROM GRID TO GROUND USING A COMBINED ADJUSTMENT FACTOR (CAF) OF 1.0001490722 APPLIED FROM 0,0 WITH A FALSE NORTHING 296.319 FEET, FALSE EASTING 359.858 FEET.
2. TOPOGRAPHIC SURVEY WAS PERFORMED ON 8/21, 9/04, 9/16, AND 9/29/2025.

N

FOUND MONUMENTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	1987378.659	2414294.079	2831.28	RB5 W/ 2" ALC PLS 7541 C-1/4 RP
102	1987411.311	2414358.757	2832.00	RB5 W/ 2" ALC PLS 7541 C-1/4 RP

CONTROL				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
94	1987423.642	2414216.606	2829.34	RB5 W/ R.P.C "HMH CONTROL"
95	1987322.833	2414345.841	2829.77	RB5 W/ R.P.C "HMH CONTROL"
96	1987371.675	2414418.945	2837.37	RB4 W/ R.P.C "HMH CONTROL"
97	1987416.477	2414309.902	2825.32	RB4 W/ R.P.C "HMH CONTROL"
98	1987430.330	2414364.511	2827.46	RB4 W/ R.P.C "HMH CONTROL"
99	1987827.355	2413963.508	2846.76	RB4 W/ R.P.C "HMH CONTROL"
100	1987757.404	2413980.547	2842.62	RB5 W/ R.P.C "HMH CONTROL"



811 Know what's below. Call before you dig.

SCALE IN FEET
0' 60' 120'

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED RILEY EADES	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED DAN INLOES	
DETAILED RILEY EADES	CADD FILE NAME 30091 SURV.dwg
DRAWING CHECKED DAN INLOES	DRAWING DATE: MAY 11, 2026

HMH engineering
3882 N Schreiber Way #104
Coeur d'Alene, ID 83815
(208) 635-5825

SURVEY CONTROL MAP

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	2 OF 15

PROFESSIONAL LAND SURVEYOR LICENSED 20888 05/12/2026 STATE OF IDAHO DANIEL O. INLOES

Plot Date:5/12/2026 8:22 AM Plotted By: Riley Eades
Path: Z:\DOCUMENTS\PROJECTS\2022\GS022-04 LHTAC LULB\WO-0050 CHARLIE CREEK BRIDGE (WTA-0853)\SURVEY\06 DWG\WO-0050 - 30091 SURV.DWG

SHEET NUMBER				5	6	10									
SHEET				DEMO	PLAN	PPP									
ITEM NO.	ITEM	UNIT	QUANTITY												
201-010A	CLEARING & GRUBBING	LS	1												
203-006A	REMOVAL OF SIGN	EA	4	4											
+ 205-005A	EXCAVATION	CY	420												
212-011A	FIBER WATTLE	FT	235			235									
212-105A	WATER AND POLLUTION	CA	10000												
+ 215-005A	GEOSYNTHETIC REINFORCED ABUTMENT BACKFILL	CY	150												
303-022A	3/4" AGGREGATE TYPE B FOR BASE	TON	470												
+ 405-435A	SUPERPAVE HMA PAVEMENT INCLUDING ASPHALT & ADDITIVES CLASS SP-3	TON	180												
616-010A	SIGN TYPE B-1	SF	4												
616-040J	STEEL SIGN POST TYPE E-1	FT	22												
+ 624-005A	LOOSE RIPRAP (CLASS III)	CY	118		118										
626-100A	MISCELLANEOUS TEMPORARY TRAFFIC CONTROL ITEMS	CA	10000												
+ 640-010A	RIPRAP/EROSION CONTROL GEOTEXTILE	SY	265		265										
675-005A	SURVEY	LS	1												
675-010A	DIRECTED SURVEYING	CA	3000												
677-005A	RECORD DRAWINGS	LS	1												
S900-50A	CONTINGENCY AMOUNT – MISCELLANEOUS WORK	CA	10000												
S901-05A	SP - MODIFY APPROACH	EA	1		1										
S904-05A	SP - TEMPORARY TRAFFIC CONTROL	LS	1												
Z629-05A	MOBILIZATION	LS	1												
	+ DENOTES PLAN QUANTITY														

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 RSSM.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

ROADWAY SUMMARY

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY BENEWAH

BRIDGE KEY NUMBER 30090

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26

ESTIMATING BASIS

TACK:
CSS-1 DILUTED (1:1 RATIO) EMULSIFIED ASHPALT FOR TACK COAT @ 0.12 GALLON/SY

AGGREGATE:
¾" AGGREGATE FOR BASE TYPE B @ 140 LB/CF INCLUDING 7% MOISTURE

½" AGGREGATE FOR SUPERPAVE HMA PAVEMENT @ 146 LB/CF INCLUDING ASPHALT

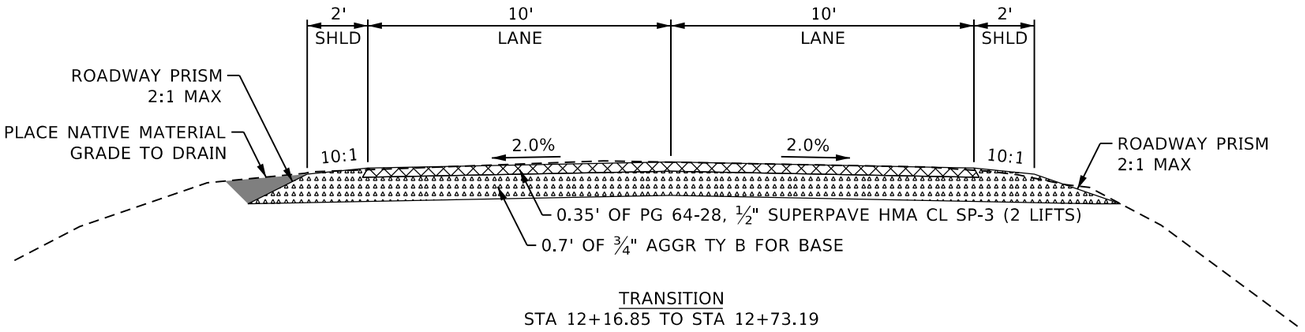
PAVING:
PG 64-28 ASPHALT CEMENT FOR SUPERPAVE HMA PAVEMENT CLASS SP-3
@ 5.5% BY WEIGHT OF MIX AND ANTI-STRIPPING ADDITIVE AT 0.5% BY WEIGHT

SURFACE SMOOTHNESS
PAVMENT SMOOTHNESS SPECIFIED BY STRAIGHTEDGE

CHARLIE CREEK RD
N.T.S
STA 11+63.34
MATCH EXISTING

TRANSITION
STA 11+63.34 TO STA 11+93.34

CHARLIE CREEK RD
N.T.S
STA 11+93.34 TO STA 12+16.85

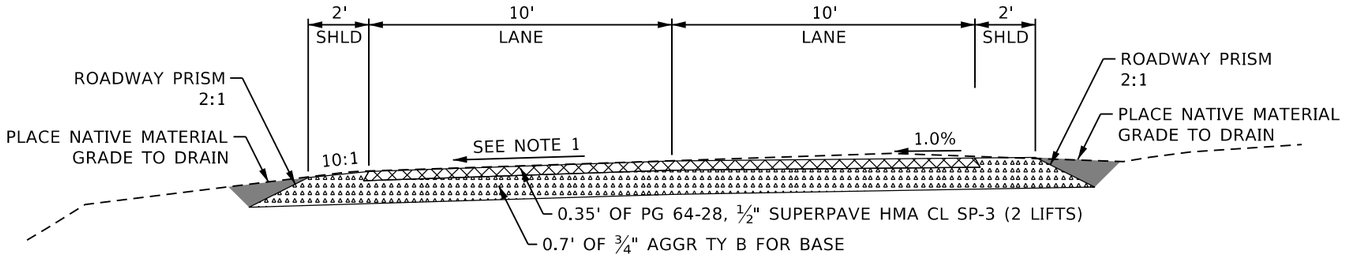


TRANSITION
STA 12+16.85 TO STA 12+73.19

SEE BRIDGE TYPICAL SECTIONS
CHARLIE CREEK RD
N.T.S
STA 12+73.19 TO STA 13+25.19

TRANSITION
STA 13+25.19 TO STA 13+67.19

CHARLIE CREEK RD
N.T.S
STA 13+67.19 TO STA 14+25.61



TRANSITION
STA 14+25.61 TO STA 14+55.61

CHARLIE CREEK RD
N.T.S
STA 14+55.61
MATCH EXISTING

NOTE:
1. SEE SUPERELEVATION (PROFILE SHEETS) FOR CROSS SLOPES.
2. SEE ROADWAY DETAIL SHEET FOR GEOSYNTHETIC REINFORCED ABUTMENT BACKFILL DETAILS (STA 12+57.01 TO STA 13+41.77)

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN
DESIGN CHECKED M. LEVESEY
DETAILED K. MADSEN
DRAWING CHECKED M. LEVESEY

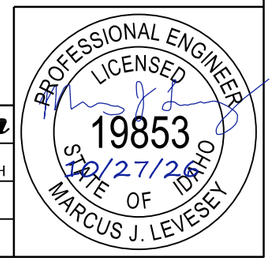
SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 30090 TYPI.dgn
DRAWING DATE: 27-OCT-2026

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Coeur d'Alene, ID 83815
(208) 635-5825

TYPICAL SECTION

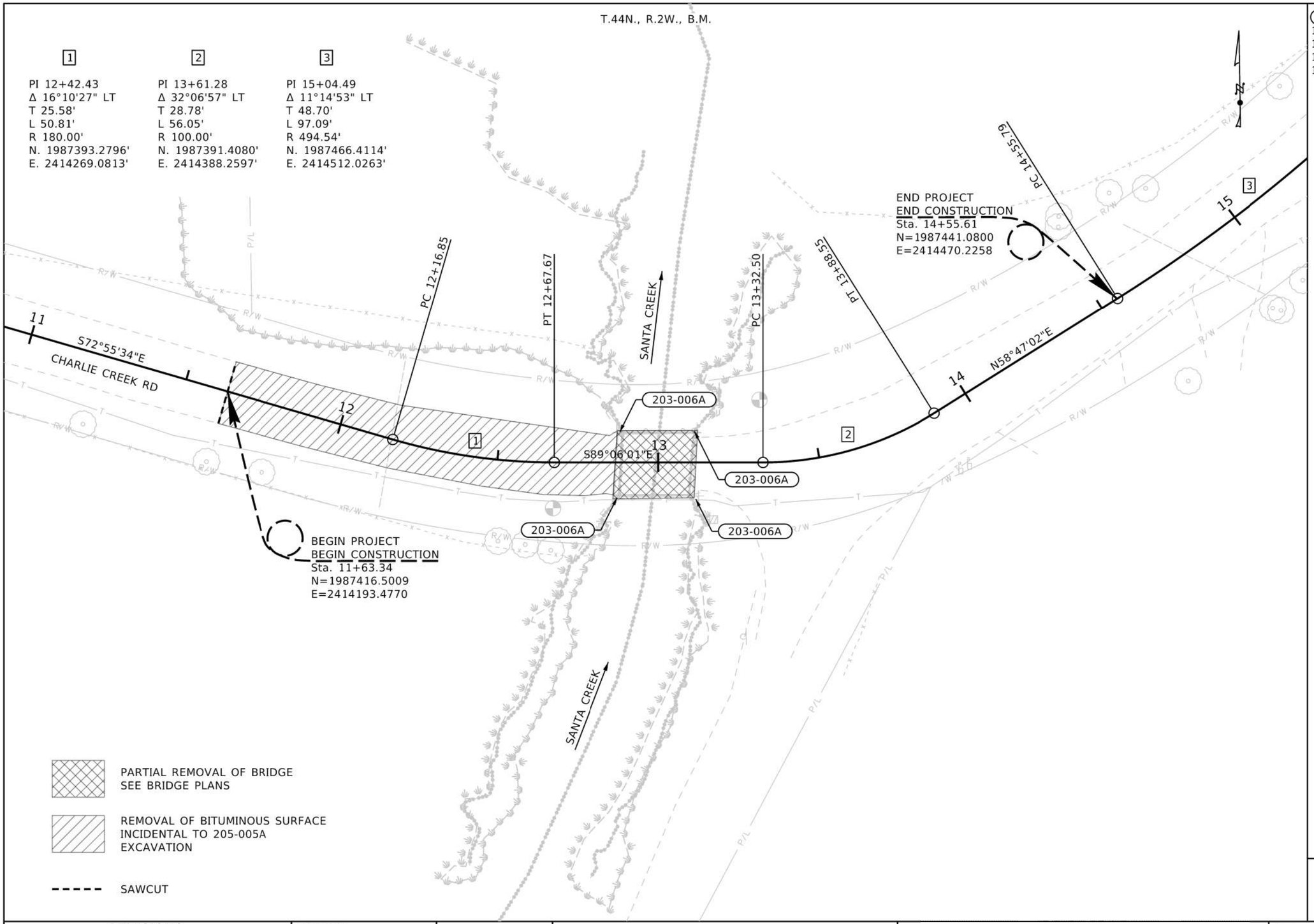
CHARLIE CREEK RD
OVER SANTA CREEK

English
COUNTY BENEWAH
BRIDGE KEY NUMBER 30090
SHEET 4 OF 15



T.44N., R.2W., B.M.

1	2	3
PI 12+42.43	PI 13+61.28	PI 15+04.49
Δ 16°10'27" LT	Δ 32°06'57" LT	Δ 11°14'53" LT
T 25.58'	T 28.78'	T 48.70'
L 50.81'	L 56.05'	L 97.09'
R 180.00'	R 100.00'	R 494.54'
N. 1987393.2796'	N. 1987391.4080'	N. 1987466.4114'
E. 2414269.0813'	E. 2414388.2597'	E. 2414512.0263'



PARTIAL REMOVAL OF BRIDGE
SEE BRIDGE PLANS

REMOVAL OF BITUMINOUS SURFACE
INCIDENTAL TO 205-005A
EXCAVATION

SAWCUT

203-006A	REMOVAL OF SIGN
1 EA	STA 12+87.26, 10.98' RT
1 EA	STA 12+88.13, 9.49' LT
1 EA	STA 13+11.23, 9.69' LT
1 EA	STA 13+11.67, 11.37' RT

NOTE:
NO WORK WITHIN WETLANDS
NO WORK BELOW ORDINARY
HIGH WATER MARK (OHW)

15 0 15 30 FEET

REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 DEMO.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
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Coeur d'Alene, ID 83815
(208) 635-5825

DEMO SHEET

CHARLIE CREEK RD
OVER SANTA CREEK

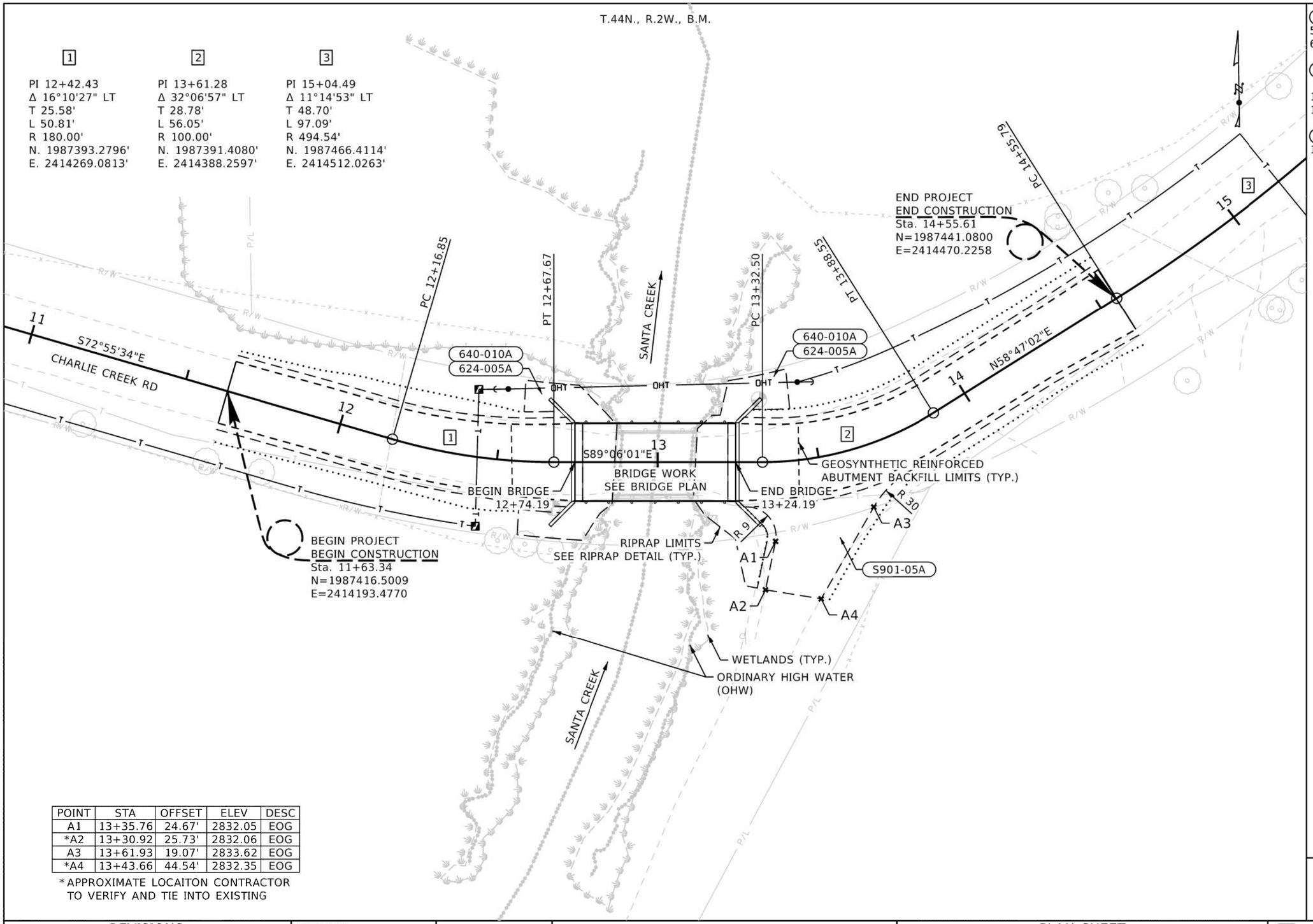
English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	5 OF 15

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY
10/27/26

T.44N., R.2W., B.M.

1	2	3
PI 12+42.43	PI 13+61.28	PI 15+04.49
Δ 16°10'27" LT	Δ 32°06'57" LT	Δ 11°14'53" LT
T 25.58'	T 28.78'	T 48.70'
L 50.81'	L 56.05'	L 97.09'
R 180.00'	R 100.00'	R 494.54'
N. 1987393.2796'	N. 1987391.4080'	N. 1987466.4114'
E. 2414269.0813'	E. 2414388.2597'	E. 2414512.0263'



POINT	STA	OFFSET	ELEV	DESC
A1	13+35.76	24.67'	2832.05	EOG
*A2	13+30.92	25.73'	2832.06	EOG
A3	13+61.93	19.07'	2833.62	EOG
*A4	13+43.66	44.54'	2832.35	EOG

*APPROXIMATE LOCAITON CONTRACTOR TO VERIFY AND TIE INTO EXISTING

(624-005A) RIPRAP (CLASS III)
57 CY STA 12+57.54 - 12+87.41
61 CY STA 13+11.13 - 13+42.60

(640-010A) RIPRAP/EROSION CONTROL GEOTEXTILE
130 SY STA 12+57.54 - 12+87.41
135 SY STA 13+11.13 - 13+42.60

(S901-05A) MODIFY APPROACH
1 EA STA 13+45.19, 12.00' RT

NOTE:
NO WORK WITHIN WETLANDS
NO WORK BELOW ORDINARY HIGH WATER MARK (OHW)

15 0 15 30 FEET

REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN
DESIGN CHECKED M. LEVESEY
DETAILED K. MADSEN
DRAWING CHECKED M. LEVESEY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 30090 PLPR.dgn
DRAWING DATE: 27-OCT-2026

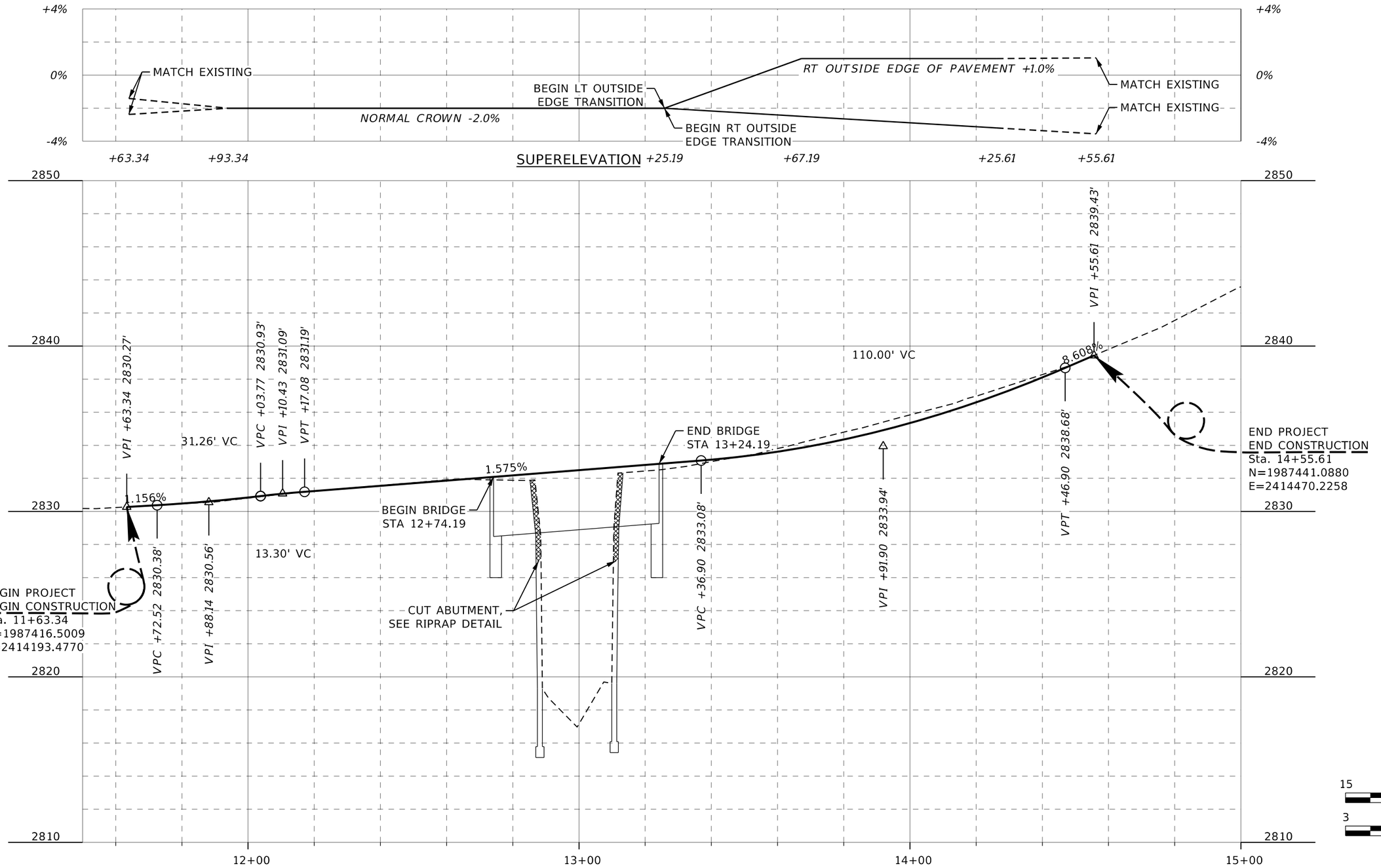
HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

PLAN SHEET

CHARLIE CREEK RD
OVER SANTA CREEK

English
COUNTY BENEWAH
BRIDGE KEY NUMBER 30090
SHEET 6 OF 15

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 PLPR.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

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Coeur d'Alene, ID 83815
(208) 635-5825

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26

PROFILE SHEET

CHARLIE CREEK RD
OVER SANTA CREEK

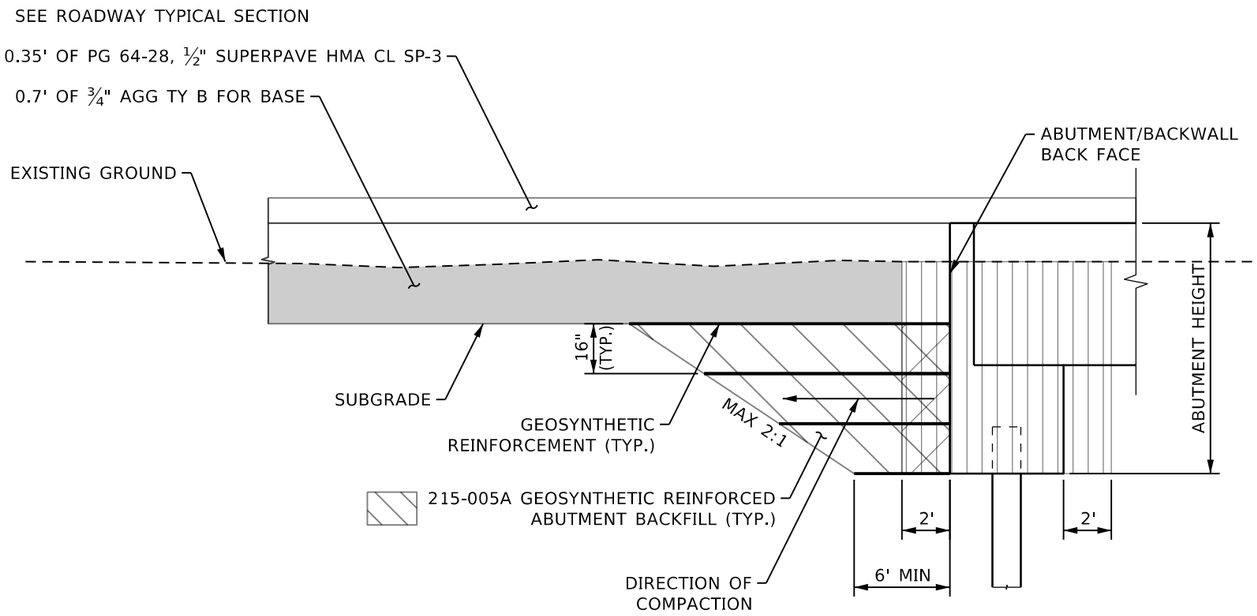
English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	7 OF 15

210-005A
STRUCTURE EXCAVATION
SCH. NO.1 PAY LIMITS

210-015A
COMPACTING BACKFILL
PAY LIMITS

205-005A
EXCAVATION



TYPICAL SECTION
GEOSYNTHETIC REINFORCED ABUTMENT BACKILL
(TYPICAL BOTH ABUTMENTS)
(ABUTMENT SHOWN, SIMILAR PLACEMENT AT WINGS)
N.T.S

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 DETL.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

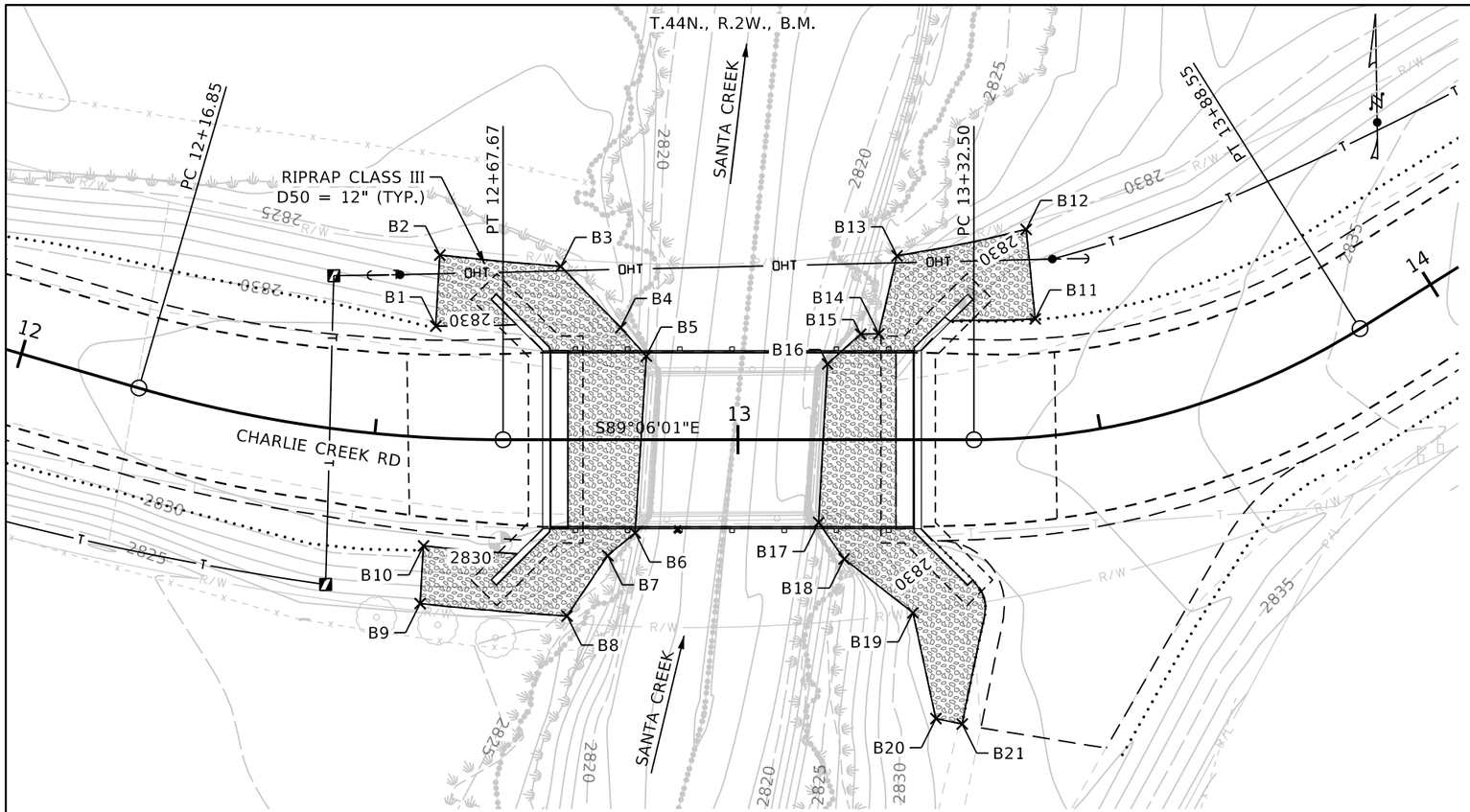
ROADWAY DETAIL

CHARLIE CREEK RD
OVER SANTA CREEK

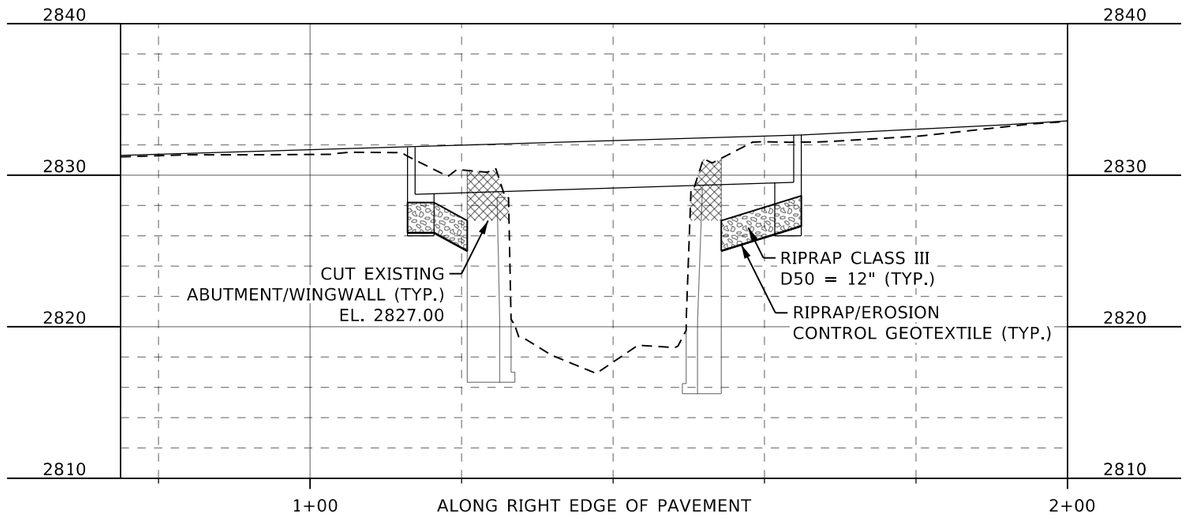
English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET 8	OF 15

PROFESSIONAL ENGINEER
LICENSED
19853
STATE OF IDAHO
MARCUS J. LEVESEY
10/27/26



POINT	STA	OFFSET	ELEV	DESC
B1	12+57.54	15.40' LT	2830.44	RIPRAP
B2	12+57.54	25.18' LT	2825.29	RIPRAP
B3	12+75.60	23.87' LT	2825.20	RIPRAP
B4	12+83.87	15.44' LT	2827.00	RIPRAP
B5	12+87.41	11.51' LT	2827.00	RIPRAP
B6	12+85.86	12.84' RT	2827.00	RIPRAP
B7	12+82.08	15.97' RT	2827.00	RIPRAP
B8	12+76.47	24.28' RT	2824.74	RIPRAP
B9	12+57.54	22.90' RT	2830.42	RIPRAP
B10	12+57.54	14.92' RT	2826.68	RIPRAP
B11	13+42.60	16.20' LT	2832.51	RIPRAP
B12	13+42.60	28.59' LT	2829.72	RIPRAP
B13	13+21.90	25.31' LT	2825.81	RIPRAP
B14	13+19.40	14.57' LT	2727.00	RIPRAP
B15	13+16.90	14.53' LT	2827.00	RIPRAP
B16	13+12.35	10.42' LT	2827.00	RIPRAP
B17	13+11.13	11.40' RT	2827.00	RIPRAP
B18	13+14.62	16.43' RT	2827.00	RIPRAP
B19	13+24.11	23.83' RT	2831.38	RIPRAP
B20	13+27.26	38.41' RT	2831.19	RIPRAP
B21	13+30.89	39.15' RT	2831.45	RIPRAP



NOTE:
NO WORK WITHIN WETLANDS
NO WORK BELOW ORDINARY
HIGH WATER MARK (OHW)

HORIZONTAL 10 0 10 20 FEET

VERTICAL 5 0 5 10 FEET

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 DETL.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

RIPRAP DETAIL

CHARLIE CREEK RD
OVER SANTA CREEK

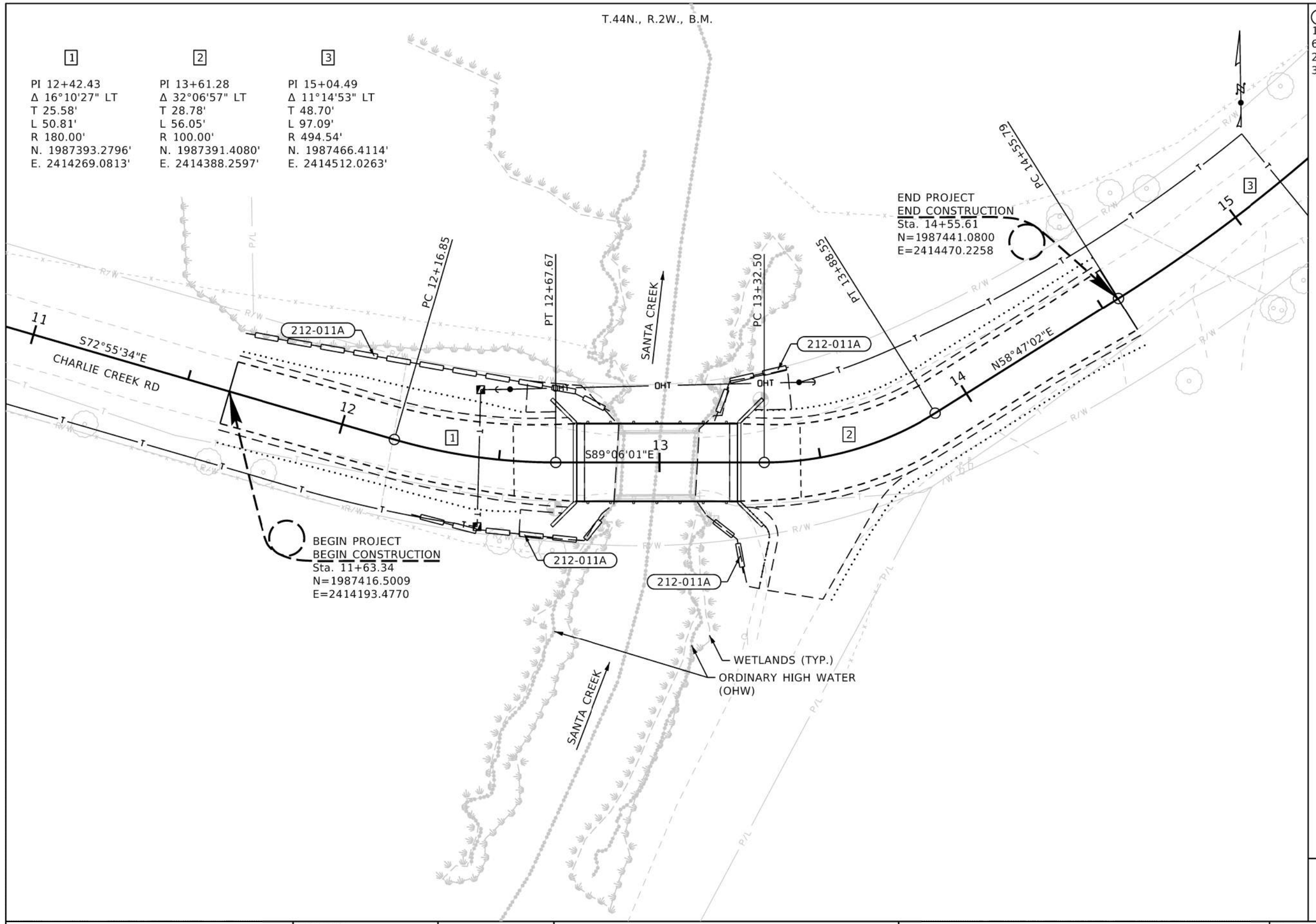
English

COUNTY BENEWAH

BRIDGE KEY NUMBER 30090

T.44N., R.2W., B.M.

1	2	3
PI 12+42.43	PI 13+61.28	PI 15+04.49
Δ 16°10'27" LT	Δ 32°06'57" LT	Δ 11°14'53" LT
T 25.58'	T 28.78'	T 48.70'
L 50.81'	L 56.05'	L 97.09'
R 180.00'	R 100.00'	R 494.54'
N. 1987393.2796'	N. 1987391.4080'	N. 1987466.4114'
E. 2414269.0813'	E. 2414388.2597'	E. 2414512.0263'



212-011A FIBER WATTLE
116 FT STA 11+63.21 - 12+84.62 LT
64 FT STA 12+27.16 - 12+82.87 RT
23 FT STA 13+14.62 - 13+26.01 RT
32 FT STA 13+17.07 - 13+43.20 LT

NOTE:
NO WORK WITHIN WETLANDS
NO WORK BELOW ORDINARY
HIGH WATER MARK (OHW)

15 0 15 30
FEET

REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 SWPP.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

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3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

POLLUTION PREVENTION PLAN

CHARLIE CREEK RD
OVER SANTA CREEK

English	
COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	10 OF 15

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY
10/27/26

SIGN ASSEMBLY	STATION, OFFSET (XXX+XX.XX, RT/LT, SHLD. OR MEDIAN IF ON DIVIDED HWY)		RAMP NUMBER OR LOCAL STREET	FOUNDATION SIZE (INxIN OR INxINxIN)	POST TYPE (A-X, B-X, D-X, E-X)	OFFSET FROM SHLD. OR FACE OF CURB TO POST 1 CENTER (FT)	DISTANCE BETWEEN POSTS (IF USING 2 OR 3 POSTS, FT)	POST 1 LENGTH* (FT)	POST 2 LENGTH * (IF USING 2 OR 3 POSTS, FT)	POST 3 LENGTH* (IF USING 3 POSTS, FT)	DISTANCE FROM SHOULDER OR TOP OF CURB TO SIGN BOTTOM (FT)	SIGN TYPE (B-X, C-X, E)	SIGN DESIGNATION	SIGN SIZE (INxIN)			SIGN AREA (SF)	SIGN BACKGROUND COLOR	MAIN SIGN LEGEND COLOR	SIGN BRACE WEIGHT (LBS)	SIGN BRACKET WEIGHT (LBS)	BRACKET NUMMBER	NOTES (SIGN LEGEND, SIGN DESCRIPTION, ETC.)
1	12+74.19, 12.58'	LEFT	Charlie Creek Rd		E-1			5.5			4.0	B-1	OM3-L	6	X	18	0.8	Yellow	Black				Object Marker (Attached to Bridge Rail)
2	12+74.19, 12.58'	RIGHT	Charlie Creek Rd		E-1			5.5			4.0	B-1	OM3-R	6	X	18	0.8	Yellow	Black				Object Marker (Attached to Bridge Rail)
3	13+24.19, 12.58'	LEFT	Charlie Creek Rd		E-1			5.5			4.0	B-1	OM3-R	6	X	18	0.8	Yellow	Black				Object Marker (Attached to Bridge Rail)
4	13+24.19, 12.58'	RIGHT	Charlie Creek Rd		E-1			5.5			4.0	B-1	OM3-L	6	X	18	0.8	Yellow	Black				Object Marker (Attached to Bridge Rail)

REVISIONS

NO.	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 SPM.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

SIGN SUMMARY SHHET

CHARLIE CREEK RD
OVER SANTA CREEK

English

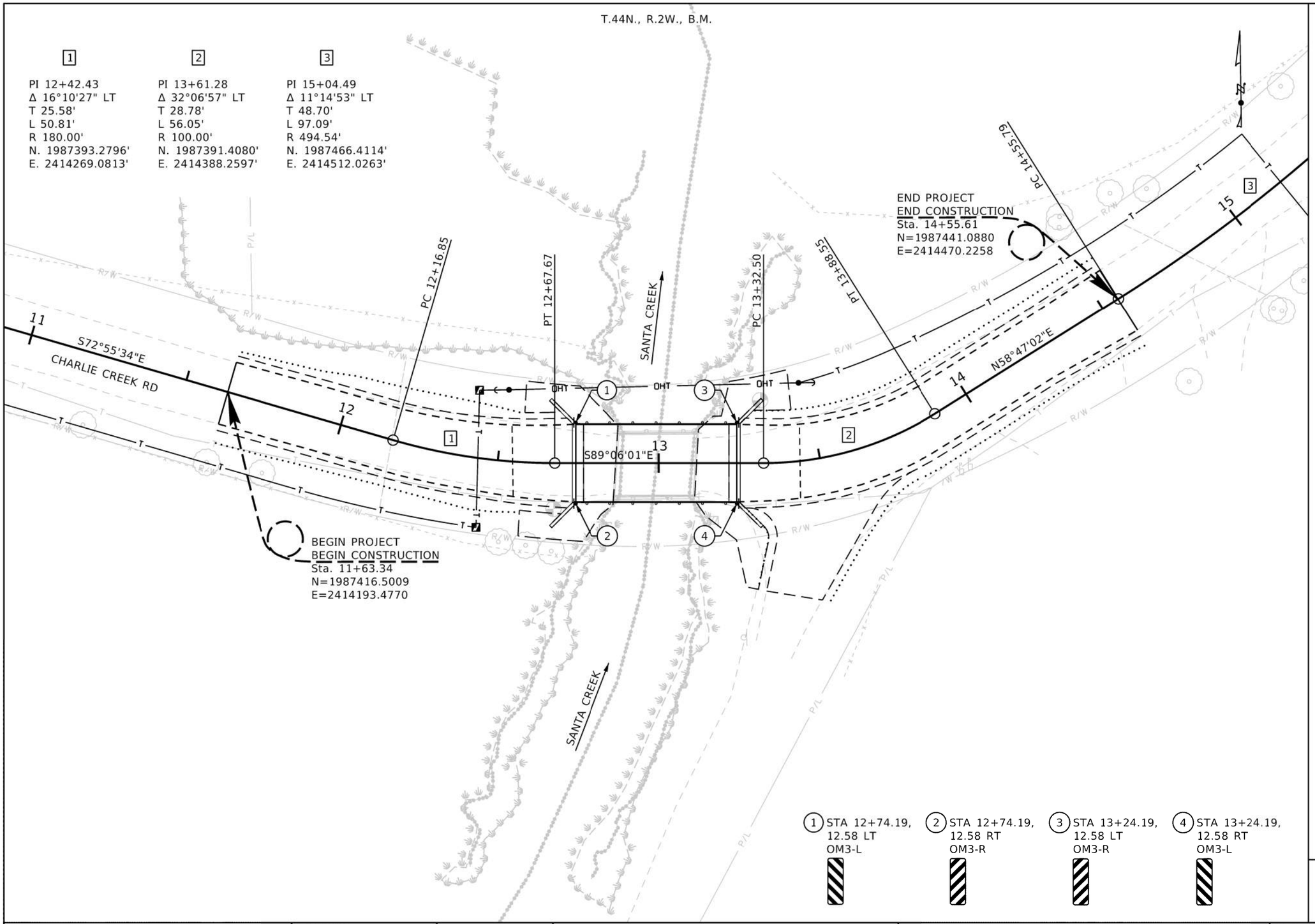
COUNTY BENEWAH

BRIDGE KEY NUMBER 30090

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26

T.44N., R.2W., B.M.

1	2	3
PI 12+42.43	PI 13+61.28	PI 15+04.49
Δ 16°10'27" LT	Δ 32°06'57" LT	Δ 11°14'53" LT
T 25.58'	T 28.78'	T 48.70'
L 50.81'	L 56.05'	L 97.09'
R 180.00'	R 100.00'	R 494.54'
N. 1987393.2796'	N. 1987391.4080'	N. 1987466.4114'
E. 2414269.0813'	E. 2414388.2597'	E. 2414512.0263'



NOTE:
NO WORK WITHIN WETLANDS
NO WORK BELOW ORDINARY HIGH WATER MARK (OHW)

15 0 15 30 FEET

1	2	3	4
STA 12+74.19, 12.58 LT	STA 12+74.19, 12.58 RT	STA 13+24.19, 12.58 LT	STA 13+24.19, 12.58 RT
OM3-L	OM3-R	OM3-R	OM3-L

REVISIONS			
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SIGN SHEET

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	12 OF 15

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY
10/27/26

TRAFFIC CONTROL NOTES

1. PROVIDE AND INSTALL SIGNS & TEMPORARY TRAFFIC CONTROL DEVICES, IN CONFORMANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS ADOPTED BY THE DEPARTMENT, AND THE CURRENT VERSIONS OF THE ITD TRAFFIC MANUAL AND THE IDAHO SIGN SUPPLEMENTAL TO THE MUTCD. INSTALL ALL SUPPORTS FOR CONSTRUCTION SIGNING WITH BREAKING OR YIELDING FEATURES FOR MOTORIST SAFETY.

2. REMOVE OR COVER ANY EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS. IF COVERING, COVER WITH AN APPROVED TEMPORARY HARD BLACK PLASTIC OR WOOD. NO TAPE OR LIGHT PLASTIC COVERS ARE ALLOWED. UNCOVER ALL EXISTING SIGNS ONCE CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL OPERATIONS NO LONGER CONFLICT. REPLACE ANY SIGNS DAMAGED BY THE CONTRACTOR'S OPERATIONS AT NO COST TO THE DEPARTMENT.

3. IF THE TEMPORARY TRAFFIC CONTROL PLAN SHOWN, DOES NOT CONFORM TO THE DESIRED CONTRACTORS METHOD OF OPERATION, SUBMIT A NEW TRAFFIC CONTROL PLAN FOR APPROVAL. NEW TRAFFIC CONTROL PLANS AND ANY INCREASED COST OF CONSTRUCTION WILL BE AT CONTRACTORS EXPENSE. SEVEN (7) CALENDAR DAYS FOR REVIEW TIME IS REQUIRED FOR THE NEW TRAFFIC CONTROL PLAN OR TWO (2) CALENDAR DAYS FOR CHANGES MADE TO THE PLAN.

4. MONITOR WORK CONDITIONS UNDER VARYING CONDITIONS OF TRAFFIC VOLUME, LIGHT, AND WEATHER TO ENSURE TEMPORARY TRAFFIC CONTROL MEASURES ARE OPERATING EFFECTIVELY AND THAT ALL DEVICES USED ARE CLEARLY VISIBLE AT ALL TIMES AND IN GOOD REPAIR.

5. THE DISTANCES SHOWN BETWEEN TEMPORARY TRAFFIC CONTROL DEVICES ARE APPROXIMATE MINIMUMS AS GOVERNED BY THE MUTCD, AND SOME ADJUSTMENTS MAY BE NECESSARY IN THE FIELD DEPENDING ON CONDITIONS ENCOUNTERED. SUPPLEMENTAL DEVICES MAY BE REQUIRED BY ACTUAL TRAFFIC OR CONSTRUCTION SITUATIONS. INFORM THE DEPARTMENT OF ANY CHANGES MADE.

6. INSTALL ALL TEMPORARY TRAFFIC CONTROL DEVICES PRIOR TO START OF ANY WORK INCLUDING SURVEYING.

7. MOUNT ALL TEMPORARY TRAFFIC CONTROL SIGNS USED FOR THE DURATION OF THE PROJECT ON GROUND-MOUNTED, FHWA-APPROVED, CRASHWORTHY POSTS.

8. REMOVE UNUSED TEMPORARY TRAFFIC CONTROL SIGNING FROM THE EDGE OF TRAVELED WAY AND LAY THEM DOWN OUTSIDE THE CLEAR ZONE, BEHIND GUARDRAIL, OR, IF NOT BEING USED AGAIN, REMOVE ENTIRELY.

9. ILLUMINATE ANY FLAGGING STATIONS IF NIGHT WORK INVOLVES FLAGGERS.

10. OBLITERATE ALL CONFLICTING PAVEMENT MARKINGS WITH THE LEAST DESTRUCTIVE MEANS POSSIBLE.

11. PROVIDE TEMPORARY TRAFFIC CONTROL DEVICES IN NEW OR LIKE NEW CONDITION, MEETING THE RETROREFLECTIVITY REQUIREMENTS OF PROJECT SPECIFICATIONS.

12. ANY SPEED REDUCTIONS REQUIRES A REQUEST GIVEN TO AND APPROVED BY THE DEPARTMENT A MINIMUM OF THREE BUSINESS DAYS PRIOR TO THE START OF WORK.

13. STEEL BARRIER MAY BE USED IN PLACE OF CONCRETE TO PROTECT THE WORK ZONE.

MUTCD TABLE 6C-3 TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
MERGING TAPER = AT LEAST L
SHIFTING TAPER = AT LEAST 0.5 L
SHOULDER TAPER (ST) = AT LEAST 0.33L
ONE LANE, TWO WAY TRAFFIC TAPER = 100' MAX.
DOWNSTREAM TAPER = 100' PER LANE

MUTCD TABLE 6C-4 FORMULAS FOR DETERMINING TAPER LENGTHS	
(40 MPH or Less) $L = \frac{WS^2}{60}$ W = WIDTH OF OFFSET IN FEET S = POSTED SPEED	(45 MPH or More) L = WS W = WIDTH OF OFFSET IN FEET S = POSTED SPEED
L = Merging Taper ½L = Shifting Taper ⅓L = Shoulder Taper	

MUTCD TABLE 6C-2 STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED	
*SPEED (MPH)	DISTANCE (FT.)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820
*Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed	

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
RURAL	500'	500'	500'
URBAN (HIGH SPEED)	350'	350'	350'
URBAN (LOW SPEED)	100'	100'	100'

SYMBOL LEGEND

BARRICADE TYPE III

SIGN

PORTABLE CHANGEABLE MESSAGE SIGN

REVISIONS			
NO.	DATE	BY	DESCRIPTION

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DETAILED K. MADSEN	CADD FILE NAME 30090 TRCP.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

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(208) 635-5825

TRAFFIC CONTROL PLAN

CHARLIE CREEK RD
OVER SANTA CREEK

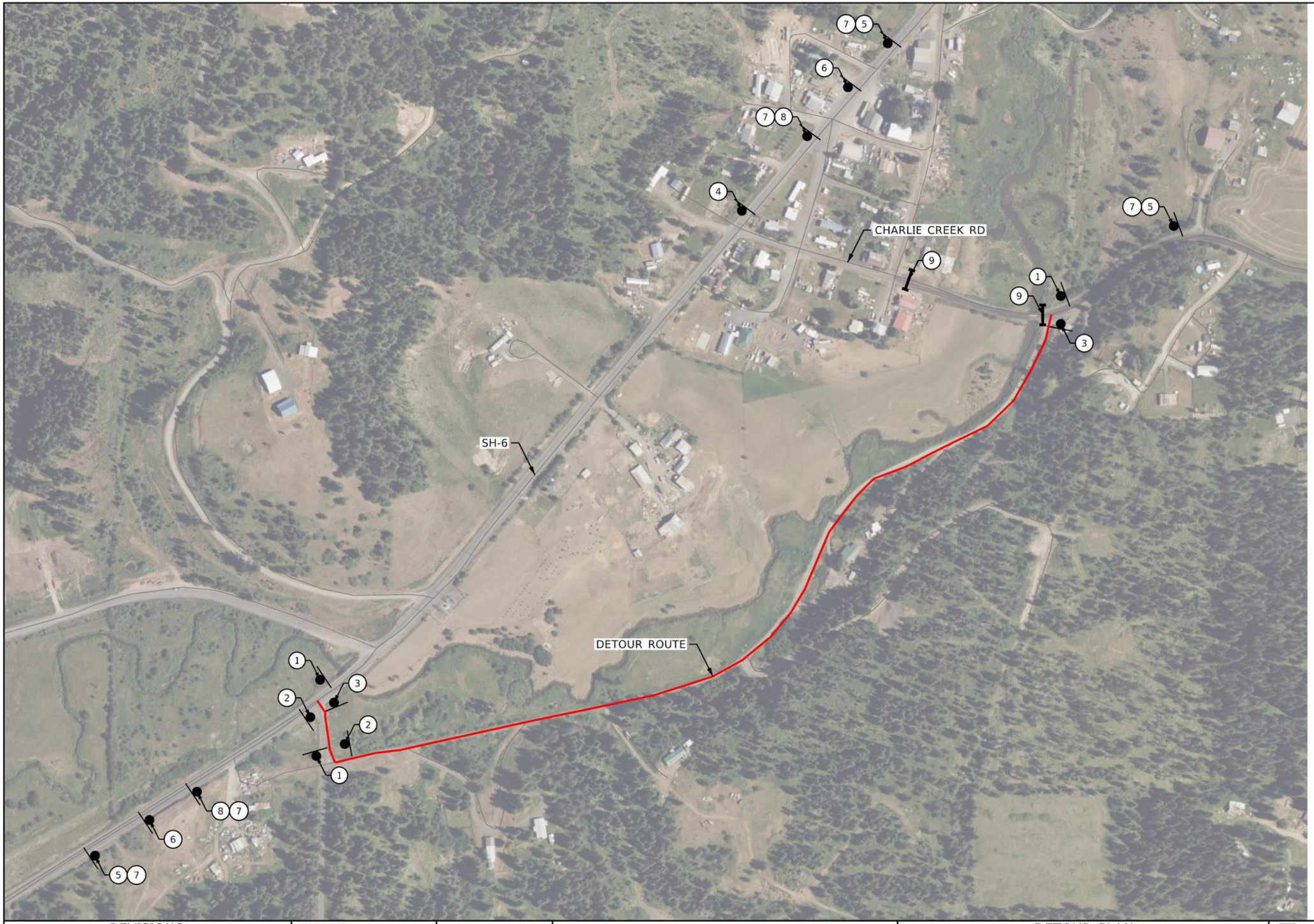
English

COUNTY BENEWAH

BRIDGE KEY NUMBER 30090

SHEET 13 OF 15

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 12/27/26



1	DETOUR	M4-10L
2	DETOUR	M4-10R
3	END DETOUR	M4-8a
4	DETOUR	M6-3 / M4-8
5	ROAD WORK AHEAD	W20-1
6	DETOUR AHEAD	W20-2
		R5-2
7	Charlie Creek Rd	SPECIAL
8	BRIDGE OUT	R11-2b
9	ROAD CLOSED	R11-2

REVISIONS			
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DETOUR PLAN

CHARLIE CREEK RD
OVER SANTA CREEK

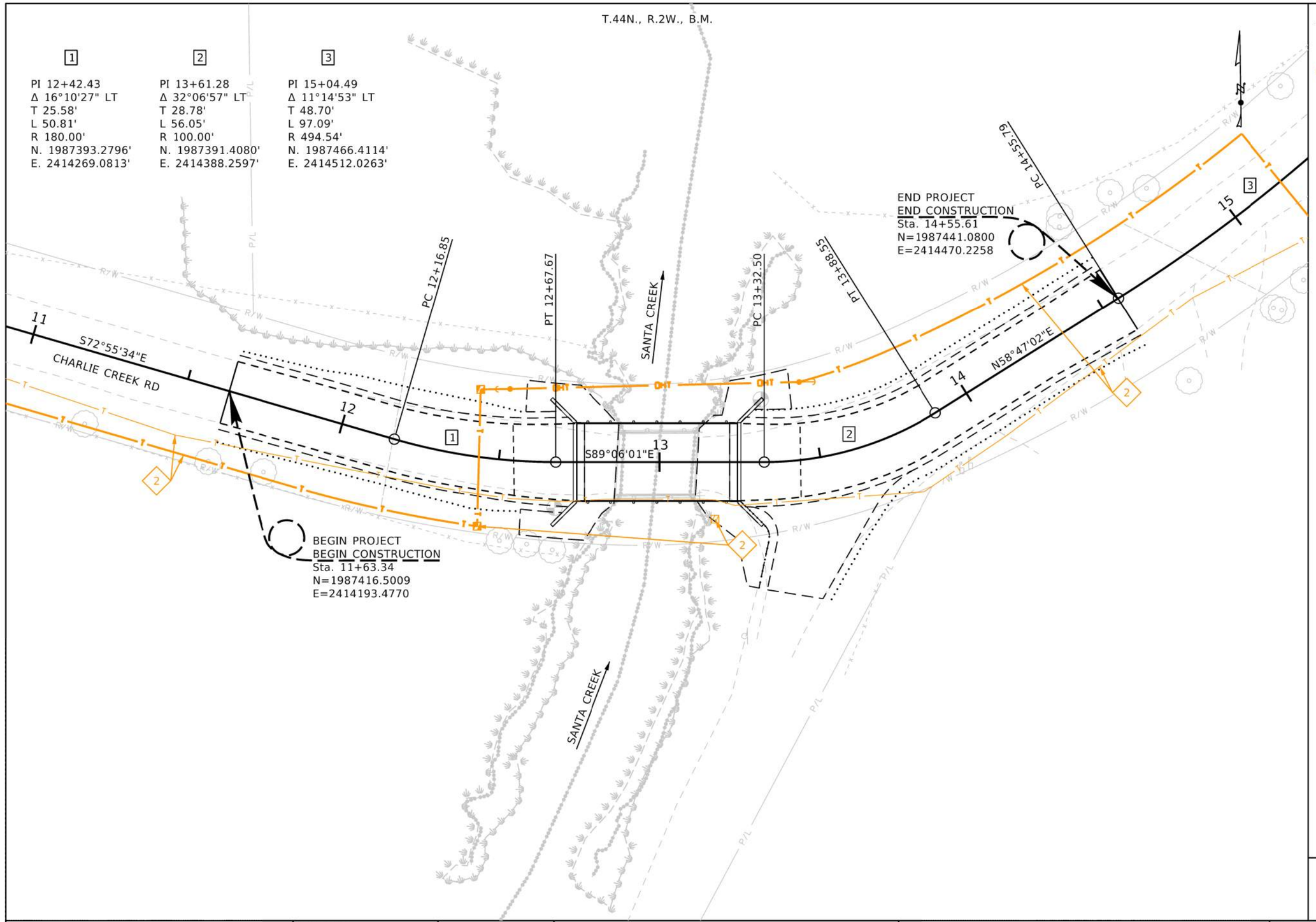
English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	14 OF 15

PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26

T.44N., R.2W., B.M.

1	2	3
PI 12+42.43	PI 13+61.28	PI 15+04.49
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R 180.00'	R 100.00'	R 494.54'
N. 1987393.2796'	N. 1987391.4080'	N. 1987466.4114'
E. 2414269.0813'	E. 2414388.2597'	E. 2414512.0263'



1 RETAIN/PROTECT

2 ADJUST/RELOCATE UTILITY BELONGING TO ZIPLY BY ZIPLY AT COMPANY EXPENSE

NOTE:
NO WORK WITHIN WETLANDS
NO WORK BELOW ORDINARY HIGH WATER MARK (OHW)

15 0 15 30 FEET

REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED K. MADSEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED M. LEVESEY	
DETAILED K. MADSEN	CADD FILE NAME 30090 UTIL.dgn
DRAWING CHECKED M. LEVESEY	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

UTILITY SHEET

CHARLIE CREEK RD
OVER SANTA CREEK

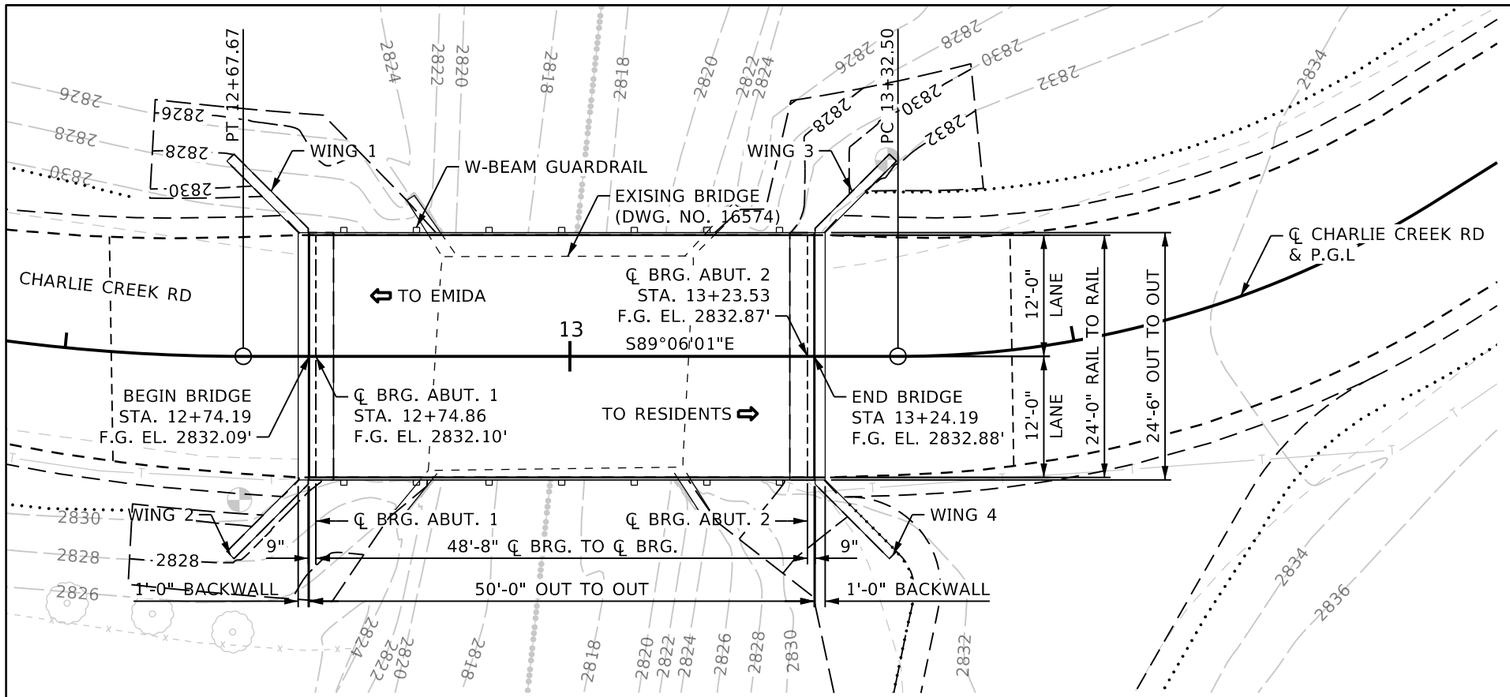
English

COUNTY	BENEWAH
BRIDGE KEY NUMBER	30090
SHEET	15 OF 15

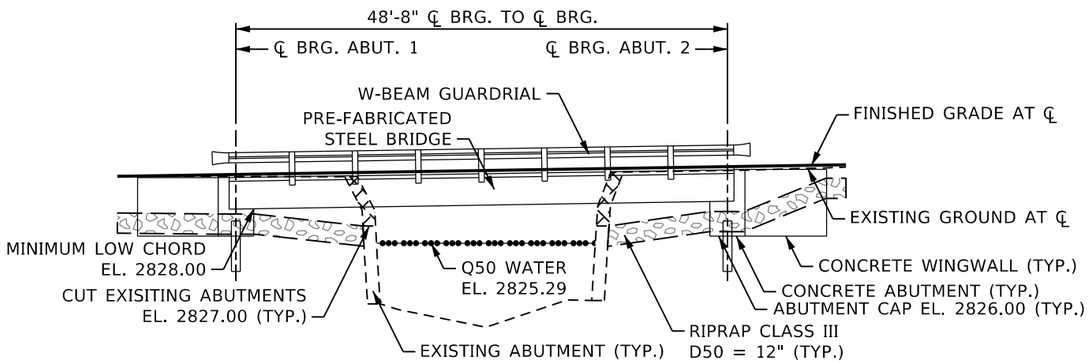
PROFESSIONAL ENGINEER LICENSED 19853 STATE OF IDAHO MARCUS J. LEVESEY 10/27/26

HYDRAULIC DATA

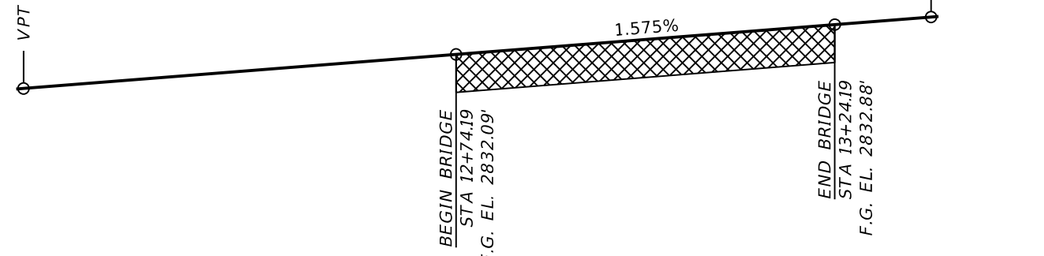
FLOOD	DISCHARGE	H.W. ELEVATION	VELOCITY
DESIGN [Q50]	498 CFS	2825.3 FT	2.0 FPS
BASE [Q100]	583 CFS	2825.6 FT	1.8 FPS
SCOUR [Q500]	756 CFS	2825.9 FT	1.6 FPS



PLAN
1" = 15'-0"



ELEVATION
1' = 15'-0"



PROFILE GRADE
N.T.S

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED C. CONNELLY	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED C. MERRILL	
DETAILED K. MADSEN	CADD FILE NAME 30091 S&L.dgn
DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

HMH engineering
3882 N. Schreiber Way, Suite 104
Coeur d'Alene, ID 83815
(208) 635-5825

SITUATION AND LAYOUT

CHARLIE CREEK RD
OVER SANTA CREEK

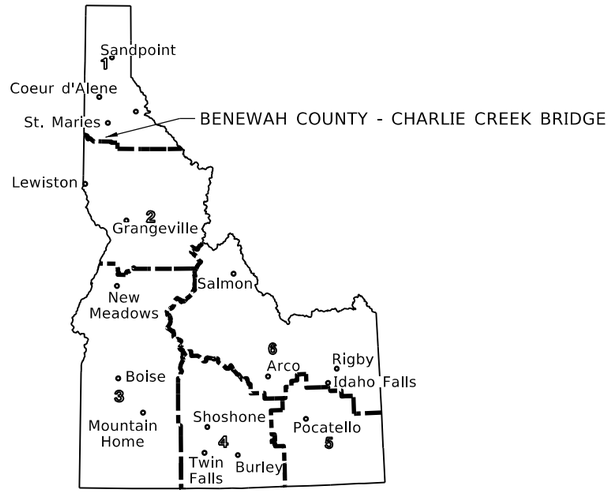
English
COUNTY BENEWAH
BRG. KEY NO. 30091
BRG. DWG NO. 16574
SHEET 1 OF 12

PROFESSIONAL ENGINEER REGISTERED 6788 STATE OF IDAHO CHRISTOPHER B. MERRILL
12/27/26



VICINITY MAP

N.T.S



SHEET INDEX

SITUATION AND LAYOUT 1
SHEET INDEX, QUANTITIES & VICINITY MAP 2
DESIGN AND GENERAL NOTES 3
FOOTING LAYOUT AND PILE NOTES 4
ABUTMENT 1 DETAILS (1 OF 2) 5
ABUTMENT 1 DETAILS (2 OF 2) 6
ABUTMENT 2 DETAILS (1 OF 2) 7
ABUTMENT 2 DETAILS (2 OF 2) 8
WING 1 & 2 DETAILS 9
WING 3 & 4 DETAILS 10
DECK CROSS SECTION DETAILS 11
METAL REINFORCEMENT 12

ONE DIRECTIONAL TRAFFIC DATA

TRAFFIC DATA YEAR 2023
AADT 150
CAADT..... 23
15.0%
FUTURE YEAR 2042
AADT 225
CAADT 34
15.0%

QUANTITIES

	203-021A	REMOVAL OF BRIDGE - PARTIAL	1.0	EA
+	210-005A	STRUCTURE EXCAVATION SCH. NO. 1	140.0	CY
+	210-015A	COMPACTING BACKFILL	70.0	CY
+	502-140A	CONCRETE CLASS 40A SCH. NO. 1	31.1	CY
+	503-010A	METAL REINFORCEMENT SCH. NO. 1	7288.3	LB
	519-005A	CONCRETED PILES	208.0	FT
	520-005A	PREDRILLING FOR PILING IN SOIL	80.0	FT
	520-010A	PREDRILLING FOR PILING IN ROCK	120.0	FT
	522-005A	CONTROLLED DENSITY FILL	1.0	LS
	566-005A	COMPRESSION EXPANSION JOINT	49.0	FT
	S501-25A	SP BRIDGE - STEEL	1.0	LS

+ DENOTES PLAN QUANTITY

REVISIONS

NO.	DATE	BY	DESCRIPTION

DESIGNED C. CONNELLY
DESIGN CHECKED C. MERRILL
DETAILED K. MADSEN
DRAWING CHECKED C. MERRILL

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CADD FILE NAME 30091 INDX.dgn
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SHEET INDEX, QUANTITIES & VICINITY MAP

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY BENEWAH
BRG. KEY NO. 30091
BRG. DWG NO. 16574
SHEET 2 OF 12

PROFESSIONAL ENGINEER REGISTERED 6788 STATE OF IDAHO CHRISTOPHER B. MERRILL
10/27/26

DESIGN

DESIGN SPECIFICATIONS

"AASHTO LRFD BRIDGE DESIGN SPECIFICATION" 10th EDITION AND 12/2025 ITD BRIDGE DESIGN LRFD MANUAL.

DESIGN PROCEDURES

GIRDERS DESIGNED AS SIMPLE SPANS.

PROPRIETARY COMPUTER SOFTWARE PROGRAMS USED TO FACILITATE THE STRUCTURAL ANALYSIS:

NAME	VERSION	RELEASE DATE
RISA-3D	23.0	

DESIGN LOADS

PERMANENT LOADS

DC	UNIT WEIGHT OF REINFORCED CONCRETE	0.150	kcf
DW	INITIAL WEARING SURFACE	0.085	ksf
	FUTURE WEARING SURFACE	0.028	ksf
EV	UNIT WEIGHT OF SOIL	0.135	kcf
EH	ACTIVE PRESSURE	0.032	kcf
	AT REST PRESSURE	0.052	kcf
	PASSIVE PRESSURE	0.565	kcf

TRANSIENT LOADS

LL	HL-93		
IM	DYNAMIC ALLOWANCE APPLIED TO TRUCK & TANDEM		
LS	LIVE LOAD SURCHARGE AT ABUTMENT	4.0	ft
	LIVE LOAD SURCHARGE AT WING WALL	2.0	ft
TU	UNIFORM TEMPERATURE RANGE	-30°F TO 120°F	
	BASE SETTING TEMPERATURE	60°F	

EXTREME EVENT LOADS

EQ	SITE CLASS	B	
	ACCELERATION COEFFICIENT S_{D1}	0.15	g
	SEISMIC PERFORMANCE ZONE	1	

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

MATERIALS, CONSTRUCTION AND WORKMANSHIP IN ACCORDANCE WITH THE STATE OF IDAHO TRANSPORTATION DEPARTMENT, "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", 2023 EDITION, AND THE PROJECT PLANS AND SPECIFICATIONS.

MATERIALS

CONCRETE:

ABUTMENTS AND WINGWALLS - CLASS 40A ..... f'c = 4.00 ksi

METAL REINFORCEMENT: AASHTO M31, GRADE 60 TYPE S ..... fy = 60.00 ksi

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 MEASURING 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.

CONSTRUCTION

EPOXY COATED REINFORCEMENT IS DESIGNATED BY AN (E) AFTER THE BAR MARK.

PROVIDE CONSTRUCTION JOINTS ONLY AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER.

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

BY PREFAB BRIDGE MANUFACTURER

REVISIONS

NO.	DATE	BY	DESCRIPTION

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DESIGN CHECKED C. MERRILL

DETAILED K. MADSEN

DRAWING CHECKED C. MERRILL

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DESIGN AND GENERAL NOTES

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OVER SANTA CREEK

English

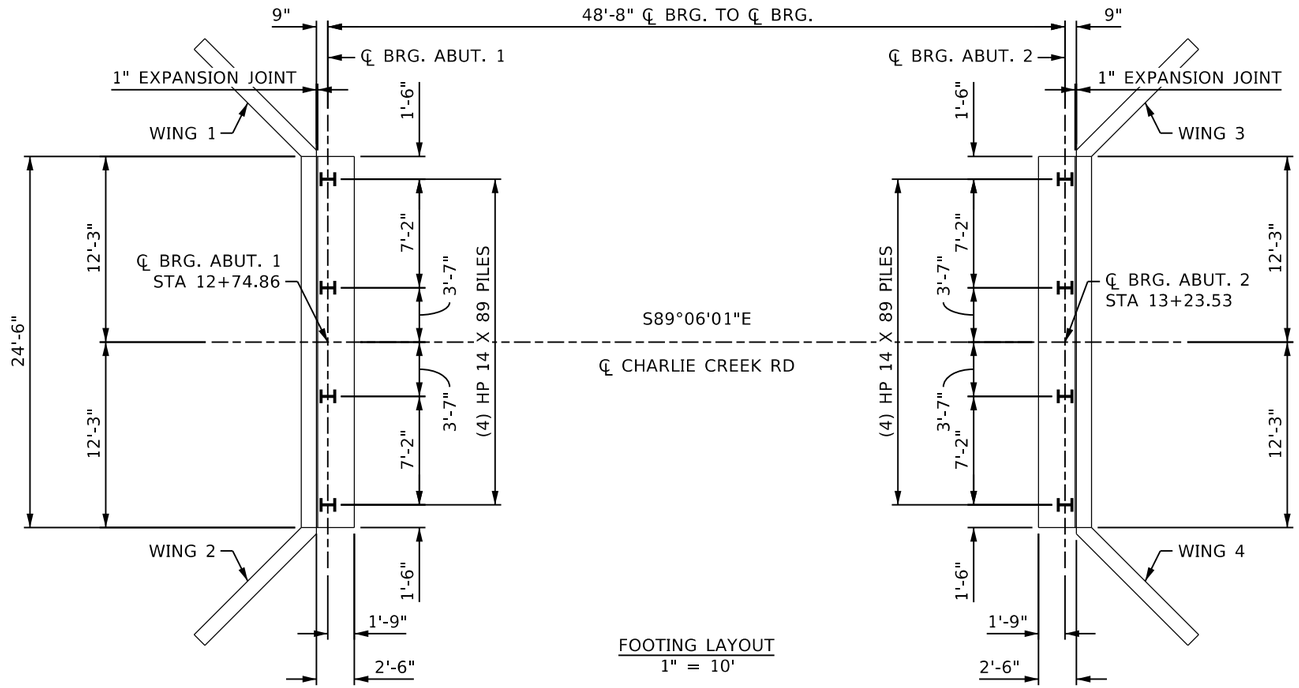
COUNTY BENEWAH

BRG. KEY NO. 30091

BRG. DWG NO. 16574

SHEET 3 OF 12

PROFESSIONAL ENGINEER REGISTERED 6788 STATE OF IDAHO CHRISTOPHER B. MERRILL 12/27/26



FOOTING LAYOUT
1" = 10'

N

NOTES

MATERIAL SPECIFICATIONS

1. PROVIDE HP 14 x 89 STEEL H-PILES THAT CONFORM TO ASTM A572 GRADE 50.
2. PROVIDE SPLICE PLATES OF THE SAME MATERIAL AS THE STEEL H-PILES.
3. PREFABRICATED SPLICERS MAY BE USED PER ITD'S QUALIFIED PRODUCTS LIST FOR CATEGORY 505 PILING AND SUB-CATEGORY "SPLICING FOR STEEL H-PILES."

WELDING

4. QUALIFICATION OF WELDERS, MATERIALS, INSPECTION, AND PROCEDURES FOR WELDING ALL H-PILE WILL CONFORM TO THE CURRENT EDITION OF ANSI/AWS D1.1.
5. PROVIDE WELDING QUALIFICATION TESTS TO DEMONSTRATE THE WELDABILITY OF H-PILES UNDER FIELD CONDITIONS FOR ALL TYPES OF WELDS TO BE MADE ON THE PILES.
6. ATTACH ALL PILE POINTS AND PREFABRICATED SPLICERS BY WELDING IN ACCORDANCE WITH THE CURRENT EDITION OF ANSI/AWS D1.1. SUBMIT WELDING DETAILS AND PROCEDURES FOR APPROVAL.

PRE-DRILLING

7. STEEL CASING TO BE DETERMINDED BY THE CONTRACTOR. THE MINIMUM OUTSIDE DIAMETER FOR THE TEMPORARY CASING IS 24".
8. VARIATIONS IN DEPTH TO ROCK AND PILE TOP ELEVATIONS ARE EXPECTED.
9. PREDRILLING WILL CONFORM TO SECTION 520 OF THE STANDARD SPECIFICATIONS. CONCRETE CLASS 40A(F) AND COARSE AGGREGATE MATERIAL FOR CONCRETE NO. 1 ARE INCIDENTAL TO ITEMS 519-005A, 520-005A AND 520-010A, RESPECTIVELY.
10. ITD COARSE AGGREGATE FOR CONCRETE SIZE NO. 1.

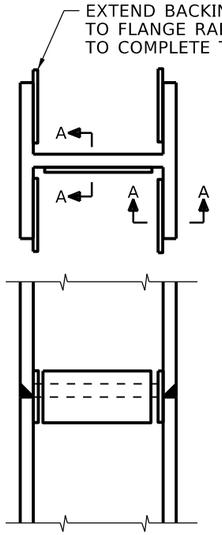
MISCELLANEOUS

11. PILE TIP ELEVATIONS ARE SHOWN FOR ESTIMATING PURPOSES ONLY.
12. ESTIMATED PILE LENGTHS ARE COMPUTED FROM PILE CUT-OFF AND ESTIMATED PILE TIP ELEVATIONS.
13. PILE SPLICES, IF REQUIRED, ARE CONSIDERED INCIDENTAL ITEMS.

PILE SCHEDULE

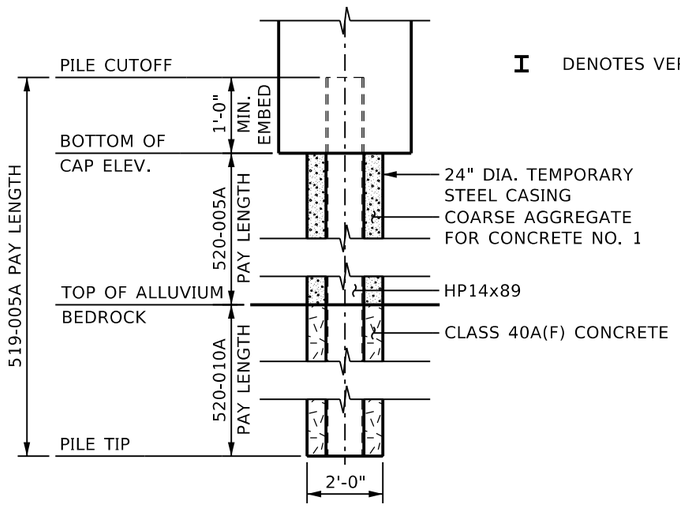
LOCATION	NO.	ELEVATION			ESTIMATED PILE LENGTH
		PILE CUT-OFF	ESTIMATED TOP OF ROCK	ESTIMATED PILE TIP	
ABUT. 1	4	2827.0	2817.0	2802.0	25
ABUT. 2	4	2827.0	2815.0	2800.0	27

NOTE: PILE MUST BE EMBBEDED A MINIMUM OF 15' INTO BEDROCK



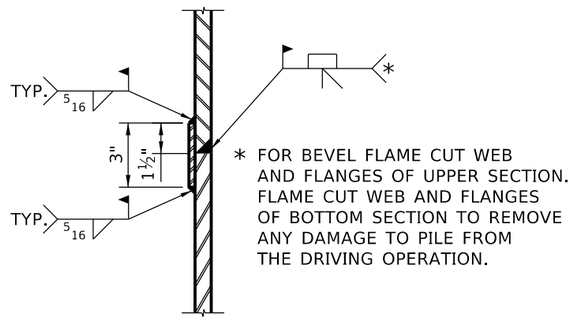
NOTE:
THE SPLICE IS MADE BY USING 3" x $\frac{3}{8}$" ALIGNMENT PLATES AND BUTT WELDING THE WEB AND FLANGES

H PILE BUTT WELDED SPLICE DETAIL
N.T.S



ABUTMENT PILE DETAILS
N.T.S

I DENOTES VERTICAL PILING



* FOR BEVEL FLAME CUT WEB AND FLANGES OF UPPER SECTION. FLAME CUT WEB AND FLANGES OF BOTTOM SECTION TO REMOVE ANY DAMAGE TO PILE FROM THE DRIVING OPERATION.

SECTION A-A

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED C. CONNELLY	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED C. MERRILL	
DETAILED K. MADSEN	CADD FILE NAME 30091 FTPI.dgn
DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

HMH engineering
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Coeur d'Alene, ID 83815
(208) 635-5825

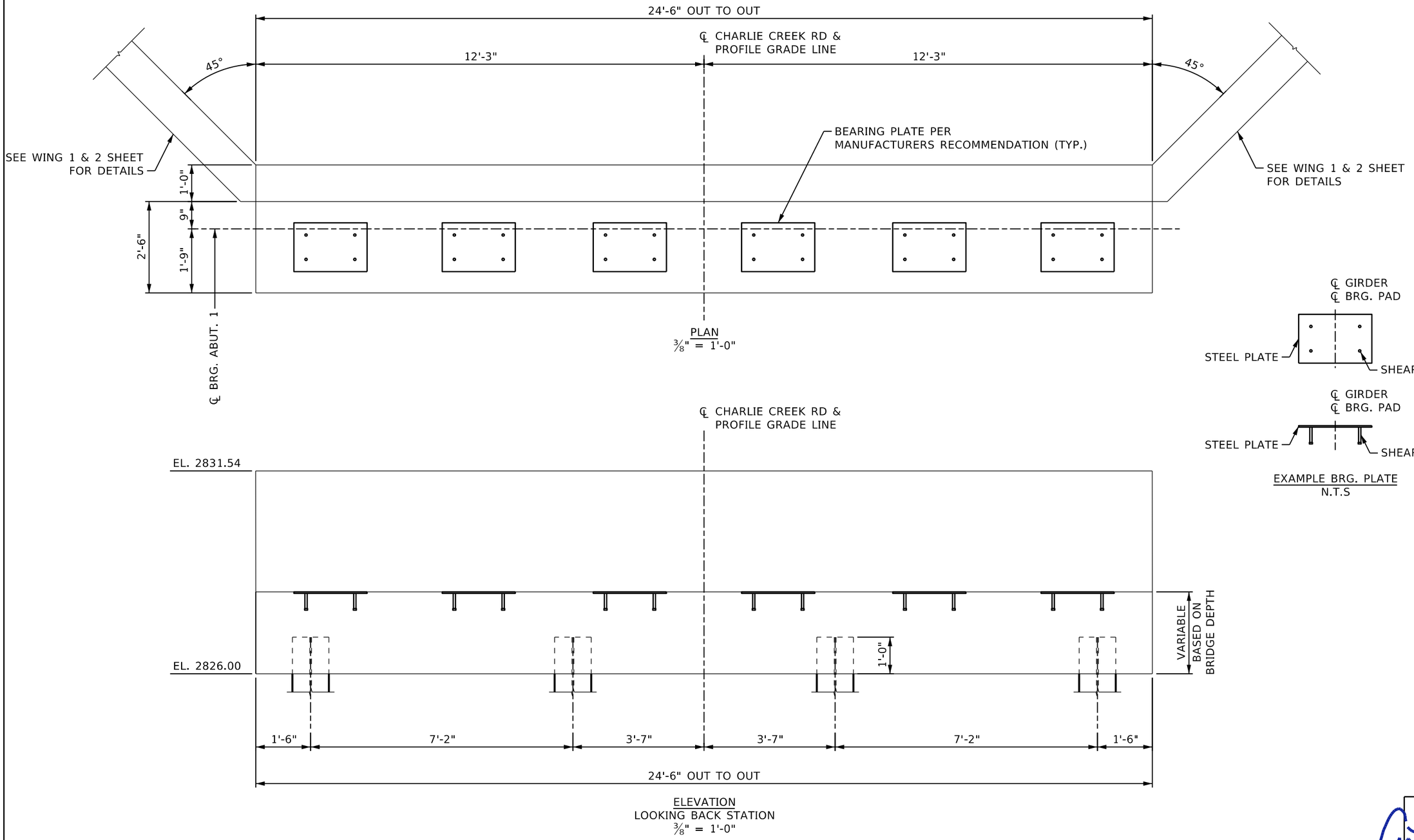
FOOTING LAYOUT AND PILE NOTES

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 4 OF 12	

PROFESSIONAL ENGINEER REGISTERED 6788 STATE OF IDAHO CHRISTOPHER B. MERRILL
10/27/26



EXAMPLE BRG. PLATE
N.T.S

REVISIONS			
NO.	DATE	BY	DESCRIPTION

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DESIGN CHECKED C. MERRILL	
DETAILED K. MADSEN	CADD FILE NAME 30091 ABUT.dgn
DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

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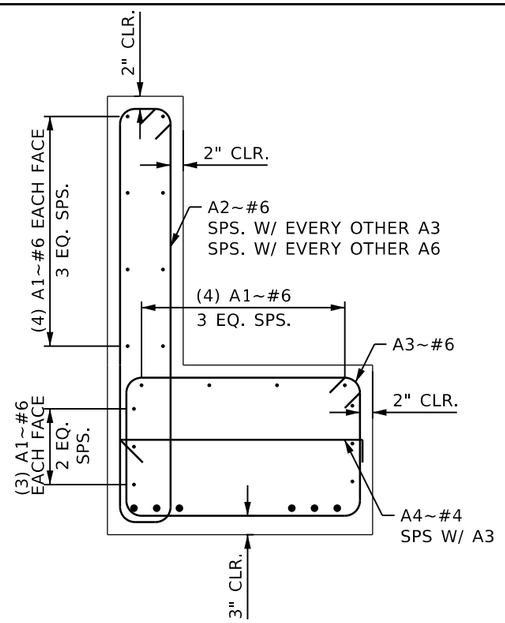
ABUTMENT 1 DETAILS (1 OF 2)

CHARLIE CREEK RD
OVER SANTA CREEK

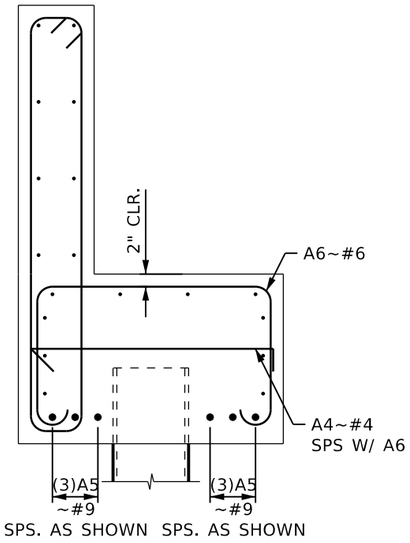
English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 5	OF 12

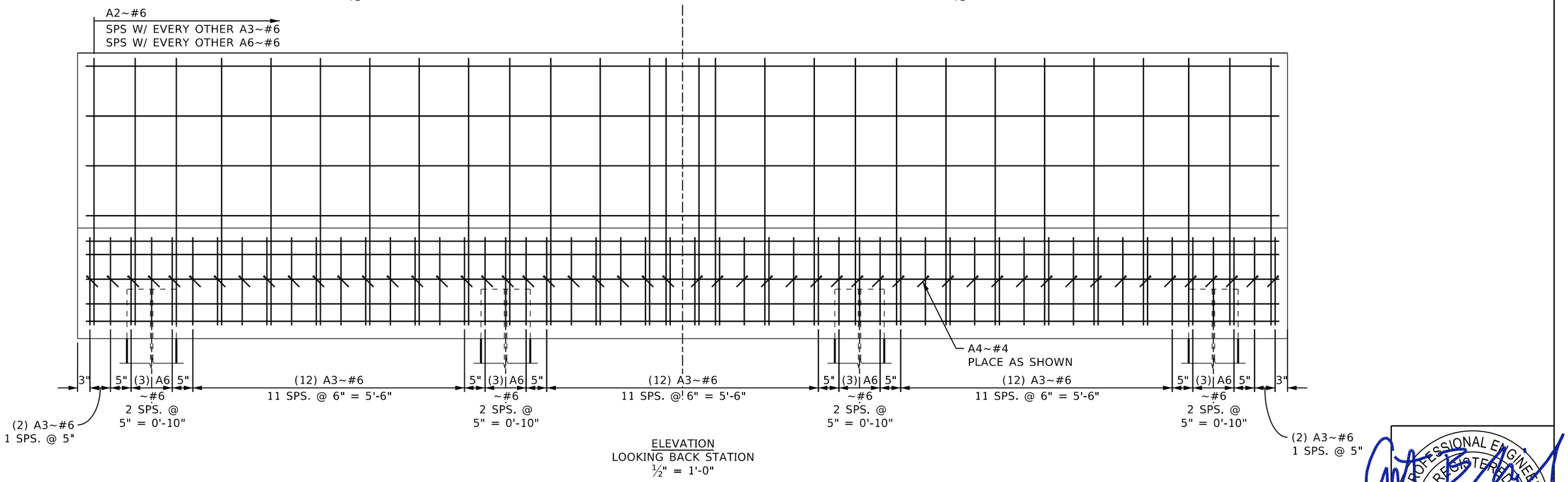
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10/27/26



TYPICAL SECTION
½" = 1'-0"



TYPICAL SECTION
½" = 1'-0"



ELEVATION
LOOKING BACK STATION
½" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION

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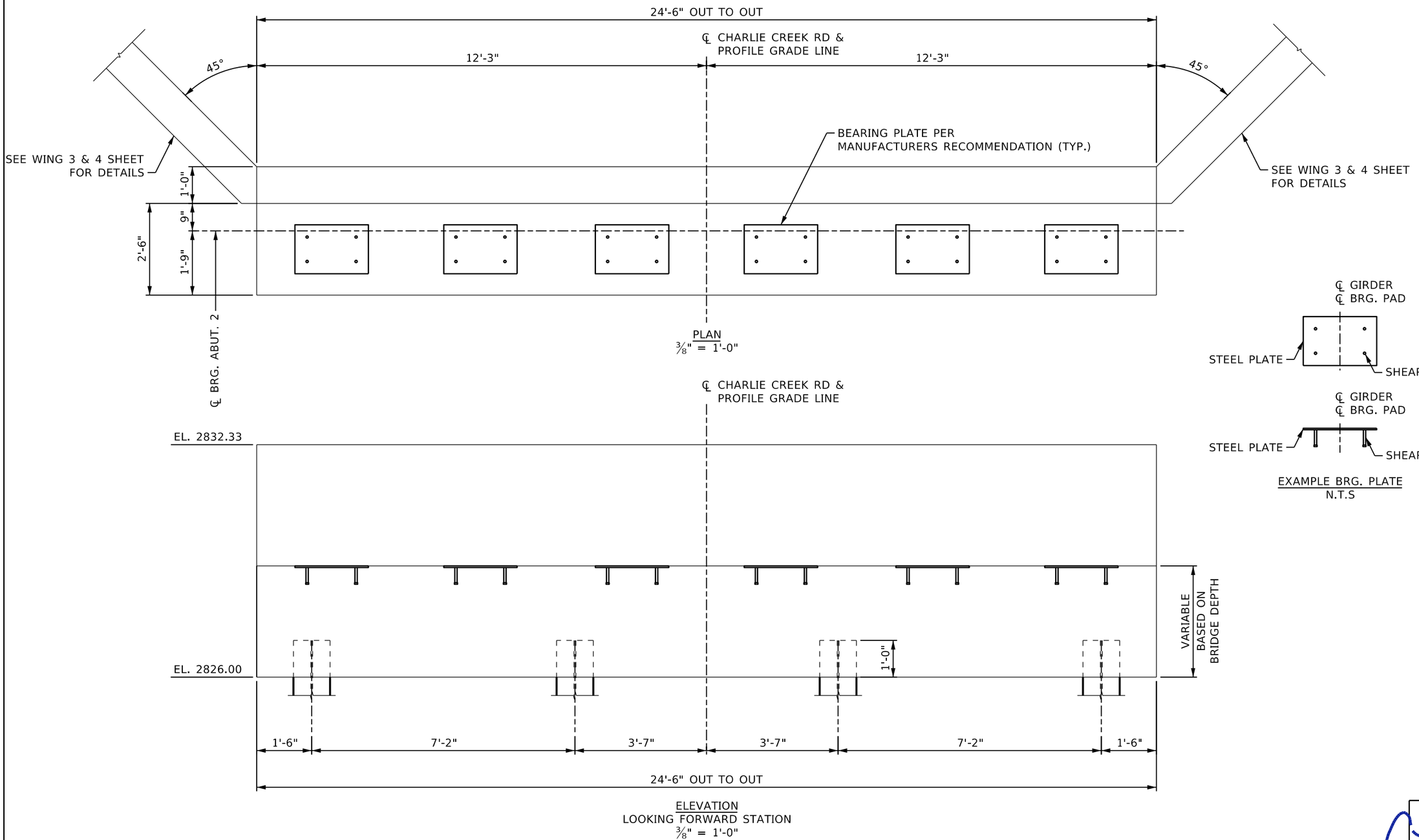
ABUTMENT 1 DETAILS (2 OF 2)

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 6	OF 12

PROFESSIONAL ENGINEER
REGISTERED
6788
STATE OF IDAHO
CHRISTOPHER B. MERRILL
10/27/26



EXAMPLE BRG. PLATE
N.T.S

REVISIONS			
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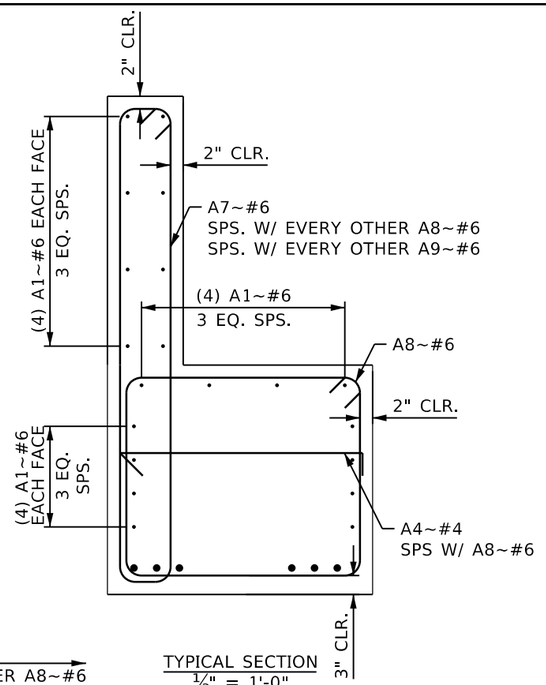
ABUTMENT 2 DETAILS (1 OF 2)

CHARLIE CREEK RD
OVER SANTA CREEK

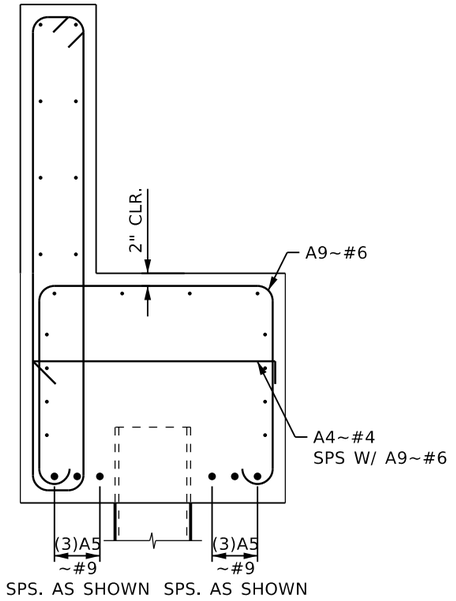
English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 7 OF 12	

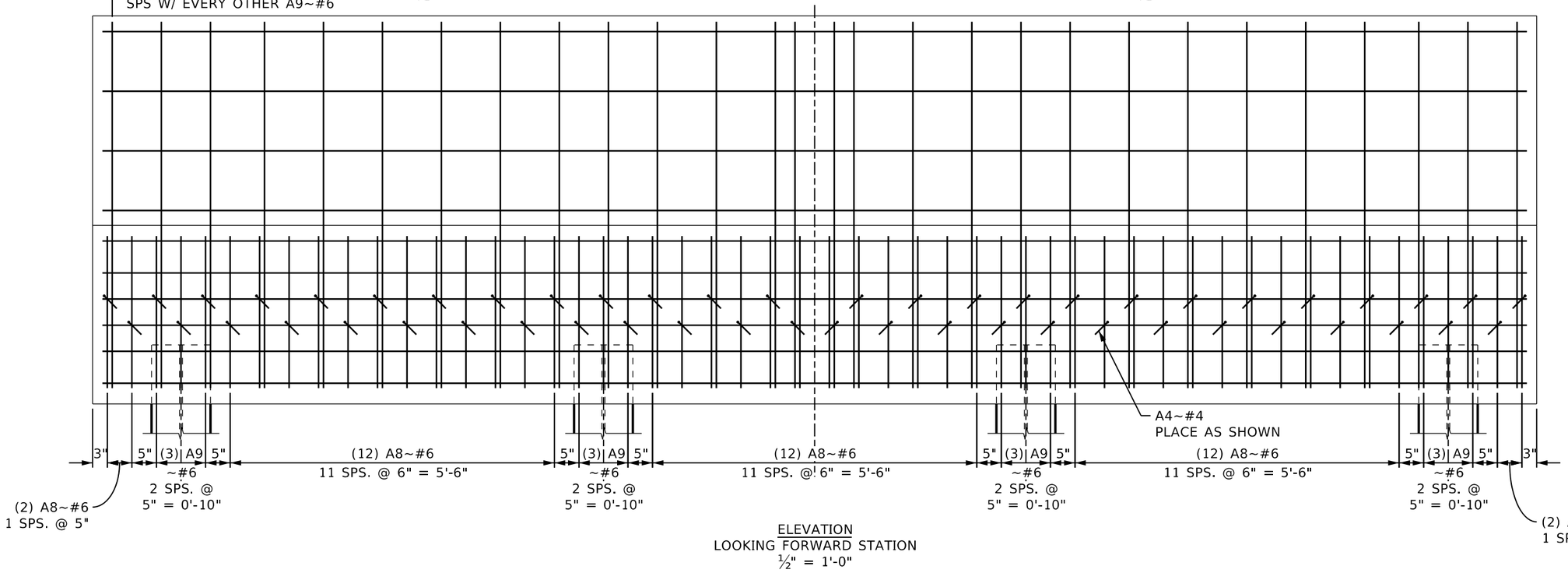
PROFESSIONAL ENGINEER
REGISTERED
6788
10/27/26
STATE OF IDAHO
CHRISTOPHER B. MERRILL



TYPICAL SECTION
½" = 1'-0"



TYPICAL SECTION
½" = 1'-0"



ELEVATION
LOOKING FORWARD STATION
½" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION

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DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

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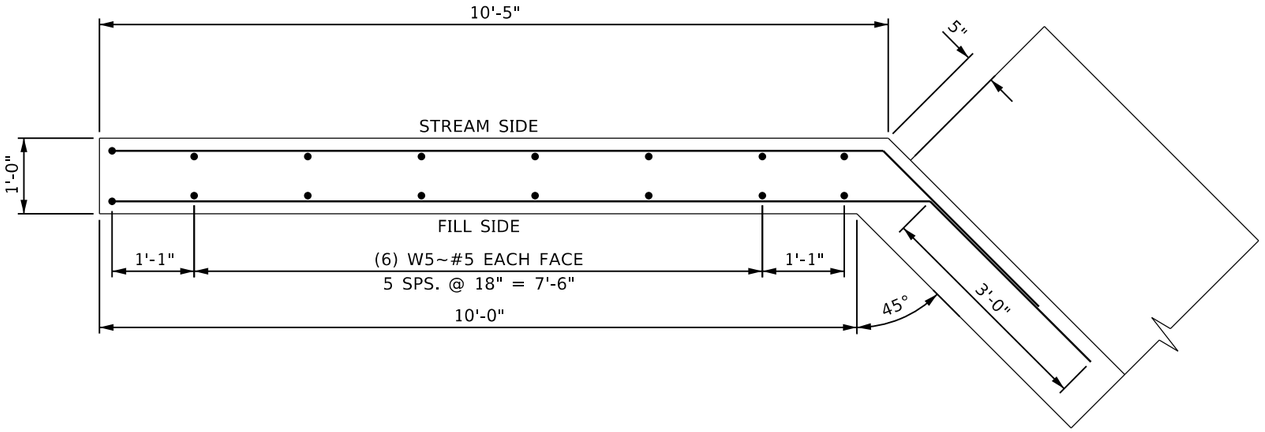
ABUTMENT 2 DETAILS (2 OF 2)

CHARLIE CREEK RD
OVER SANTA CREEK

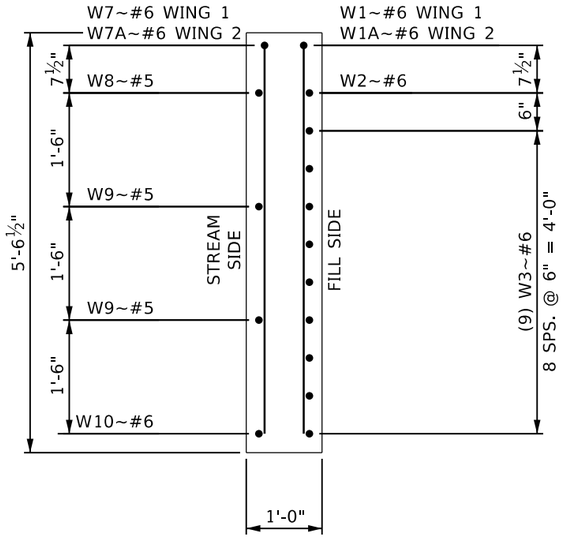
English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 8 OF 12	

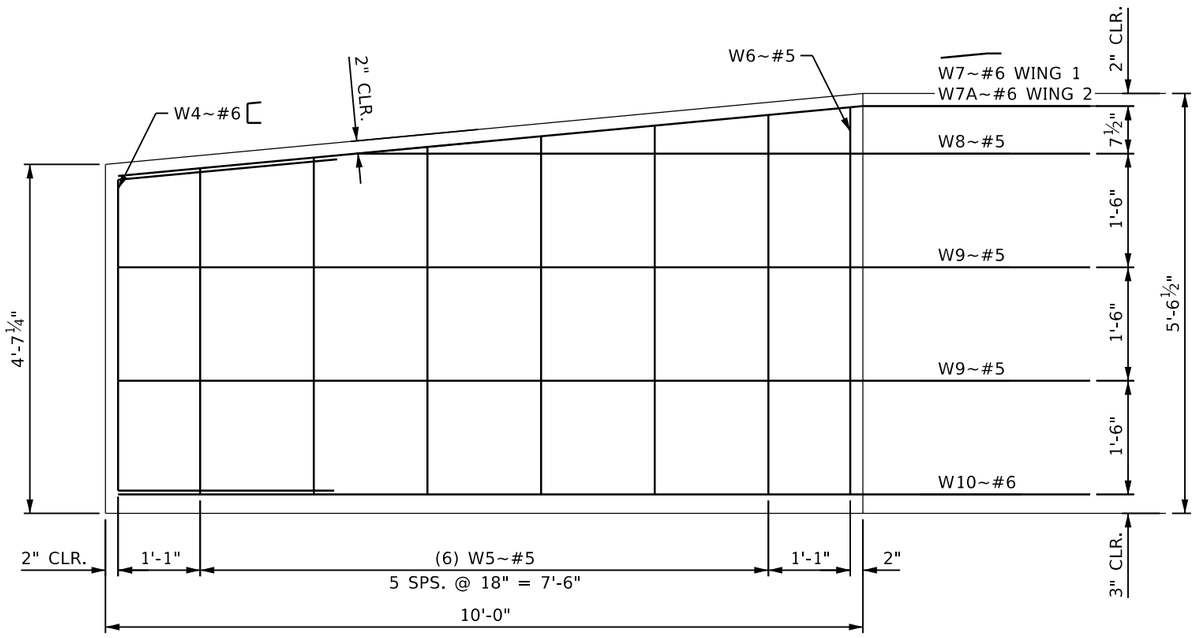
PROFESSIONAL ENGINEER
REGISTERED
6788
10/27/26
STATE OF IDAHO
CHRISTOPHER B. MERRILL



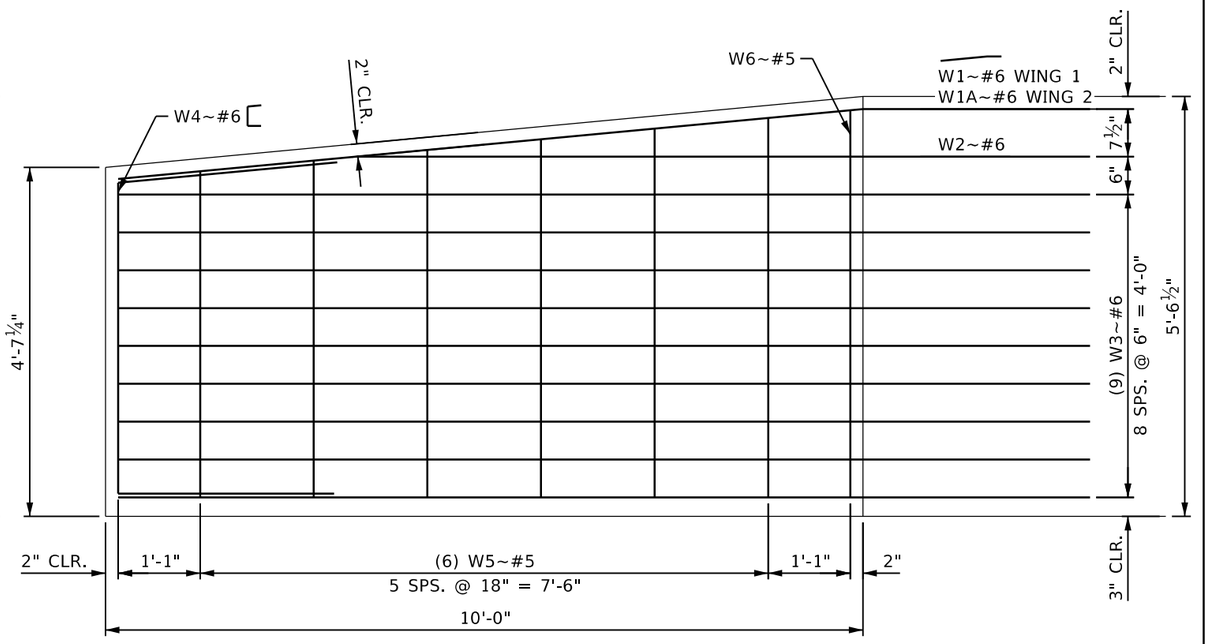
PLAN
½" = 1'-0"



TYPICAL SECTION
½" = 1'-0"



ELEVATION - STREAM SIDE
½" = 1'-0"



ELEVATION - FILL SIDE
½" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED C. CONNELLY	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED C. MERRILL	
DETAILED K. MADSEN	CADD FILE NAME 30091 WING.dgn
DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

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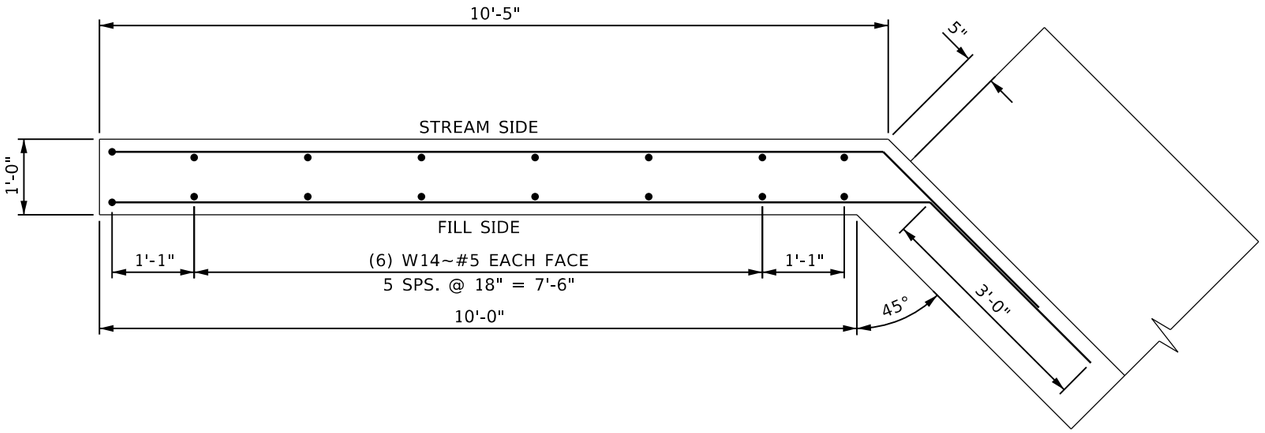
WING 1 & 2 DETAILS

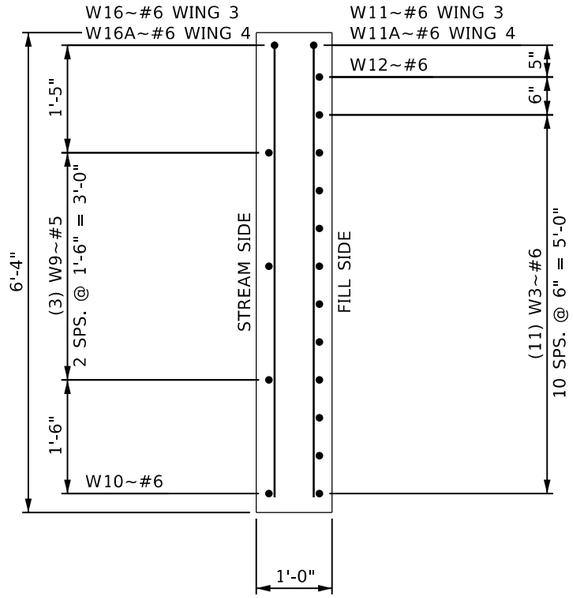
CHARLIE CREEK RD
OVER SANTA CREEK

English

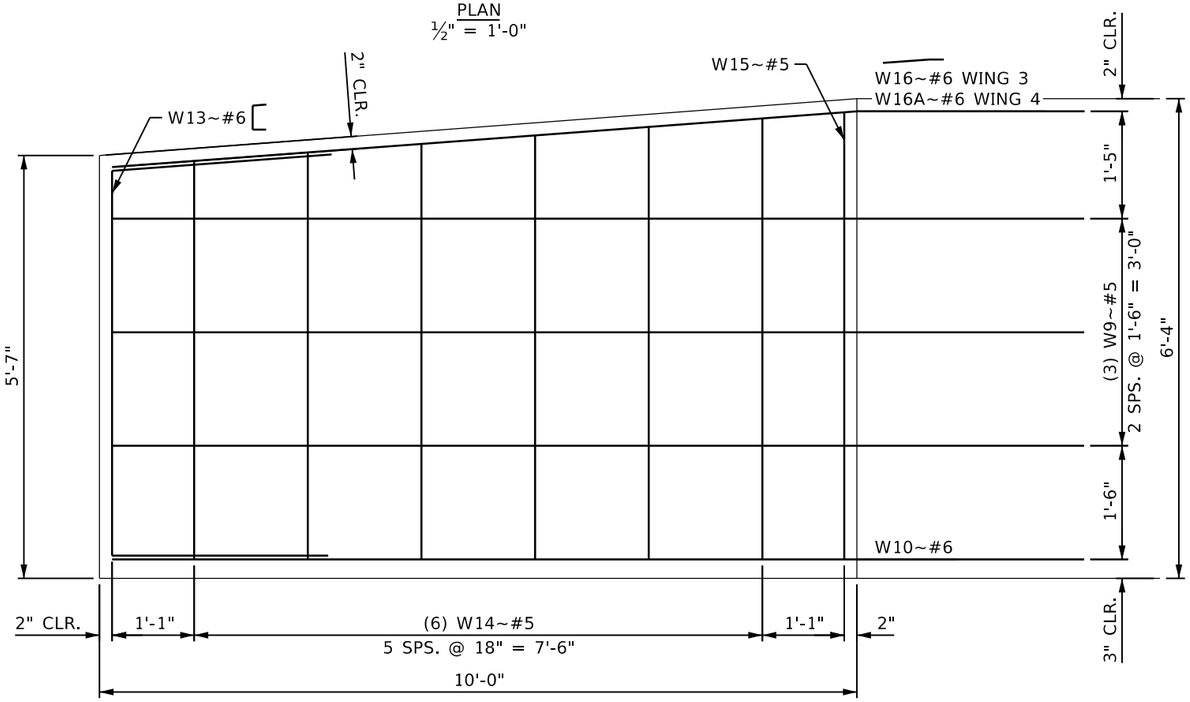
COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 9 OF 12	

PROFESSIONAL ENGINEER REGISTERED
6788
10/27/26
STATE OF IDAHO
CHRISTOPHER B. MERRILL



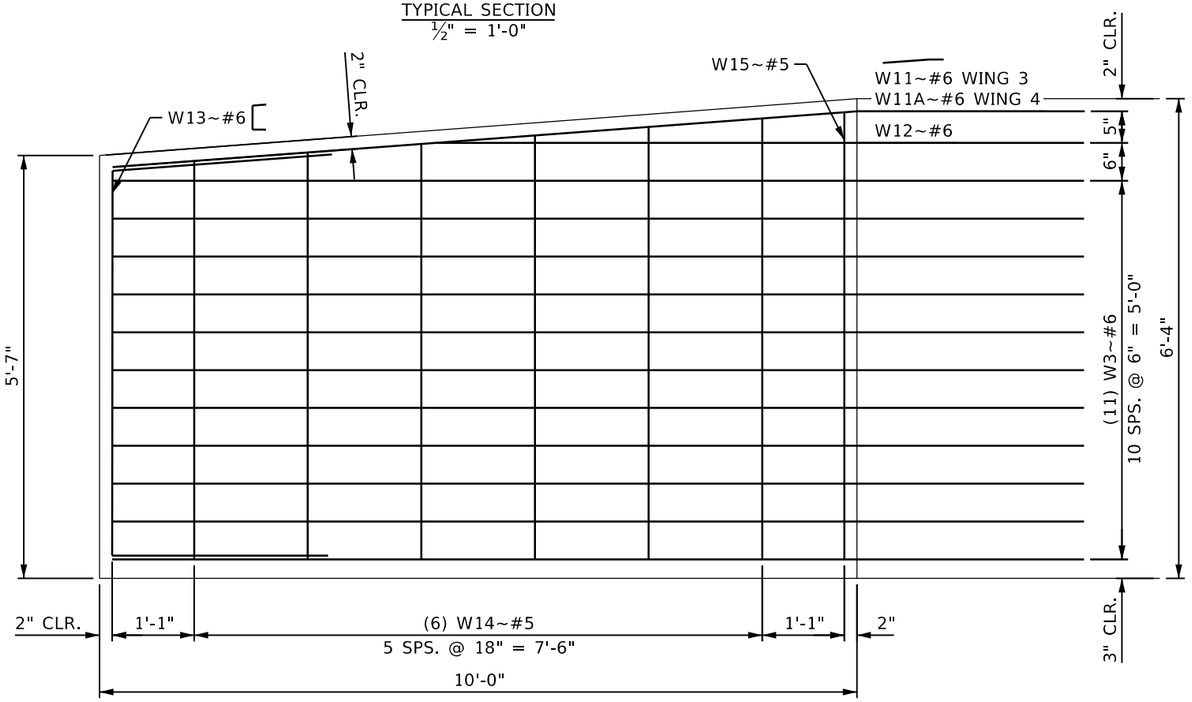


PLAN
½" = 1'-0"



ELEVATION - STREAM SIDE
½" = 1'-0"

TYPICAL SECTION
½" = 1'-0"



ELEVATION - FILL SIDE
½" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION

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DETAILED K. MADSEN	CADD FILE NAME 30091 WING.dgn
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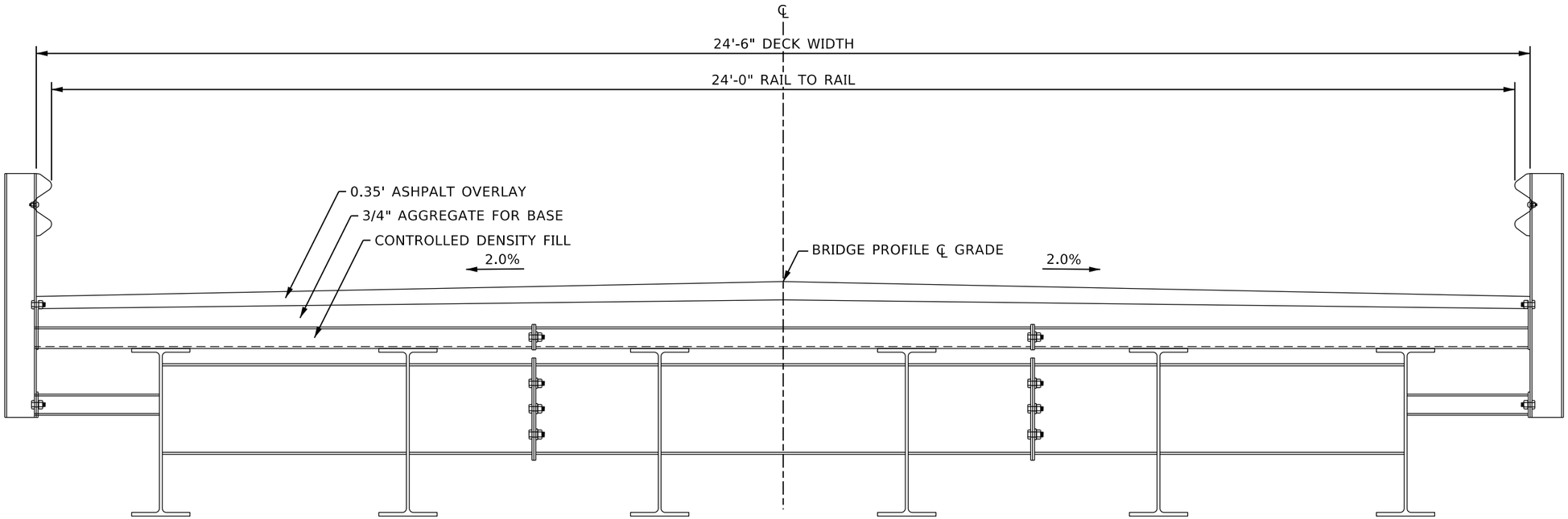
WING 3 & 4 DETAILS

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 10 OF 12	

PROFESSIONAL ENGINEER
REGISTERED
6788
10/27/26
STATE OF IDAHO
CHRISTOPHER B. MERRILL



NEW BRIDGE CONSTRUCTION
N.T.S

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED C. CONNELLY	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED C. MERRILL	
DETAILED K. MADSEN	CADD FILE NAME 30091 DECK.dgn
DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

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3882 N. Schreiber Way, Suite 104
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(208) 635-5825

DECK CROSS SECTION DETAILS

CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY BENEWAH

BRG. KEY NO.	BRG. DWG NO.
30091	16574

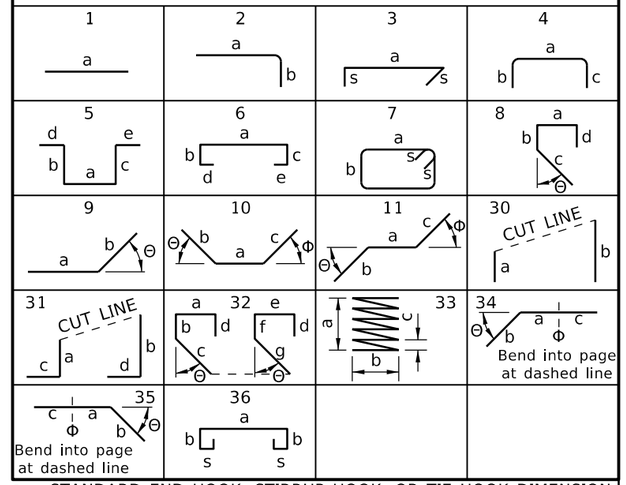
SHEET 11 OF 12

PROFESSIONAL ENGINEER REGISTERED
6788
STATE OF IDAHO
CHRISTOPHER B. MERRILL
10/27/26

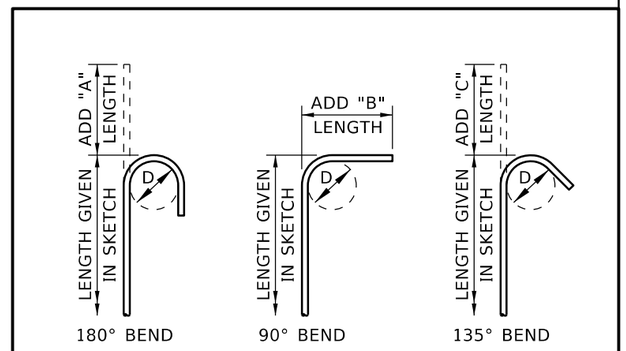
SUBSTRUCTURE

MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BEND TYPE	BARS/ SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE Θ	ANGLE Φ	TOTAL LENGTH
A1	ABUT 1&2	#6		38	1			24'-2"							918'-4"
A2	ABUT 1	#6		28	7			0'-8"	5'-1 1/2"						361'-8"
A3	ABUT 1	#6		40	7			3'-2"	1'-9 3/4"						451'-8"
A4	ABUT 1&2	#4		104	3			3'-2"							407'-4"
A5	ABUT 1&2	#9		12	1			24'-2"							290'-0"
A6	ABUT 1	#6		12	36			3'-2"	1'-9 3/4"						97'-6"
A7	ABUT 2	#6		28	7			0'-8"	5'-11"						406'-0"
A8	ABUT 2	#6		40	7			3'-2"	2'-7 1/4"						515-0"
A9	ABUT 2	#6		12	36			3'-2"	2'-7 1/4"						116'-6"
W1	WING 1	#6		1	35			1'-2 1/4"	9'-8 1/2"	3'-0"			5.36	45	13'-10 3/4"
W1A	WING 2	#6		1	34			1'-2 1/4"	9'-8 1/2"	3'-0"			5.36	45	13'-10 3/4"
W2	WING 1&2	#6		2	9			7'-8"	3'-0"				45		21'-4"
W3	WING 1,2,3,4	#6		40	9			10'-10 1/2"	3'-0"				45		555'-0"
W4	WING 1&2	#6		4	10			4'-2 1/2"	3'-0"	3'-0"			84.64	90	40'-10"
W5	WING 1&2	#5		24	30		6	4'-3 3/4"	5'-0"						111'-9"
W6	WING 1&2	#5		4	1			5'-1 1/4"							20'-5"
W7	WING 1	#6		1	35			0'-6 1/4"	9'-8 1/2"	3'-0"			5.36	45	13'-2 3/4"
W7A	WING 2	#6		1	34			0'-6 1/4"	9'-8 1/2"	3'-0"			5.36	45	13'-2 3/4"
W8	WING 1&2	#5		2	9			7'-0"	3'-0"				45		20'-0"
W9	WING 1,2,3,4	#5		10	9			10'-2 1/4"	3'-0"				45		131'-10 1/2"
W10	WING 1,2,3,4	#6		4	9			10'-2 1/4"	3'-0"				45		52'-9"
W11	WING 3	#6		1	34			1'-2 1/4"	9'-8 1/4"	3'-0"			4.29	45	13'-10 1/2"
W11A	WING 4	#6		1	35			1'-2 1/4"	9'-8 1/4"	3'-0"			4.29	45	13'-10 1/2"
W12	WING 3&4	#6		2	9			6'-6 3/4"	3'-0"				45		19'-1 1/2"
W13	WING 3&4	#6		4	10			5'-2 1/4"	3'-0"	3'-0"			85.71	90	44'-9"
W14	WING 3&4	#5		24	30		6	5'-3"	5'-9 3/4"						132'-11"
W15	WING 3&4	#5		4	1			5'-10 3/4"							23'-7"
W16	WING 3	#6		1	34			0'-6 1/4"	9'-8 1/4"	3'-0"			4.29	45	13'-2 1/2"
W16A	WING 4	#6		1	35			0'-6 1/4"	9'-8 1/4"	3'-0"			4.29	45	13'-2 1/2"

BAR BEND DIAGRAMS



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



"L" = LENGTH GIVEN IN SKETCH

BAR SIZE	STANDARD END HOOK DIMENSIONS ALL GRADES D	A	B	STIRRUP AND TIE HOOK DIMENSIONS ALL GRADES 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"			

SUPERSTRUCTURE BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#4	407'-4"	0.668	272.10
#5	440'-6 1/2"	1.043	459.48
#6	3708'-10 1/2"	1.502	5570.73
#9	290'-0"	3.400	986.00
	TOTAL WEIGHT		7288.31

EPOXY COATED BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#4		0.668	
#5		1.043	
#6		1.502	
#7		2.044	
	TOTAL WEIGHT		

GFRP BAR LENGTH

BAR SIZE	LINEAR FEET PER BAR	NUMBER OF BARS	TOTAL LENGTH
#4			

REINFORCEMENT NOTES

1. PROVIDE BEND DETAILS IN ACCORDANCE WITH THE LATEST ACI STANDARD PRACTICE AND AASHTO SPECIFICATIONS.
2. DIMENSIONS SHOWN IN THE "BAR BEND DIAGRAMS" ARE OUT TO OUT OF BEND POINTS, HOOKS, OR BAR ENDS, UNLESS NOTED OTHERWISE. PIN DIAMETER "D" IS THE SAME FOR BENDS AND HOOK ON A BAR.
3. NO DEDUCTIONS FOR CURVATURE AT BENDS ARE MADE EXCEPT FOR THE ADJUSTMENTS INCLUDED IN THE ABOVE "ADD LENGTH" DIMENSIONS.
4. * INDICATES STIRRUP OR TIE BAR.
5. PROVIDE BARS THAT CONFORM TO AASHTO M31, GRADE 60.
6. 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.
   C. PROVIDE BAR TYPE S OR W DESIGNATED IN THE "BAR TYPE" COLUMN.
7. BAR WEIGHTS ONLY INCLUDE REINFORCING STEEL PAID FOR UNDER THE PAY ITEMS 503-005A, 503-010A, 503-015A, 503-020A, & 503-025A. OTHER REINFORCING STEEL NOT LISTED IS INCIDENTAL TO OTHER PAY ITEMS.

DESIGNER NOTES

PROVIDE BAR TYPE S OR W IN ACCORDANCE WITH BRIDGE DESIGN MANUAL ARTICLE 5.4.3.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

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DETAILED K. MADSEN	CADD FILE NAME 30091 METL.dgn
DRAWING CHECKED C. MERRILL	DRAWING DATE: 27-OCT-2026

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Coeur d'Alene, ID 83815
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METAL REINFORCEMENT

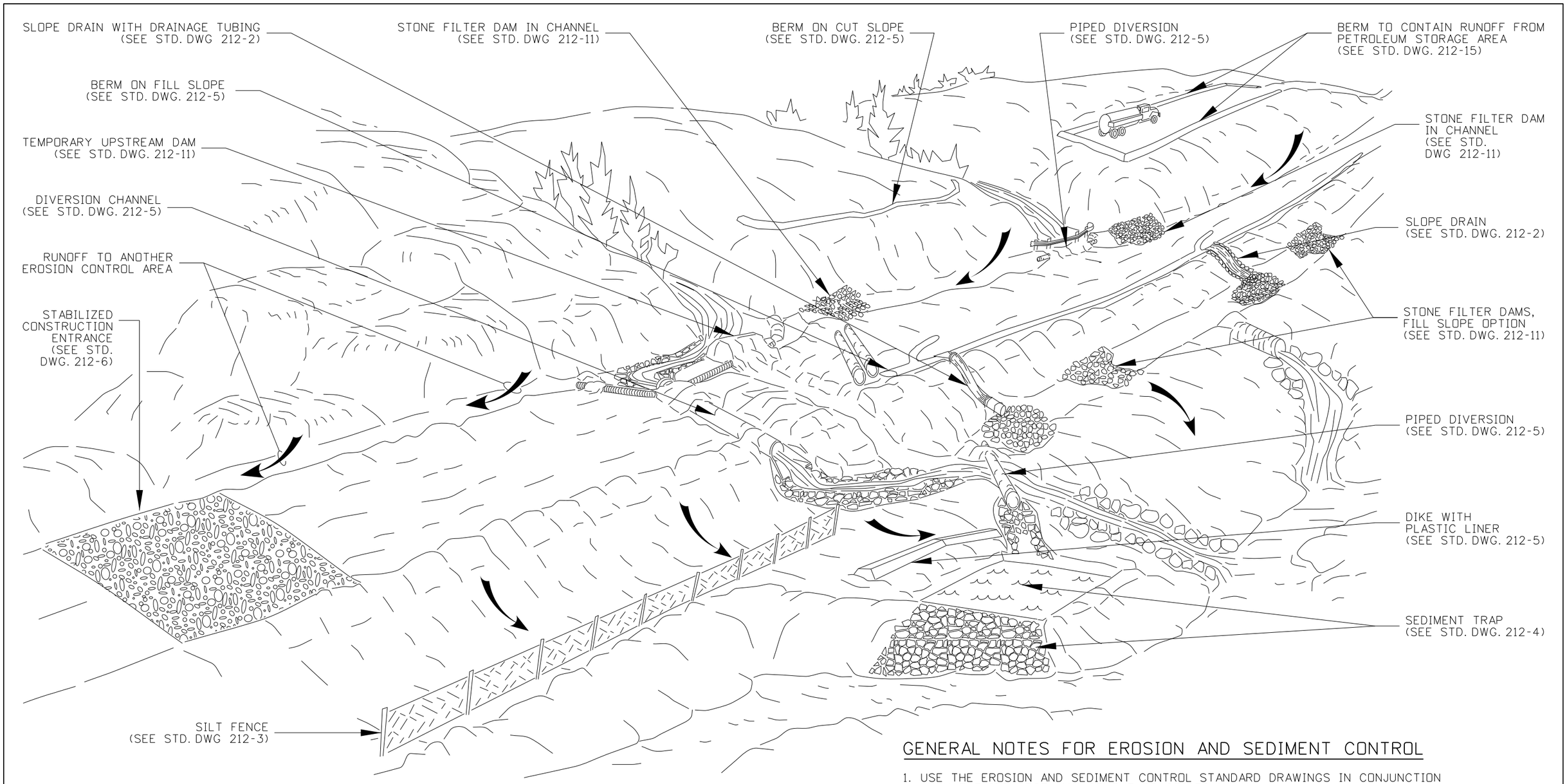
CHARLIE CREEK RD
OVER SANTA CREEK

English

COUNTY	BENEWAH
BRG. KEY NO. 30091	BRG. DWG NO. 16574
SHEET 12 OF 12	

PROFESSIONAL ENGINEER REGISTERED 6788 STATE OF IDAHO CHRISTOPHER B. MERRILL

10/27/26



GENERAL NOTES FOR EROSION AND SEDIMENT CONTROL

1. USE THE EROSION AND SEDIMENT CONTROL STANDARD DRAWINGS IN CONJUNCTION WITH THE ITD BEST MANAGEMENT PRACTICES MANUAL.
2. THE PLACEMENT OF EROSION CONTROL MEASURES IS SITE SPECIFIC. OBTAIN THE ENGINEER'S APPROVAL OF THE EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO INSTALLATION.
3. EROSION AND SEDIMENT CONTROL MEASURES PLACEMENT AND INSTALLATION MAY BE CONTROLLED BY THE NPDES, 404 PERMIT OR CONTRACT SPECIFICATIONS.
4. DRAWING NOT TO SCALE

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER ORIGINAL SIGNED AND DATED MARCH 18, 2021 STATE OF IDAHO 13683

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	9-93	MSM	6	12-16	RDL			
2	6-96	MSM	7	02-21	TWF			
3	10-10	KEH						
4	10-11	KEH						
5	12-12	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 212-01_0421.dgn

DRAWING DATE: APRIL, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

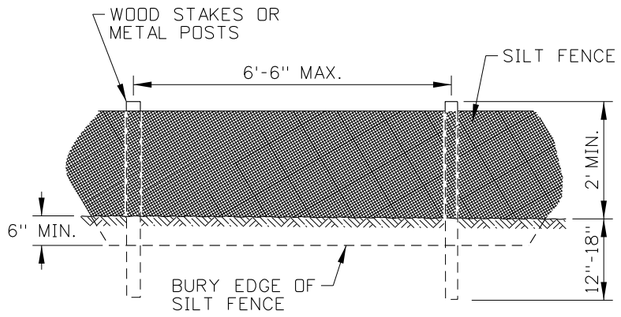
STANDARD DRAWING

EROSION AND SEDIMENT CONTROL EXAMPLE APPLICATIONS

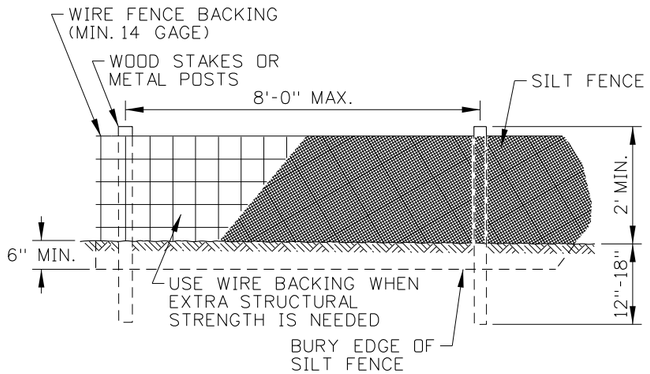
English

STANDARD DRAWING NO. 212-1

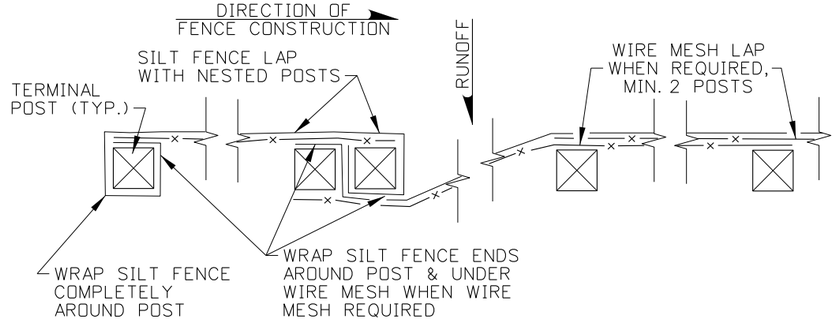
SHEET 1 OF 1



SILT FENCE (NO WIRE BACKING)



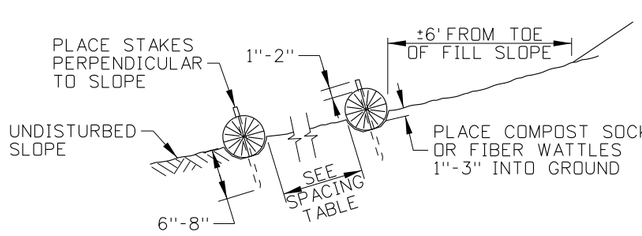
SILT FENCE (WIRE BACKING)



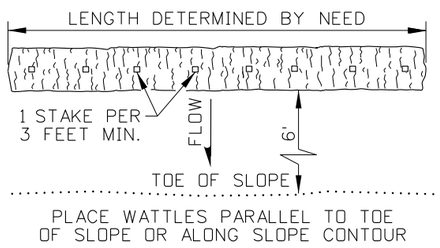
SILT FENCE LAP DETAIL

FIBER WATTLE & COMPOST SOCK SPACING TABLE				
SLOPE	WATTLE SIZE			
	6"	9"	12"	20"
1:1	5 FT	10 FT	15 FT	20 FT
2:1	10 FT	20 FT	30 FT	40 FT
3:1	15 FT	30 FT	45 FT	60 FT
4:1 OR FLATTER	20 FT	40 FT	60 FT	80 FT

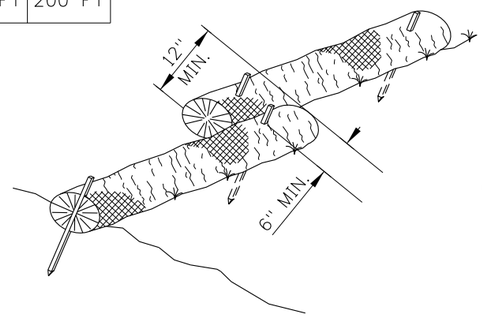
SILT FENCE SPACING TABLE			
SLOPE	SOIL TYPE		
	SILTY	CLAYS	SANDY
1:1	50 FT	75 FT	100 FT
2:1	75 FT	100 FT	125 FT
4:1	100 FT	125 FT	150 FT
10:1 OR FLATTER	125 FT	150 FT	200 FT



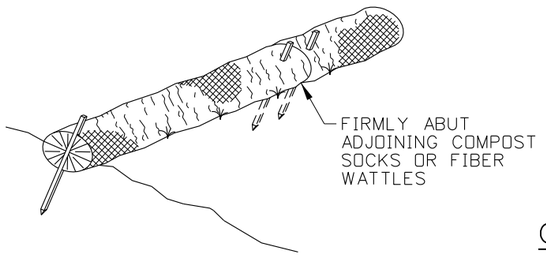
COMPOST SOCK AND FIBER WATTLE
SIDE VIEW



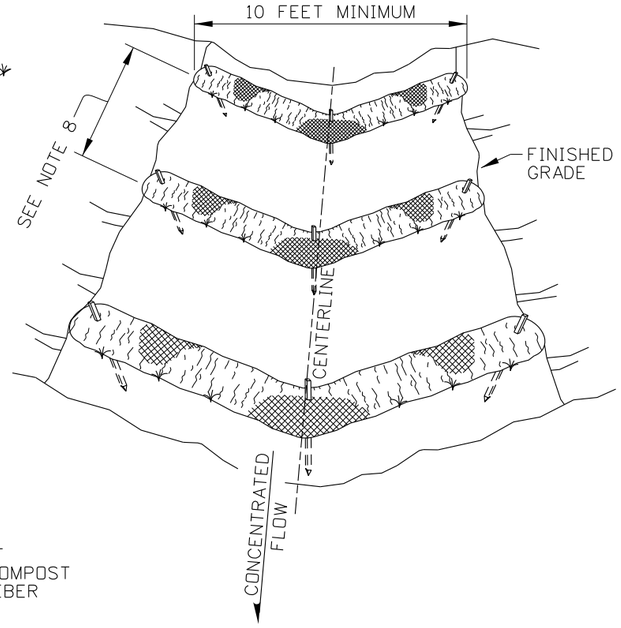
COMPOST SOCK AND FIBER WATTLE
PLAN VIEW



COMPOST SOCK AND FIBER WATTLE OVERLAPPING DETAIL



COMPOST SOCK AND FIBER WATTLE ABUTTING DETAIL



COMPOST SOCK AND FIBER WATTLE TEMPORARY CHECK DAM DETAIL

NOTES

1. SEE THE GENERAL NOTES FOR EROSION CONTROL STANDARD DRAWINGS ON 212-1.
2. THE NEED FOR TEMPORARY SEDIMENT CONTROL DEVICES ARE DETERMINED BY SITE DESIGN. SPACE SILT FENCES, COMPOST SOCKS, AND FIBER WATTLES IN ACCORDANCE WITH THE SILT FENCE SPACING TABLE AND FIBER WATTLE & COMPOST SOCK SPACING TABLE.
3. INSTALL TEMPORARY SEDIMENT CONTROL BARRIERS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND SPECIFICATIONS. THE DIMENSIONS SHOWN ARE GENERAL GUIDELINES.
4. PLACE SEDIMENT BARRIERS TO FOLLOW THE SLOPE CONTOURS. USE EITHER METAL POSTS OR WOOD STAKES.
5. ENSURE RUNOFF PASSES THROUGH THE SILT FENCE AND NOT AROUND THE FENCE.
6. GROUND SILT FENCES WITH WIRE MESH IN ACCORDANCE WITH THE GROUNDING DETAIL SHOWN ON STANDARD DRAWING 610-1.
7. EXTEND OR JOIN SILT FENCE USING SILT FENCE LAP WITH NESTED POSTS.
8. SPACE CHECK DAMS ACCORDING TO THE HEIGHT OF THE DAM AND THE SLOPE OF THE CHANNEL SO THE BACKWATER FROM THE DOWNSTREAM DAM REACHES THE TOE OF THE UPSTREAM DAM.
9. ON SLOPES, TURN THE ENDS OF EACH ROW OF COMPOST SOCKS AND FIBER WATTLES UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE SOCK OR WATTLE.
10. REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF SILT FENCES, COMPOST SOCKS, AND FIBER WATTLES WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE BARRIER.
11. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER STATE OF IDAHO 13683 ORIGINAL SIGNED MARCH 18, 2021 RYAN D. LANCASTER

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	09-93	MSM	6	01-13	RDL			
2	12-94	MSM	7	03-21	TWF			
3	06-96	GFK						
4	10-10	KEH						
5	10-11	KEH						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 212-03_0421.dgn

DRAWING DATE: APRIL, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

TEMPORARY EROSION AND SEDIMENT CONTROL

SILT FENCE, FIBER WATTLE, AND COMPOST SOCK

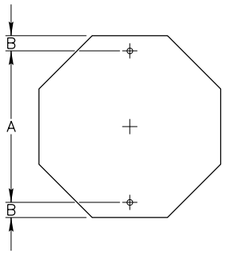
REQUIRES STD. DWG. 212-1

English

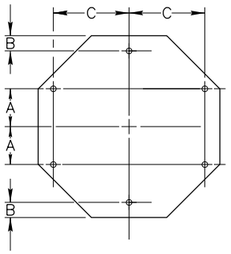
STANDARD DRAWING NO.

212-3

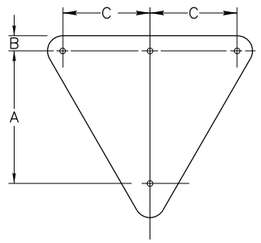
SHEET 1 OF 1



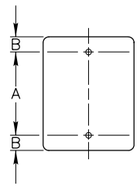
SIGN SIZE	A	B
30"X30"	24"	3"



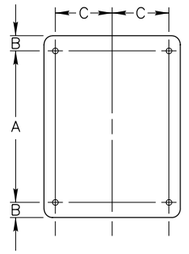
SIGN SIZE	A	B	C
36"X36"	8"	3"	12"
48"X48"	10"	—	20"



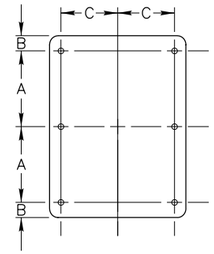
SIGN SIZE	A	B	C
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36"X36"	23"	3"	—
48"X48"	25"	3"	17"
60"X60"	35"	4"	23"



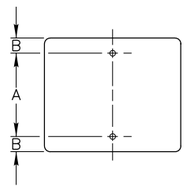
SIGN SIZE	A	B
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6"X18"	15"	1½"
9"X12"	9"	1½"
12"X18"	15"	1½"
12"X30"	24"	3"
12"X36"	32"	2"
18"X24"	18"	3"
24"X30"	24"	3"
24"X36"	30"	3"
30"X36"	30"	3"



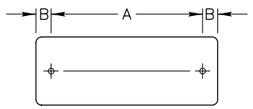
SIGN SIZE	A	B	C
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36"X48"	42"	3"	15"
48"X30"	24"	3"	15"
48"X36"	30"	3"	15"
60"X36"	30"	3"	21"



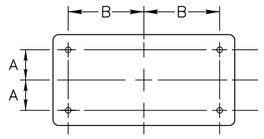
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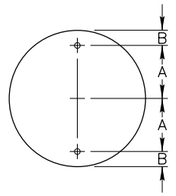
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18"X12"	9"	1½"
18"X18"	15"	1½"
21"X15"	12"	1½"
24"X6"	3"	1½"
24"X10"	7"	1½"
24"X12"	9"	1½"
24"X18"	15"	1½"
24"X24"	18"	3"
30"X18"	12"	3"
30"X24"	18"	3"
30"X30"	24"	3"
36"X24"	18"	3"
36"X30"	24"	3"
42"X24"	18"	3"
42"X30"	24"	3"
42"X36"	30"	3"



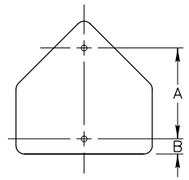
SIGN SIZE	A	B
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36"X12"	30"	3"
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48"X12"	42"	3"
48"X18"	42"	3"
54"X18"	48"	3"



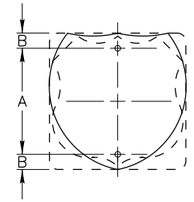
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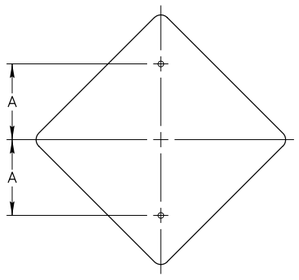
SIGN SIZE	A	B
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48"	21"	3"



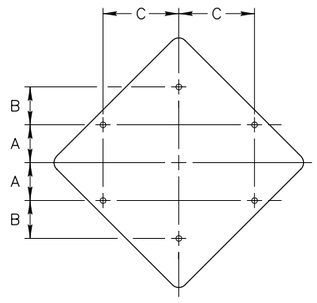
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36"X36"	24"	3"



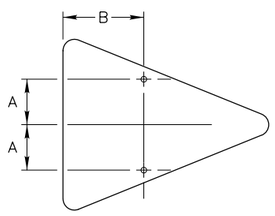
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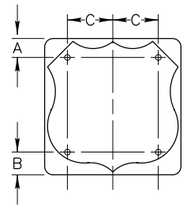
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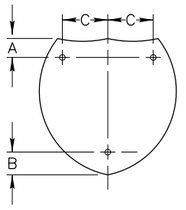
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48"X48"	10"	—	20"



SIGN SIZE	A	B
36"X48"	9"	16"



SIGN SIZE	A	B	C
36"X36"	5"	6"	12"



SIGN SIZE	A	B	C
36"X36"	5"	6"	12"
45"X36"	5"	6"	16"

NOTES:

1. ALL MOUNTING HOLES SHALL BE ⅜" DIAMETER.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED ORIGINAL SIGNED BY RYAN D. LANCASTER STATE OF IDAHO 13683 MANUAL SIGNATURE OR AUTHENTICATED ELECTRONIC SIGNATURE 1, 2017 RYAN D. LANCASTER

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	12-01	NQB						
2	06-07	HEB						
3	07-14	HEB						
4	05-17	HEB						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 616-1_0517.dgn

DRAWING DATE: DECEMBER, 1994

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

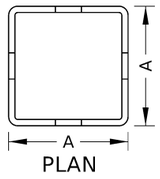
STANDARD DRAWING

PUNCHING SCHEDULE FOR TYPE "B" OR TYPE "E" SIGNS

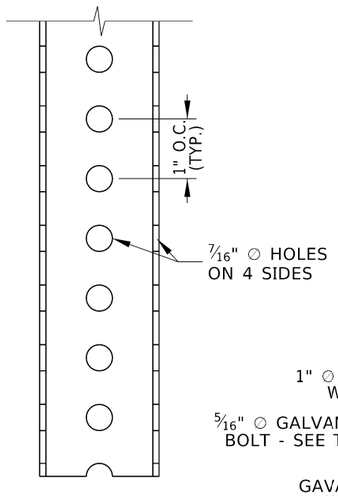
English

STANDARD DRAWING NO. 616-1

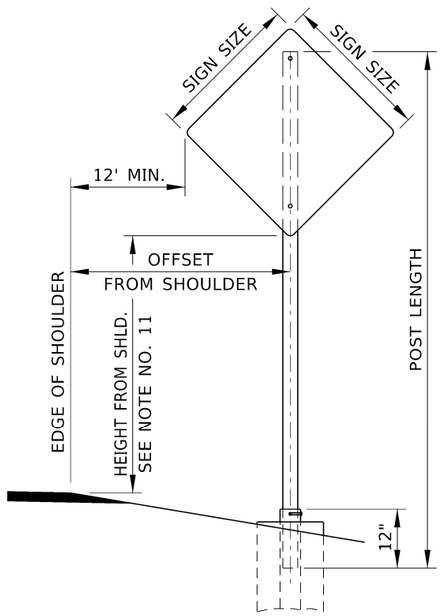
SHEET 1 OF 1



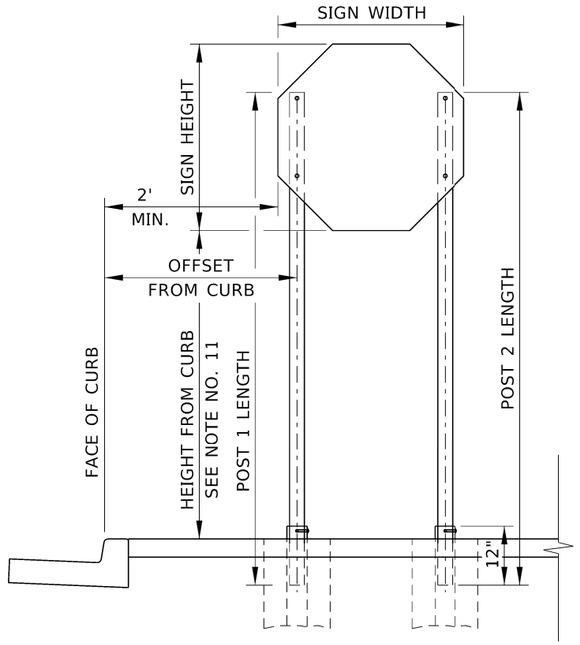
PLAN



ELEVATION

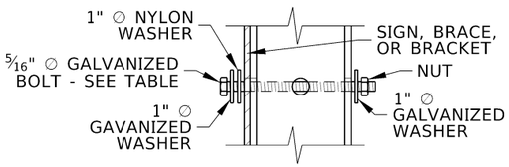


ONE POST

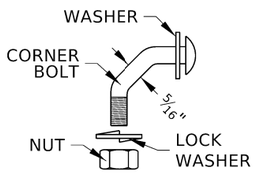


TWO POSTS

SIGN ASSEMBLY MEASUREMENTS



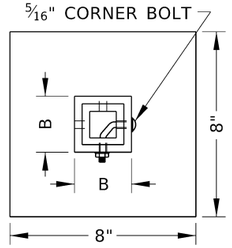
SIGN BOLT



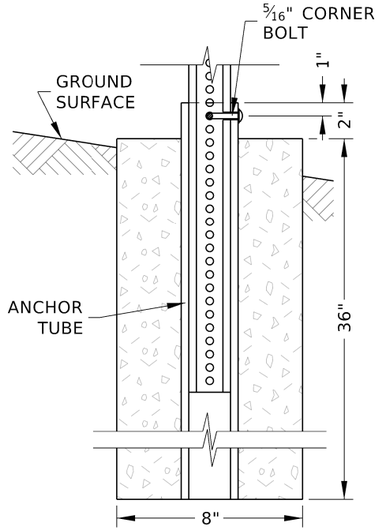
CORNER BOLT

FASTENER DETAILS

SEE NOTE NO. 10



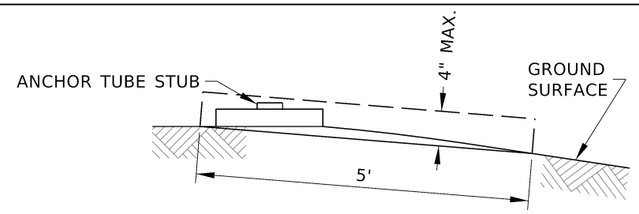
PLAN



ELEVATION

FOUNDATION

SEE NOTE NOS. 12 & 13



FOUNDATION AND STUB HEIGHT DETAIL

SEE NOTE NO. 15

SIGN POST AND FOUNDATION TABLE										
TYPE E PERFORATED STEEL TUBE POST					FOUNDATION		ANCHOR TUBE			FASTENERS
POST TYPE	PERFORATED STEEL TUBE POST SIZE		POST WEIGHT (LB/FT)	MAXIMUM SIGN LOAD (SFxFT)	SIZE (INxINxIN)	CONCRETE (CY)	B (IN)	GAUGE	POST WEIGHT (LB/FT)	SIGN BOLT LENGTH (IN)
	A (IN)	GAUGE								
E-1	2	12	2.42	43	8x8x36	0.05	2½x2½	7	5.59	2½
E-2	2½	10	4.01	91	8x8x36	0.05	3x3	7	6.87	3

NOTES

1. USE TYPE E - PERFORATED STEEL TUBE POSTS - WITH TYPE B - SHEET ALUMINUM AND TYPE E - HDO PLYWOOD SIGNS.
2. SEE THE TRAFFIC MANUAL TO CALCULATE SIGN LOAD PER POST.
3. SEE PROJECT SIGN SUMMARY FOR SIGN ASSEMBLY DIMENSIONS.
4. USE ONE OR MORE TYPE E - PERFORATED STEEL TUBE POST. DO NOT MIX E-1 AND E-2 POSTS ON THE SAME SIGN ASSEMBLY.
5. POST 1 IS CLOSEST TO THE HIGHWAY, WHETHER INSTALLED ON THE RIGHT OR LEFT SIDE.
6. A BREAKAWAY DEVICE MUST BE INSTALLED IF THREE POSTS ARE USED. REFER TO THE ITD QUALIFIED PRODUCTS LIST FOR BREAKAWAY DEVICES.
7. TYPE E - PERFORATED STEEL TUBE POSTS - DO NOT NEED TO BE SHIELDED BY GUARDRAIL OR BARRIER. WHEN PERFORATED STEEL POSTS ARE INSTALLED BEHIND GUARDRAIL OR BARRIER, ENSURE THE POSTS ARE OUTSIDE OF THE GUARDRAIL OR BARRIER WORKING WIDTH.
8. SIGNS CAN BE MOUNTED BACK-TO-BACK IF THE SHAPE OF STOP, YIELD, OR WARNING SIGNS ARE NOT SHIELDED.
9. SIGNS ARE INSTALLED WITH OR WITHOUT BRACES DEPENDENT ON SIGN SIZE AND APPLICATION.
10. TYPE B - SHEET ALUMINUM - OR TYPE E - HDO PLYWOOD - SIGNS CAN BE AFFIXED TO THE POST OR THROUGH BRACES OR BRACKETS.
11. INSTALL SIGNS AT THE FOLLOWING HEIGHTS:
    A. IF INSTALLED IN A RURAL AREA, 5 FEET ABOVE THE PAVEMENT ELEVATION OR 4 FEET IF A SUPPLEMENTARY PLAQUE IS INSTALLED BELOW THE SIGN.
    B. IF INSTALLED IN THE VICINITY OF A CURB OR IN A BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA WHERE PARKING OR PEDESTRIAN MOVEMENTS ARE LIKELY, 7 FEET ABOVE THE PAVEMENT ELEVATION OR 6 FEET IF A SUPPLEMENTARY PLAQUE IS INSTALLED BELOW THE SIGN. IF INSTALLED LOWER THAN 7 FEET, ENSURE SIGNS DO NOT PROJECT MORE THAN 4 INCHES INTO THE PEDESTRIAN FACILITY.
12. PRECAST FOUNDATION OR CAST FOUNDATION IN PLACE. ENSURE THE BOTTOM OF THE FOUNDATION IS KEPT OPEN TO DRAIN. IF THE ANCHOR TUBE IS PERFORATED, ENSURE THE INSIDE OF THE ANCHOR REMAINS OPEN.
13. IF SOLID BEDROCK IS ENCOUNTERED WITHIN THE FOUNDATION DEPTH, DRILL A 4.5 INCH VERTICAL HOLE AND SOCKET THE ANCHOR TUBE. FILL DRILLED HOLES WITH GROUT, TYPE B, CLASS 1. ENSURE THE INSIDE OF THE ANCHOR TUBE REMAINS OPEN. WHEN INSTALLED IN BEDROCK, ENSURE THE E-1 POST IS EMBEDDED 18 INCHES DEEP AND THE E-2 POST IS EMBEDDED 24 INCHES.
14. WHEN THE SIGN IS INSTALLED ON A BACKSLOPE, ENSURE THE SIGN POST IS AT LEAST 5' HIGHER THAN THE GROUND SURFACE.
15. ENSURE NO PART OF THE FOUNDATION OR SIGN POST STUB PROJECTS MORE THAN 4 IN. ABOVE ANY 5 FT. CHORD ALIGNED PERPENDICULARLY TO THE EDGE OF THE HIGHWAY BETWEEN A POINT ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE OF THE SUPPORT.
16. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED ORIGINAL SIGNED BY RYAN D. LANCASTER DATE ORIGINAL SIGNED MARCH 1, 2023 ORIGINAL SIGNED 13683 STATE OF IDAHO RYAN D. LANCASTER

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-92	JEC	6	05-15	HEB			
2	12-94	HEB	7	12-16	HEB			
3	06-99	HEB	8	02-23	RDL			
4	12-01	NQB						
5	12-13	HEB						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

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IDAHO TRANSPORTATION DEPARTMENT

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BOISE IDAHO

ORIGINAL SIGNED BY: MONICA CRIDER

HIGHWAY DESIGN ENGINEER

STANDARD DRAWING

STEEL SIGN POST AND FOUNDATION TYPE E - PERFORATED STEEL TUBE POST

ENGLISH

STANDARD DRAWING NO. 616-7

SHEET 1 OF 1