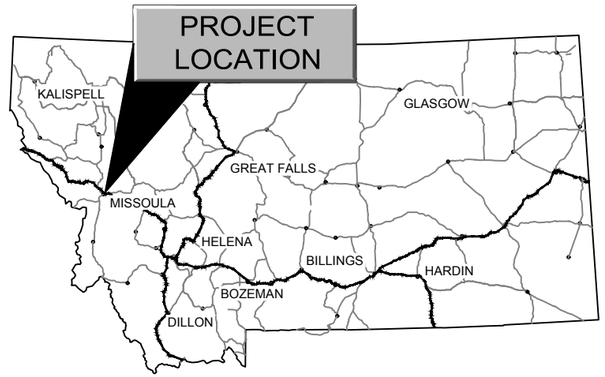
Missoula COUNTY

CONSTRUCTION PLANS FOR:

LOLO STREET BRIDGE REPLACEMENT

COUNTY PROJECT NO. PWFY26-001

S14 T13N R19W
MISSOULA COUNTY, MONTANA



LOCATION MAP

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SITE MAP
NO SCALE

PROJECT MANAGER
J. ROSKE

DJ&A ENGINEERS PLANNERS SURVEYORS

PLANS PREPARED FOR
MISSOULA COUNTY

REV 1: ISSUED ON 10/27/26

MONTANA
JACOB W. ROSKE
No. 72241 PE
LICENSED PROFESSIONAL ENGINEER

9/1/2026

GENERAL NOTES

1. BRIDGE DESIGN: THIS STRUCTURE IS DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION WITH CURRENT INTERIMS.
2. SPECIFICATIONS: CONSTRUCT THE PROJECT IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS. THE PROJECT SPECIFICATIONS ARE DERIVED FROM THE MISSOULA CITY PUBLIC WORKS STANDARDS AND SPECIFICATIONS (MCPWSS) AND BEST MANAGEMENT PRACTICES, MONTANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS (MPWSS).
3. MATERIAL SOURCES: ALL MATERIALS ARE CONTRACTOR FURNISHED.
4. SOIL EROSION AND POLLUTION CONTROL PLAN: SUBMIT A SOIL EROSION AND POLLUTION CONTROL PLAN TO THE COUNTY FOR APPROVAL PRIOR TO BEGINNING WORK ACCORDING TO THE PROJECT SPECIFICATIONS. PROVIDE METHODS TO PREVENT RUNOFF FROM THE CONSTRUCTION SITE FROM ENTERING THE ACTIVE STREAM OR ADJACENT PROPERTIES. PROVIDE A SILT BASIN FOR ANY WATER PUMPED FROM THE EXCAVATION. SEE SHEET 47 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. DISPOSAL: ALL MATERIALS DESIGNATED FOR REMOVAL, EXCEPT FOR MATERIALS TO BE SALVAGED PER THE PROJECT PLANS AND SPECIFICATIONS, BECOME THE PROPERTY OF THE CONTRACTOR UPON REMOVAL AND ARE TO BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
6. UTILITIES: UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. NOT ALL EXISTING UTILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS OF ALL UTILITIES THAT MAY BE IMPACTED BY THIS PROJECT. THE CONTRACTOR SHALL COORDINATE ALL PRIVATE UTILITY RELOCATIONS WITH THE UTILITY PROVIDERS AT NO COST TO THE OWNER.
7. SEWER MAIN PRESERVATION: CONTRACTOR TO COORDINATE WITH PAT BROOK AND WASTEWATER STAFF (406-552-6610) TO TV SEWER MAIN BEFORE AND AFTER THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES TO SEWER MAIN DURING CONSTRUCTION. CONTRACTOR TO GIVE A MINIMUM OF 2 WEEKS NOTICE AHEAD OF CONSTRUCTION ACTIVITIES IN THE VICINITY OF THE AREA TO GIVE ADEQUATE TIME FOR THE SEWER MAIN TO BE VIDEOED.
8. WATERMAIN REPLACEMENT: THE WATERMAIN IS REPLACED ACCORDING TO THE PLANS PROVIDED IN APPENDIX AND IS PAID FOR UNDER SCHEDULE B. SEE PROJECT SPECIFICATIONS.
9. RIGHTS-OF-WAY: DUE TO THE PROXIMITY OF WORK TO ADJACENT PROPERTIES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY LOCATION OF EXISTING RIGHT-OF-WAY PRIOR TO STARTING WORK. WHERE APPLICABLE, THE RIGHT-OF-WAY BASED ON FOUND MONUMENTS TAKES PRECEDENCE OVER THAT BASED ON AS-BUILT PLANS. SEE PROJECT SPECIAL PROVISIONS FOR MORE INFORMATION.
10. SEEDING: UTILIZE 'LOLO NATIONAL FOREST RIPARIAN' SEED MIX FOR ALL DISTURBED AREAS BELOW THE HIGHWATER MARK AND 'LOLO NATIONAL FOREST DRYLAND' SEED MIX FOR ALL OTHER DISTURBED AREAS PER THE PROJECT SPECIFICATIONS.
11. TEMPORARY TRAFFIC CONTROL: SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN TO THE COUNTY FOR APPROVAL PRIOR TO BEGINNING WORK. LOLO STREET MAY BE CLOSED IN THE VICINITY OF THE BRIDGE FOR THE DURATION OF CONSTRUCTION. MAINTAIN ACCESS TO RESIDENTS' DRIVEWAYS AT ALL TIMES. SEE SHEET 46 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
12. MAILBOXES: ALL MAILBOXES ARE TO REMAIN OPERATIONAL DURING CONSTRUCTION, EITHER BY INSTALLING CLUSTER MAILBOXES BEFORE REMOVING EXISTING MAILBOXES OR BY PROVIDING TEMPORARY MAILBOX USE.
13. RESETTING EXISTING SIGNS: RESET STREET SIGNS IN ACCORDANCE WITH PROJECT SPECIFICATIONS, MONTANA DEPARTMENT OF TRANSPORTATION DETAILED DRAWINGS, AND THE MISSOULA CITY PUBLIC WORKS STANDARDS AND SPECIFICATIONS MANUAL.
14. ANTI-GRAFFITI COATING: COATING MEETING PROJECT SPECIFICATIONS WILL BE APPLIED TO THE FOLLOWING PORTIONS OF THE BRIDGE: CONCRETE RAIL ENDS OVER WINGWALLS, INSIDE FACES OF RAIL CURBS, AND ALL EXPOSED FACES OF ABUTMENTS ABOVE FINISHED GROUND.

SITE MATERIAL NOTES

1. CAST IN PLACE CONCRETE: USE F'C = 4500 PSI CONCRETE OUTSIDE OF BRIDGE WORK EXTENTS, FOR SIDEWALKS, CURBS, GUTTERS, AND CURB RAMPS. MIX DESIGN SHALL CONFORM TO MPWSS 03310 AND APPLICABLE CITY OF MISSOULA MODIFICATIONS.

BRIDGE MATERIAL NOTES

1. CAST IN PLACE CONCRETE: USE F'C = 4000 PSI CONCRETE THAT COMPLIES WITH THE FOLLOWING CLASSES:

   SUBSTRUCTURE = CONCRETE CLASS STRUCTURE
   END DIAPHRAGM = CONCRETE CLASS STRUCTURE
   RAISED SIDEWALK = CONCRETE CLASS STRUCTURE - LOW SLUMP
   BRIDGE RAIL CURB = CONCRETE CLASS STRUCTURE - LOW SLUMP

   MAKE ALL CONCRETE IN ACCORDANCE WITH AN MDT APPROVED MIX DESIGN CONFORMING TO MDT SECTION 551 REQUIREMENTS. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" AND FILLET ALL ACUTE ANGLES 3" UNLESS OTHERWISE NOTED.

2. PRESTRESSED CONCRETE BEAMS: USE CONCRETE CLASS PRE THAT INCLUDES 4-6% ENTRAINED AIR. MAXIMUM F'C = 7500 PSI.
3. REINFORCING STEEL: USE NON-PRESTRESSED REINFORCING OF THE DEFORMED TYPE CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60 OR USE ASTM A706, GRADE 60 ONLY WHERE SPECIFIED TO BE WELDED. CUT AND BEND STEEL IN ACCORDANCE WITH ACI 315. FURNISH UNCOATED 'BLACK' REINFORCING BARS UNLESS OTHERWISE NOTED. FURNISH EPOXY-COATED REINFORCING BARS CONFORMING TO ASTM A775 WHERE NOTED WITH SUFFIX (E). CONCRETE COVER SHALL BE AS 2" EXCEPT AS NOTED BELOW:

BOTTOM OF SLAB	1"
TOP OF SLAB	2-1/2"
CAST AGAINST GRADE	3"
BARRIERS & CURBS	1-1/2"

   COVER TO ANY TIE BAR IS 1/2" LESS THAN WHAT IS LISTED ABOVE.

4. PRESTRESSING STEEL: USE PRESTRESSING STEEL OF LOW-RELAXATION PRESTRESSING STRAND CONFORMING TO AASHTO M203, GRADE 270.
5. HARDWARE AND STRUCTURAL STEEL: USE STEEL SHAPES, PLATES AND BARS MEETING THE REQUIREMENTS OF ASTM A36. GALVANIZE ALL STEEL IN ACCORDANCE WITH AASHTO M111 (ASTM A123) UNLESS OTHERWISE NOTED. USE HARDWARE MEETING THE REQUIREMENTS OF ASTM A307 EXCEPT AS NOTED. GALVANIZE HARDWARE IN ACCORDANCE WITH AASHTO M232 (ASTM A153) UNLESS OTHERWISE NOTED.
6. WELDING: WELD IN ACCORDANCE WITH THE BRIDGE WELDING CODE, AWS D1.5 WITH E70XX ELECTRODES. A CERTIFIED WELDER IS REQUIRED.

LEGEND

	EXISTING	PROPOSED
EDGE OF ASPHALT		
PERMANENT SLOPE EASEMENT		
ROAD CENTERLINE		
SIGNS		
MINOR CONTOUR		
MAJOR CONTOUR		
FENCE		
NATURAL GAS LINE	NG	
OVERHEAD POWER LINE	OHP	
POWER POLE		
POWER POLE ANCHOR		
LIGHTING		
UTILITY BOX	T	
RIGHT-OF-WAY BASED ON FOUND MONUMENTS		
RIGHT OF WAY BASED ON AS-BUILT CENTERLINE		
CURB AND GUTTER		
CONSTRUCTION LIMITS		
CONTROL POINT		
ASPHALT CONCRETE PAVEMENT		
CONCRETE		
GRAVEL		
CULVERT		
TOPSOIL AND SEEDING		
WATER VALVE	WV	
WATER LINE	EW	W
SEWER MANHOLE	S	S
SEWER LINE	SS	SS
MAILBOX		
STORM SUMP OR CATCH BASIN		

ABBREVIATIONS

BOT = BOTTOM
ELEV = ELEVATION
(E) = EXISTING
MDT = MONTANA DEPARTMENT OF TRANSPORTATION
MPWSS = MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS
MAX = MAXIMUM
MIN = MINIMUM
(N) = NEW
PL = PLATE
R/W = RIGHT OF WAY
REQ'D = REQUIRED
TRANS = TRANSITION
TYP = TYPICAL
WTR = WATER

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

GENERAL NOTES

SHEET 2 OF 47

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SCHEDULE A - BRIDGE REPLACEMENT ESTIMATED QUANTITES

SPEC	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
MDT	0010	MOBILIZATION	LUMP SUM	1
	0020	CITY PERMITS	LUMP SUM	1
MDT	0030	CONTRACTOR SURVEY AND LAYOUT	LUMP SUM	1
	0040	CONTRACTOR QUALITY CONTROL AND ASSURANCE	LUMP SUM	1
	0050	TEMPORARY TRAFFIC CONTROL	LUMP SUM	1
MDT	0060	SOIL EROSION & POLLUTION CONTROL	LUMP SUM	1
	0070	ASPHALT SAW CUT	LINEAR FOOT	139
	0080	REMOVE EXISTING CURB AND GUTTER	LINEAR FOOT	475
	0090	REMOVE EXISTING CONCRETE SIDEWALK	SQUARE YARD	136
MDT	0100	REMOVE EXISTING GUARDRAIL	LINEAR FOOT	100
	0110	REMOVAL OF PAVEMENT, ASPHALT	SQUARE YARD	570
MDT	0120	CLEARING AND GRUBBING	ACRE	0.8
MDT	0130	REMOVE EXISTING CONCRETE BRIDGE	LUMP SUM	1
MDT	0140	EMBANKMENT IN PLACE	CUBIC YARD	480
MDT	0150	STRUCTURE EXCAVATION, TYPE I	CUBIC YARD	950
MDT	0160	BRIDGE END BACKFILL	CUBIC YARD	300
MDT	0170	PLACED RIPRAP, CLASS II	CUBIC YARD	350
	0180	ADJUST EXISTING MANHOLE	EACH	1
	0190	RELOCATE EXISTING SIGN	EACH	5
	0200	PEDESTRIAN SIGN SYSTEM	EACH	4
	0210	SEPARATION GEOTEXTILE - HIGH STRENGTH	SQUARE YARD	720
	0220	SUB-BASE COURSE, 3" - MINUS	CUBIC YARD	160
	0230	CRUSHED BASE COURSE, 3/4" - MINUS	CUBIC YARD	212
	0240	ASPHALT CONCRETE PAVEMENT, TYPE B, PG 58-28	TON	124
MDT	0250	COMMERCIAL MIX-PG 58-28, BRIDGE ASPHALT OVERLAY	TON	25
	0260	PERMANENT PAVEMENT MARKINGS - WHITE WATERBORNE	GALLON	3
	0270	PERMANENT PAVEMENT MARKINGS - YELLOW WATERBORNE	GALLON	1
	0280	PERMANENT PAVEMENT MARKINGS - YELLOW EPOXY CURB	GALLON	6
MDT	0290	CONCRETE-CLASS STRUCTURE, ABUTMENTS	CUBIC YARD	210
MDT	0300	REINFORCING STEEL, GRADE 60, ABUTMENTS	POUND	21500
MDT	0310	REINFORCING STEEL, GRADE 60, EPOXY COATED	POUND	9000
MDT	0320	ELASTOMERIC BEARING DEVICES	EACH	16
MDT	0330	PRECAST, PRESTRESSED CONCRETE DECK BULB-TEE GIRDERS	LINEAR FOOT	744
MDT	0340	CONCRETE-CLASS STRUCTURE LOW SLUMP, RAISED SIDEWALK	SQUARE YARD	242
MDT	0350	WATERPROOFING MEMBRANE	SQUARE YARD	230
MDT	0360	BRIDGE RAIL, COMBINATION RAIL	LINEAR FOOT	242
MDT	0370	CONCRETE SIDEWALK, 9" DEPTH	SQUARE YARD	52
MDT	0380	ANTI-GRAFFITI COATING	SQUARE YARD	115
	0390	CONCRETE SIDEWALK, 4" DEPTH	SQUARE YARD	322
	0400	TYPICAL "L" TYPE CURB AND GUTTER	LINEAR FOOT	295
	0410	COVE GUTTER	SQUARE YARD	70
	0420	CURB RAMP FORMING, BRIDGE	EACH	4
	0430	CURB RAMP FORMING AND ADA, SIDEWALKS	EACH	5
	0440	STANDARD DRY WELL W. CURB INLET	EACH	3
	0450	CATCH BASIN (CITY OF MISSOULA 24") WITH CURB INLET	EACH	1
	0460	12" HDPE STORM PIPE	LF	23
MDT	0470	ONE-WAY DEPARTURE TERMINAL	EACH	2
MDT	0480	MASH W-BEAM TERMINAL SECTION	EACH	2
MDT	0490	FENCE - WILDLIFE FRIENDLY, 3-STRAND BARBLESS	LINEAR FOOT	250
	0500	TOPSOIL PLACEMENT	SQUARE YARD	1100
	0510	SEEDING	SQUARE YARD	1100

1

NOTE: ITEMS WITH SPECIFICATIONS LISTED AS 'MDT' ARE GOVERNED BY MDT SPECIFICATIONS. ALL OTHERS ARE GOVERNED BY MPWSS SPECIFICATIONS WITH APPLICABLE CITY OF MISSOULA MODIFICATIONS. SPECIFICATION NUMBERS THAT CORRESPOND TO THE ITEM NUMBERS ARE LISTED IN THE SPECIAL PROVISIONS. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND APPLICABLE SPECIAL PROVISIONS.

SCHEDULE B - WATER MAIN ESTIMATED QUANTITES

SEE APPENDIX FOR QUANTITIES WHICH CORRESPOND TO THE WATER MAIN REPLACEMENT.

CALL
TWO WORKING DAYS
BEFORE YOU DIG
(ID, MT, ND, OR, WA, WY)

CALL 1-800-424-5555
WWW.MONTANA811.ORG
UNDERGROUND UTILITIES LOCATION CENTER

WITH THE FOLLOWING:
COUNTY MISSOULA
NEAREST CITY MISSOULA
SEC. & 1/4 SEC. NO.# 14-SE 1/4 (S 1/4 OF SE 1/4)
TOWNSHIP & RANGE T 13 N, R 19 W

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
DRAWN PAD DATE 08/2026
CHECKED JWR SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUMMARY OF ESTIMATED QUANTITIES

SHEET 3 OF 47

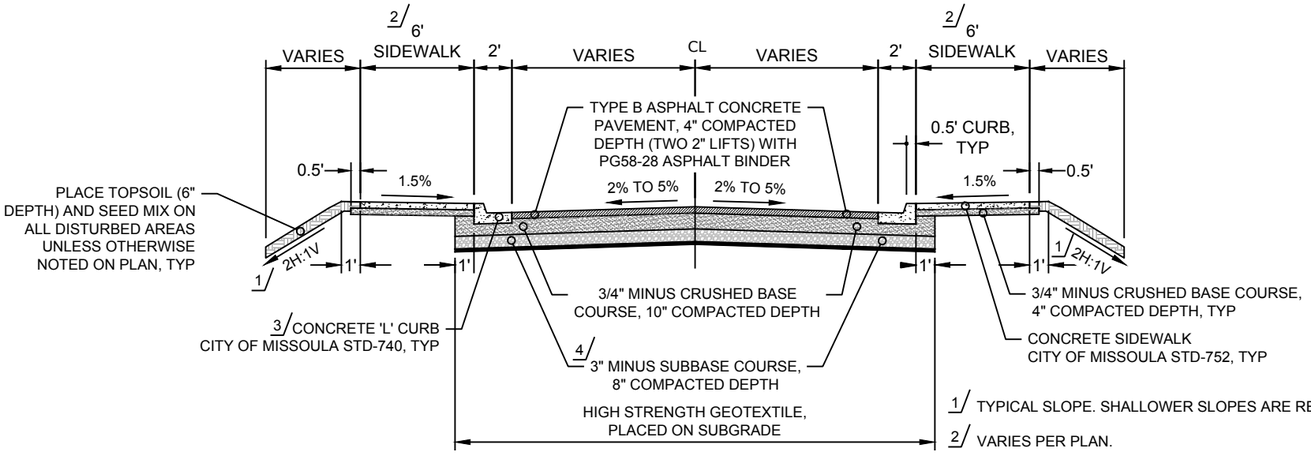
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CENTERLINE POINTS

POINT #	STATION	DESCRIPTION	NORTHING	EASTING	REMARKS
15000	0+00.00	BP	992635.9907	851336.9796	
15001	1+48.47	PC	992624.1519	851484.9751	
15002	1+88.03		992617.7686	851523.9731	BEGIN ROAD WORK
15003	2+85.85	PT	992575.6468	851611.5147	
15004	3+12.58		992559.4218	851632.7576	START BRIDGE
15005	4+08.58		992501.1510	851709.0500	END BRIDGE
15006	4+94.24	PC	992449.1615	851777.1183	
15007	5+41.73	PT	992432.8759	851820.9897	
15008	5+48.46		992432.4816	851827.7071	END ROAD WORK
15009	8+90.12	EP	992412.4617	852168.7851	

CONTROL POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	992136.25	852994.45	3342.08	SET 1" RPC ON 5/8" REBAR
CP-2	992793.09	853534.73	3361.78	SET 1" RPC ON 5/8" REBAR
CP-3	992628.69	851558.76	3313.47	SET 1" RPC ON 5/8" REBAR
CP-4	992471.00	851720.23	3309.86	SET MAG NAIL
CP-5	992616.81	851300.00	3324.66	SET 1" RPC ON 5/8" REBAR
CP-6	992414.97	851803.18	3305.40	SET 1" RPC ON 5/8" REBAR
CP-7	992397.08	852024.95	3305.79	SET 1" RPC ON 5/8" REBAR



ROAD TYPICAL SECTION

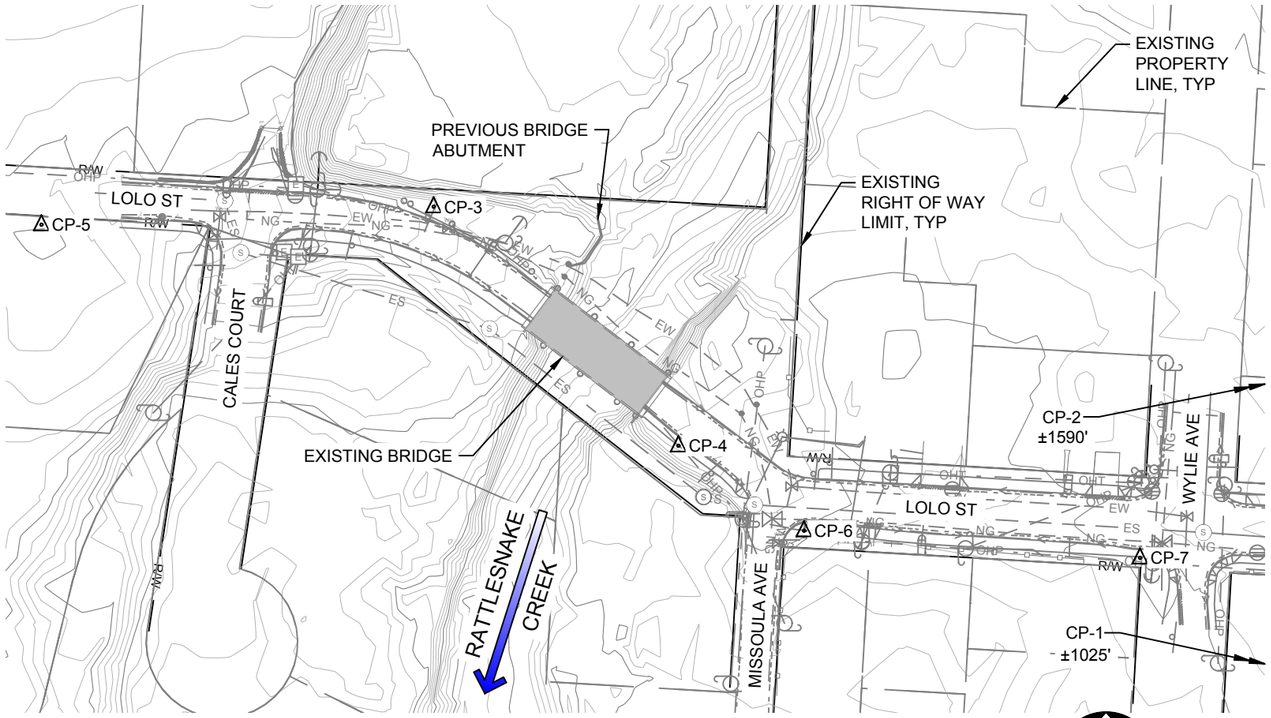
NOT TO SCALE
STA 2+50.00 TO 3+12.58
AND
STA 4+08.58 TO 5+48.46

1/ TYPICAL SLOPE. SHALLOWER SLOPES ARE REQUIRED WHERE NOTED PER PLAN.

2/ VARIES PER PLAN.

3/ TRANSITIONS TO COVE GUTTER, SEE SHEET 13 FOR DETAILS.

4/ IF A MINIMUM OF 8" OF EXISTING SUBBASE REMAINS WHEN EXCAVATING TO THE GRADES SHOWN IN THE PLANS, UNDERLYING GEOTEXTILE CAN BE OMMITTED AND NEW BASE COURSE CAN BE PLACED DIRECTLY ON EXISTING SUBBASE. QUANTITIES SHOWN IN THE PLANS AND ESTIMATE ARE BASED ON REPLACING THE FULL ROADWAY SECTION AT SPECIFIED LOCATIONS.



PROJECT CONTROL

NOT TO SCALE

SURVEY CONTROL INFORMATION

PROJECT: LOLO STREET BRIDGE MISSOULA COUNTY
DATE OF FIELD WORK: SPRING 2023
VERTICAL DATUM: NAVD 88
PROJECT UNITS: INTERNATIONAL FEET
COORDINATE SYSTEM: MODIFIED MONTANA STATE PLANE - 2500
PROJECT COMBINATION SCALE FACTOR: 1.0007612462
SPC TRANSLATION POINT: N46° 53' 06.52926" W 113° 58' 17.35905"

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LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

PROJECT CONTROL & TYPICAL SECTIONS

SHEET 4 OF 47

PLOTTED BY: JACOB.C.GULA:\WORK\DJA-PROJ\7600\7611\DLG\STREET BRIDGE - PATROL.DWG

LEGEND:

OVERHEAD POWER & COMM (NWE & CHARTER) - PROPOSED RELOCATE: OH OH OH
NATURAL GAS (NWE) - PROPOSED RELOCATE: G
WATER MAIN (CITY OF MISSOULA) - PROPOSED RELOCATE: SEE APPENDIX

GENERAL NOTES:

1. LINEWORK DEPICTING UTILITY RELOCATES IS SUBJECT TO CHANGE AND WILL BE DEPENDANT ON FINAL DESIGN BY INDIVIDUAL UTILITY OWNERS.

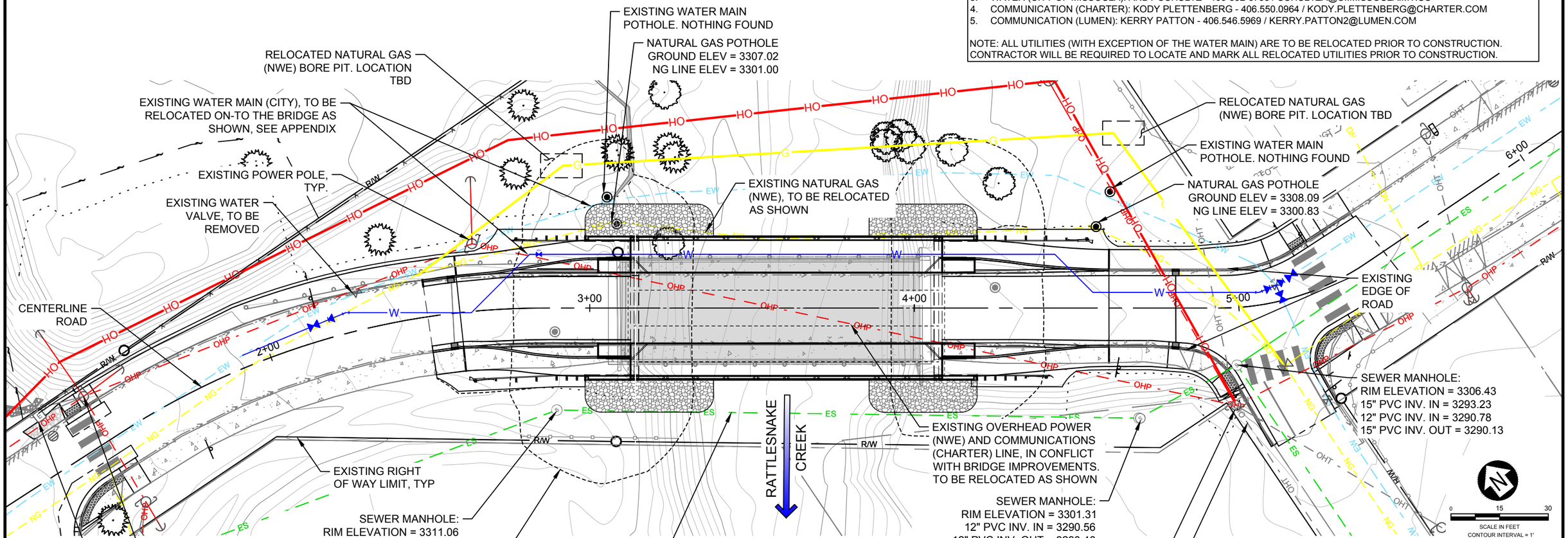
UTILITY CONFLICTS:

NATURAL GAS: STA 3+04 TO 4+20 (PARALLEL)
OVERHEAD POWER: STA 2+70 TO STA 5+00 (DIAGONAL CROSSING OVER BRIDGE)
WATER: STA 2+71 TO STA 4+87 (PARALLEL)
COMMUNICATION (CHARTER): STA 2+70 TO STA 5+00 (DIAGONAL CROSSING OVER BRIDGE W/ NWE)

UTILITY RELOCATION BY OTHERS:

1. NATURAL GAS (NWE): PATRICK KIENBERGER - 406.241.6037 / PATRICK.KIENBERGER@NORTHWESTERN.COM
2. POWER (NWE): PATRICK KIENBERGER - 406.241.6037 / PATRICK.KIENBERGER@NORTHWESTERN.COM
3. WATER (CITY OF MISSOULA): ANDY SCHULTZ - 406-552-6758 / SCHULTZA@CI.MISSOULA.MT.US
4. COMMUNICATION (CHARTER): KODY PLETTENBERG - 406.550.0964 / KODY.PLETTENBERG@CHARTER.COM
5. COMMUNICATION (LUMEN): KERRY PATTON - 406.546.5969 / KERRY.PATTON2@LUMEN.COM

NOTE: ALL UTILITIES (WITH EXCEPTION OF THE WATER MAIN) ARE TO BE RELOCATED PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO LOCATE AND MARK ALL RELOCATED UTILITIES PRIOR TO CONSTRUCTION.



PLAN

NOTE: SEE SHEET 16. FOR STORMWATER WORK

REVISION	DATE	DESCRIPTION
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DESIGNER N/A PROJ. NO. 7611
DRAWN DL DATE 08/2026
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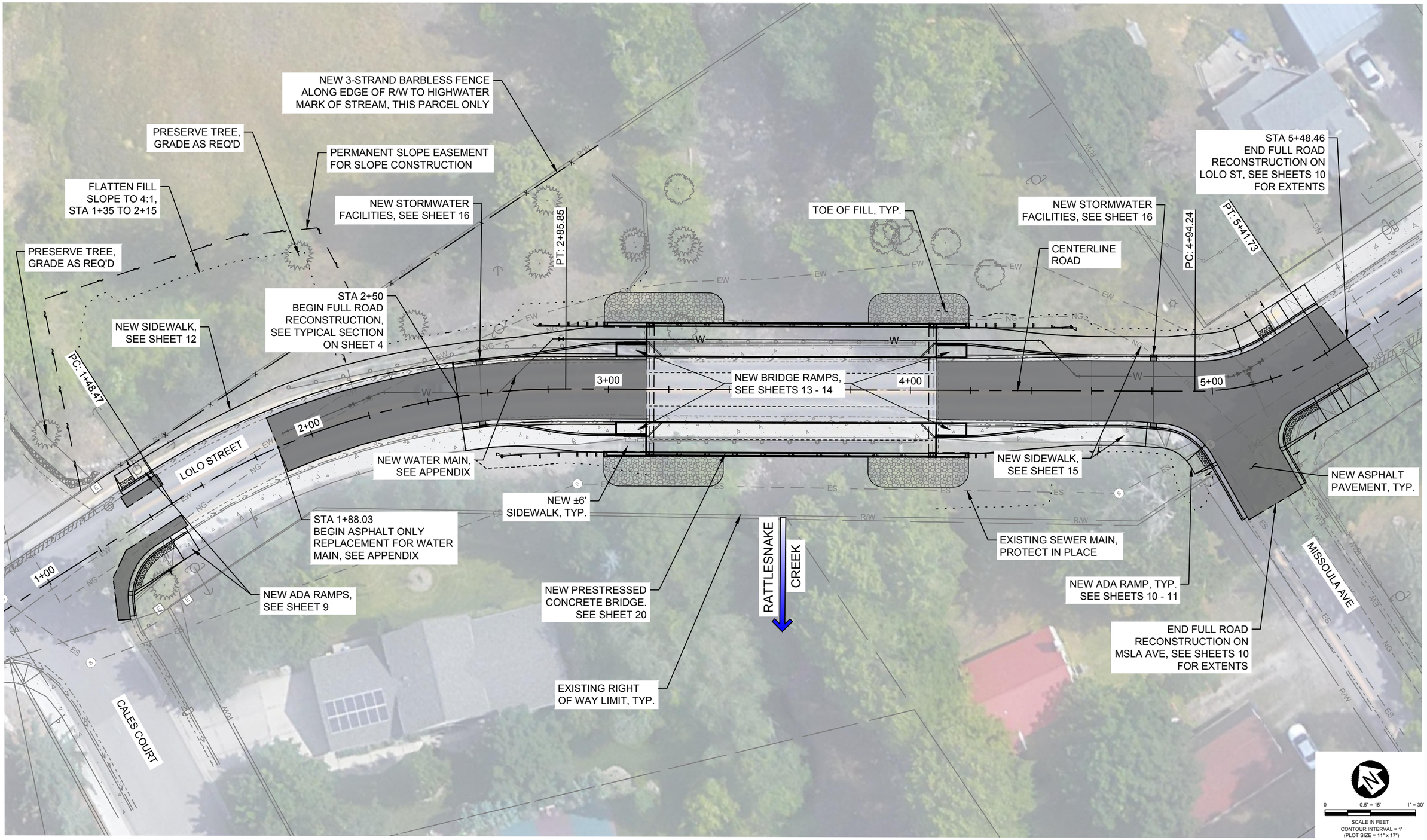
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SITE UTILITY OVERVIEW

SHEET 5 OF 47

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SITE PLAN OVERVIEW

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
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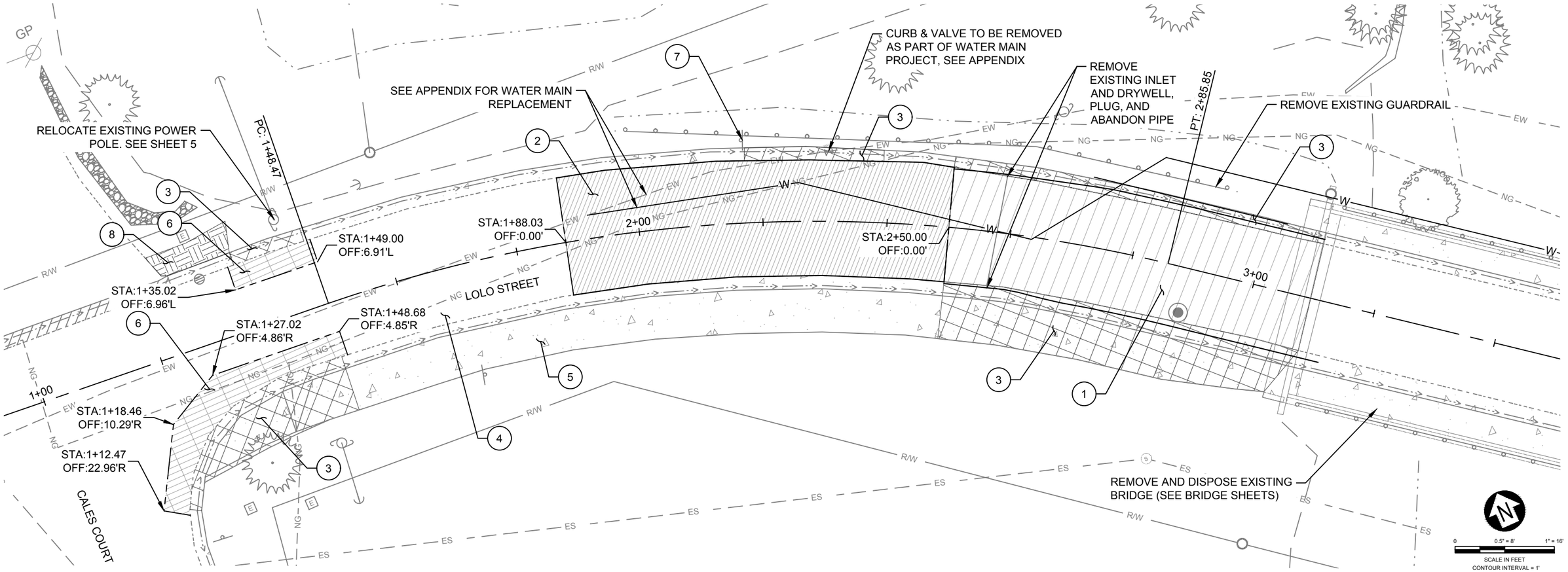
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

CIVIL SITE OVERVIEW

SHEET 6 OF 47

J:\2026\26-38_JACOB\CIVIL\DRAWINGS\LOLO BRIDGE\MISSOULA LOLO STREET BRIDGE - SITE OVERVIEW & DRAWING INDEX.DWG



CONSTRUCTION NOTES: DEMOLITION - (#)

1. REMOVE AND REPLACE ROAD SECTION. SEE SHEET 4 FOR TYPICAL SECTION.
2. ASPHALT TO BE REMOVED IN WATERLINE REPLACEMENT PROJECT (SEE APPENDIX).
3. DEMOLISH CONCRETE CURB, GUTTER, & SIDEWALK. DISPOSE OFFSITE.
4. PROTECT IN PLACE EXISTING ASPHALT.
5. PROTECT IN PLACE EXISTING SIDEWALK TO REMAIN.
6. REMOVE AND REPLACE ASPHALT PER CITY OF MISSOULA STD-744.
7. REMOVE AND RELOCATE SIGN 2' BEHIND PROPOSED SIDEWALK OR CURB WHEN SIDEWALK IS NOT PRESENT.
8. REMOVE EXISTING TOPSOIL AND VEGETATION.

GENERAL NOTES: DEMOLITION

1. UTILITIES: UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. NOT ALL UTILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THIS PROJECT.
2. SEE SHEET 5 FOR KNOWN IMPACTS TO EXISTING UTILITIES.

LEGEND: DEMOLITION

- FULL ROAD SECTION REMOVAL
- ASPHALT TO BE REMOVED FOR WATER MAIN, SEE APPENDIX
- CONCRETE CURB, GUTTER, AND SIDEWALK TO BE REMOVED
- ASPHALT REMOVAL FOR CURB REPLACEMENT
- TOP SOIL AND VEGETATION REMOVAL

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
DRAWN MZ | DATE 08/2026
CHECKED BB | SURVEYED DJ&A, P.C.

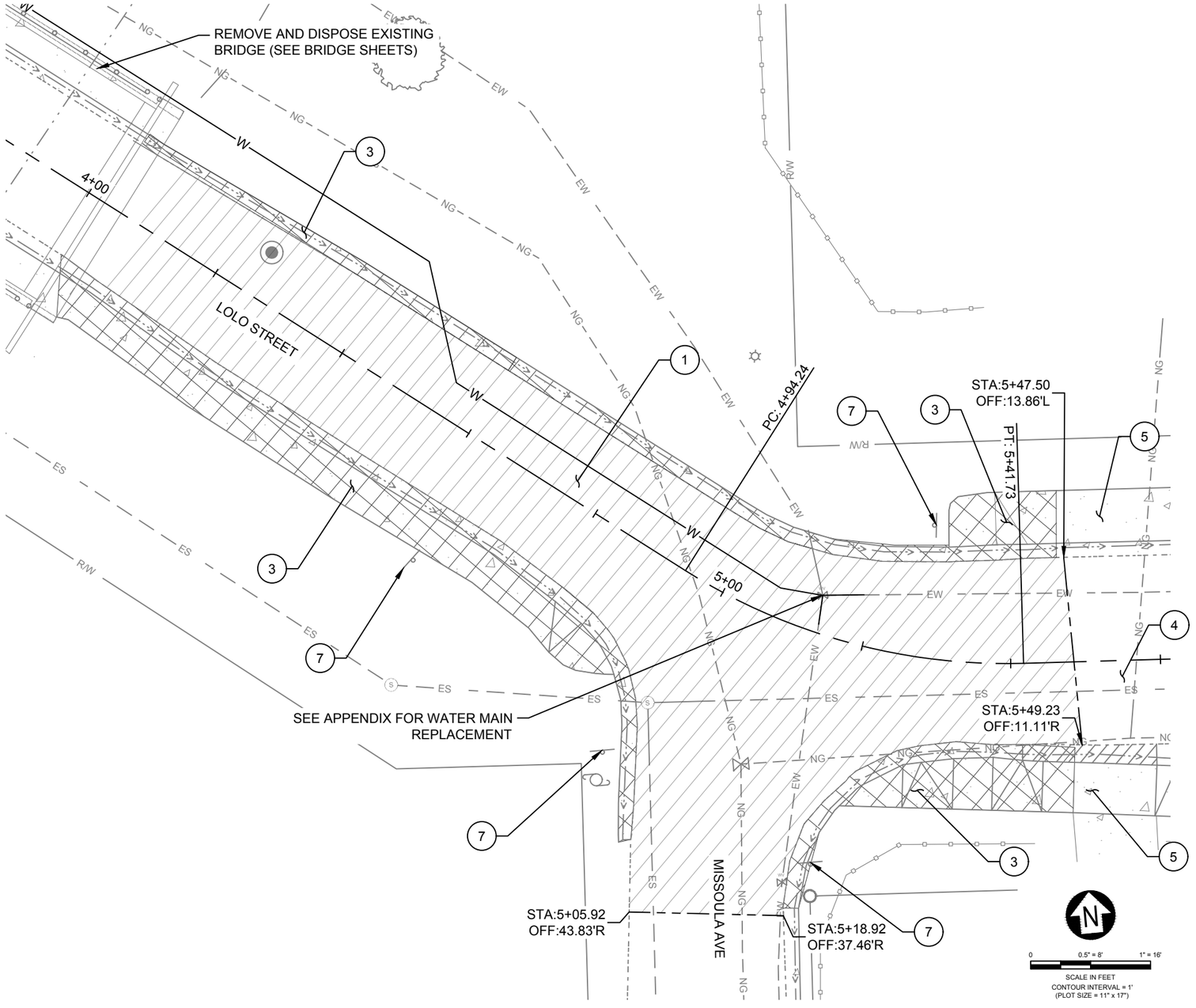
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

CIVIL DEMO PLANS WEST OF BRIDGE

SHEET 7 OF 47

J:\PROJECTS\7611 LOLO STREET BRIDGE - SITE OVERVIEW & DEMO PLANS\DWG\7611 LOLO STREET BRIDGE - SITE OVERVIEW & DEMO PLANS.DWG



CONSTRUCTION NOTES: DEMOLITION - (#)

1. REMOVE AND REPLACE ROAD SECTION. SEE SHEET 4 FOR TYPICAL SECTION.
2. ASPHALT TO BE REMOVED IN WATERLINE REPLACEMENT PROJECT (SEE APPENDIX).
3. DEMOLISH CONCRETE CURB, GUTTER, & SIDEWALK. DISPOSE OFFSITE.
4. PROTECT IN PLACE EXISTING ASPHALT.
5. PROTECT IN PLACE EXISTING SIDEWALK TO REMAIN.
6. REMOVE AND REPLACE ASPHALT PER CITY OF MISSOULA STD-744.
7. REMOVE AND RELOCATE SIGN 2' BEHIND PROPOSED SIDEWALK OR CURB WHEN SIDEWALK IS NOT PRESENT.
8. REMOVE EXISTING TOP SOIL AND VEGETATION.

GENERAL NOTES: DEMOLITION

1. UTILITIES: UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. NOT ALL UTILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THIS PROJECT.
2. SEE SHEET 5 FOR IMPACTS TO EXISTING UTILITIES.

LEGEND: DEMOLITION

- FULL ROAD SECTION REMOVAL
- ASPHALT TO BE REMOVED FOR WATER MAIN, SEE APPENDIX
- CONCRETE CURB, GUTTER, AND SIDEWALK TO BE REMOVED
- ASPHALT REMOVAL FOR CURB REPLACEMENT
- TOP SOIL AND VEGETATION REMOVAL

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
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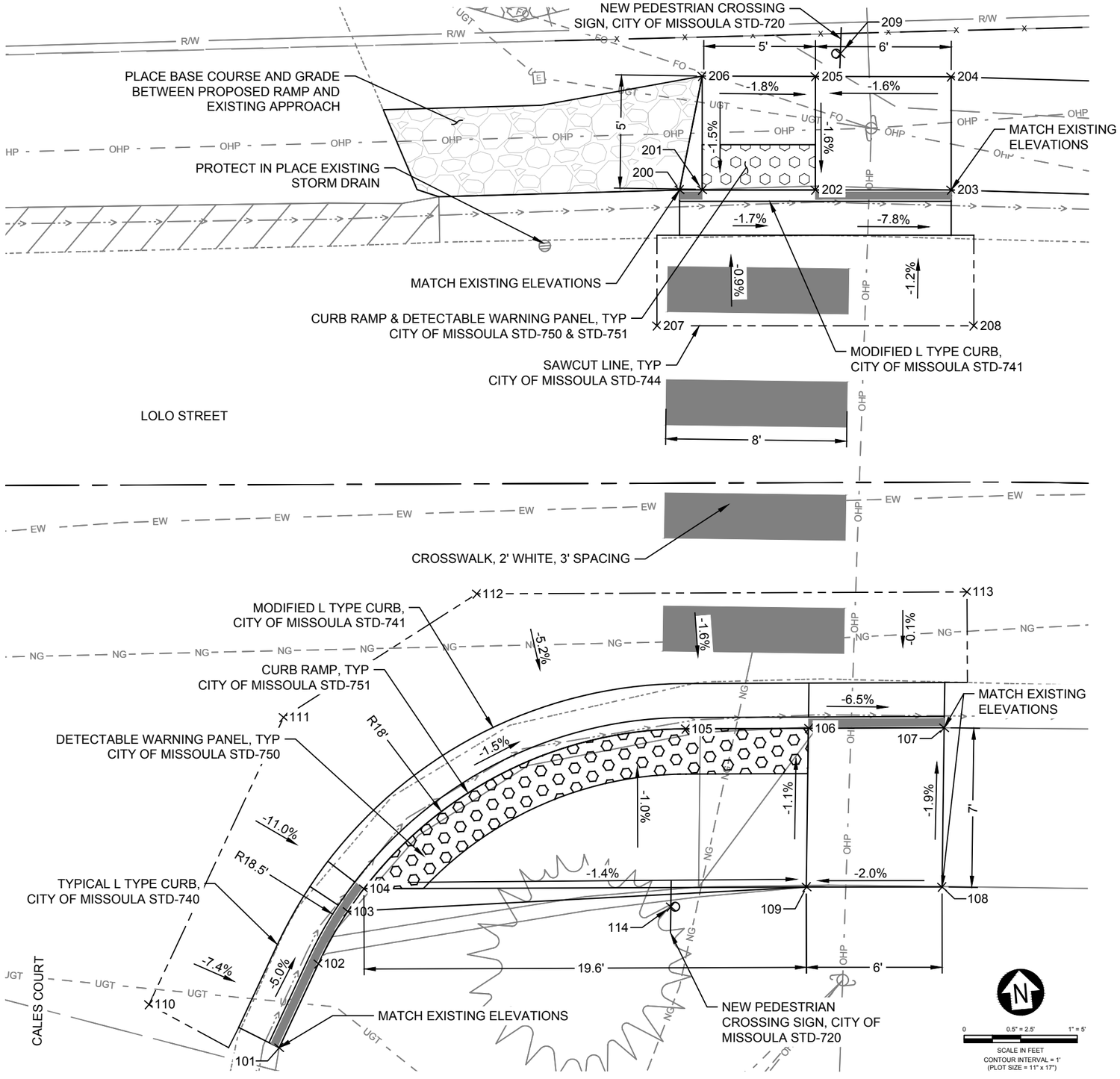
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

CIVIL DEMO PLANS EAST OF BRIDGE

SHEET 8 OF 47

J:\JOBS\26.06_MCDB_LOLO_BRIDGE\MISSOULA_LOLO_STREET_BRIDGE_PSE_OVERHAUL\11 DRAWINGS\LOLO STREET BRIDGE_PSE_DEMO.DWG



NOTES:
1. ALL DIMENSIONS ARE TO TOP BACK OF CURB OR BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.

2. ALL LANDINGS AT RAMPS ARE NOT TO EXCEED 2.0% IN ANY DIRECTION.

3. ALL NEW TYPE L CURB TO BE PAINTED WITH YELLOW EPOXY.

NORTH RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
200	992638.06	851473.62	3317.53	TBC, BEGIN CURB
201	992637.97	851474.62	3317.07	LAYDOWN
202	992637.56	851479.60	3316.98	LAYDOWN, GRADE BRK
203	992637.06	851485.58	3317.05	TBC, END CURB
204	992642.04	851486.00	3317.15	SIDEWALK
205	992642.56	851480.02	3317.06	SIDEWALK
206	992642.99	851475.04	3317.15	SIDEWALK
207	992632.16	851472.12	3317.25	SAWCUT
208	992631.00	851486.08	3316.65	SAWCUT
209	992643.46	851481.20	3316.68	W11-2, W17-7P

SOUTH RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	992601.76	851452.83	3318.34	TBC, BEGIN CURB
102	992605.31	851454.87	3318.14	TBC, PC
103	992607.51	851456.35	3317.99	TBC
104	992608.45	851457.15	3317.44	LAYDOWN, GRADE BRK
105	992614.31	851471.92	3317.17	LAYDOWN, PT
106	992613.87	851477.34	3317.09	LAYDOWN, GRADE BRK
107	992613.40	851483.29	3317.15	TBC, END CURB
108	992606.40	851482.61	3317.29	SIDEWALK
109	992606.89	851476.65	3317.17	SIDEWALK
110	992604.14	851447.26	3318.13	SAWCUT
111	992616.29	851454.24	3317.93	SAWCUT
112	992621.02	851463.21	3317.66	SAWCUT
113	992619.30	851484.80	3316.73	SAWCUT
114	992606.53	851470.60	3317.58	W11-2, W16-7P

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
DRAWN MZ | DATE 08/2026
CHECKED BB | SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

CIVIL RAMP DETAILS WEST OF BRIDGE

SHEET 9 OF 47

J:\2025\25127.JACOB.CIVIL\MWORD\CIVIL\PROD\DRG\25127LOLO STREET BRIDGE_CRADING & EFFLR AIS.DWG

NOTES:
1. ALL DIMENSIONS ARE TO TOP BACK OF CURB OR BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.

2. ALL LANDINGS AT RAMPS ARE NOT TO EXCEED 2.0% IN ANY DIRECTION.

3. ALL NEW TYPE L CURB TO BE PAINTED WITH YELLOW EPOXY.

4. SEE SHEET 11 FOR POINT TABLES.

SEE SHEET 16 FOR STORMWATER DETAILS

NEW WATER MAIN, SEE APPENDIX

LOLO STREET

TYPICAL L TYPE CURB, CITY OF MISSOULA STD-740

NEW PEDESTRIAN CROSSING SIGN, CITY OF MISSOULA STD-720

REMOVE AND RELOCATE EXISTING SIGN 2' BEHIND PROPOSED SIDEWALK

MATCH EXISTING ELEVATIONS

MODIFIED L TYPE CURB, CITY OF MISSOULA STD-741

CURB RAMP, TYP CITY OF MISSOULA STD-751

CURB RAMP, TYP SIMILAR TO CITY OF MISSOULA STD-751

CROSSWALK, 2' WHITE, 3' SPACING, TYP.

DETECTABLE WARNING PANEL, TYP CITY OF MISSOULA STD-750

TRANSITION CURB TO MATCH EXISTING

REMOVE AND RELOCATE EXISTING SIGN 2' BEHIND PROPOSED SIDEWALK/CURB

MODIFIED L TYPE CURB, CITY OF MISSOULA STD-741

TYPICAL L TYPE CURB, CITY OF MISSOULA STD-740

NEW PEDESTRIAN CROSSING SIGNS, CITY OF MISSOULA STD-720

MATCH EXISTING ELEVATIONS

REMOVE AND RELOCATE EXISTING SIGN 2' BEHIND PROPOSED CURB

MATCH EXISTING ELEVATIONS

MATCH EXISTING STRIPING, 4" YELLOW WATERBORNE

MISSOULA AVE

MATCH EXISTING STRIPING, 4" WHITE WATERBORNE

SCALE IN FEET
CONTOUR INTERVAL = 1'
(PLOT SIZE = 11" x 17")

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ PROJ. NO. 7611
DRAWN MZ DATE 08/2026
CHECKED BB SURVEYED DJ&A, P.C.

ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

CIVIL RAMP DETAILS EAST OF BRIDGE

SHEET 10 OF 47

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NORTHEAST RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
300	992468.26	851771.84	3307.44	TBC, BEGIN CURB
301	992457.76	851785.66	3306.74	TBC, PC
302	992451.58	851797.78	3306.14	TBC, GRADE BRK
303	992450.11	851805.16	3305.58	LAYDOWN, PT, GRADE BRK
304	992449.73	851810.13	3305.50	LAYDOWN, GRADE BRK
305	992449.26	851816.13	3305.79	TBC
306	992448.44	851826.74	3305.33	TBC, END CURB
307	992455.44	851827.35	3305.45	SIDEWALK
308	992456.25	851816.74	3305.86	SIDEWALK
309	992456.70	851810.76	3305.60	SIDEWALK
310	992457.08	851805.77	3305.70	SIDEWALK
311	992458.28	851799.81	3306.19	SIDEWALK
312	992462.02	851791.77	3306.62	SIDEWALK
313	992469.08	851780.71	3307.25	SIDEWALK
314	992473.05	851775.47	3307.56	SIDEWALK
315	992446.37	851827.56	3304.99	SAWCUT
316	992458.59	851812.26	3305.81	W11-2, W16-7P
317	992459.08	851805.95	3305.99	RELOCATED SIGN

SOUTHWEST RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
400	992448.94	851756.97	3307.68	TBC, BEGIN CURB
401	992445.61	851760.69	3307.49	TBC, PC
402	992432.77	851766.98	3306.41	LAYDOWN, GRADE BRK
403	992428.92	851766.86	3306.34	LAYDOWN, PT
404	992426.56	851766.54	3306.31	LAYDOWN, GRADE BRK
405	992425.56	851766.41	3306.72	TBC
406	992405.69	851763.77	3305.42	TBC, END CURB
407	992427.35	851760.59	3306.40	SIDEWALK
408	992429.71	851760.91	3306.45	SIDEWALK
409	992432.35	851760.99	3306.50	SIDEWALK
410	992441.14	851756.69	3307.32	SIDEWALK
411	992444.47	851752.97	3307.74	SIDEWALK
412	992404.44	851765.63	3304.95	SAWCUT
413	992424.68	851764.27	3306.28	RELOCATED SIGN

SOUTHEAST RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	992402.86	851788.25	3305.29	TBC, BEGIN CURB
501	992415.66	851790.02	3305.62	TBC
502	992416.65	851790.15	3305.17	LAYDOWN, PC, GRADE BRK
503	992421.65	851794.82	3305.29	LAYDOWN, GRADE BRK
504	992422.53	851800.08	3305.19	LAYDOWN, PT
505	992421.72	851806.92	3305.09	LAYDOWN, GRADE BRK
506	992421.02	851812.88	3305.25	TBC (4" REVEAL)
507	992420.67	851815.81	3305.18	TBC (4" REVEAL)
508	992419.11	851826.61	3304.78	LAYDOWN, END CURB
509	992412.44	851825.82	3304.65	SIDEWALK
510	992413.72	851814.99	3305.30	SIDEWALK
511	992414.06	851812.06	3305.37	SIDEWALK
512	992414.77	851806.10	3305.21	SIDEWALK
513	992402.14	851786.13	3304.80	SAWCUT
514	992420.96	851827.83	3304.60	SAWCUT
515	992413.43	851799.85	3305.46	W11-2, W16-7P
516	992412.52	851791.60	3305.70	RELOCATED SIGN

3/2026 10:17 J:\ACAD_C\CIVIL\MISSOULA\PROJ\7611\LOLO STREET BRIDGE - ENGINEERING & SITE PLANS.DWG

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
DRAWN MZ | DATE 08/2026
CHECKED BB | SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

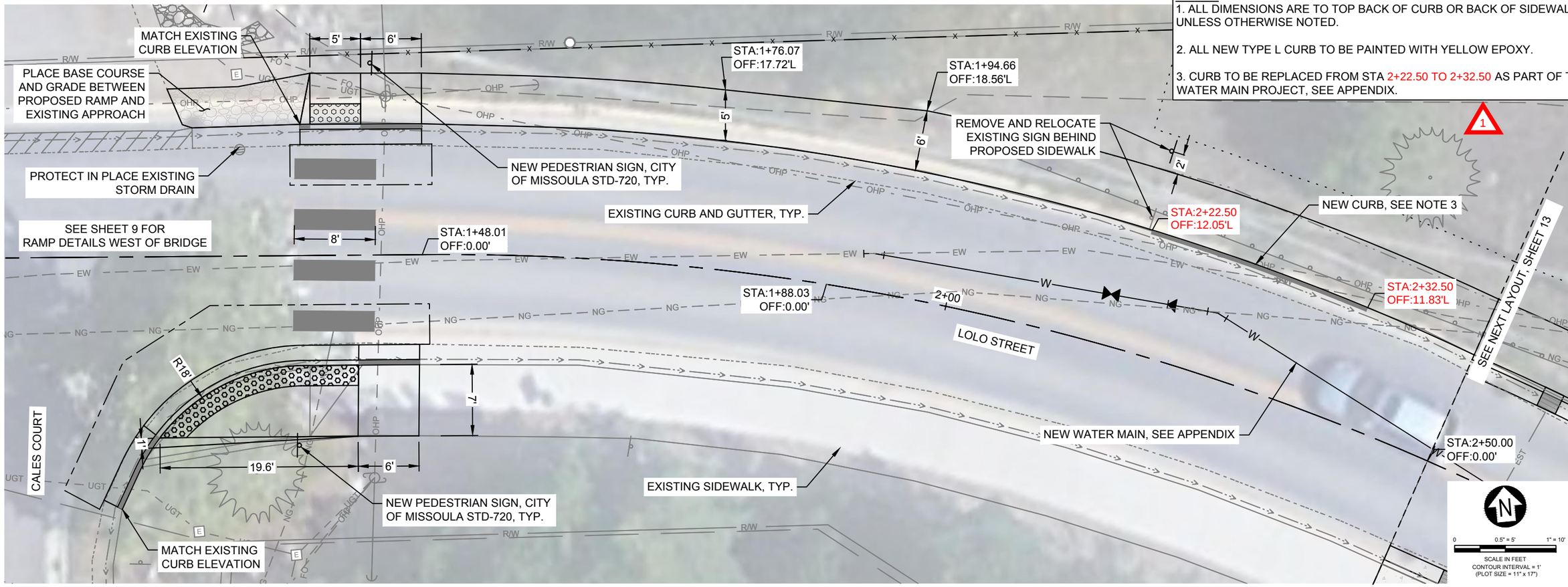
CIVIL RAMP POINT TABLES EAST OF BRIDGE

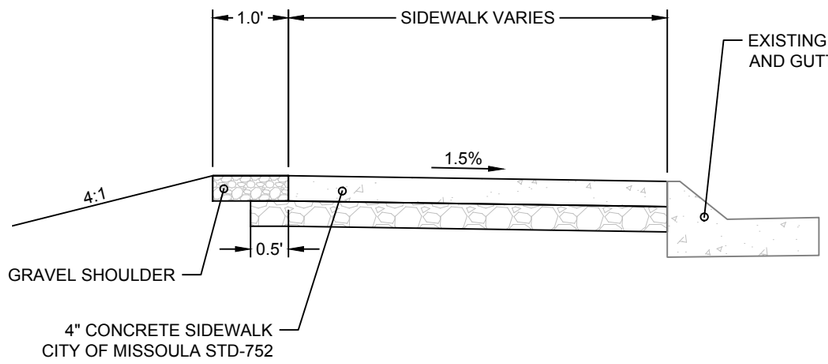
SHEET 11 OF 47

NOTES:
1. ALL DIMENSIONS ARE TO TOP BACK OF CURB OR BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.

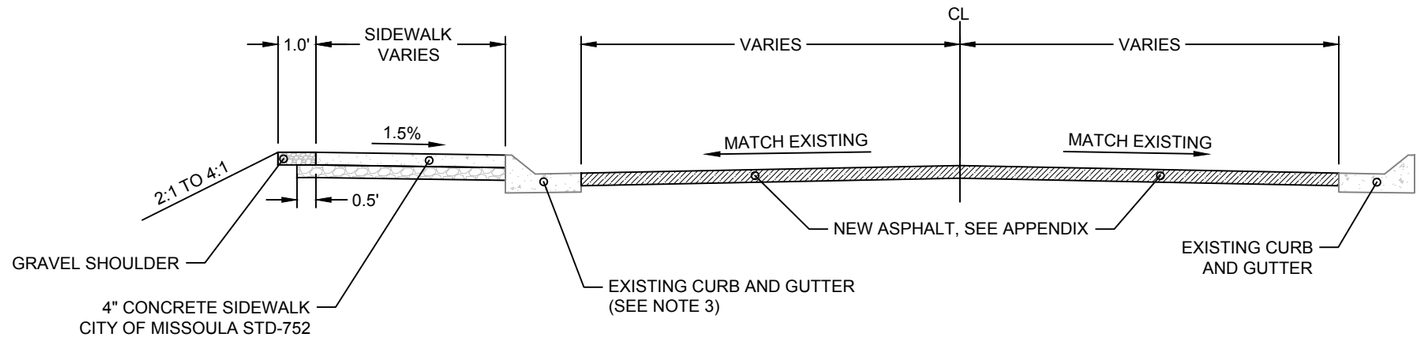
2. ALL NEW TYPE L CURB TO BE PAINTED WITH YELLOW EPOXY.

3. CURB TO BE REPLACED FROM STA 2+22.50 TO 2+32.50 AS PART OF THE WATER MAIN PROJECT, SEE APPENDIX.





TYPICAL SECTION 1
NOT TO SCALE
STA 1+48.01 TO 1+88.03



TYPICAL SECTION 1
NOT TO SCALE
STA 1+88.03 TO 2+50.00

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
DRAWN MZ | DATE 08/2026
CHECKED BB | SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

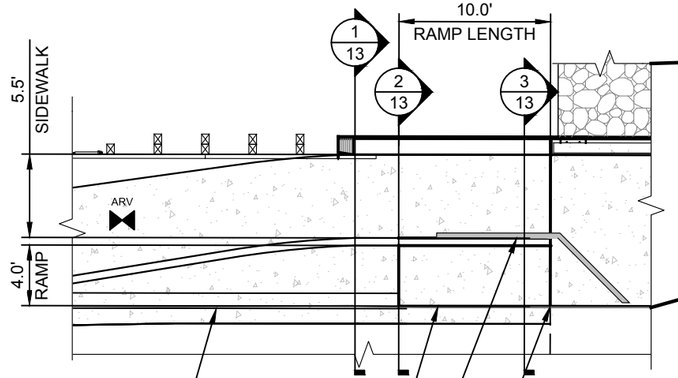
CIVIL WEST SIDEWALK DETAILS

SHEET 12 OF 47

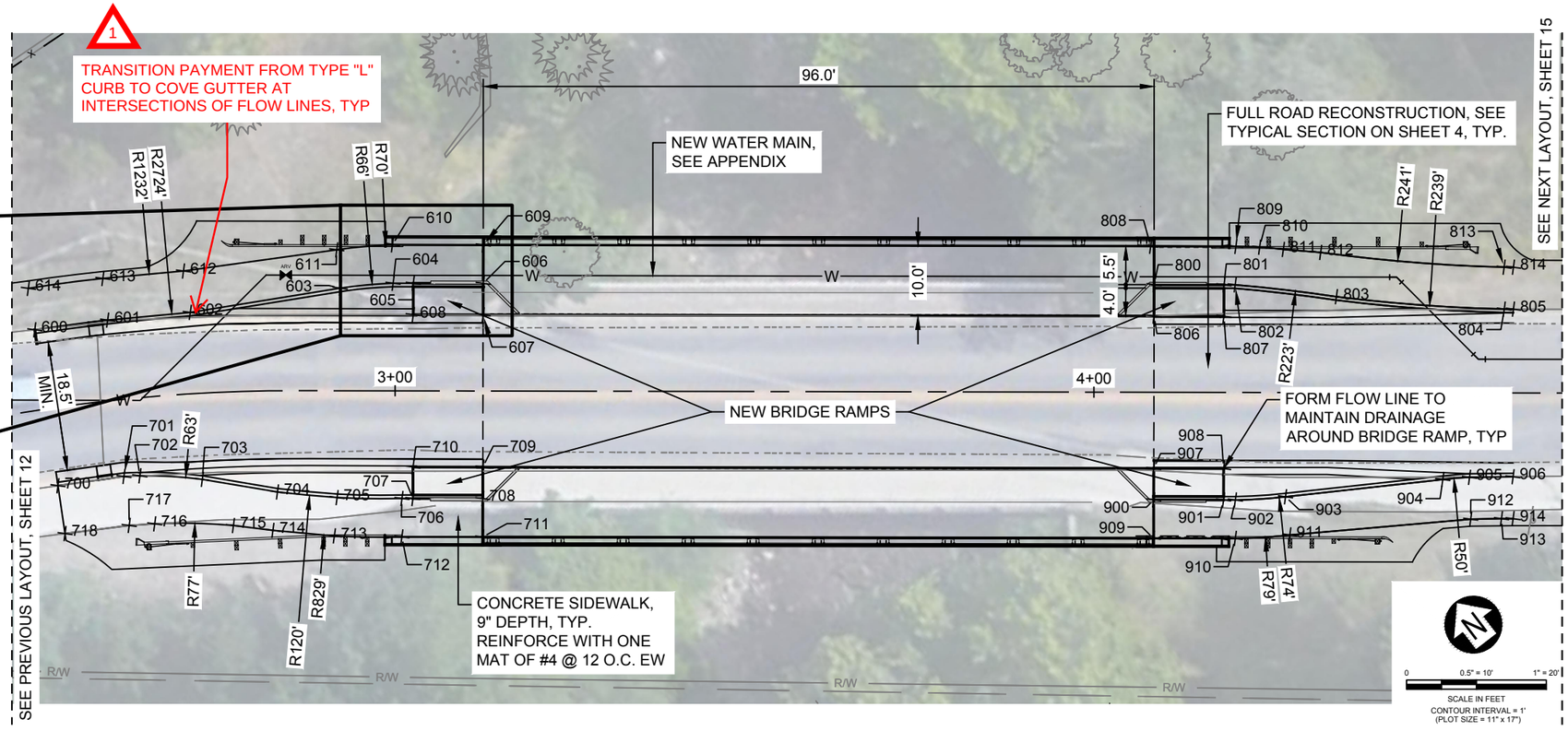
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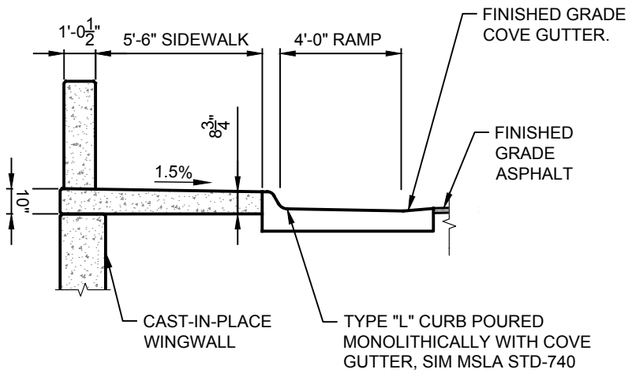
NOTES:
1. ALL DIMENSIONS ARE TO TOP BACK OF CURB OR BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.

2. ALL LANDINGS AT RAMPS ARE NOT TO EXCEED 2.0% IN ANY DIRECTION.

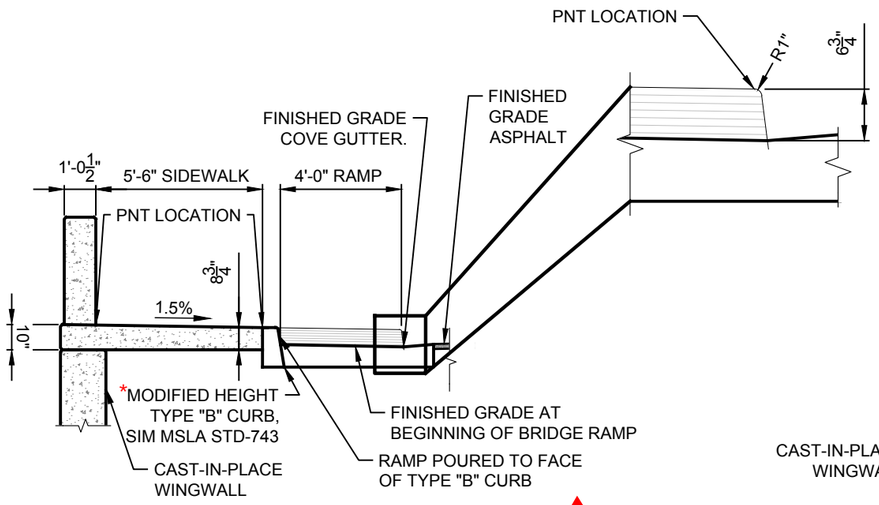


PLAN
SCALE: 1" = 10'



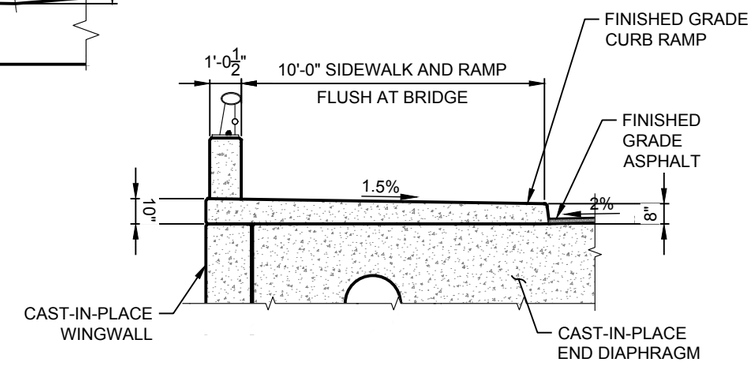


1 / 13 SECTION
NOT TO SCALE



2 / 13 SECTION
NOT TO SCALE

*NOTE: TYPE "B" CURB IS INCIDENTAL TO ITEM 0420 (1)



3 / 13 SECTION
NOT TO SCALE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BRIDGE END SIDEWALK & RAMP DETAILS

SHEET 13 OF 47

J:\2026\26-07 JACOB\C\CAD\PLANS\PDF\LOLA BRIDGE\SHEETS\26-07 LOLO STREET BRIDGE - CURB RAMP.DWG

NORTHWEST BRIDGE RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
600	992605.23	851587.02	3312.86	TBC
601	992600.02	851596.16	3312.78	TBC, PCC
602	992593.74	851606.24	3312.48	TBC, PI
603	992583.51	851625.42	3312.06	TBC, PC
604	992579.49	851631.86	3311.91	TBC, PT
605	992577.74	851634.16	3311.85	TBC
606	992571.67	851642.11	3311.64	TBC
607	992568.09	851639.38	3311.55	RAMP
608	992574.16	851631.43	3311.27	RAMP
609	992576.04	851645.45	3311.72	9" SIDEWALK
610	992583.93	851635.12	3312.00	9" SIDEWALK
611	992588.18	851628.34	3312.16	SIDEWALK
612	992599.04	851609.05	3312.59	SIDEWALK
613	992605.17	851599.23	3312.87	SIDEWALK
614	992610.50	851589.88	3313.20	SIDEWALK

SOUTHWEST BRIDGE RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
700	992585.46	851576.14	3312.55	TBC
701	992580.79	851584.47	3312.79	TBC, PI
702	992579.48	851586.33	3312.73	TBC, PC
703	992573.68	851593.13	3312.50	TBC, PT
704	992565.72	851600.60	3312.27	TBC, PC
705	992559.92	851606.90	3312.08	TBC
706	992554.20	851614.22	3311.88	TBC, PT
707	992553.25	851615.46	3311.85	TBC
708	992547.18	851623.41	3311.65	TBC
709	992550.75	851626.14	3311.56	RAMP
710	992556.82	851618.19	3311.27	RAMP
711	992542.81	851620.07	3311.73	9" SIDEWALK
712	992549.83	851610.87	3311.97	9" SIDEWALK
713	992555.79	851603.27	3312.18	SIDEWALK
714	992561.74	851596.76	3312.37	SIDEWALK
715	992565.72	851592.68	3312.50	SIDEWALK
716	992572.73	851583.85	3312.78	SIDEWALK
717	992574.76	851580.81	3312.90	SIDEWALK
718	992579.38	851572.80	3313.13	SIDEWALK

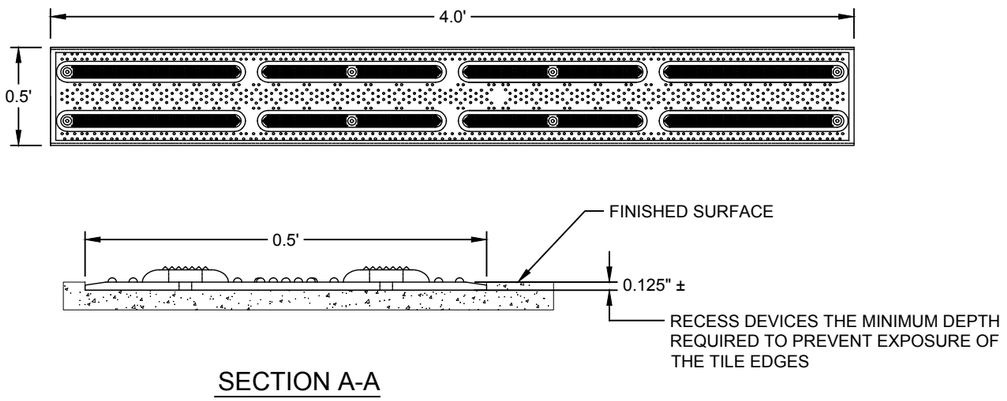
NORTHEAST BRIDGE RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
800	992513.39	851718.40	3309.72	TBC
801	992507.32	851726.35	3309.52	TBC
802	992506.35	851727.62	3309.49	TBC, PC
803	992496.23	851738.12	3309.12	TBC, PRC
804	992480.27	851756.15	3308.43	TBC, PT
805	992479.48	851757.19	3308.39	TBC
806	992509.82	851715.67	3309.63	RAMP
807	992503.75	851723.62	3308.94	RAMP
808	992518.07	851721.34	3309.80	9" SIDEWALK
809	992510.67	851731.03	3309.57	9" SIDEWALK
810	992508.52	851733.67	3309.49	SIDEWALK
811	992506.22	851736.18	3309.40	SIDEWALK
812	992502.64	851740.16	3309.27	SIDEWALK
813	992485.06	851759.78	3308.52	SIDEWALK
814	992484.25	851760.84	3308.48	SIDEWALK

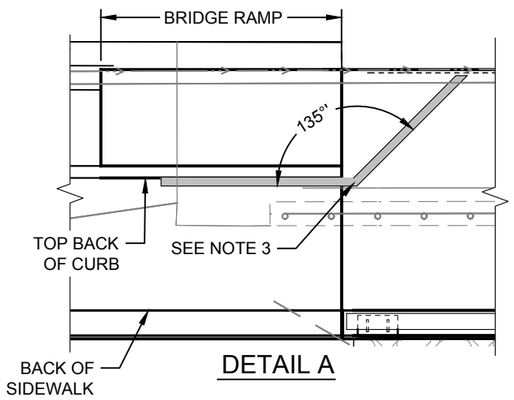
SOUTHEAST BRIDGE RAMP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
900	992488.91	851699.70	3309.72	TBC
901	992482.84	851707.65	3309.52	TBC
902	992481.81	851708.98	3309.48	TBC, PC
903	992477.84	851714.98	3309.31	TBC, PT
904	992466.19	851734.39	3308.68	TBC, PC
905	992464.12	851737.62	3308.56	TBC, PT
906	992460.41	851742.63	3308.45	TBC
907	992492.48	851702.43	3309.63	RAMP
908	992486.41	851710.38	3308.94	RAMP
909	992484.56	851696.33	3309.80	9" SIDEWALK
910	992477.44	851705.65	3309.57	9" SIDEWALK
911	992473.12	851712.16	3309.38	SIDEWALK
912	992459.24	851734.12	3308.65	SIDEWALK
913	992456.64	851737.67	3308.53	SIDEWALK
914	992455.63	851739.00	3308.54	SIDEWALK

TRUNCATED DOME STRIP DETAIL



SECTION A-A



DETAIL A

NOTES:

1. PROVIDED AND INSTALLED ADA-COMPLIANT DIRECTIONAL WARNING DEVICES. PROVIDE DEVICES THAT ARE 0.5' IN WIDTH AND YELLOW IN COLOR.
2. SUBMIT PROPOSED DIRECTIONAL WARNING DEVICE SYSTEM FOR APPROVAL. INCLUDE DRAWINGS, MATERIAL PROPERTIES & MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR CUTTING AND MODIFYING TILES IN THE FIELD. CONSTRUCTION OF FILLETS AT ANGLE POINTS SUBJECT TO APPROVAL BY PROJECT MANAGER.
4. DIMENSIONS SHOWN IN PLANS ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. PRIOR TO INSTALLING DIRECTIONAL WARNING DEVICES LAYOUT AREA TO RECEIVE TILES AND CONFIRM LAYOUT WITH PROJECT MANAGER.
5. INCLUDE ALL WORK AND MATERIALS TO INSTALL DIRECTIONAL WARNING DEVICES IN THE UNIT PRICE BID FOR CURB RAMP FORMING, BRIDGE.
6. MILLED THE CONCRETE SURFACE AS APPROVED BY THE PROJECT MANAGER TO RECESS DEVICES.

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER MZ | PROJ. NO. 7611
DRAWN MZ | DATE 08/2026
CHECKED BB | SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BRIDGE END SIDEWALK & RAMP POINT TABLES & DETAILS

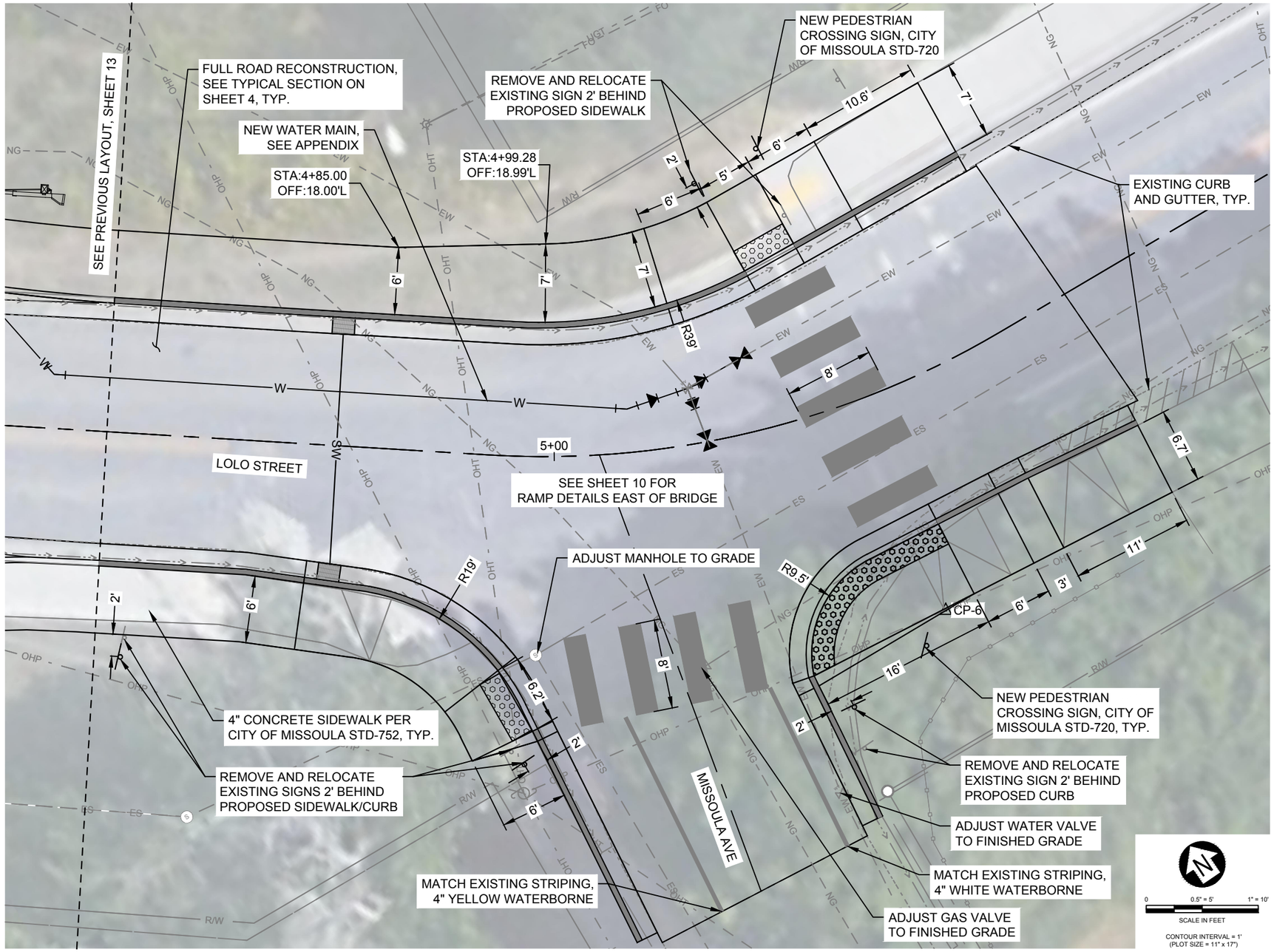
SHEET OF 14 47

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NOTES:
1. ALL DIMENSIONS ARE TO TOP BACK OF CURB OR BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.

2. ALL NEW TYPE L CURB TO BE PAINTED WITH YELLOW EPOXY.

3. SEE TYPICAL SECTION SHEET 4.



REVISION	DATE	DESCRIPTION
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DRAWN MZ DATE 08/2026
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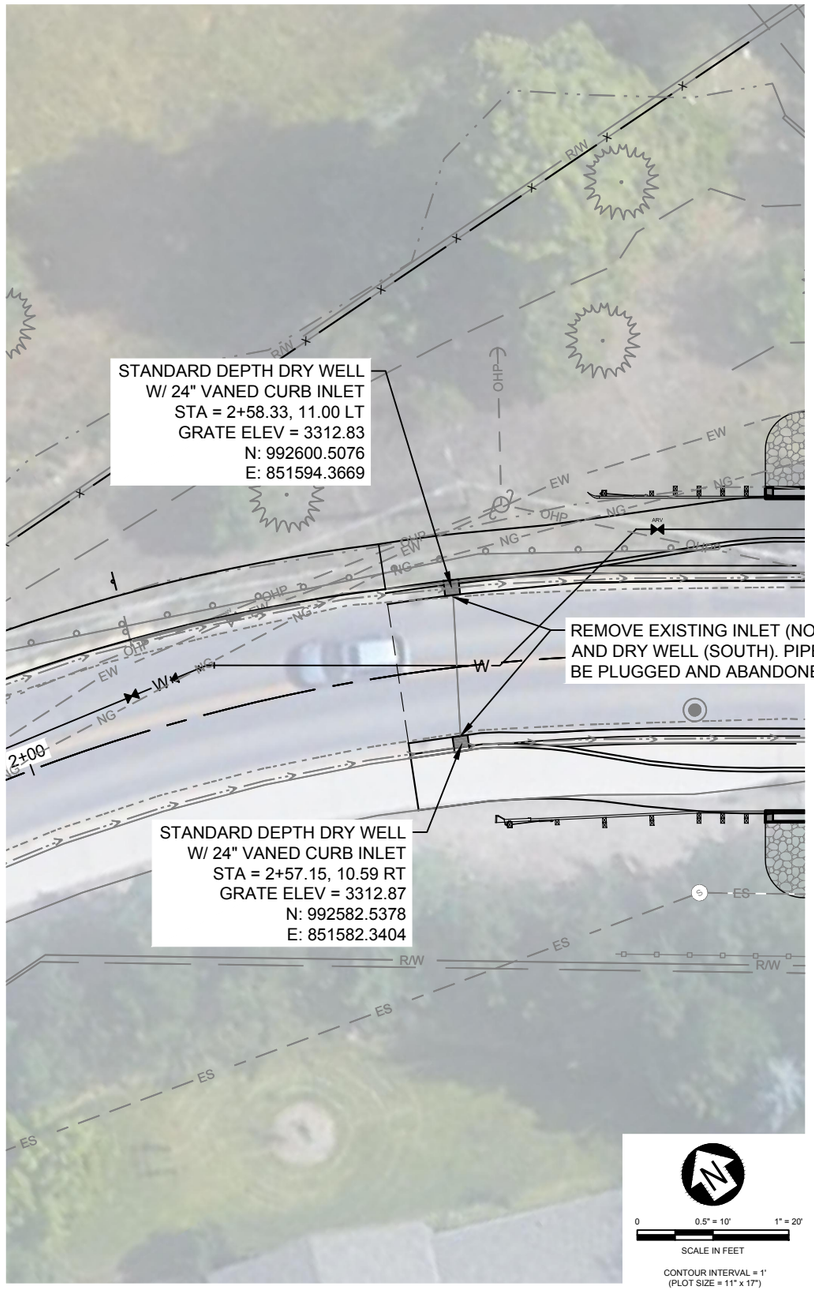
ENGINEERS PLANNERS SURVEYORS

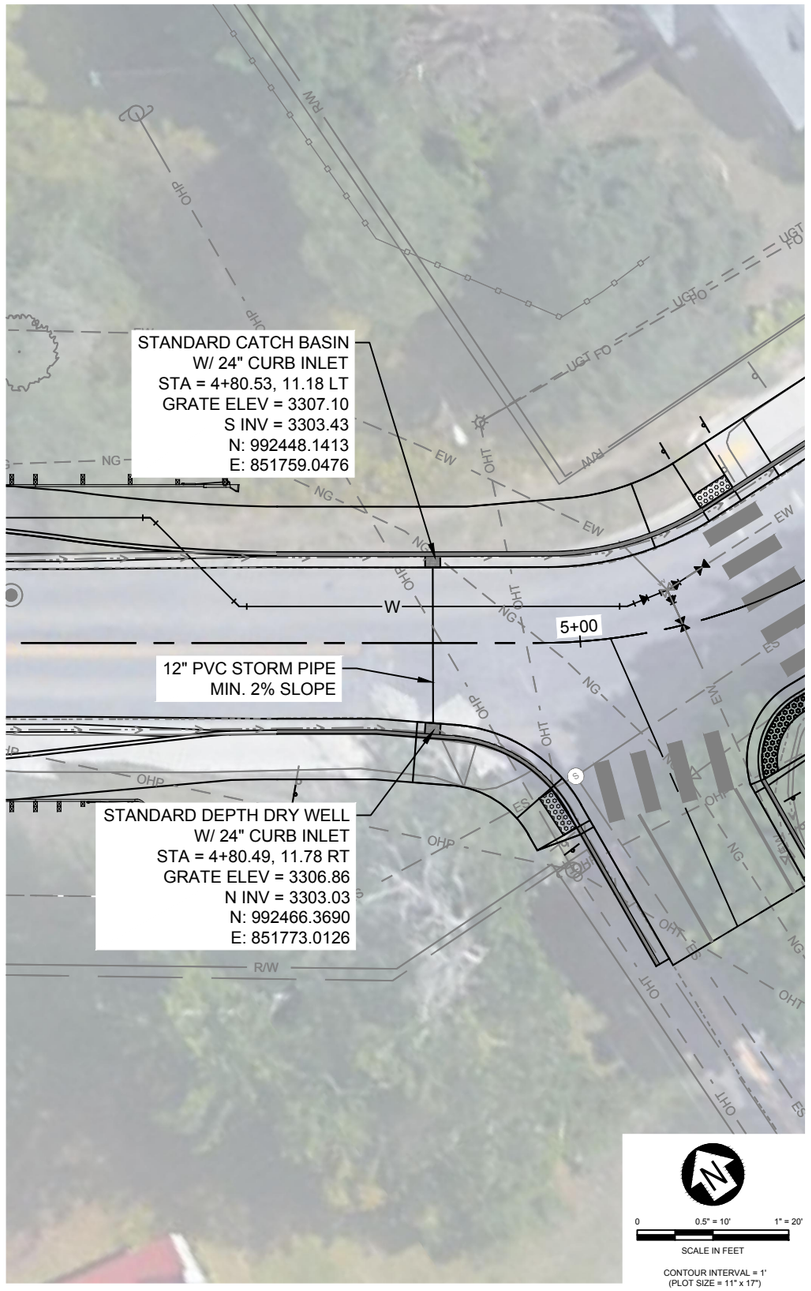
LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

CIVIL EAST SIDEWALK DETAILS

SHEET 15 OF 47

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NOTES:

1. PIPE LENGTHS IN LINEAR FEET ARE PROVIDED FROM CENTER OF MANHOLE/STRUCTURE UNLESS NOTED OTHERWISE.
2. REFERENCE STRUCTURE STATION/OFFSET LOCATIONS, NORTHINGS AND EASTINGS, AND GRATE ELEVATIONS PROVIDED ARE ALONG THE CURB AND GUTTER FLOWLINE AT THE CENTER OF THE STRUCTURE.
3. DRY WELLS SHALL BE STANDARD DEPTH IN ACCORDANCE WITH CITY OF MISSOULA STANDARD DRAWINGS STD - 616. REFER TO STD - 601 FOR 24" COMBINATION CURB INLET FRAME AND GRATE. REFER TO STD - 614 FOR STANDARD CATCH BASINS.
4. STORM DRAIN CATCH BASINS AND MANHOLES, AND CONNECTIONS TO PROPOSED PIPES SHALL BE PER THE CITY OF MISSOULA STANDARD DRAWINGS AND THE STANDARD MODIFICATIONS TO THE MPWSS. CATCH BASINS SHALL INCLUDE 18 INCH SUMPS UNLESS OTHERWISE NOTED.PROVIDE 3 - 2" ADJUSTMENT RINGS MINIMUM FOR ALL STORMWATER STRUCTURES CONNECTING TO EXISTING STORM DRAIN PIPES UNLESS OTHERWISE NOTED.

REVISION	DATE	DESCRIPTION
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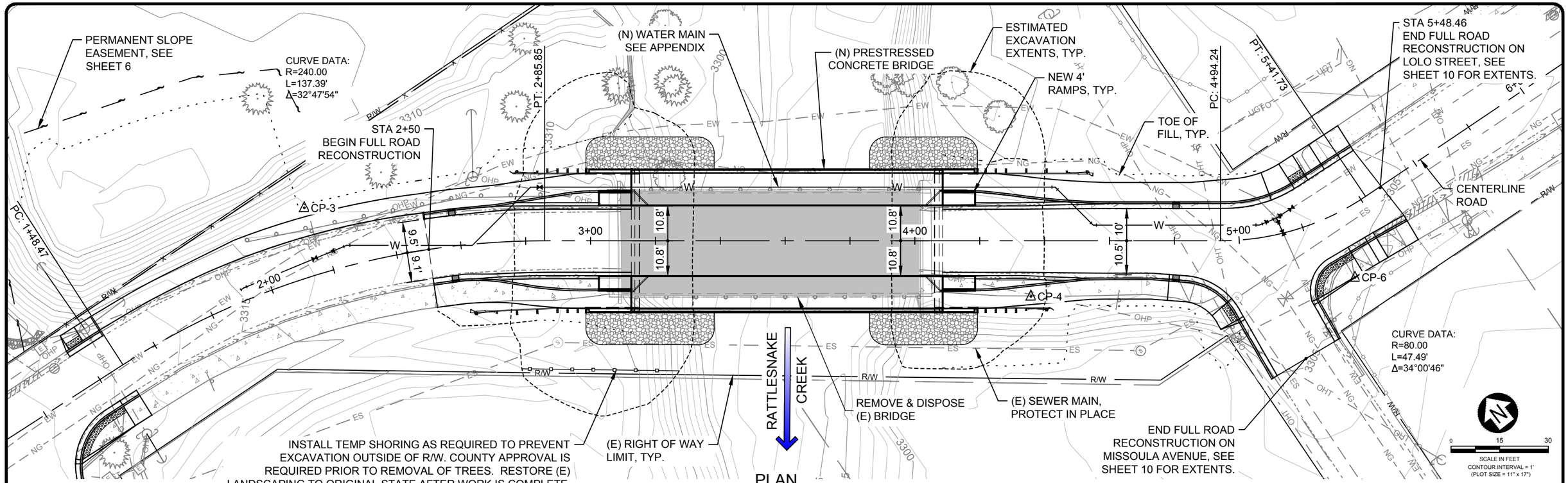
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

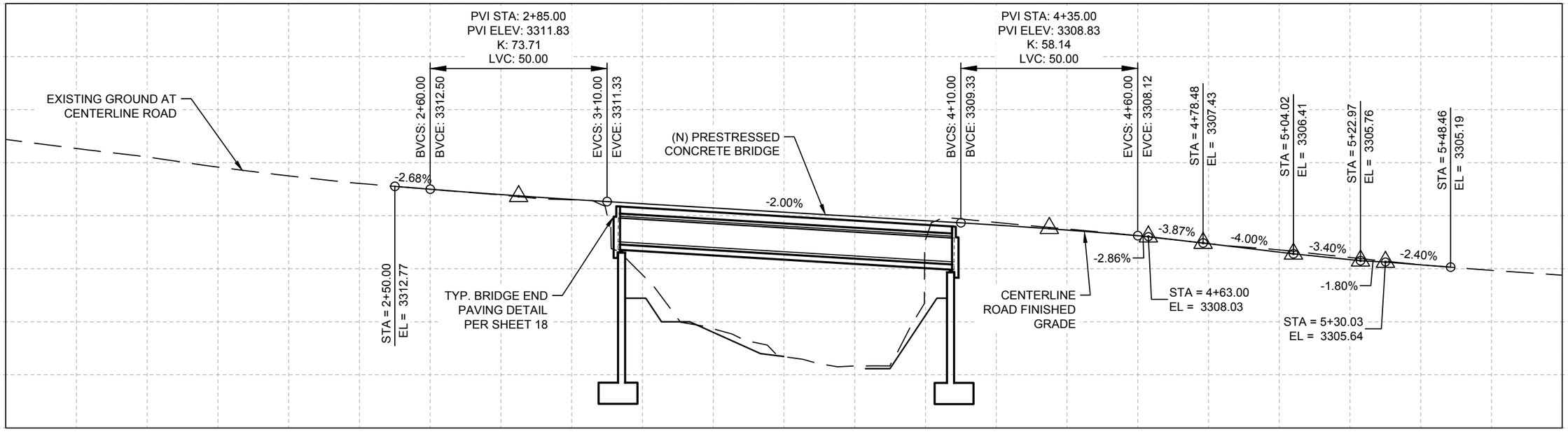
CIVIL STORMWATER PLANS

SHEET OF 16 47

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PLAN



PROFILE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
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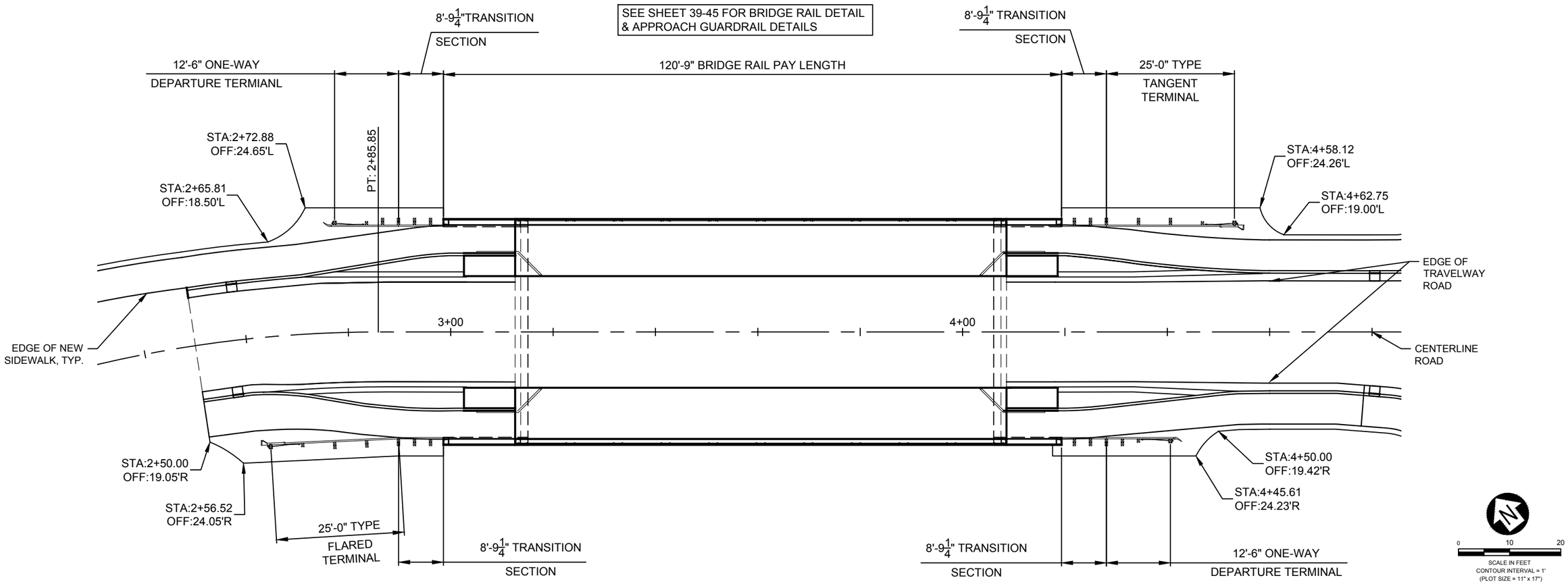
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

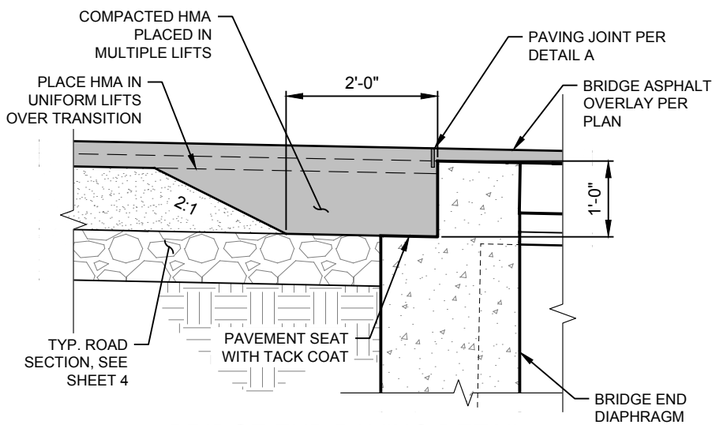
ROAD PLAN & PROFILE

SHEET 17 OF 47

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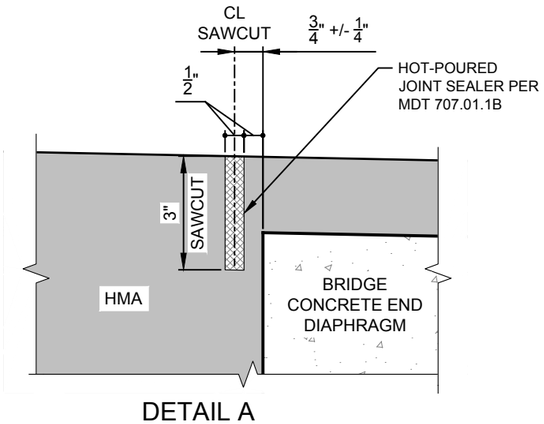


SHOULDER & GUARDRAIL PLAN



BRIDGE END PAVING DETAIL

SCALE: NO SCALE



DETAIL A

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

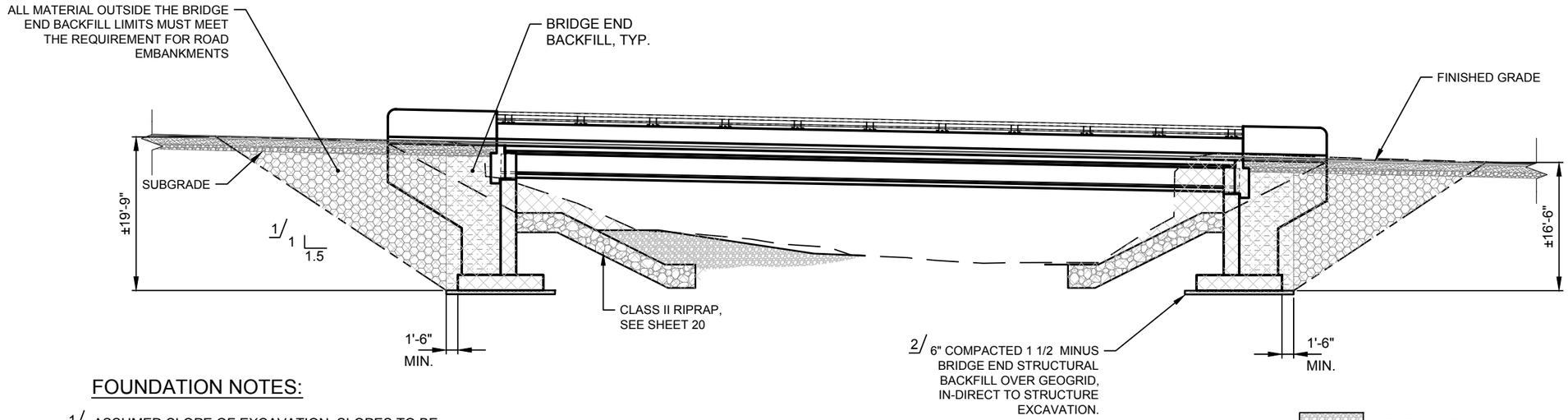
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SHOULDER & GUARDRAIL PLAN

SHEET 18 OF 47

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FOUNDATION NOTES:

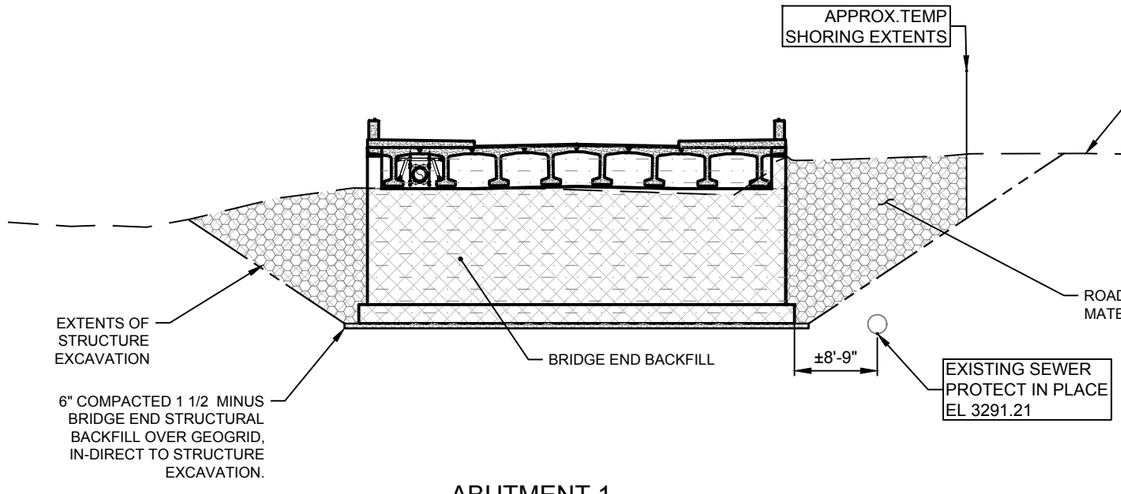
1/ ASSUMED SLOPE OF EXCAVATION. SLOPES TO BE DETERMINED GIVEN CONTRACTOR'S MEANS AND METHODS IN COMPLIANCE WITH ALL APPLICABLE OSHA REGULATIONS

2/ PROVIDE STRUCTURAL GEOGRID MEETING THE ENGINEERING CHARACTERITICS OF INTERAX(r) NX750 tm. COMPACT STRUCTURAL BACKFILL TO AT LEAST 98 PERCENT RELATIVE COMPACTION.

BRIDGE END BACKFILL

NOT TO SCALE

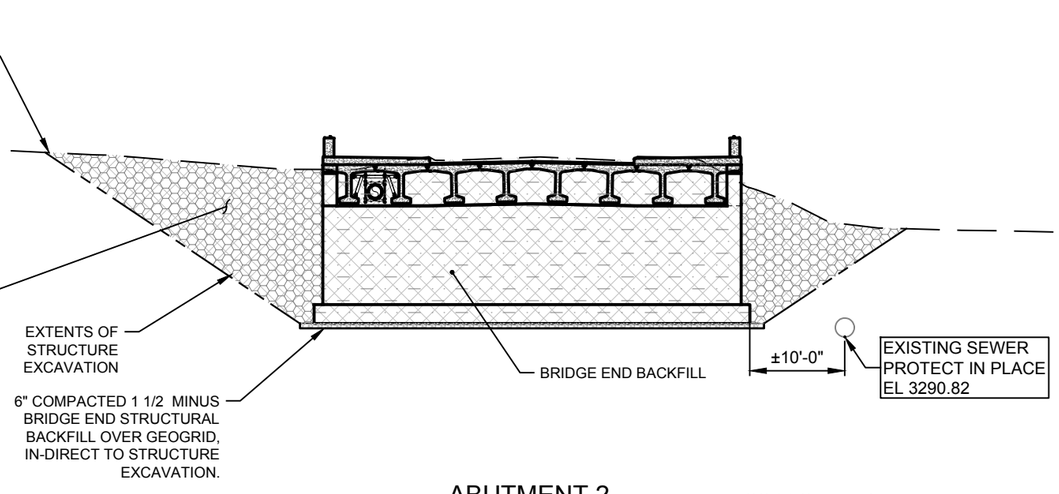
- LEVELING COURSE
- STRUCTURE EXCAVATION
- BRIDGE END BACKFILL
- ASPHALT CONCRETE PAVEMENT
- CRUSHED BASE COURSE
- SUB-BASE COURSE
- EMBANKMENT



ABUTMENT 1

NOT TO SCALE

LOOKING AHEAD
ON-LINE



ABUTMENT 2

NOT TO SCALE

LOOKING AHEAD
ON-LINE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
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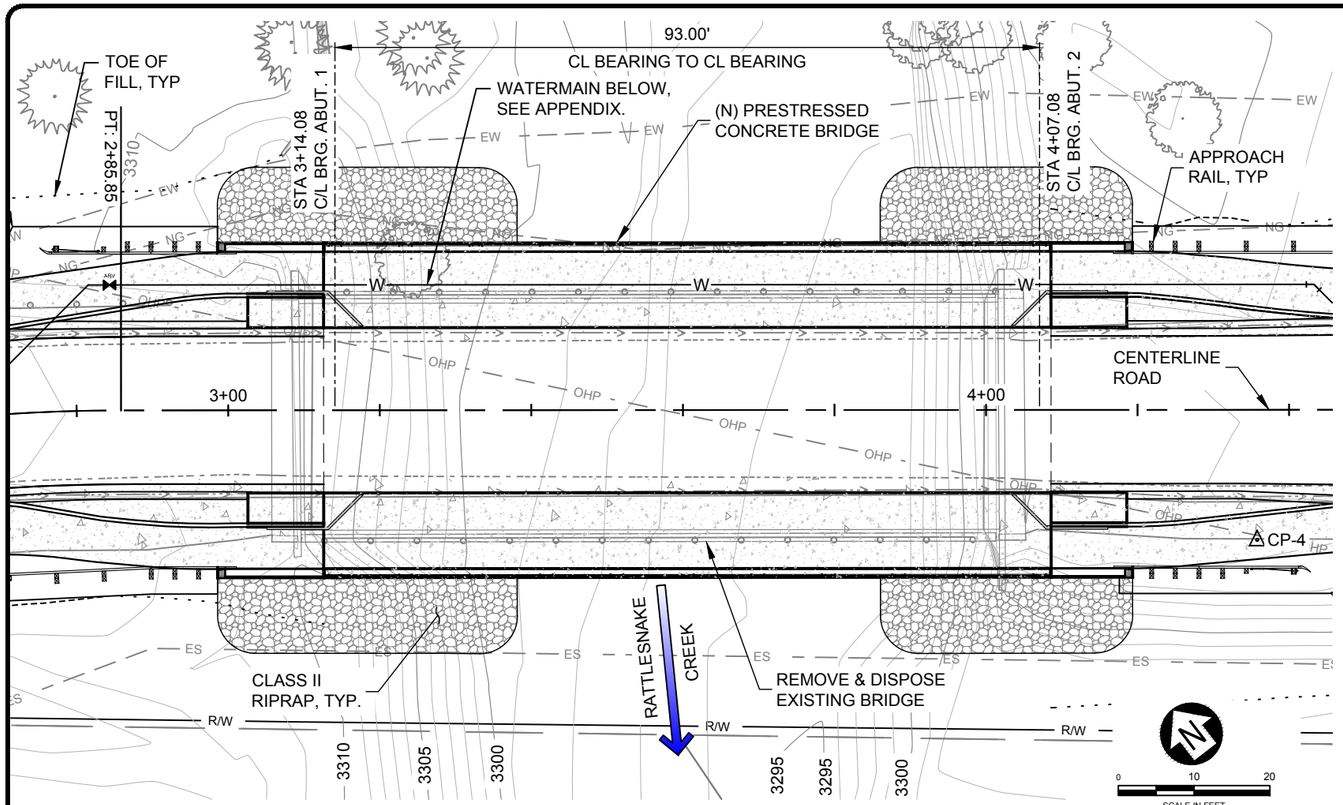
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

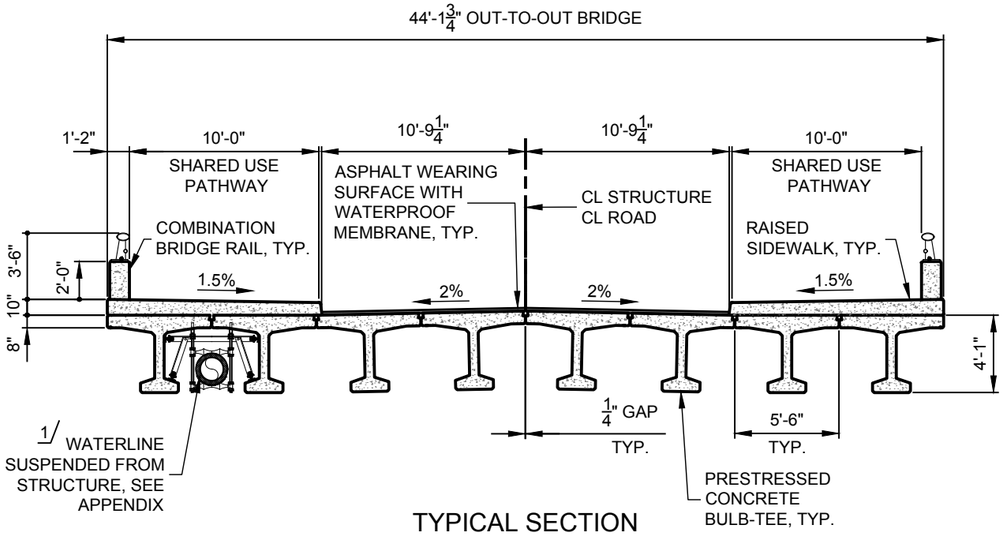
BRIDGE END BACKFILL

SHEET 19 OF 47

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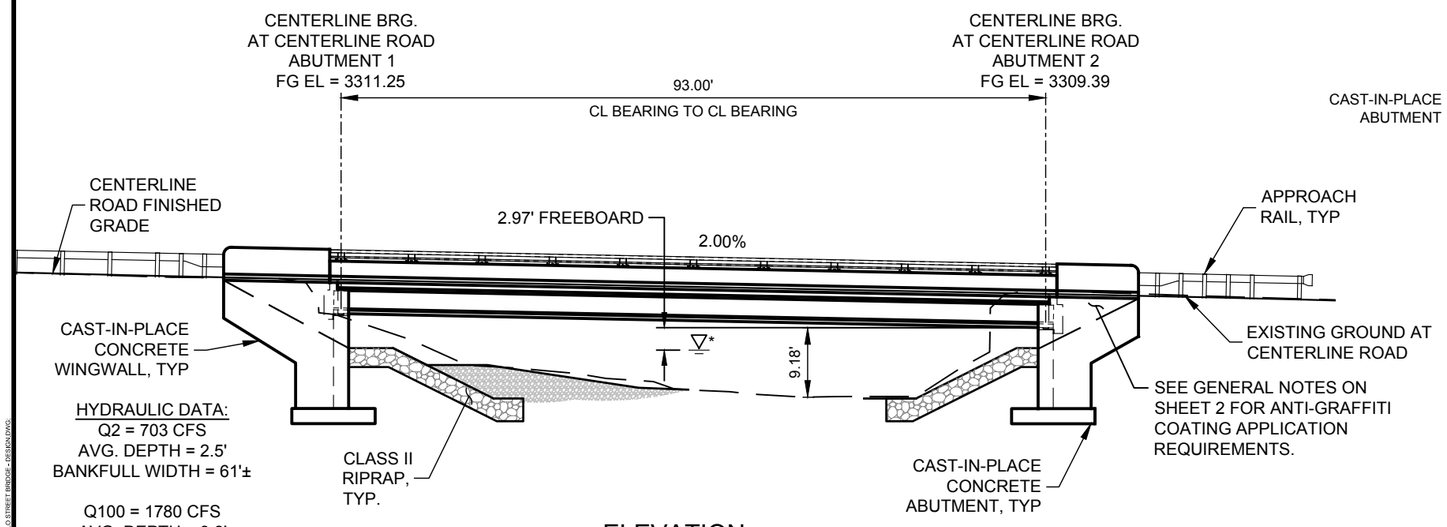
PLAN



TYPICAL SECTION

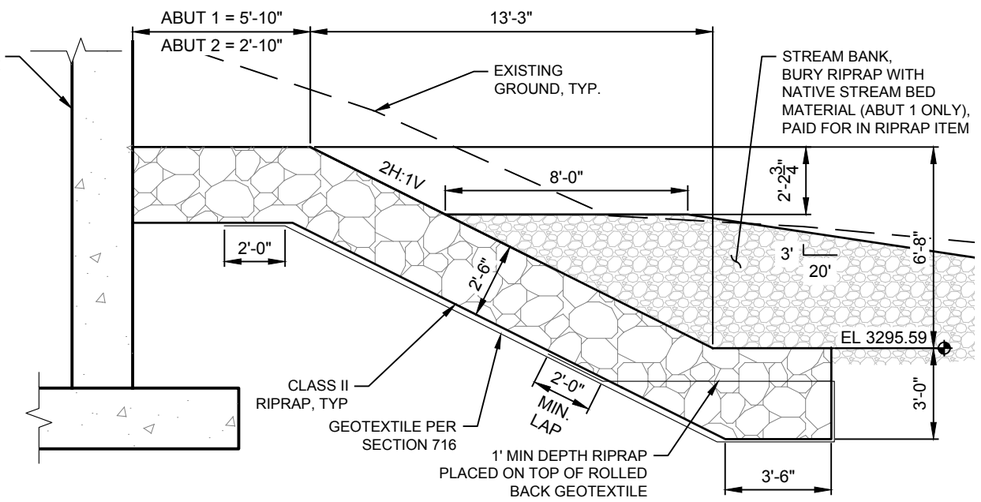
SCALE: 1/8" = 1'-0"

1/ CONNECTIONS TO GIRDERS ARE POST-INSTALLED BUT MUST BE COORDINATED WITH GIRDER DESIGN TO AVOID REINFORCING.



ELEVATION

SCALE: 1" = 20'



TYPICAL RIPRAP DETAIL

SCALE: 1" = 5'

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A, P.C.

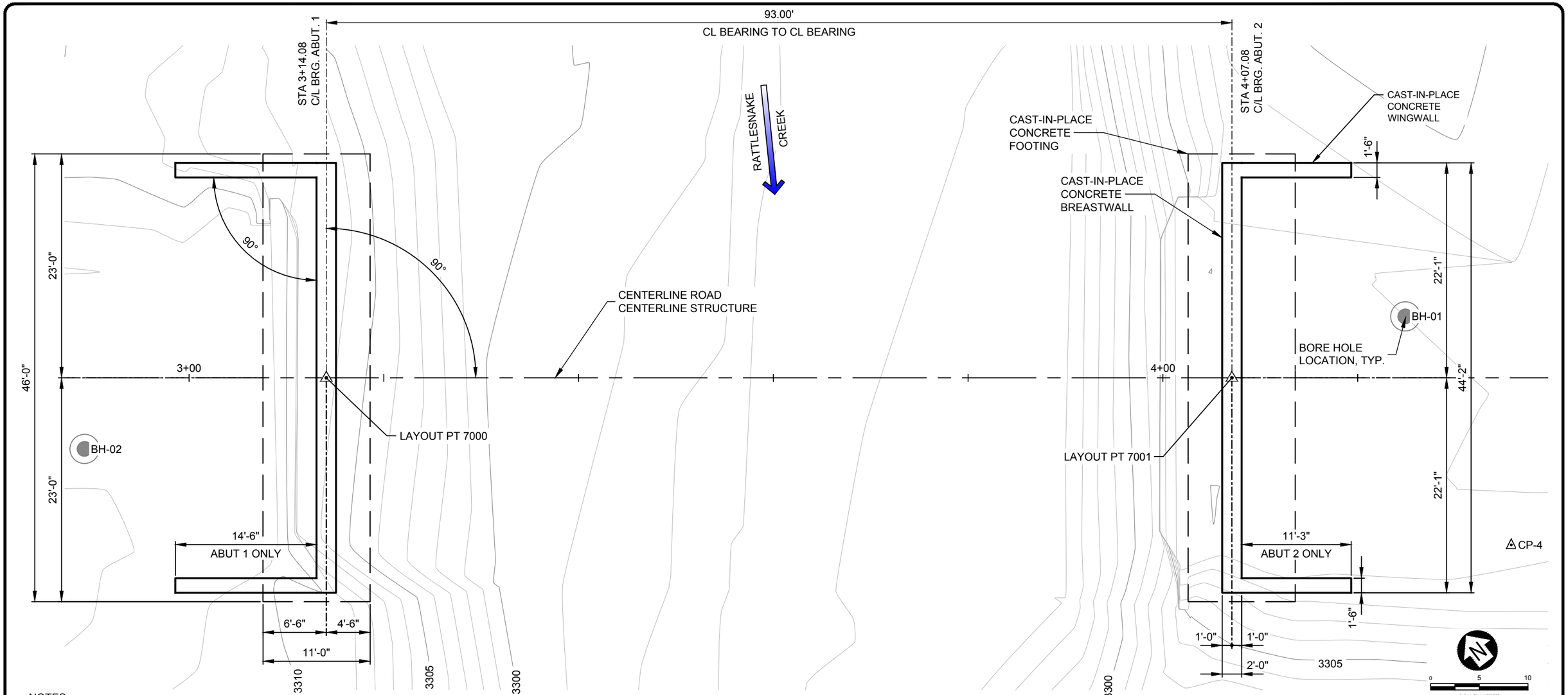
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BRIDGE GENERAL LAYOUT

SHEET 20 OF 47

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NOTES:
1. DIMENSIONS FOR EACH ABUTMENT ARE TYPICAL EXCEPT FOR LENGTH OF WINGWALLS.
2. SEE SHEET 22-24 FOR BORING LOGS

PLAN

FOUNDATION NOTES

CONCRETE TESTING: CONTRACTOR SHALL PROVIDE TEST SPECIMENS FOR OWNER'S TESTING AGENCY TO PERFORM CONCRETE TESTING PER PROJECT SPECIFICATIONS.

REBAR SHOPS & INSPECTION: SUBMIT REBAR SHOP PLANS TO THE COUNTY FOR APPROVAL AT LEAST 30 DAYS PRIOR TO FORMING CONCRETE. SPECIAL INSPECTIONS BY THE OWNER'S AGENCY WILL BE REQUIRED FOR ALL CAST-IN-PLACE CONCRETE REINFORCING.

BACKFILL PLACEMENT: BACKFILL SHALL NOT BE PLACED AGAINST CONCRETE UNTIL APPROVED BY THE COUNTY WITH TESTED CONCRETE STRENGTHS OF AT LEAST 80% OF THE DESIGN STRENGTH ACHIEVED.

GEOTECHNICAL INFORMATION: A GEOTECHNICAL INVESTIGATION WAS CONDUCTED FOR THE SITE. POORLY-GRADED GRAVEL WITH SILT AND SAND (GP-GM) WERE ENCOUNTERED AT THE BEARING LEVEL OF THE NEW FOOTINGS. THE FOUNDATION DESIGN WAS PERFORMED ASSUMING A NOMINAL BEARING RESISTANCE OF 12 KSF. A GEOTECHNICAL REPORT PRODUCED BY LORENZEN SOIL MECHANIC, INC. ON MAY 19, 2025, IS ON FILE WITH THE COUNTY AND MAY BE REQUESTED FOR VIEWING.

ABUTMENT LAYOUT POINTS

POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-7000	992558.50	851633.94	3292.27	ABUTMENT 1
CP-7001	992502.06	851707.86	3292.24	ABUTMENT 2

* LAYOUT POINTS ARE TO THE BOTTOM OF THE FOOTING

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
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DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

FOUNDATION PLAN

SHEET 21 OF 47

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Lorenzen Soil Mechanics, Inc.
5730 Exprressway Unit H
Missoula, MT 59808
Telephone: 406-830-0633

BORING NUMBER BH-01

CLIENT DJ&A
PROJECT NAME Lolo Street Bridge
PROJECT NUMBER E25
PROJECT LOCATION Missoula
DATE STARTED 2/27/25 **COMPLETED** 2/27/25
GROUND ELEVATION 3311 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR O'Keefe Drilling
GROUND WATER LEVELS:
DRILLING METHOD Geoprobe 8150 LS Sonic Drill
▽ **AT TIME OF DRILLING** 18.00 ft / Elev 3293.00 ft
▼ **AT END OF DRILLING** 18.00 ft / Elev 3293.00 ft
LOGGED BY Lorenzen **CHECKED BY** Lorenzen
NOTES N46° 53.096' W113° 58.266'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GM) Silty GRAVEL with Sand; rounded to subangular; moist; dark brown (10YR 3/3) matrix; no reaction to 10% HCl solution. Fines are non-plastic. Drilling rate from 0 to 5 feet = 125 ft/hr.	RC					5				
2.5		(GP-GM) Poorly Graded Gravel with Silt and Sand, frequent Cobbles; subangular; dry; light gray (2.5Y 7/1) matrix; no reaction to10% HCl solution. Fines are non-plastic.	RC					2				
5.0		(GP-GM) Poorly Graded Gravel with Silt and Sand, frequent Cobbles, trace white Coatings; rounded; dry; brown (10YR 5/3) matrix; very dense; no to very weak reaction to 10% HCl solution. Fines are non-plastic. Cylinder Clamp weld broke at the 5-foot depth. Approximately 4 hours to repair from a local shop.	SPT	44	7-26-27 (53)			2				
7.5		Drilling rate from 5 to 10 feet = 130 ft/hr.	RC					3				
10.0		(GP-GM) Poorly Graded Gravel with Silt and Sand, frequent Cobbles; rounded to subrounded; dry; dark yellowish brown (10YR 4/4) to light gray (10YR 7/1) and grayish brown (10YR 5/2) matrices; very dense; medium reaction to 10% HCl solution. Fines are non-plastic.	RC SPT	100	41-50/5"			5 2				
12.5		Drilling rate from 10 to 15 feet = 30 ft/hr.	RC					1				
15.0			RC					3				

(Continued Next Page)

Lorenzen Soil Mechanics, Inc.
5730 Exprressway Unit H
Missoula, MT 59808
Telephone: 406-830-0633

BORING NUMBER BH-01

CLIENT DJ&A
PROJECT NAME Lolo Street Bridge
PROJECT NUMBER E25
PROJECT LOCATION Missoula

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
15.0		(GP-GM) Poorly Graded Gravel with Silt and Sand, frequent Cobbles, occasional Boulder, trace white Coatings; rounded to subrounded; dry; brown (10YR 5/3) matrix; very dense; weak reaction to10% HCl solution. Fines are non-plastic. Drilling rate from 15 to 17.5 feet = 20 ft/hr.	SPT RC	100	50/4"			4				
17.5		(SP-SM) Silty SAND with Gravel, frequent Cobbles; wet; grayish brown (10YR 5/2) to brown (10YR 5/3) matrices; very dense; no reaction to 10% HCl solution. Fines are non-plastic. Gravels and Cobbles are rounded to subrounded. Drilling rate from 17.5 to 20 feet = 15 ft/hr.	RC					4				
20.0			SPT RC	100	50/6"			13 5				
22.5		Drilling rate from 20 to 25 feet = 100 ft/hr.	RC RC					5 7				
25.0			SPT	100	50/5"			15				

Rattlesnake Creek water surface ~ 12.7 below the top of bridge deck.

Bottom of borehole at 25.4 feet.

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
DRAWN PAD DATE 08/2026
CHECKED JWR SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BORING LOGS

SHEET 22 OF 47

J:\E25\07-01 LAND\CIVIL\DRAWINGS\LOLO BRIDGE\MISSOULA LOLO STREET BRIDGE - MORE.DWG

Lorenzen Soil Mechanics, Inc.
5730 Exprressway Unit H
Missoula, MT 59808
Telephone: 406-830-0633

BORING NUMBER BH-02

CLIENT DJ&A
PROJECT NAME Lolo Street Bridge
PROJECT NUMBER E25
PROJECT LOCATION Missoula
DATE STARTED 2/28/25 **COMPLETED** 2/28/25
GROUND ELEVATION 3316 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR O'Keefe Drilling
GROUND WATER LEVELS:
DRILLING METHOD Geoprobe 8150 LS Sonic Drill
AT TIME OF DRILLING 14.50 ft / Elev 3301.50 ft
LOGGED BY Lorenzen **CHECKED BY** Lorenzen
AT END OF DRILLING 14.50 ft / Elev 3301.50 ft
NOTES N46° 53.108' W113° 58.298'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		ASPHALT - 5 inches thick										
		(GW) BASE COURSE ~ 1 foot thick										
2.5		(GP-GM) Poorly-Graded GRAVEL with Silt and Sand, frequent Cobbles; subangular to angular; dry; yellowish brown (10YR 5/4) matrix; medium reaction to 10% HCl solution; Drilling rate from 0 to 5 feet = 35 ft/hr.	RC					5				
5.0		(GP-GM) Poorly-Graded GRAVEL with Silt and Sand; subangular to angular; dry; brown (10YR 4/3) matrix; dense; medium reaction to 10% HCl solution. Fines are non-plastic.	SPT	100	41-22-18 (40)			3				
7.5		Drilling rate from 5 to 10 feet = 170 ft/hr.	RC					3				
10.0		(SP-SM) Poorly-Graded SAND with Silt and Gravel frequent Cobbles; dry; brown (7.5YR 4/2); medium dense; medium reaction to 10% HCl solution. Gravels are rounded to subrounded.	SPT	39	8-9-7 (16)			3 3				
12.5		Drilling rate from 10 to 15 feet = 25 ft/hr.	RC									
15.0												

(Continued Next Page)

Lorenzen Soil Mechanics, Inc.
5730 Exprressway Unit H
Missoula, MT 59808
Telephone: 406-830-0633

BORING NUMBER BH-02

CLIENT DJ&A
PROJECT NAME Lolo Street Bridge
PROJECT NUMBER E25
PROJECT LOCATION Missoula

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
15.0		(SP-SM) Poorly-Graded SAND with Silt and Gravel frequent Cobbles; dry; brown (7.5YR 4/2); medium dense; medium reaction to 10% HCl solution. Gravels are rounded to subrounded. *(continued)*	SPT RC	35	3-28-50/0"			22 21	NP	NP	NP	12
17.5		(GP-GM) Poorly-Graded GRAVEL with Silt and Sand, frequent Cobbles; subangular to angular; wet; very dark grayish brown (10YR 3/2) matrix; very dense; medium reaction to 10% HCl solution. Fines are non-plastic. Drilling rate from 15 to 20 feet = 35 ft/hr.	RC					6				
20.0		(SM) Silty SAND with Gravel, occasional Cobble; damp; grayish brown (10YR 5/2) to light grayish brwon (10YR 6/2); very dense; no reaction to 10% HCl solution. Fines are non-plastic. Gravels are rounded to subrounded.	SPT RC	94	30-39-39 (78)			5 7	NP	NP	NP	24
22.5		Drilling rate from 25 to 30 feet = 20 ft/hr.	RC					5	NP	NP	NP	28
25.0		(SM) Silty SAND with Gravel; wet; dark gray (2.5Y 4/1); very dense; no reaction to 10% HCl solution. Fines are non-plastic. Gravels are rounded to subrounded.	SPT RC	100	50/5"			15 5	NP	NP	NP	13
27.5		(GM) Silty GRAVEL with Sand; rounded to subrounded; wet; grayish brown (2.5Y 5/2) matrix; very dense; no reaction to 10% Cl solution. Fines are non-plastic.	RC					8	NP	NP	NP	25
30.0		(GM) Silty GRAVEL with Sand; frequent Cobbles; rounded to subrounded; dry; white (2.5Y 8/2) matrix; very dense; no reaction to 10% Cl solution. Fines are non-plastic. Drilling rate from 30 to 35 feet = 40 ft/hr.	RC					3	NP	NP	NP	31
		(GM) Silty GRAVEL with Sand, frequent Cobbles; rounded to subrounded; wet; grayish brown (2.5Y 5/2) matrix; very dense; no reaction to 10% Cl solution. Fines are non-plastic.	SPT	100	47-50/6"			5				

(Continued Next Page)

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
DRAWN PAD DATE 08/2026
CHECKED JWR SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BORING LOGS

SHEET 23 OF 47

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 5/13/25 14:48 - C:\USERS\TODD LORENZEN\DOCUMENTS\LORENZEN SOIL MECHANICS\DJ&A\LOLO STREET BRIDGES\6.0 DELIVERABLES\LOLO STREET BRIDGE.GPJ
J:\JOBS\E25\E25_JACOB_CIDJA\PLANNING\CLIA\PROD\MISSOULA CO\LO STREET BRIDGE_ROTMG.DWG

Lorenzen Soil Mechanics, Inc.
5730 Exprressway Unit H
Missoula, MT 59808
Telephone: 406-830-0633

BORING NUMBER BH-02

CLIENT DJ&A **PROJECT NAME** Lolo Street Bridge

PROJECT NUMBER E25 **PROJECT LOCATION** Missola

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
32.5		(GM) Silty GRAVEL with Sand, frequent Cobbles; rounded to subrounded; wet; grayish brown (2.5Y 5/2) matrix; very dense; no reaction to 10% Cl solution. Fines are non-plastic. *(continued)* Drilling rate from 35 to 40 feet = 40 ft/hr.	RC					8				
35.0		(GM) Silty GRAVEL with Sand, frequent Cobbles; rounded to subrounded; wet; yellowish brown (10YR 5/4) matrix; very dense; no reaction to 10% Cl solution. Fines are non-plastic.	SPT	100	50/4"			16				
			RC					9				
37.5			RC					10				
			RC					7				
40.0			SPT	61	13-38-32 (70)			9				

Rattlesnake Creek water surface ~ 12.7 below the top of bridge deck.

Bottom of borehole at 41.5 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 5/13/25 14:48 - C:\USERS\TODD LORENZEN\DOCUMENTS\LORENZEN SOIL MECHANIC\DJ&A\LOLO STREET BRIDGES\6.0 DELIVERABLES\LOLO STREET BRIDGE.GPJ

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
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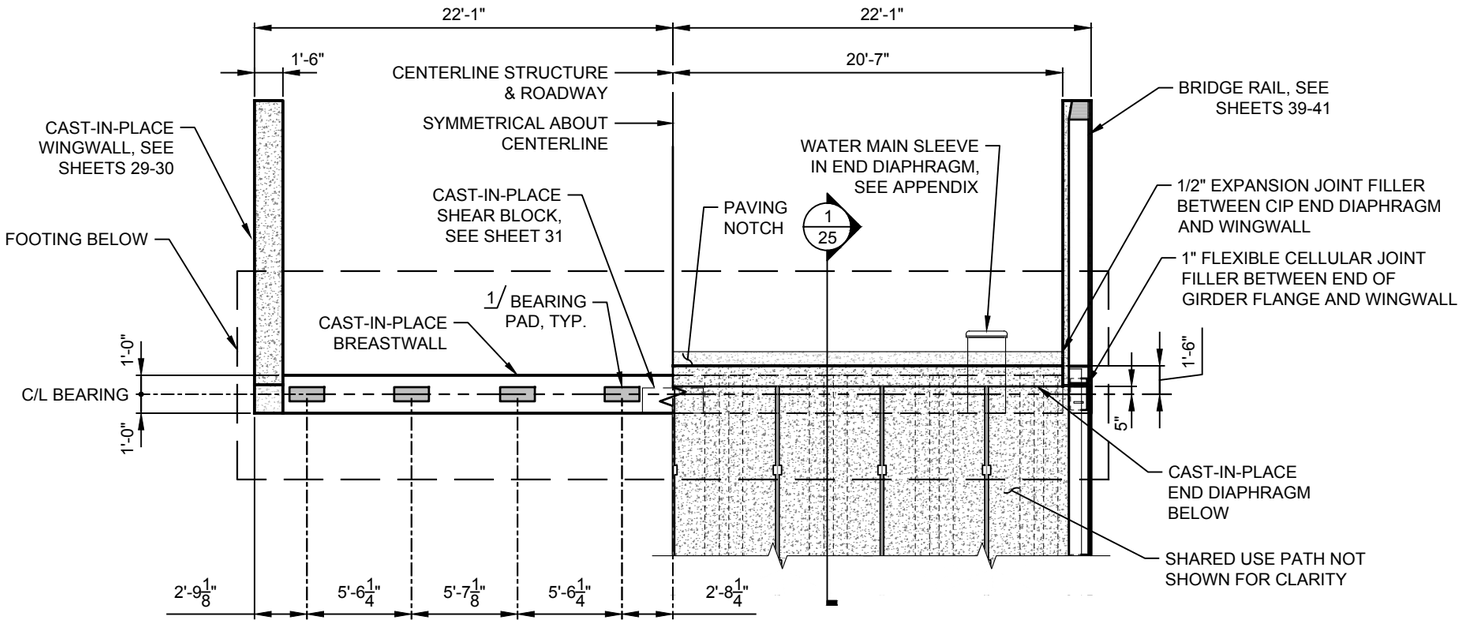
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BORING LOGS

SHEET 24 OF 47

8/5/2026 07:48 - MCOBURN-DJA\DRIVING\LAPTOP\DESKTOP\LOLO STREET BRIDGE - BORING.DWG

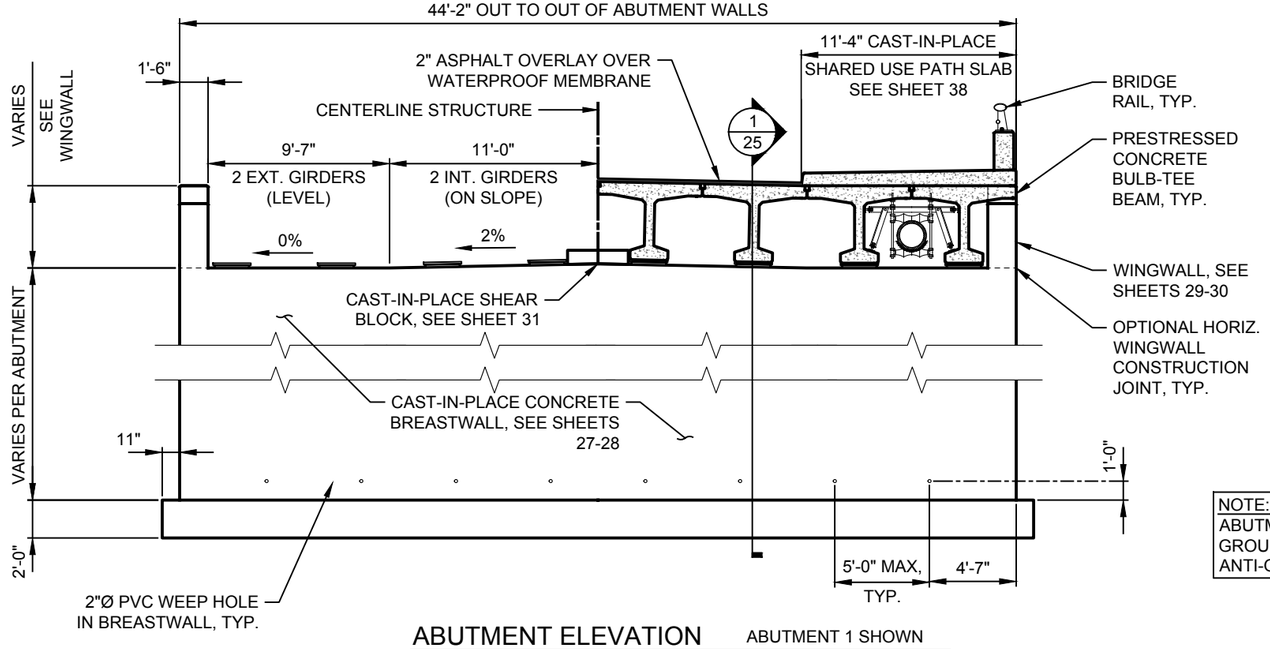


1/ STEEL REINFORCED ELASTOMERIC BEARING PAD. SEE SHEET 31.

ABUTMENT PLAN

ABUTMENT 1 SHOWN
ABUTMENT 2 SIMILAR

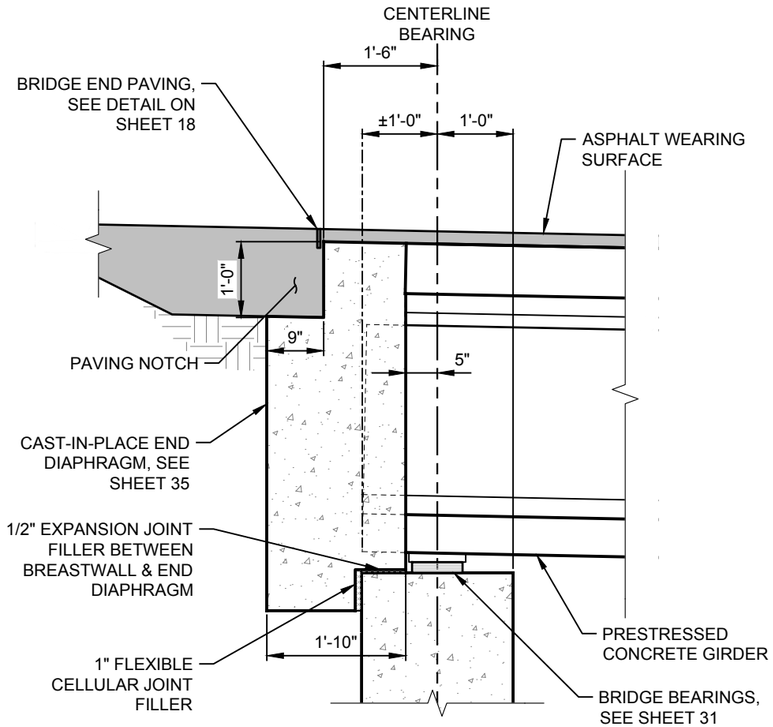
SCALE: 1/8" = 1'-0"



ABUTMENT ELEVATION

ABUTMENT 1 SHOWN
ABUTMENT 2 SIMILAR

SCALE: 1/8" = 1'-0"



1/25 SECTION

ABUTMENT 1 SHOWN
ABUTMENT 2 SIMILAR

SCALE: 1/2" = 1'-0"

NOTE: ALL EXPOSED FACES OF ABUTMENT ABOVE FINISHED GROUND WILL BE COATED WITH ANTI-GRAFFITI COATING.

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

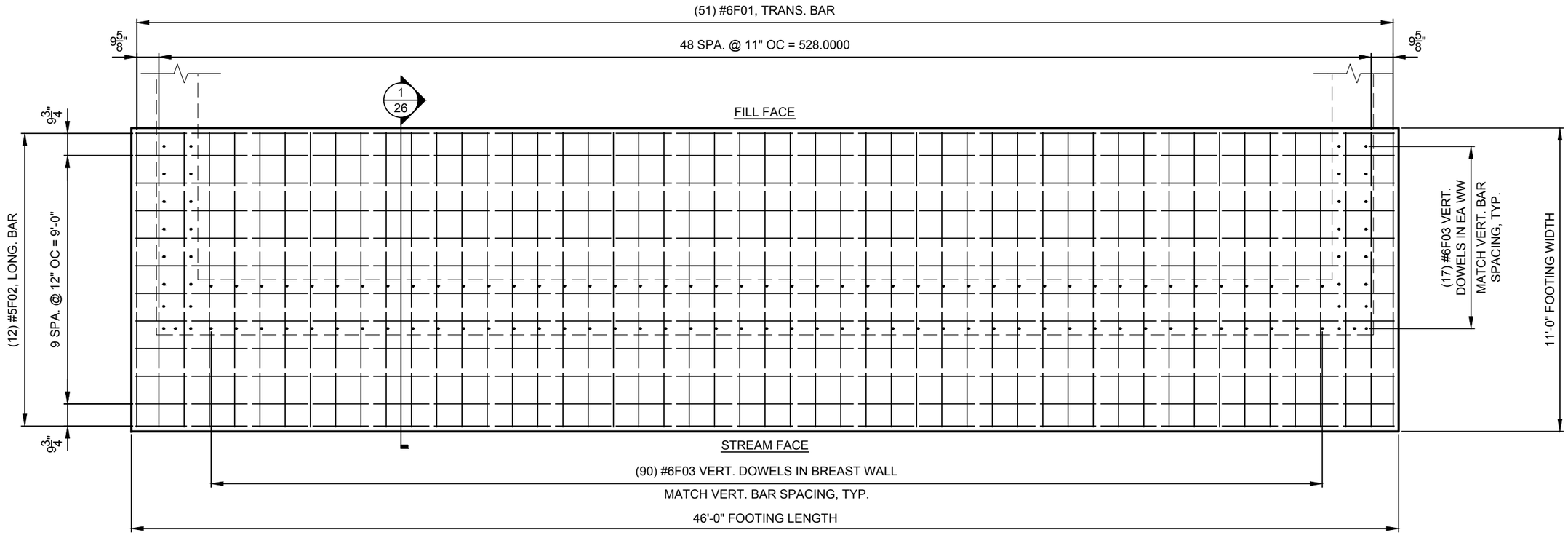
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

ABUTMENT PLAN & ELEVATION

SHEET OF 25 47

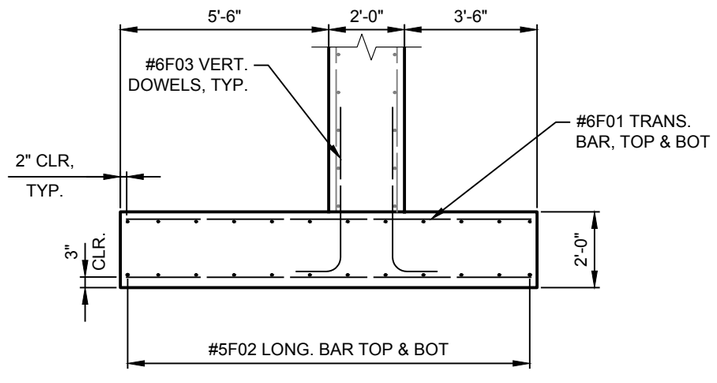
J:\2026_JA\26_01\ALP\WORK\ALPBROWSER\26_01 LOLO STREET BRIDGE_DETAILS.DWG



FOUNDATION REINFORCEMENT

SCALE: 1/4" = 1'-0"

ABUTMENT 1 SHOWN (TOP & BOT MAT SIMILAR)
ABUTMENT 2 SIMILAR (TOP & BOT MAT SIMILAR)



1/26 SECTION

SCALE: 1/4" = 1'-0"

ABUTMENT 1 SHOWN
ABUTMENT 2 SIMILAR

REINFORCING SCHEDULE - ABUTMENT 1 & 2 FOOTINGS

MARK	SIZE	NO.	TYPE	LENGTH	A	B	G
#6F01	6	204	STR	10' - 8"			
#5F02	5	48	STR	45' - 8"			
#6F03	6	248	2	5' - 9"	4' - 6"	1' - 3"	

TYPE STR — LENGTH

TYPE 2 — B, A, G

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

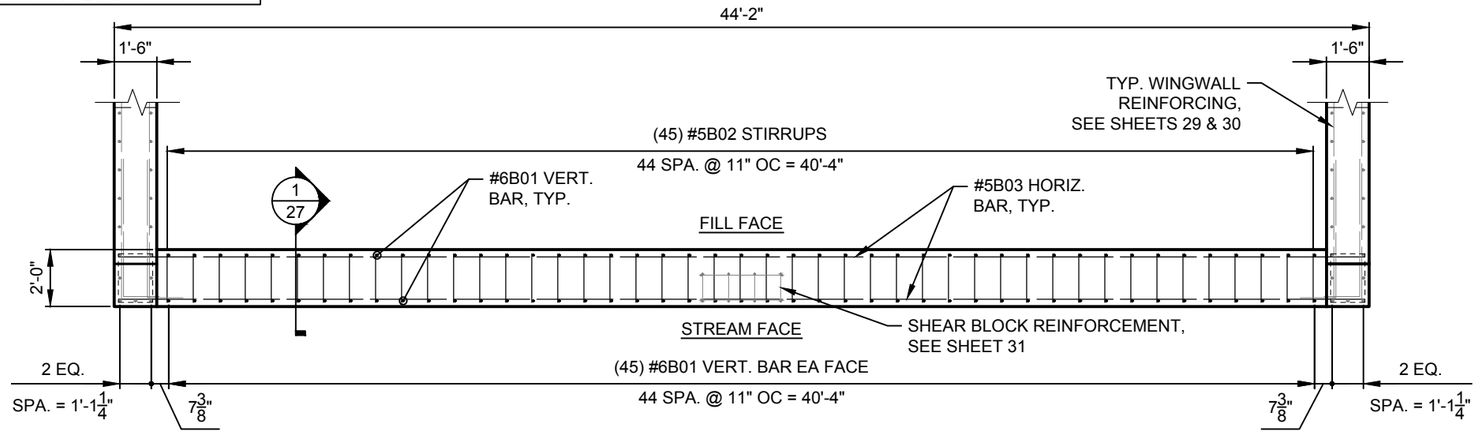
LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

ABUTMENT DETAILS

SHEET OF 26 47

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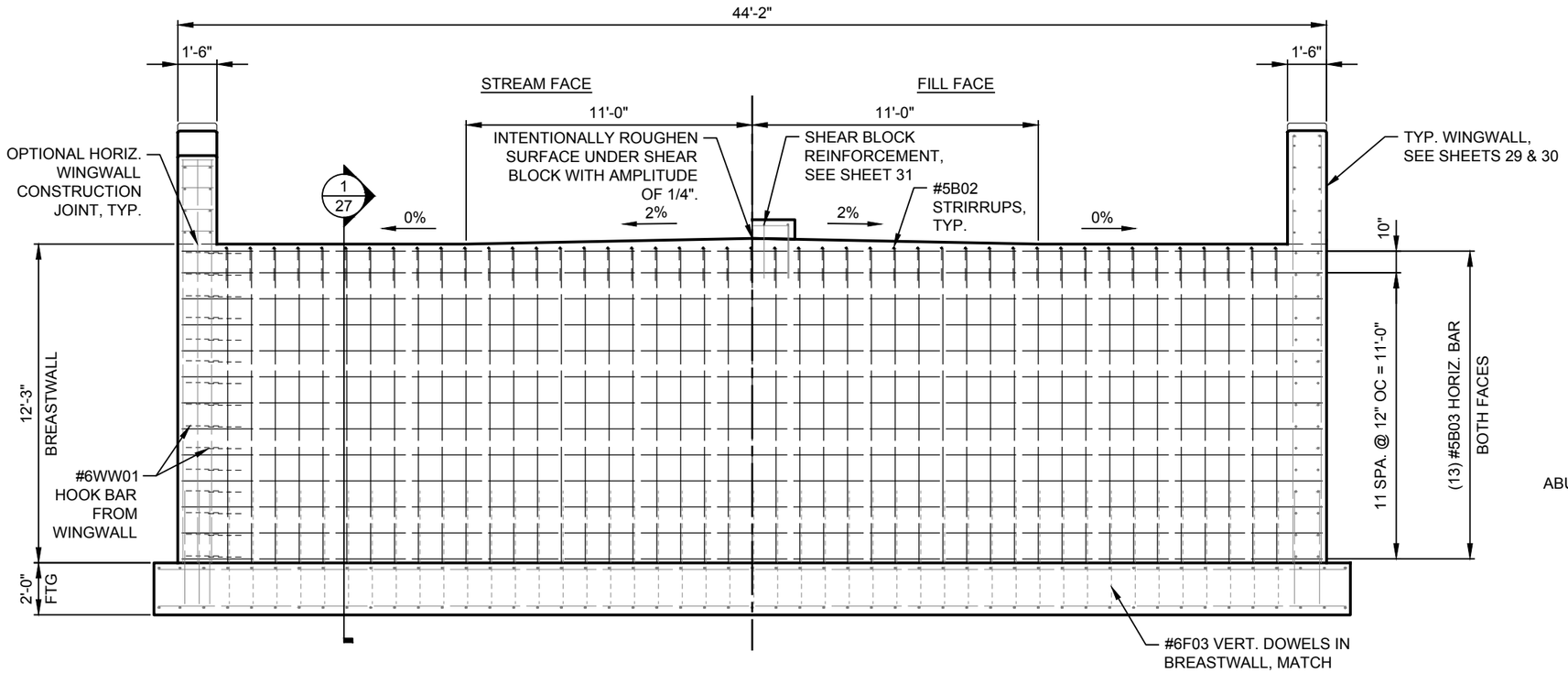
NOTE: FOOTING AND END DIAPHRAGM NOT SHOW FOR CLARITY.



ABUTMENT 1 BREASTWALL PLAN

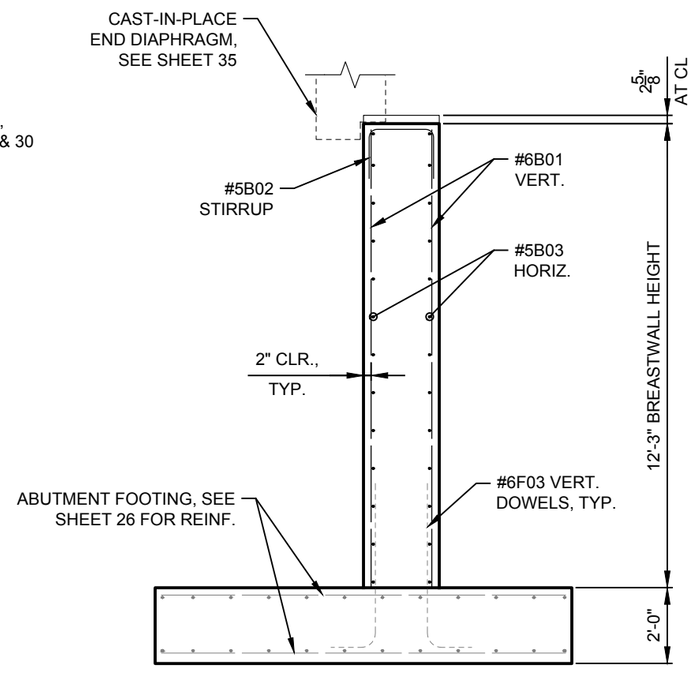
SCALE: 3/16" = 1'-0"

NOTE: SEE SHEET 28 FOR REINFORCING SCHEDULE



ABUTMENT 1 BREASTWALL ELEVATION

SCALE: 3/16" = 1'-0"



1/27 SECTION — ABUTMENT 1

SCALE: 1/4" = 1'-0"

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

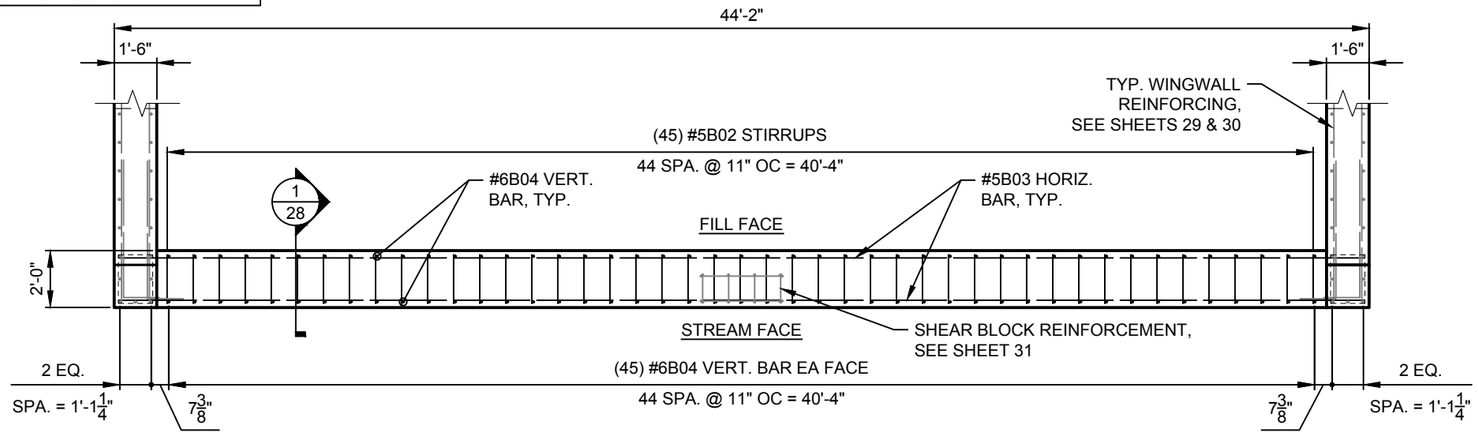
LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

ABUTMENT DETAILS

SHEET OF 27 47

\\DJA\Projects\MISSOULA\PWORKS\LOLO STREET BRIDGE_25714.6.DWG

NOTE: FOOTING AND END DIAPHRAGM NOT SHOW FOR CLARITY.



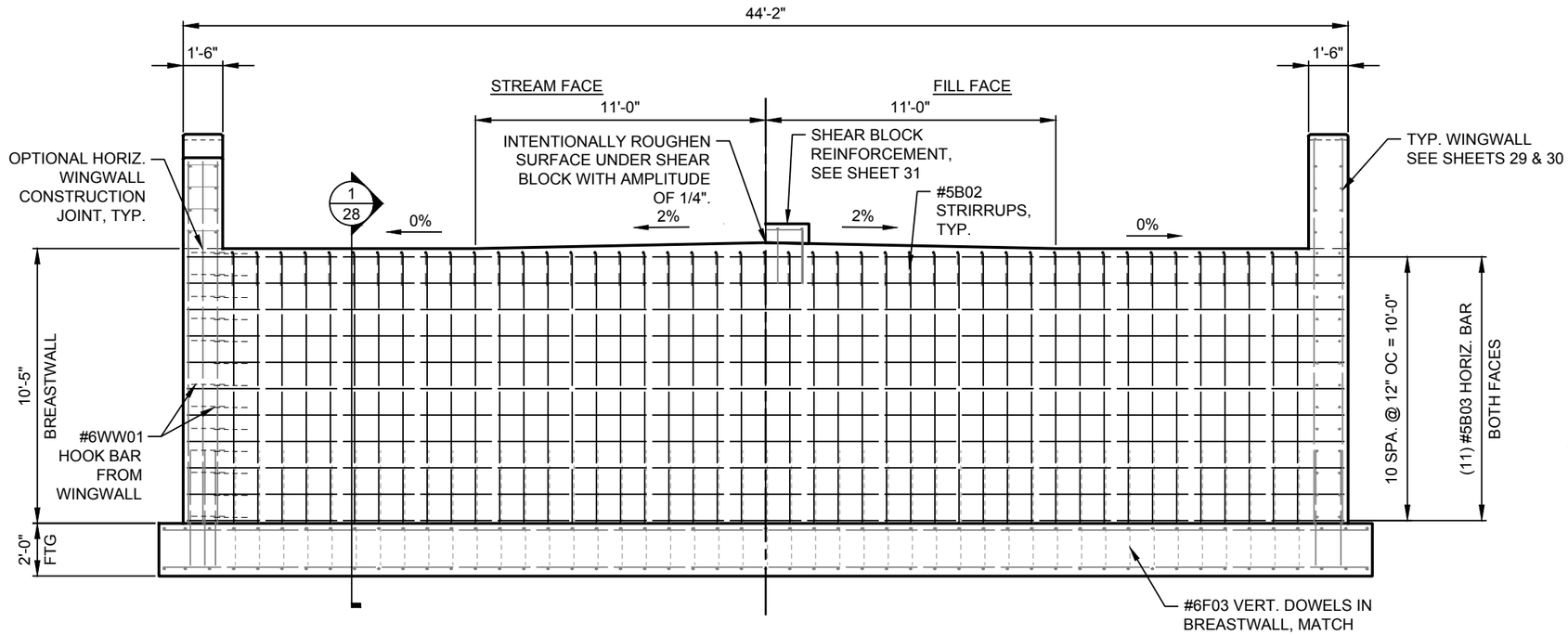
ABUTMENT 2 BREASTWALL PLAN

SCALE: 3/16" = 1'-0"

REINFORCING SCHEDULE - ABUTMENT 1 & 2 BREASTWALL							
MARK	SIZE	NO.	TYPE	LENGTH	A	B	G
#6B01	6	90	STR	12' - 1"			
#5B02	5	90	2	4' - 2"	1' - 3"	1' - 8"	1' - 3"
#5B03	5	48	STR	43' - 10"			
#6B04	6	90	STR	10' - 3"			

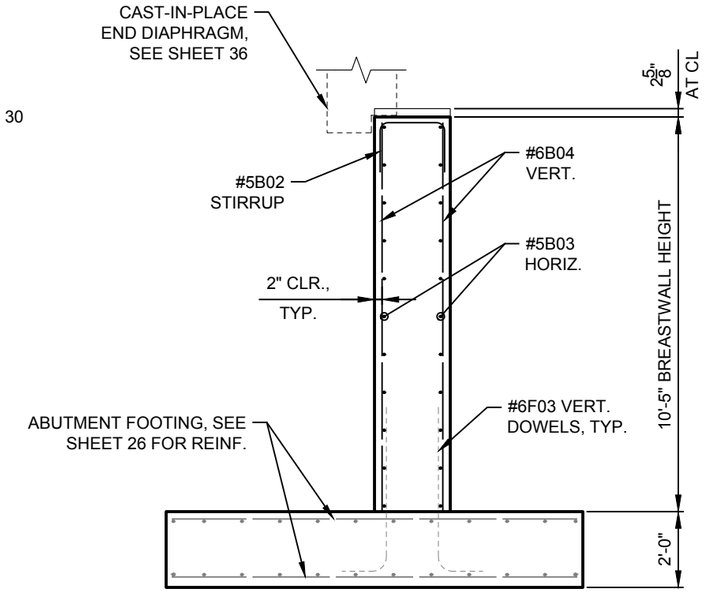
TYPE STR — LENGTH

TYPE 2 — B, A, G



ABUTMENT 2 BREASTWALL ELEVATION

SCALE: 3/16" = 1'-0"



1/28 SECTION — ABUTMENT 2

SCALE: 1/4" = 1'-0"

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

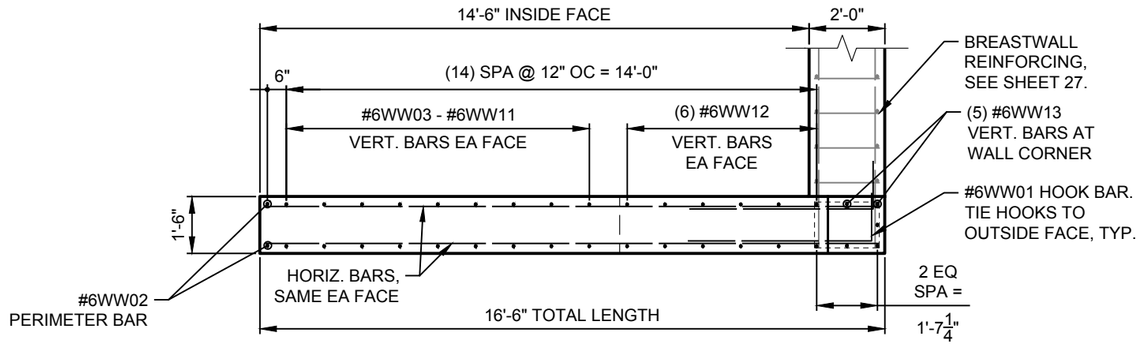
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

ABUTMENT DETAILS

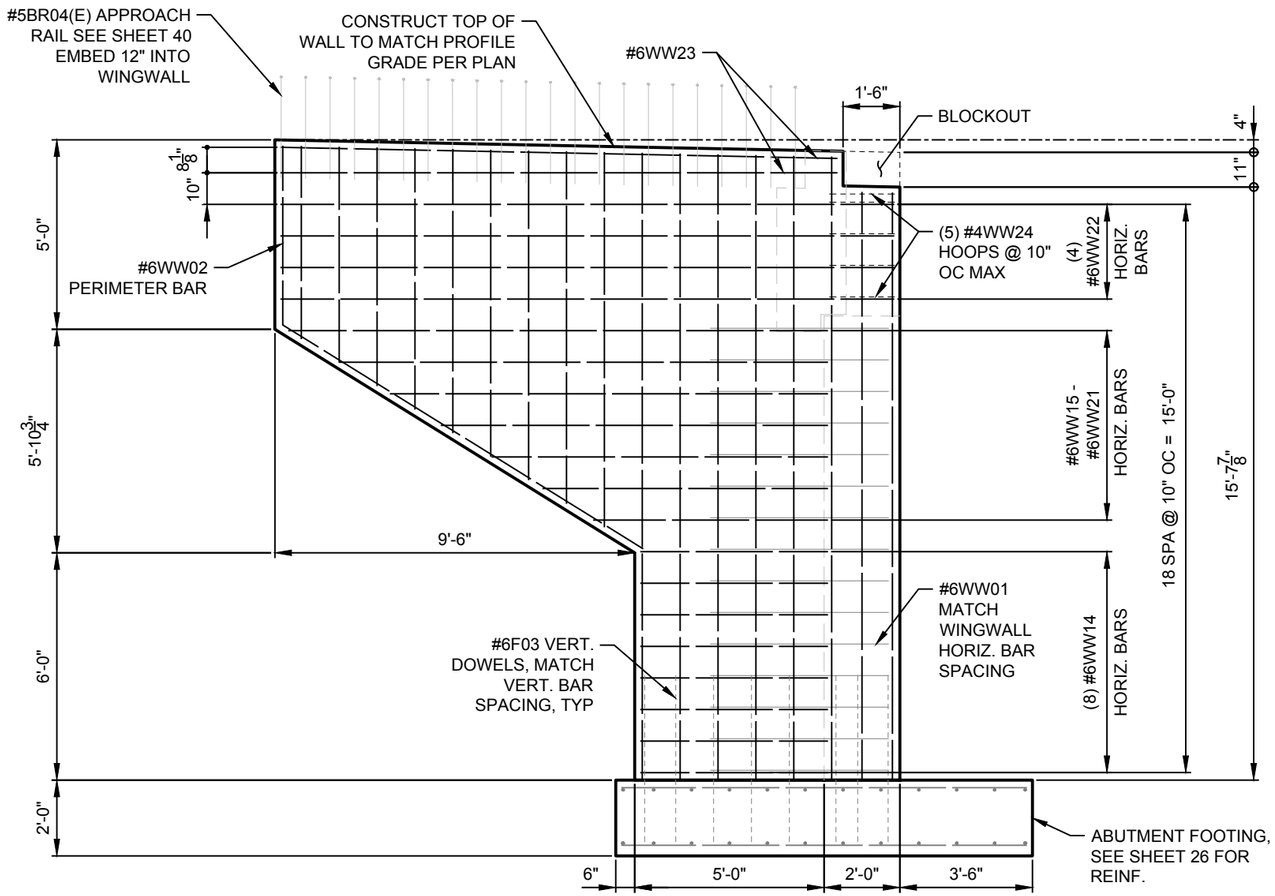
SHEET 28 OF 47

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ABUTMENT 1 WINGWALL PLAN

SCALE: 1/4" = 1'-0"



NOTE: OUTSIDE FACE SHOWN, INSIDE FACE IS SIMILAR.

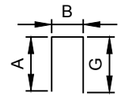
ABUTMENT 1 WINGWALL ELEVATION

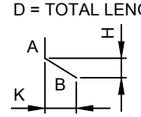
SCALE: 1/4" = 1'-0"

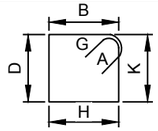
REINFORCING SCHEDULE - ABUTMENT 1 & 2 WINGWALL

MARK	SIZE	NO.	TYPE	LENGTH	A	B	D	G	H	K
#6WW01	6	112	2	6' - 1"	4' - 10"	1' - 3"				
#6WW02	6	4	14	15' - 10 3/4"	4' - 8 1/2"	11' - 2 1/4"	15' - 10 3/4"		5' - 10 3/4"	9' - 6"
#6WW03	6	4	STR	5' - 0 3/4"						
#6WW04	6	4	STR	5' - 8"						
#6WW05	6	4	STR	6' - 3"						
#6WW06	6	4	STR	6' - 10 1/4"						
#6WW07	6	4	STR	7' - 5 1/2"						
#6WW08	6	4	STR	8' - 0 3/4"						
#6WW09	6	4	STR	8' - 8"						
#6WW10	6	4	STR	9' - 3 1/4"						
#6WW11	6	4	STR	9' - 10 1/4"						
#6WW12	6	24	STR	16' - 5 3/4"						
#6WW13	6	10	STR	15' - 6"						
#6WW14	6	64	STR	4' - 11"						
#6WW15	6	4	STR	6' - 2"						
#6WW16	6	4	STR	7' - 6"						
#6WW17	6	4	STR	8' - 10"						
#6WW18	6	4	STR	10' - 2 1/4"						
#6WW19	6	4	STR	11' - 6 1/4"						
#6WW20	6	4	STR	12' - 10 1/2"						
#6WW21	6	4	STR	14' - 2 1/2"						
#6WW22	6	16	STR	16' - 2"						
#6WW23	6	8	STR	14' - 8"						
#4WW24	4	18	T1	6' - 9"	0' - 4 1/2"	1' - 9"	1' - 3"	0' - 4 1/2"	1' - 9"	1' - 3"

TYPE STR LENGTH

TYPE 2 

TYPE 14 D = TOTAL LENGTH 

TYPE T1 

NOTE: THIS REINFORCING SCHEDULE IS CONTINUED ON SHEET 30.

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
DRAWN PAD DATE 08/2026
CHECKED JWR SURVEYED DJ&A P.C.

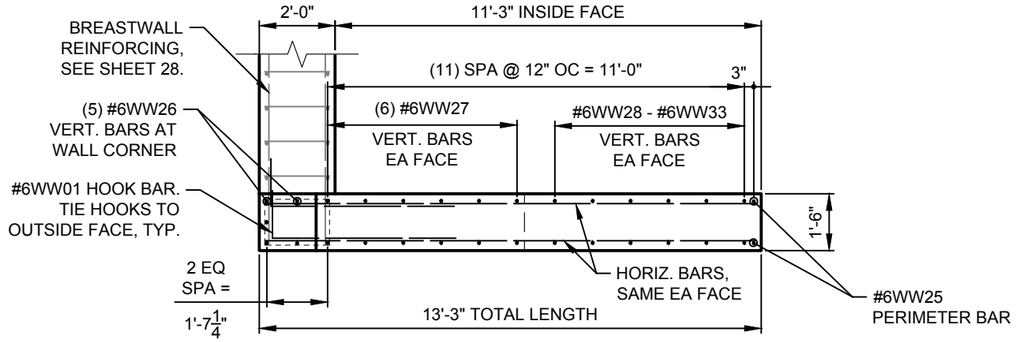
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

ABUTMENT DETAILS

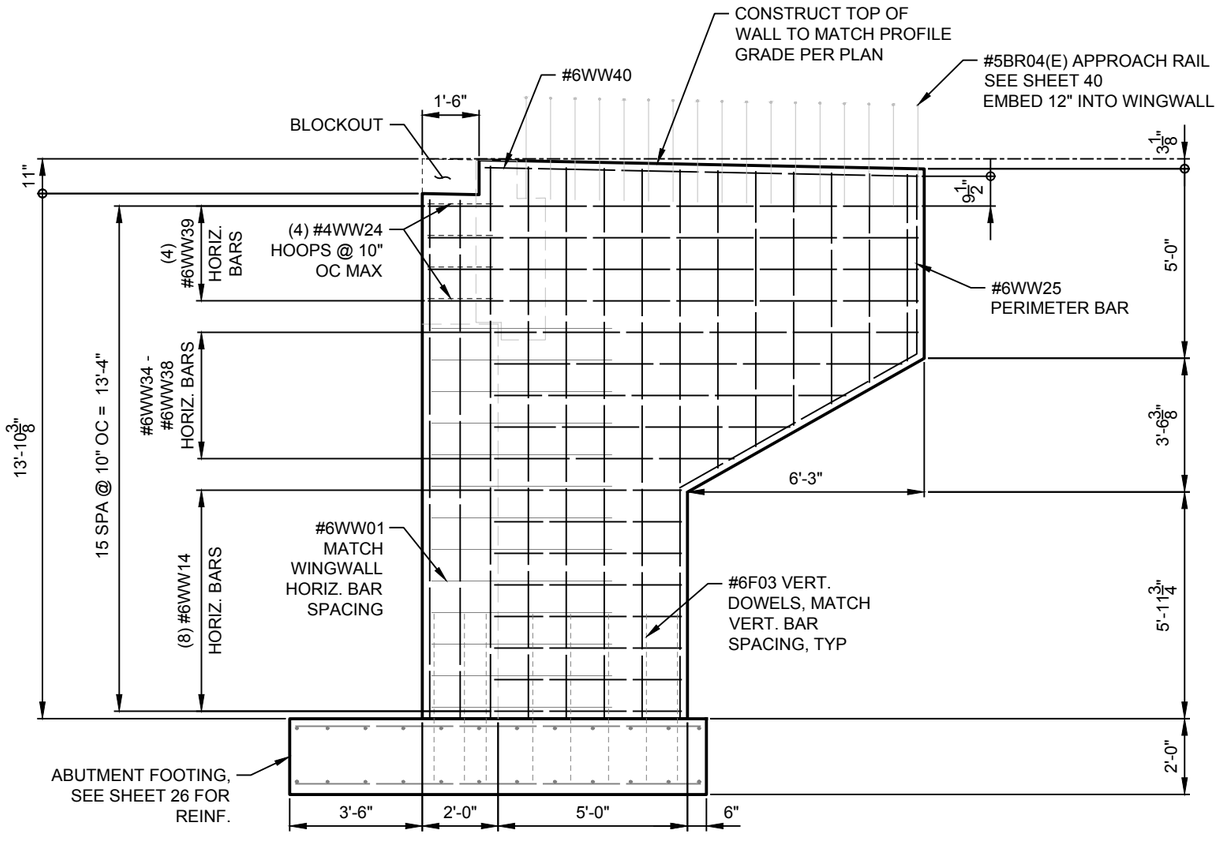
SHEET 29 OF 47

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ABUTMENT 2 WINGWALL PLAN

SCALE: 1/4" = 1'-0"



ABUTMENT 2 WINGWALL ELEVATION

SCALE: 1/4" = 1'-0"

NOTE: OUTSIDE FACE SHOWN, INSIDE FACE IS SIMILAR.

REINFORCING SCHEDULE - ABUTMENT 1 & 2 WINGWALL

MARK	SIZE	NO.	TYPE	LENGTH	A	B	D	G	H	K
#6WW25	6	4	14	11' - 10 3/4"	4' - 8 1/2"	7' - 2 1/4"	11' - 10 3/4"		3' - 6 1/4"	6' - 3"
#6WW26	6	10	STR	13' - 8 1/4"						
#6WW27	6	24	STR	14' - 6 1/4"						
#6WW28	6	4	STR	7' - 10"						
#6WW29	6	4	STR	7' - 3"						
#6WW30	6	4	STR	6' - 8"						
#6WW31	6	4	STR	6' - 1"						
#6WW32	6	4	STR	5' - 5 3/4"						
#6WW33	6	4	STR	4' - 10 3/4"						
#6WW34	6	4	STR	6' - 3 3/4"						
#6WW35	6	4	STR	7' - 9 1/4"						
#6WW36	6	4	STR	9' - 3"						
#6WW37	6	4	STR	10' - 8 3/4"						
#6WW38	6	4	STR	11' - 2"						
#6WW39	6	16	STR	12' - 11"						
#6WW40	6	4	STR	11' - 5"						

TYPE STR — LENGTH

TYPE 2 — B, A, G

TYPE 14 — D = TOTAL LENGTH; A, H, K, B

TYPE T1 — B, G, A, D, K, H

NOTE: THIS REINFORCING SCHEDULE IS CONTINUED FROM SEE SHEET 29.

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A, P.C.

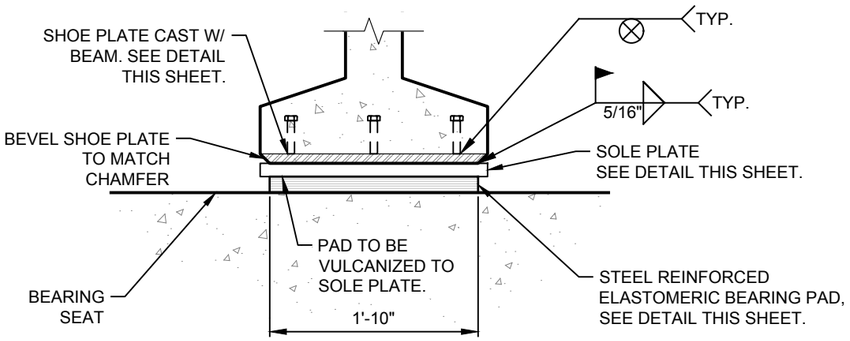
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

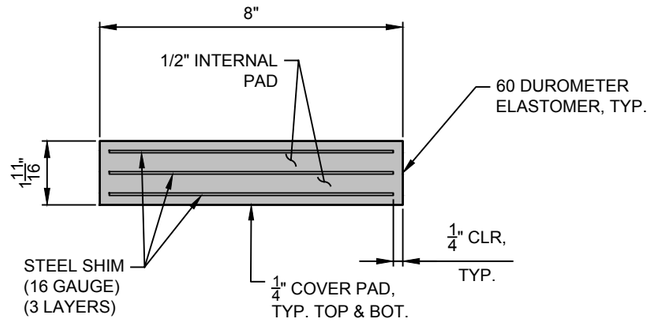
ABUTMENT DETAILS

SHEET 30 OF 47

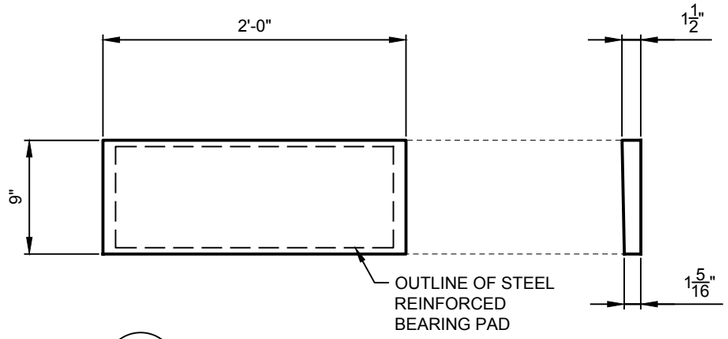
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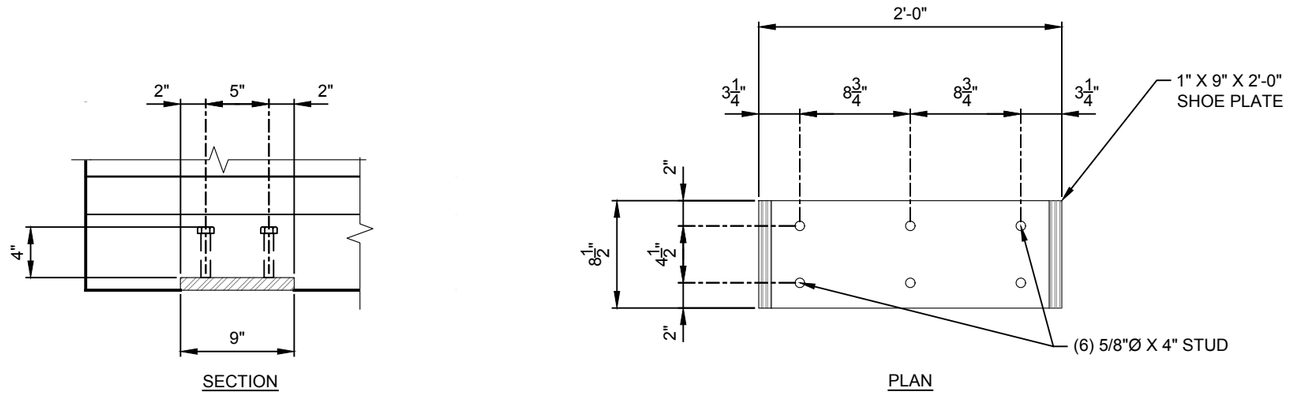
A 31 DETAIL — BEARING CONNECTION ELEVATION
SCALE: 3/4" = 1'-0"



B 31 DETAIL — STEEL REINFORCED ELASTOMERIC BEARING PAD
SCALE: 3" = 1'-0"

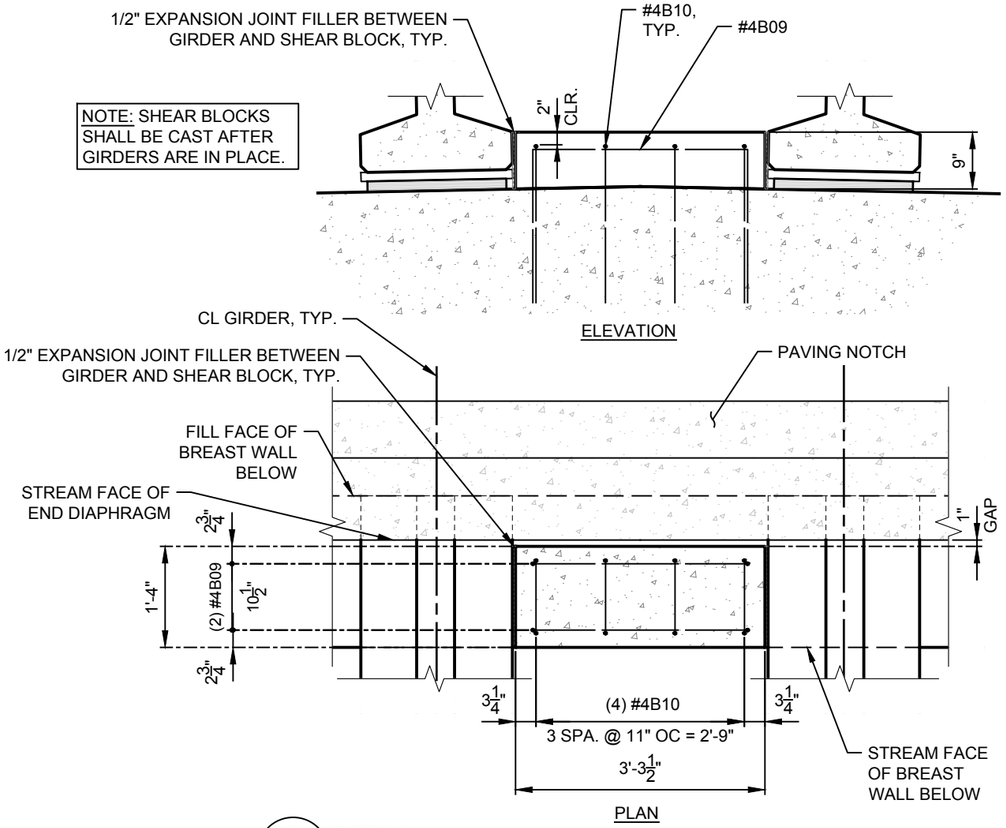


C 31 DETAIL — SOLE PLATE
SCALE: 1" = 1'-0"



D 31 DETAIL — SHOE PLATE
SCALE: 1" = 1'-0"

NOTE: SHEAR STUDS SPACING MAY BE ADJUSTED AS NECESSARY TO AVOID PRESTRESSING STRANDS.



E 31 DETAIL — SHEAR BLOCK 1 REQ'D EACH ABUTMENT
SCALE: 1/2" = 1'-0"

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

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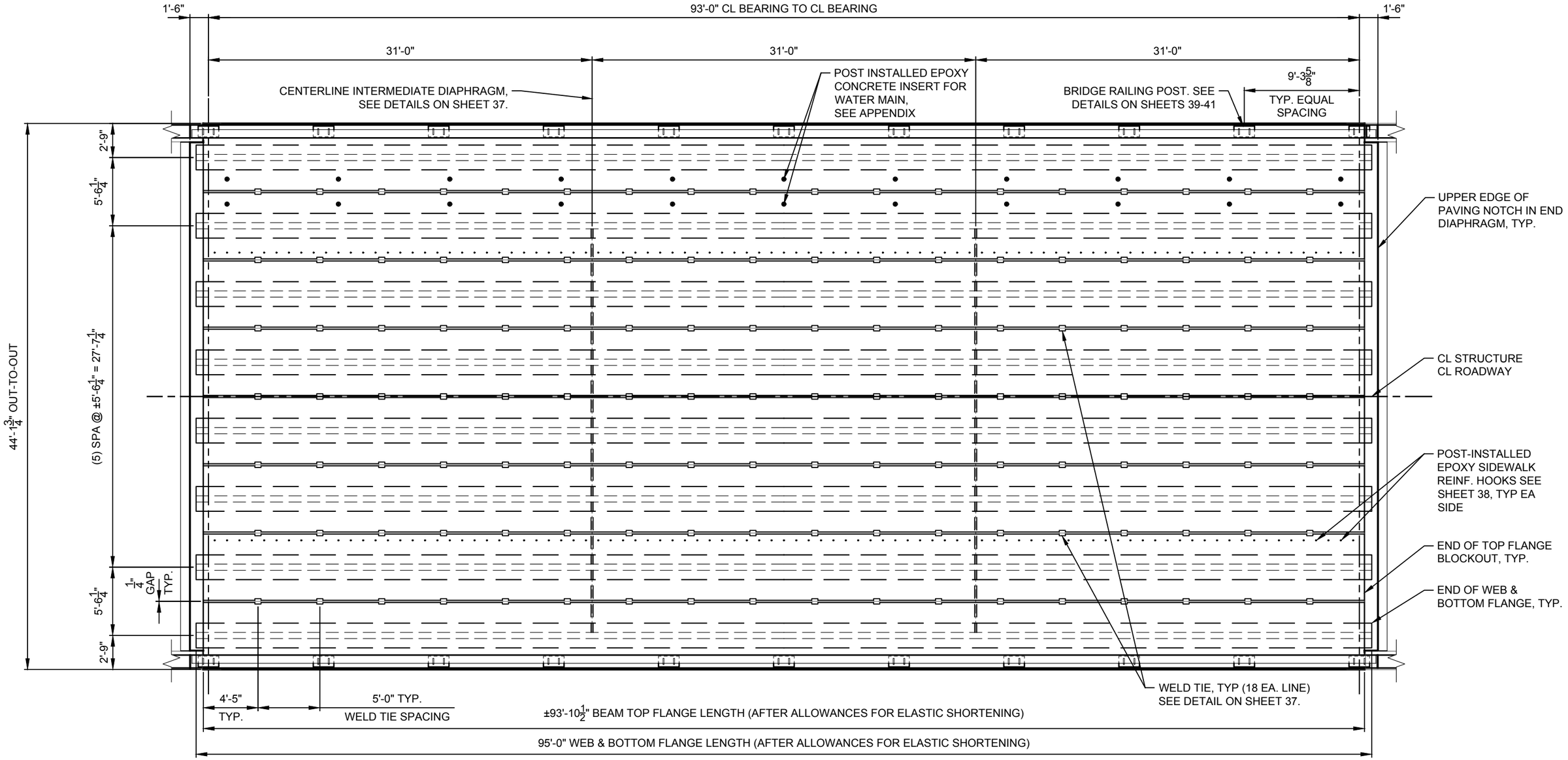
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

ABUTMENT DETAILS

SHEET OF 31 47

ADMIN, MEM, JACOB C:\DJA\PWORK\DJA_PROD\MISSOULA CO\LOLO STREET BRIDGE - 25124.5 DWG



SUPERSTRUCTURE PLAN

SCALE: 1/8" = 1'-0"

NOTE: PLAN DIMENSIONS ARE SHOWN ALONG THE HORIZONTAL PLANE UNLESS OTHERWISE NOTED.

NOTE: SEE SHEET 33 FOR BEAM DESIGN REQUIREMENTS.

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUPERSTRUCTURE PLAN

SHEET 32 OF 47

J:\2026\26-013 PATRICIA DONNER (LOLO)\PAVING\LOLOPAVINGSHEETS.DGN STREET BRIDGE - SUPERSTRUCTURE.DWG

PRESTRESSED BEAM NOTES

SPECIFICATIONS: SEE PRESTRESSED BEAM DESIGN PARAMETERS TABLE FOR DESIGN SPECIFICATIONS. SEE GENERAL NOTES ON SHEET 2 FOR ADDITIONAL DESIGN AND MATERIAL SPECIFICATIONS.

DESIGN: DESIGN AND FABRICATE THE BEAM TO SUPPORT THE DEAD LOAD AND LIVE LOADS SPECIFIED IN THE PRESTRESS BEAM DESIGN PARAMETERS TABLE. SHOW STRESSES IN THE BEAM UNDER EACH LOADING CONDITION THAT IS ANTICIPATED IN THE MANUFACTURE, HANDLING AND SERVICE LIFE OF THE BEAM. THE DESIGN DOCUMENTS MUST BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN MONTANA. SUBMIT CALCULATIONS AND SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS.

PRESTRESSING STEEL: USE 0.500" DIAMETER OR 0.600" DIAMETER 7 WIRE STRAND PRESTRESSING STEEL.

REINFORCING STEEL: EPOXY COAT ALL REINFORCING IN TOP FLANGE OF BEAM, CURB, AND INCIDENTALS.

HARDWARE: OBTAIN THE ENGINEER'S APPROVAL FOR ALL EMBEDDED PLATES, THREADED INSERTS, HOLD DOWN DEVICES, LIFTING DEVICES AND ANY OTHER HARDWARE INCORPORATED IN THE BEAM PRIOR TO FABRICATION.

BEAM LENGTH: INCREASE THE OVERALL LENGTH OF THE BEAM TO ALLOW FOR ELASTIC SHORTENING, SHRINKAGE, AND CREEP.

VARIATIONS: DO NOT CHANGE THE GENERAL SHAPE, THE DECK WIDTH OR SPAN LENGTHS FROM THOSE SHOWN ON THE BRIDGE DRAWINGS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. OBTAIN APPROVAL FROM THE ENGINEER OF ANY VARIATION REQUIRING THE ALTERATION OF THE BACKWALL, DIAPHRAGM AND SLEEVE SPACES AS SHOWN ON THE BRIDGE DRAWINGS.

PRESTRESSED CONCRETE BULB TEE BEAMS: THE BEAMS WILL BE FABRICATED IN ACCORDANCE WITH THE DETAILS SHOWN ON IN THESE PLANS. MAXIMUM F'C (COMPRESSIVE STRENGTH OF CONCRETE IN 28 DAYS) FOR DESIGN IS 7.5 K.S.I. ALL VALUES SHOWN IN THE PRESTRESSED BEAM DESIGN PARAMETERS TABLE ARE BASED ON THE BEAM SECTIONS SHOWN ON THIS SHEET.

STRUCTURAL STEEL: USE STRUCTURAL STEEL MEETING THE REQUIREMENTS OF AASHTO M 270 GRADE 36 FOR EMBEDDED PLATES, SMOOTH BARS, AND SHOES. USE STRUCTURAL STEEL MEETING THE REQUIREMENTS OF AASHTO M 314 GRADE 55 FOR ANCHOR BOLTS. GALVANIZE THE ANCHOR BOLTS MEETING THE REQUIREMENTS OF AASHTO M 232. USE HEADED SHEAR STUDS MEETING THE REQUIREMENTS OF AASHTO M 169 GRADES 1010 THROUGH 1020.

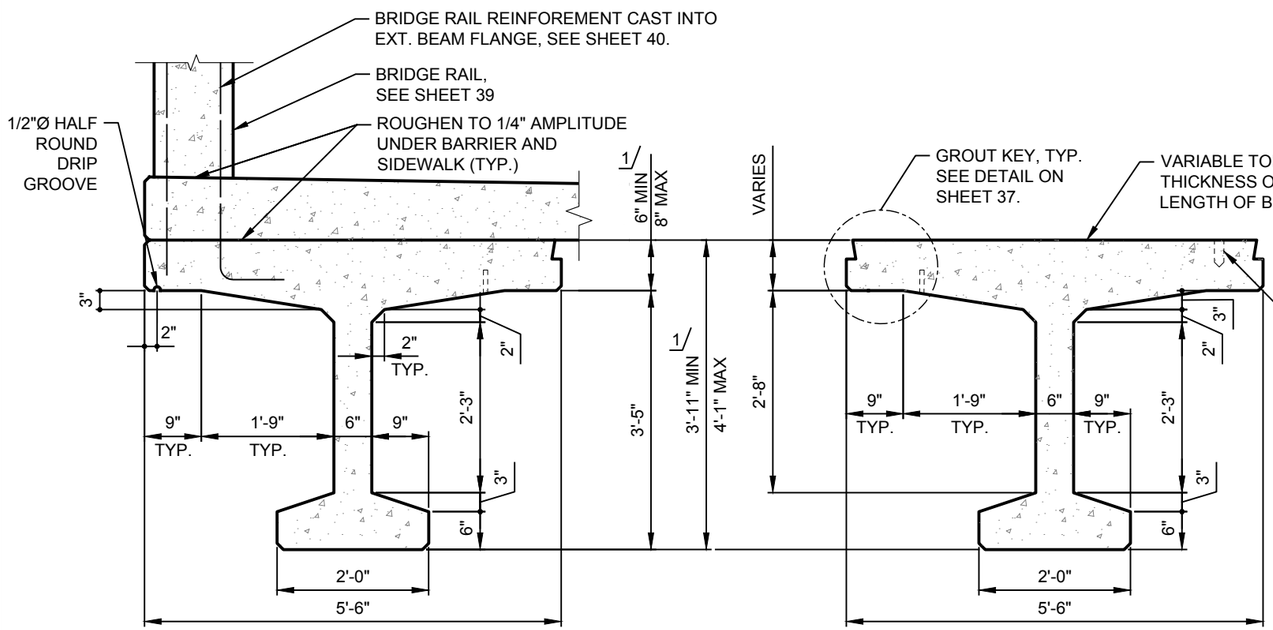
FINISHING CONCRETE: FINISH THE BOTTOMS OF ALL BEAMS AND THE EXTERIOR EDGES OF EXTERIOR BEAMS IN ACCORDANCE WITH THE SPECIFICATIONS.

VARIABLE TOP FLANGE THICKNESS: DESIGN THE THICKNESS OF THE TOP FLANGES TO ACCOMMODATE THE DESIGN PROFILE CONSIDERING THE FINAL CAMBER CONDITION ONCE ALL DEAD LOADS ARE APPLIED. SEE DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.

PRESTRESSED BEAM DESIGN PARAMETERS	
AASHTO SPECIFICATIONS	LRFD 9TH EDITION WITH CURRENT INTERIMS
STRUCTURE TYPE	SIMPLE SPAN
PRESTRESSING STRAND	270 KSI LOW RELAXATION - (0.500" OR 0.600" DIAMETER)
SHEAR REINFORCING	AASHTO M 31 GRADE 60
ALTERNATE SHEAR REINFORCING	WELDED WIRE REINFORCEMENT - AASHTO M5S, M221, OR MS4
SECTION PROPERTY CALCULATIONS	GROSS SECTION
PRESTRESS LOSS METHOD	APPROXIMATE LOSSES PER LRFD 5.9.3 AND 5.9.3.3
SHEAR COMPUTATION METHOD	SECTIONAL MODEL PER LRFD 5.7.3
BEAM / SLAB INTERFACE	N/A
LOAD RATING REQUIREMENTS	AASHTO LRFR DESIGN LOAD

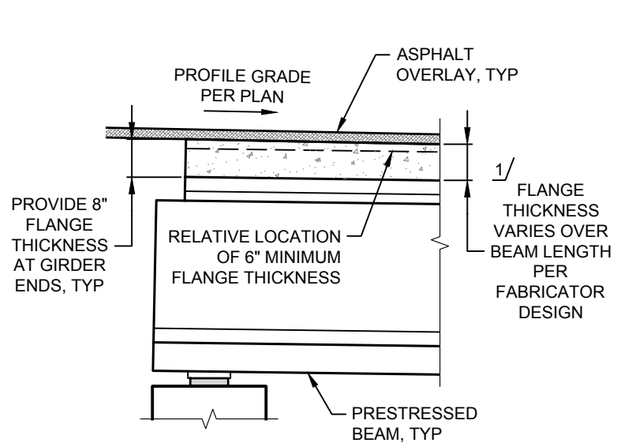
PRESTRESSED BEAM LOAD TABLE		
LOAD TYPE	LOADS	APPLICATION METHOD
SELF DEAD LOAD	SELF WEIGHT	EACH BEAM
BARRIER LOAD	0.347 KIP/FT PER RAIL	EXT. BEAMS ONLY
SIDEWALK	1.269 KIP/FT PER SIDEWALK	EQUALLY TO EXT. TWO BEAMS ONLY
INTERMEDIATE DIAPHRAGMS	0.140 KIP/BAY @ 1/3 POINTS	AT POINT LOAD
UTILITY WATER MAIN	* ±0.145 KIP/FT	EQUALLY TO EXT. TWO BEAMS ONLY
ASPHALT OVERLAY WEARING SURFACE	0.023 KIP/FT² APPLIED BETWEEN CURBS	EQUALLY TO ALL BEAMS
FUTURE WEARING SURFACE	0.012 KIP/FT² APPLIED BETWEEN CURBS	EQUALLY TO ALL BEAMS
LIVE LOAD	LRFD - HL-93 WITH IMPACT	PER AASHTO LRFD, ON ALL BEAMS
PEDESTRIAN LIVE LOAD	0.075 KIP/FT² APPLIED ON SIDEWALKS	PER AASHTO LRFD 3.6.1.6

* NOTE: COORDINATE FINAL WEIGHT OF WATER MAIN (FILLED WITH WATER) WITH APPROVED WATER MAIN SUBMITTALS.

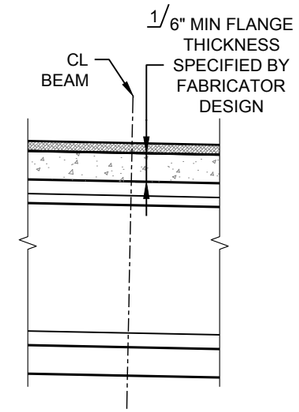


EXTERIOR BEAM
SCALE: 1/2" = 1'-0"

INTERIOR BEAM
SCALE: 1/2" = 1'-0"



END OF BEAM



CENTER OF BEAM

1/ FINAL MINIMUM FLANGE THICKNESS & GIRDER DEPTH SPECIFIED BY FABRICATOR'S DESIGN.

BEAM TOP FLANGE
SCALE: NO SCALE

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REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

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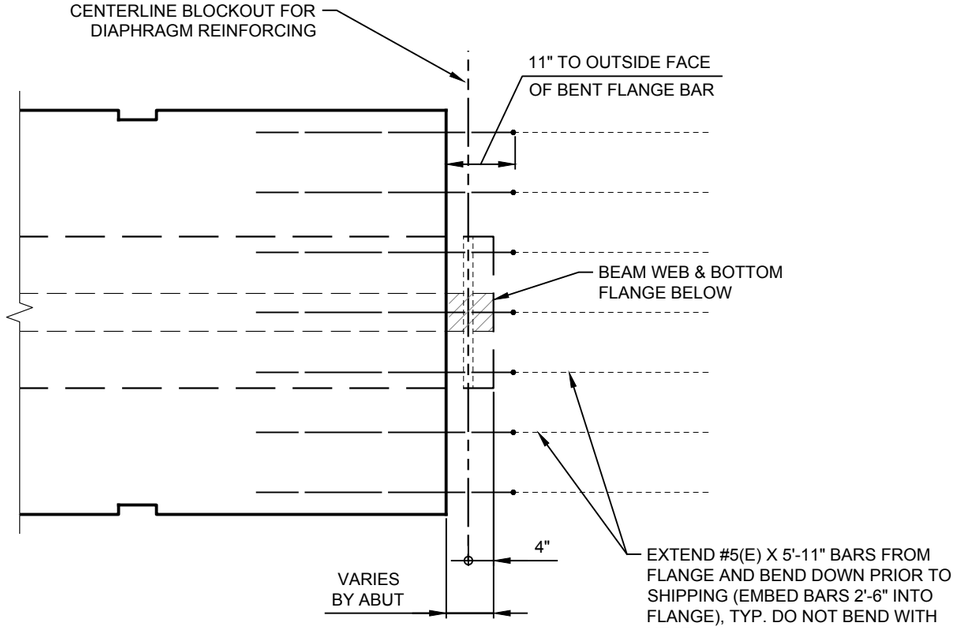
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUPERSTRUCTURE DETAILS

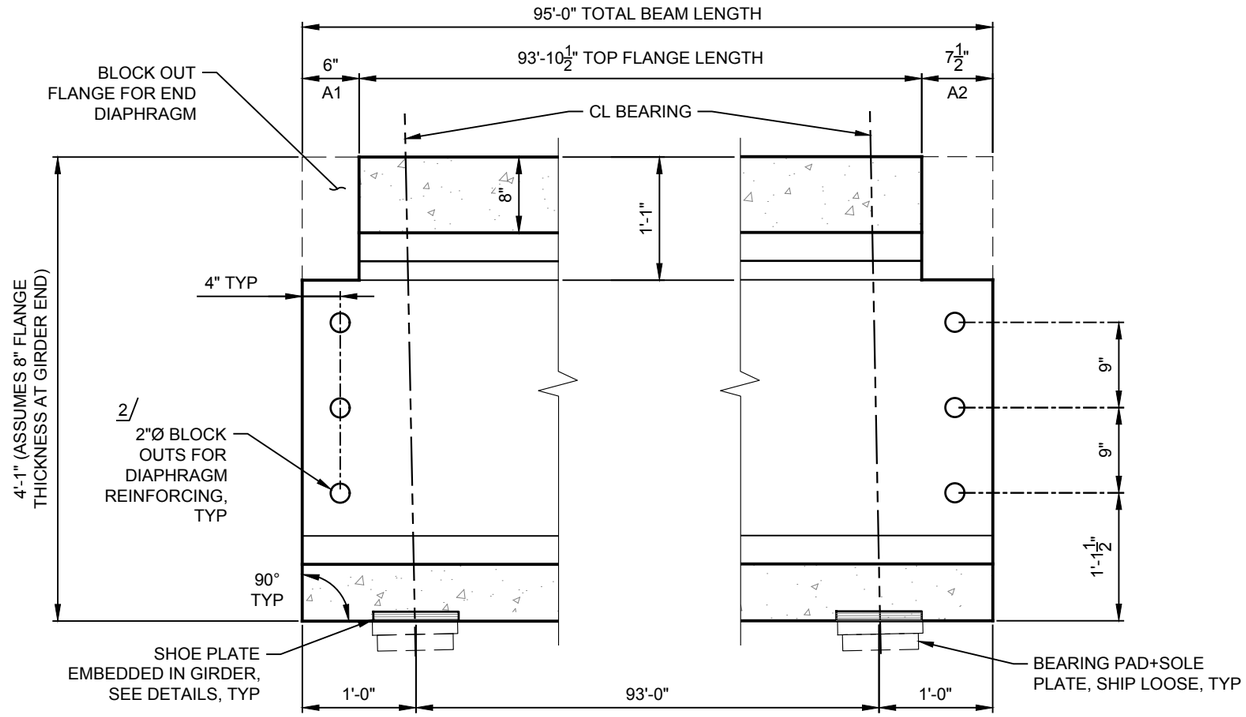
SHEET 33 OF 47

ASSIGNED PATH:C:\DJA-PROJECTS\7611 LOLO STREET BRIDGE - SUPERSTRUCTURE\7611 SUPERSTRUCTURE DETAILS.DWG



TYPICAL BEAM END

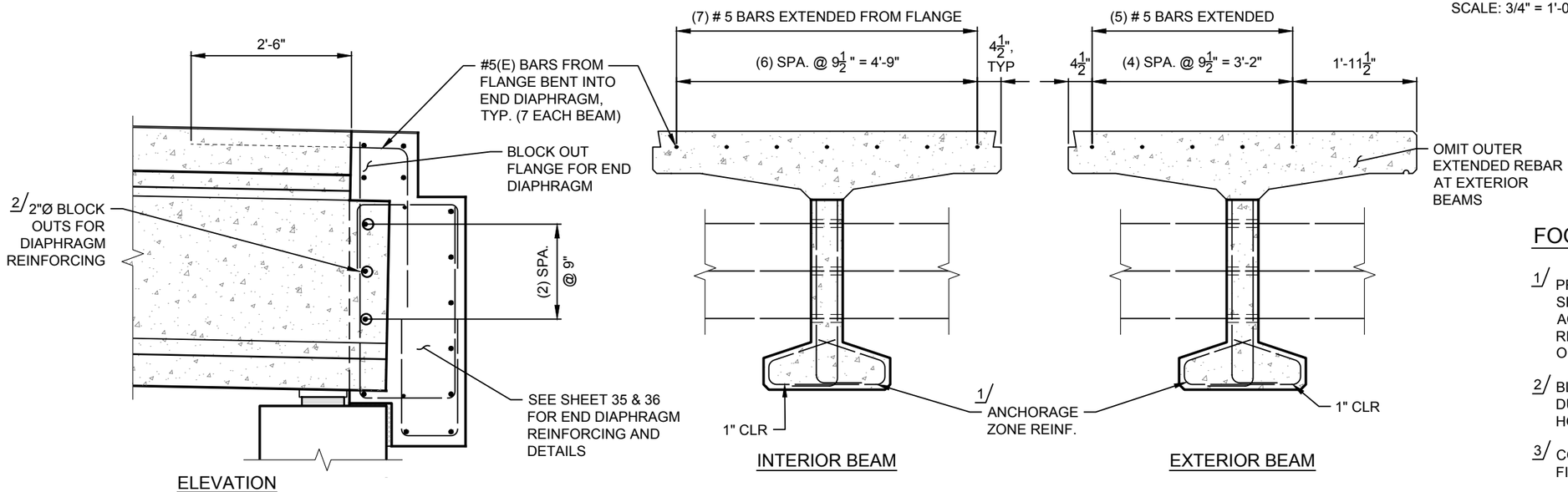
SCALE: 1/2" = 1'-0"



(SHOWN ON FLAT)

TYPICAL GIRDER ENDS

SCALE: 3/4" = 1'-0"



TYPICAL BEAM END DETAIL

SCALE: 1/2" = 1'-0"

FOOTNOTES

1/ PROVIDE REINFORCING IN THE ANCHORAGE ZONE FOR SPLITTING RESISTANCE AND CONFINEMENT IN ACCORDANCE WITH AASHTO LRFD 5.10.10.1 AND 5.10.10.2, RESPECTIVELY. USE MIN. CONFINEMENT REINFORCEMENT OF #3 BARS @ 6".

2/ BLOCKOUT HOLES MAY BE FORMED WITH POST-TENSIONING DUCT LEFT IN PLACE. OTHER MATERIALS USED TO FORM HOLES MUST BE REMOVED PRIOR TO SHIPPING.

3/ CONSTRUCT GIRDER ENDS SO THEY WILL BE PLUMB IN FINAL ERECTED POSITION.

REVISION	DATE	DESCRIPTION
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DESIGNER TE | PROJ. NO. 7611
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CHECKED JWR | SURVEYED DJ&A, P.C.

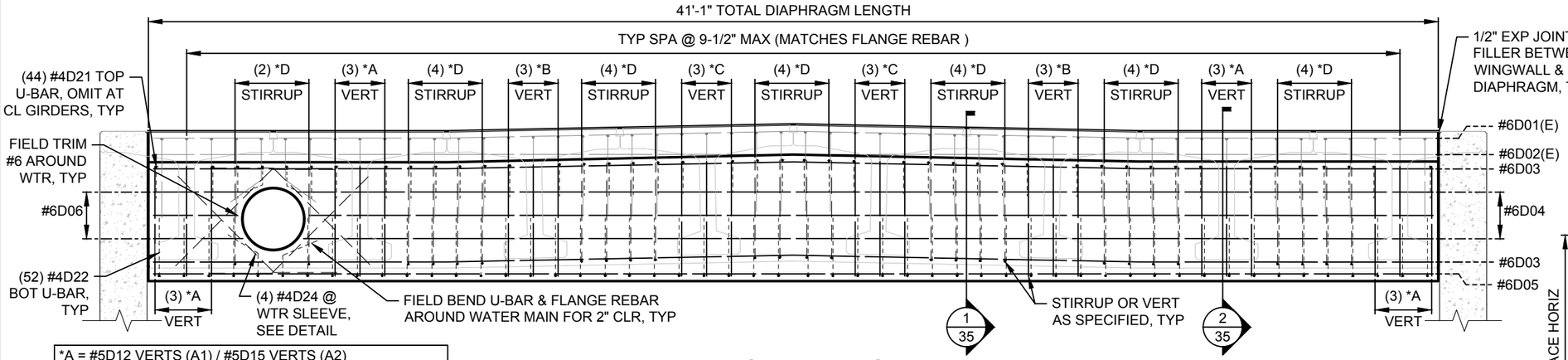
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUPERSTRUCTURE DETAILS

SHEET 34 OF 47

K:\DJA\2023\BATTEN\CONVERT\DJA-PWORK\DJA-PWORK\2023\LOLO STREET BRIDGE - SUPER\DET34 & DWG



*A = #5D12 VERTS (A1) / #5D15 VERTS (A2)
*B = #5D13 VERTS (A1) / #5D16 VERTS (A2)
*C = #5D14 VERTS (A1) / #5D17 VERTS (A2)
*D = #4D18(E) STIRRUPS (A1) / #4D19(E) STIRRUPS (A2)

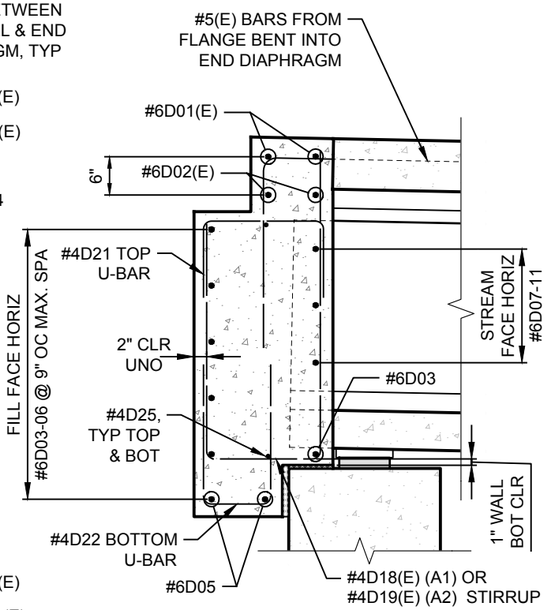
END DIAPHRAGM - FILL FACE

SCALE: 1/4" = 1'-0"

LOOKING AHEAD ONLINE

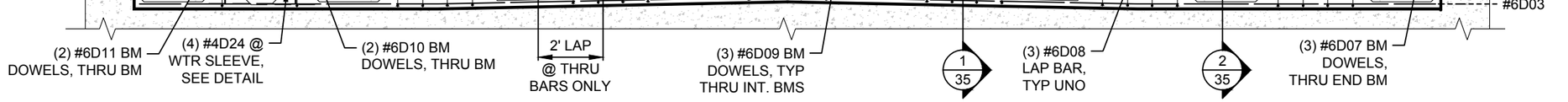
ABUTMENT 1 SHOWN ABUTMENT 2 SIMILAR

NOTE: SEE SHEET 36 FOR ADDITIONAL END DIAPHRAGM DIMENSIONS.



1/35 SECTION TYPICAL

SCALE: 1/2" = 1'-0"



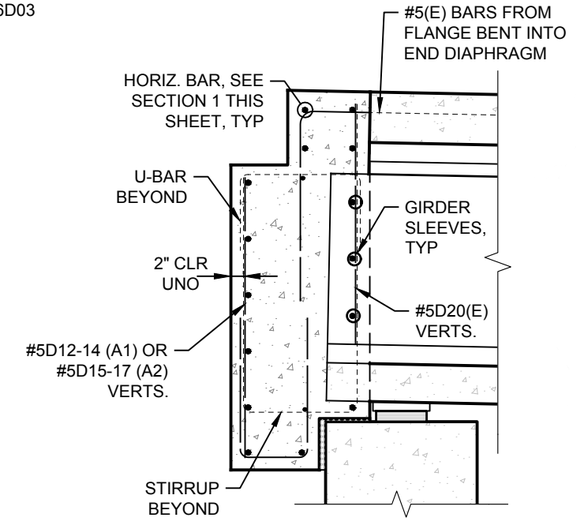
*E = (2) #5D20(E) VERTS (A1& A2)

END DIAPHRAGM - STREAM FACE

SCALE: 1/4" = 1'-0"

LOOKING AHEAD ONLINE

ABUTMENT 1 SHOWN ABUTMENT 2 SIMILAR



2/35 SECTION AT GIRDER

SCALE: 1/2" = 1'-0"

NOTES

1. FINAL SIZE AND LOCATION OF WATER MAIN SLEEVE ARE TO BE COORDINATED WITH WATER MAIN WORK, SEE APPENDIX.
2. FULL LENGTH HORIZONTAL REBAR ARE ASSUMED TO BE SUPPLIED WHEN POSSIBLE. CONTRACTOR MAY ELECT TO IMPLEMENT REBAR SPLICES BY REVISING LENGTHS AND PROVIDING THE INCLUDED SPECIFIED SPLICE LENGTHS. SPLICES MUST BE STAGGERED AT LEAST 3 FEET HORIZONTALLY FROM THE NEAREST ADJACENT SPLICED BAR
3. REBAR LAYOUT SHOWN ASSUMES THAT THE WINGWALL IS POURED IN ONE POUR AND THE TOP OF THE WINGWALL IS PRESENT DURING CONSTRUCTION OF THE END DIAPHRAGMS. SHOULD THE CONTRACTOR ELECT TO IMPLEMENT THE OPTIONAL WINGWALL CONSTRUCTION JOINT SHOWN IN THESE PLANS AND THE TOP OF THE WINGWALL IS NOT PRESENT DURING CONSTRUCTION OF THE END DIAPHRAGMS, THE CONTRACTOR MAY CONSIDER REVISING REBAR LENGTHS OF SEGMENTED BAR ON THE STREAM FACE (LONGER REBAR WILL BE POSSIBLE IF ABLE TO INSERT FROM THE END OF THE WALL). CONTRACTOR MAY USE THE REDUCED LAP FOR THRU BARS SPECIFIED ABOVE IN STREAM FACE ELEVATION.

TYPICAL MIN LAP LENGTHS IN END DIA.
#4 = 2'-0"
#5 = 2'-6"
#6 = 3'-0"
#6(E) = 3'-6"

NOTE: SEE SHEET 36 FOR REINFORCING SCHEDULE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
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DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUPERSTRUCTURE DETAILS

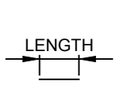
SHEET OF 35 47

10/28/2025 PATRICIA BONNER C:\DJA\PWORKING\LA-BRIDGE\MISSOULA\LO STREET BRIDGE - SUPERSTRUCTURE DETAILS.DWG

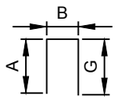
REINFORCING SCHEDULE - ABUTMENT 1 & 2 END DIAPHRAGM

MARK	SIZE	NO.	TYPE	LENGTH	A	B	D	G	H	K
#6D01(E)	6	4	50	40' - 9"	9' - 4 1/2"	11' - 0"	11' - 0"	9' - 4 1/2"	0' - 2 1/2"	11' - 0"
#6D02(E)	6	4	STR	40' - 9"						
#6D03	6	6	50	40' - 9"	9' - 4 1/2"	11' - 0"	11' - 0"	9' - 4 1/2"	0' - 2 1/2"	11' - 0"
#6D04	6	6	STR	36' - 2"						
#6D05	6	4	STR	40' - 9"						
#6D06	6	6	STR	3' - 0 1/2"						
#6D07	6	8	STR	3' - 6"						
#6D08	6	38	STR	4' - 8 1/4"						
#6D09	6	32	STR	4' - 11"						
#6D10	6	4	2	5' - 5"	4' - 3"	1' - 2"				
#6D11	6	4	2	3' - 10 1/2"	2' - 8 1/2"	1' - 2"				
#5D12	5	12	STR	3' - 5 1/2"						
#5D13	5	6	STR	3' - 6 1/4"						
#5D14	5	6	STR	3' - 7 1/2"						
#5D15	5	12	STR	3' - 4 1/2"						
#5D16	5	6	STR	3' - 5 1/4"						
#5D17	5	6	STR	3' - 6 1/2"						
#4D18(E)	4	26	2	8' - 7 3/4"	3' - 1"	1' - 6"		4' - 0 3/4"		
#4D19(E)	4	26	2	8' - 6 1/2"	3' - 0"	1' - 6"		4' - 0 1/2"		
#5D20(E)	5	32	STR	3' - 2"						
#4D21	4	88	2	3' - 6"	1' - 0"	1' - 6"		1' - 0"		
#4D22	4	104	2	4' - 6"	1' - 10"	0' - 10"		1' - 10"		
#5D23(E)	5	2	STR	1' - 6 1/4"						
#4D24	4	16	14	6' - 4"	2 '- 0"	4' - 4"	6' - 4"		3' - 0 3/4"	3' - 0 3/4"
#4D25	4	4	50	40' - 9"	9' - 4 1/2"	11' - 0"	11' - 0"	9' - 4 1/2"	0' - 2 1/2"	11' - 0"

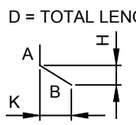
TYPE STR



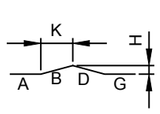
TYPE 2

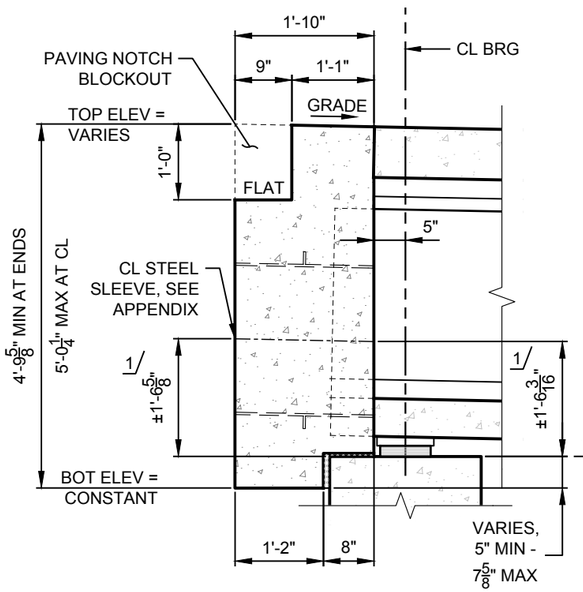


TYPE 14



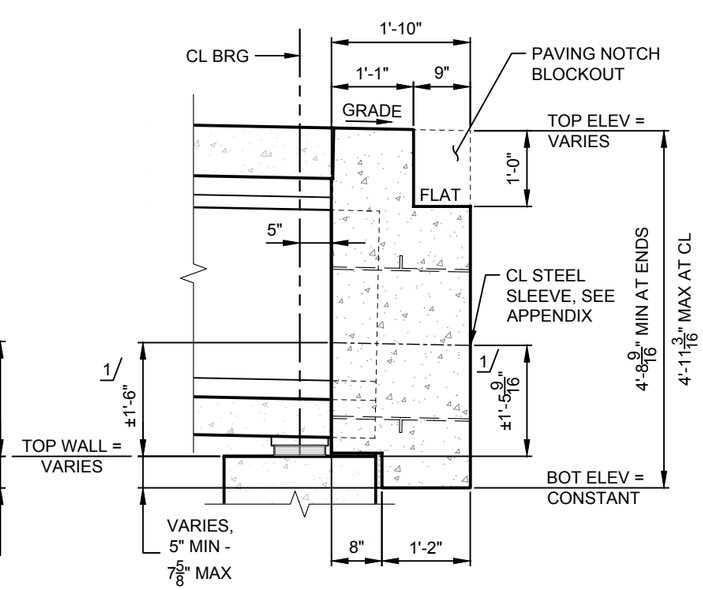
TYPE 50





END DIAPHRAGM DIMENSIONS - ABUT 1

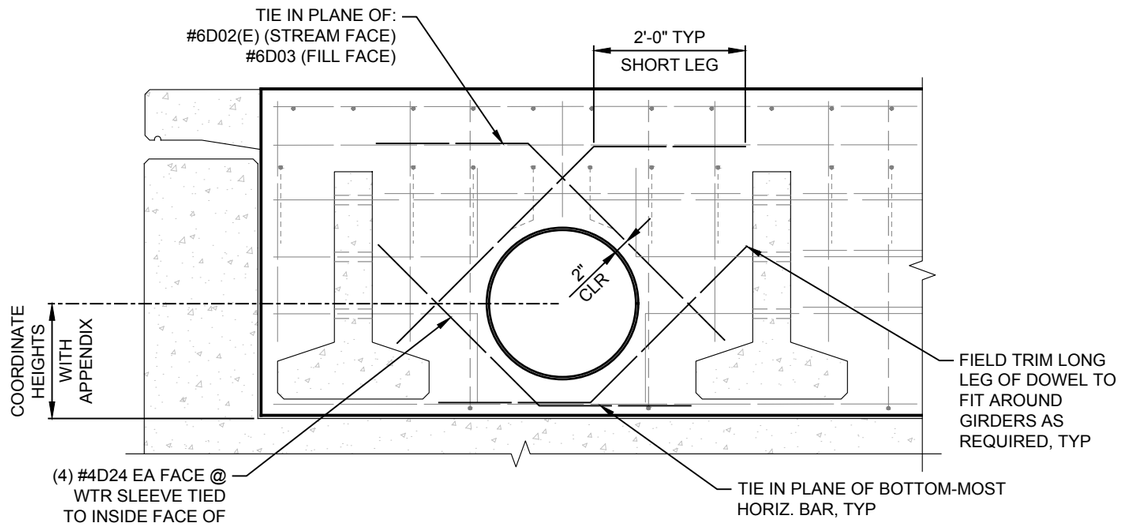
SCALE: 1/2" = 1'-0"



END DIAPHRAGM DIMENSIONS - ABUT 2

SCALE: 1/2" = 1'-0"

1/ NOTE: APPROXIMATE CENTERLINE OF SLEEVE DIMENSIONS ARE GIVEN. COORDINATE FINAL SLEEVE SIZE AND LOCATION WITH WATER PROJECT, SEE APPENDIX.



REINFORCING AROUND WATER MAIN

SCALE: NO SCALE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
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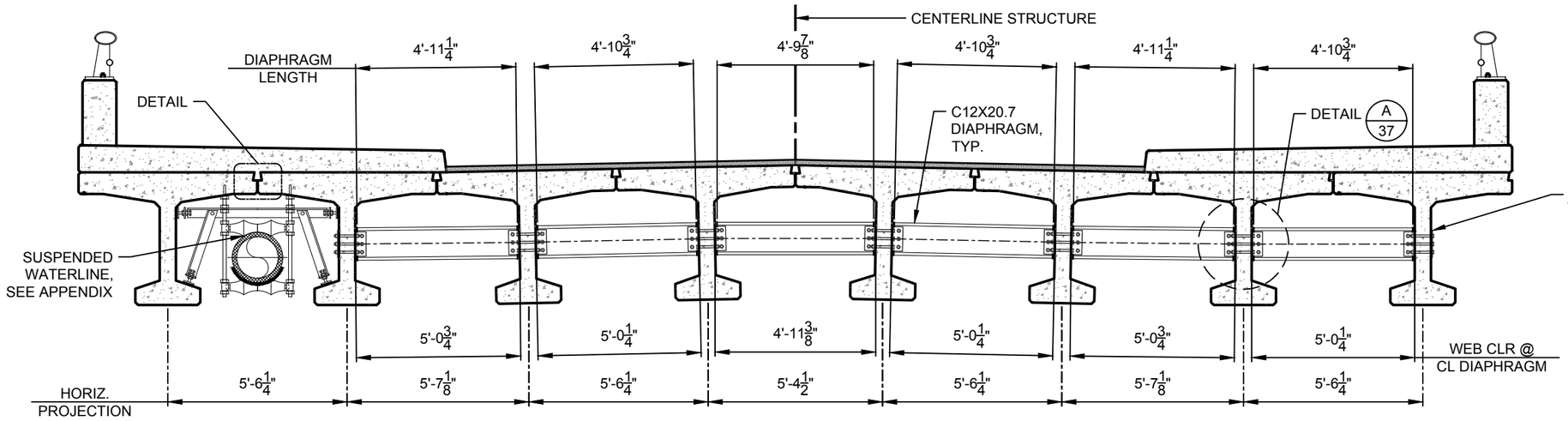
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUPERSTRUCTURE DETAILS

SHEET 36 OF 47

K:\DJA JOBS\7611 MISSOULA COUNTY\DRAWINGS\LOLO STREET BRIDGE - SUPERSTRUCTURE.DWG

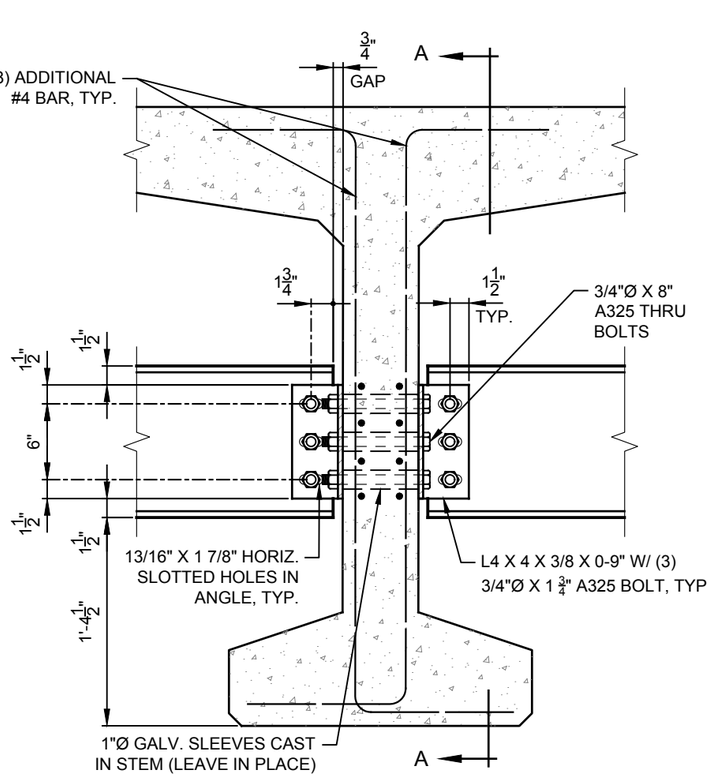


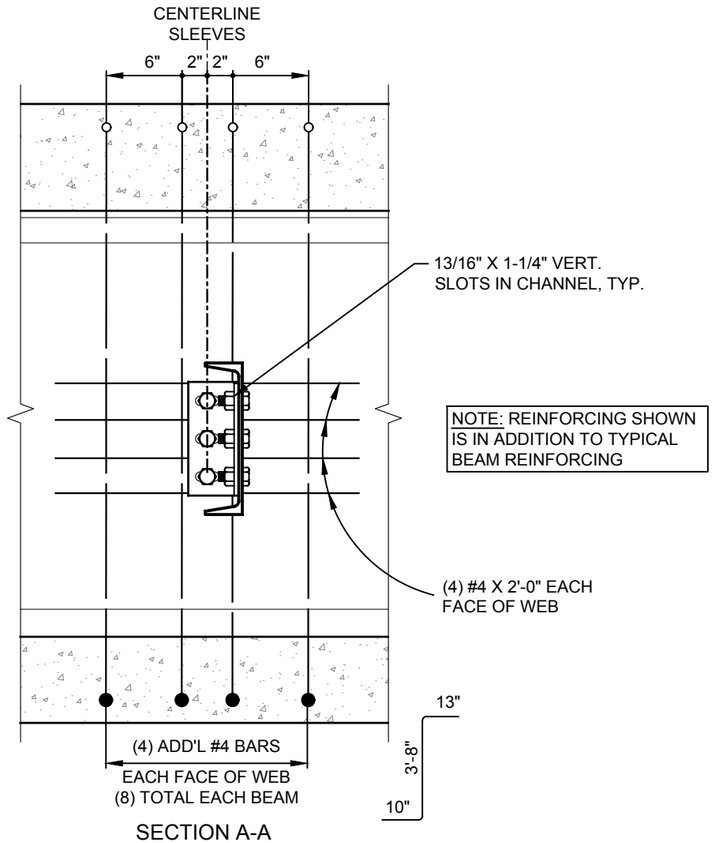
NOTE: GALVANIZE STEEL DIAPHRAGM ELEMENTS. DIAPHRAGMS ARE INCLUDED IN THE PRESTRESSED BULB TEE BID ITEM

NOTE: USE BAR 4"X1/2"X0'-10" (W/ 1"Ø HOLES, CENTERED) AS FLAT WASHER FOR THRU-BOLTS AT EXTERIOR FACES OF BEAM & AT WATER MAIN

INTERMEDIATE DIAPHRAGM DETAIL

SCALE: 1/4" = 1'-0"



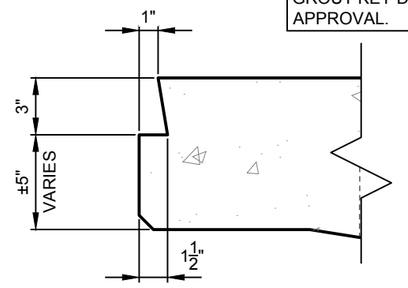


SECTION A-A

A 37 DETAIL — DIAPHRAGM CONNECTION

SCALE: 1" = 1'-0"

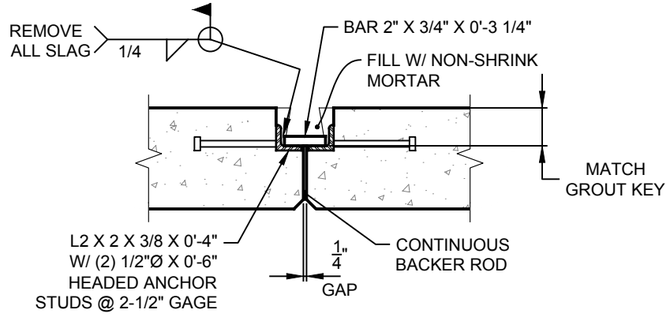
NOTE: BEAM FABRICATOR MAY SUBMIT ALTERNATE GROUT KEY DETAIL FOR APPROVAL.



GROUT KEY DETAIL

NOT TO SCALE

NOTE: BEAM FABRICATOR MAY SUBMIT ALTERNATE WELD TIE DETAIL FOR APPROVAL.



WELD TIE DETAIL

NOT TO SCALE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

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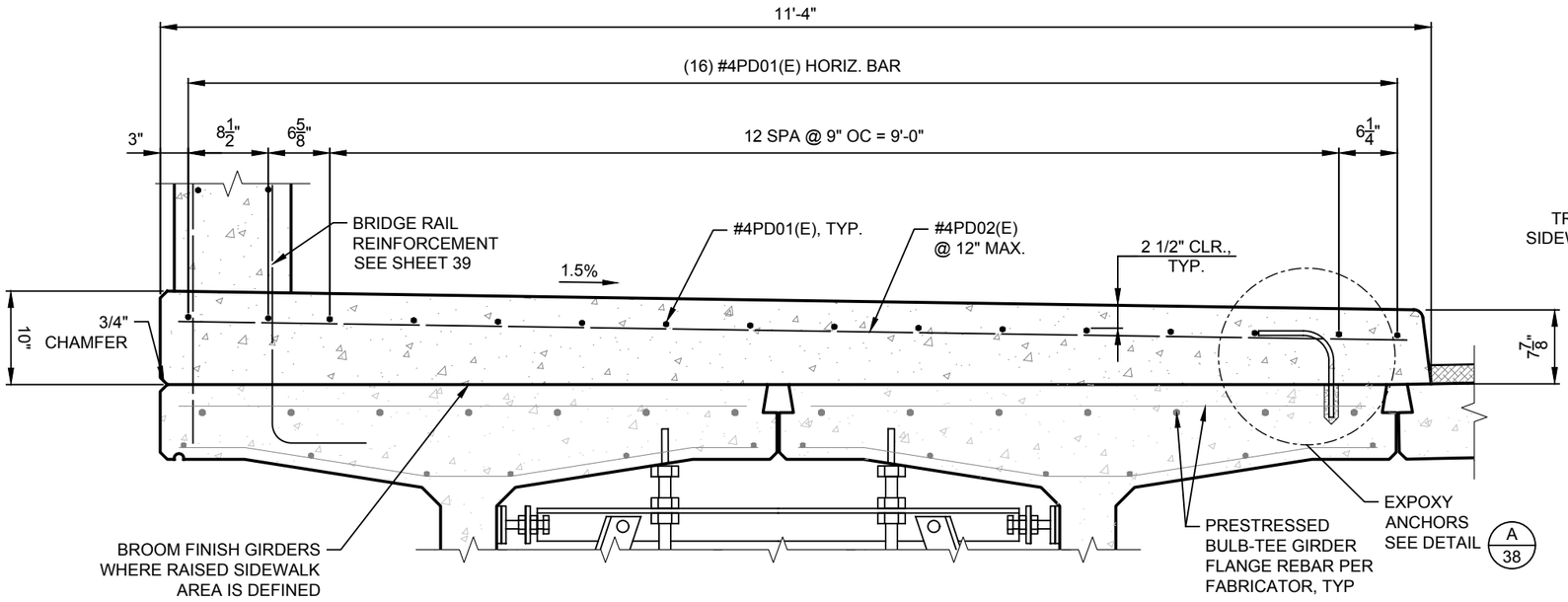
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

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SHEET 37 OF 47

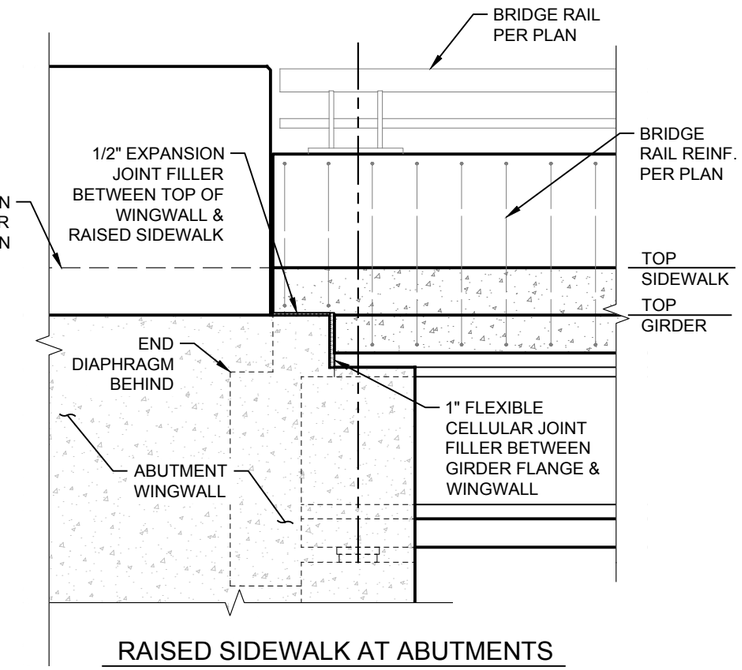
2026/08/26 13:39:47 PATRICIA BONNER C:\DJA\PROJECTS\MISSOULA\BRIDGE\MISSOULA CO STREET BRIDGE - SUPER DETAILS.DWG



RAISED SIDEWALK

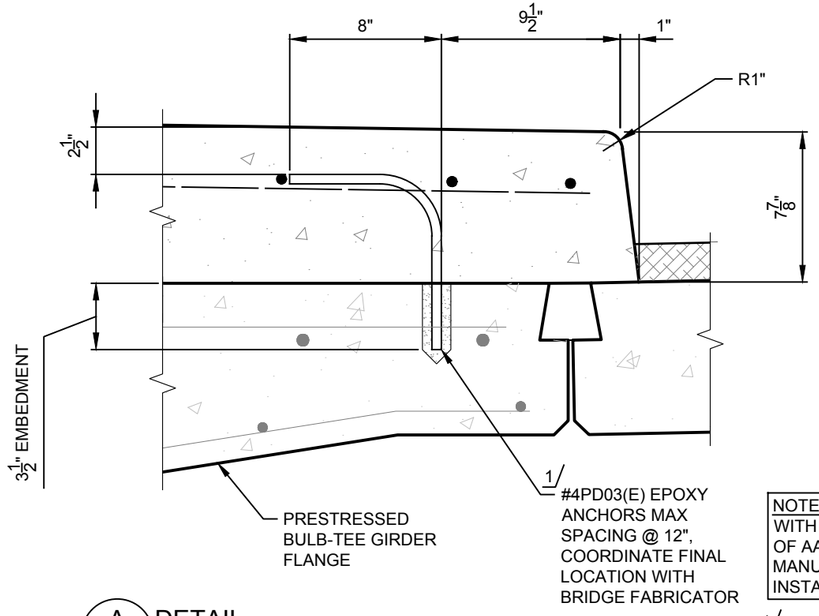
SCALE: 3/4" = 1'-0"

NOTE: SEE SHEET 39 FOR EXTENTS OF RAISED SIDEWALK.



RAISED SIDEWALK AT ABUTMENTS

SCALE: 3/4" = 1'-0"



A/38 DETAIL

SCALE: 1 1/2" = 1'-0"

NOTE: EMBED #4PD03(E) BAR INTO CONCRETE WITH AN EPOXY MEETING THE REQUIREMENTS OF AASHTO M235 TYPE IV. FOLLOW MANUFACTURER'S DIRECTIONS FOR INSTALLING THE EXPOXIED ANCHOR BARS.

1/ END EPOXY ANCHORS WILL BE INSTALLED IN END-DIAPHRAGMS WHERE RAISED SIDEWALK RUNS PAST BEAM TOP FLANGES.

REINFORCING SCHEDULE - RAISED SIDEWALK

MARK	SIZE	NO.	TYPE	LENGTH	A	B	G
#4PD01(E)	4	96	STR	33' - 9"			
#4PD02(E)	4	194	STR	10' - 11 1/2"			
#4PD03(E)	4	194	2	1' - 5 1/4"	0' - 9 1/4"	0' - 8"	

TYPE STR — LENGTH

TYPE 2 — B, A, G

REVISION	DATE	DESCRIPTION
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DRAWN PAD | DATE 08/2026
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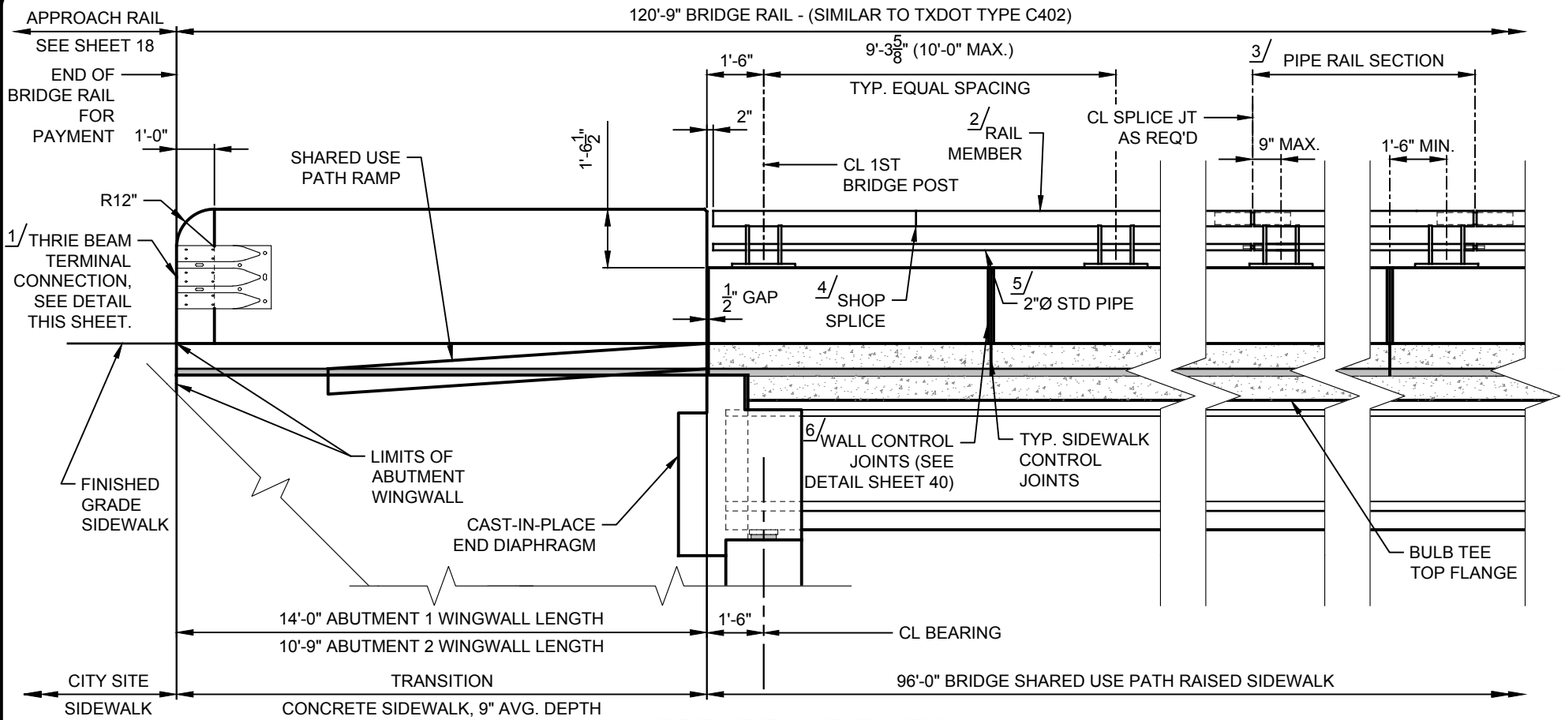
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

SUPERSTRUCTURE DETAILS

SHEET 38 OF 47

2026/08/13 PATRICIA DONNER C:\DJA\PROJ\LOLO\BRIDGE\MISSOULA LOLO STREET BRIDGE - SUPERSTRUCTURE DETAILS.DWG



BRIDGE RAIL ELEVATION

SCALE: 1/4" = 1'-0"

BRIDGE RAIL NOTES

CONSTRUCTION: THIS RAIL MAY BE SLIPFORMED IF APPROVED BY THE ENGINEER WHEN ADHESIVE ANCHOR BOLTS ARE USED. AT THE CONTRACTOR'S OPTION ANCHOR BOLTS MAY BE CAST WITH THE PARAPET. SEE "MATERIAL NOTES." SLIPFORMING PARAPET IS NOT ALLOWED IF ANCHOR BOLTS ARE CAST WITH PARAPET WALL. IF RAIL IS SLIPFORMED, APPLY AN HEAVY EPOXY BEAD 1" BEHIND TOE OF TRAFFIC SIDE OF RAIL TO CONCRETE DECK JUST PRIOR TO SLIP FORMING. PROVIDE A 3/8" WIDTH X 1/4" TALL HEAVY EPOXY BEAD WITH TYPE III, CLASS C OR A TYPE V EPOXY.

RAIL PARAPET MUST BE PLUMB UNLESS OTHERWISE APPROVED. STEEL POSTS MUST BE SQUARE TO THE TOP OF PARAPET. USE TYPE VIII EPOXY MORTAR UNDER POST BASE PLATES IF GAPS LARGER THAN 1/16" EXIST. CAP ALL ENDS OF TUBULAR STEEL SECTIONS AT PARAPET. PIPE RAIL SECTIONS MUST HAVE AT LEAST TWO POSTS BUT NOT MORE THAN FOUR. ROUND OR CHAMFER ALL EXPOSED EDGES OF STEEL COMPONENTS 1/16" BY GRINDING PRIOR TO GALVANIZING. CHAMFER ALL EXPOSED CONCRETE CORNERS.

PAYMENT: PAYMENT FOR 'BRIDGE RAIL, COMBINATION RAIL' PER LINEAR FOOT INCLUDES COMPENSATION FOR THE COST OF THE CONCRETE CLASS - LOW SLUMP IN THE CURBS AND ALL NECESSARY RESOURCES TO COMPLETE THE WORK.

MATERIAL: GALVANIZE ALL METAL COMPONENTS OF STEEL RAIL SYSTEM. APPLY ADDITIONAL COATINGS WHEN SHOWN ELSEWHERE ON THE PLANS. SLEEVE MEMBERS AND ANCHOR BOLTS MUST RECEIVE GALVANIZATION PRIOR TO INSTALLATION.

ANCHOR BOLTS MUST BE 7/8"Ø ASTM A193 GR B7 FULLY THREADED RODS WITH HEAVY HEX NUTS, ONE HARDENED STEEL WASHER (ASTM F436), AND ONE (2 1/4" O.D.) STEEL WASHER EACH. NUTS MUST CONFORM TO ASTM A563 REQUIREMENTS. EMBED FULLY THREADED RODS INTO PARAPET WALL WITH AN EPOXY MEETING THE REQUIREMENTS OF AASHTO M235 TYPE IV. MINIMUM ADHESIVE ANCHOR EMBEDMENT DEPTH IS 8". ANCHOR ADHESIVE CHOSEN MUST BE ABLE TO ACHIEVE A NOMINAL BOND STRENGTH IN TENSION OF A SINGLE ANCHOR, NA, OF 17 KIPS (EDGE DISTANCE MUST BE ACCOUNTED FOR). SUBMIT SIGNED AND SEALED CALCULATIONS OR THE MANUFACTURER'S PUBLISHED LITERATURE SHOWING THE PROPOSED ANCHOR ADHESIVE'S ABILITY TO DEVELOP THIS LOAD TO THE ENGINEER FOR APPROVAL PRIOR TO USE. ANCHOR INSTALLATION, INCLUDING HOLE SIZE, DRILLING, AND CLEAN OUT, MUST BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

OPTIONAL CAST-IN-PLACE ANCHOR BOLTS MUST BE 7/8"Ø ASTM F3125 GR A325 OR A449 BOLTS (OR A193 GR B7 OR F1554 GR 105 THREADED RODS WITH ONE TACK WELDED HEAVY HEX NUT EACH) WITH ONE HEAVY HEX NUT AND ONE HARDENED STEEL WASHER ASTM F436 PLUS ONE (2 1/4" O.D.) STEEL WASHER AT EACH BOLT. NUTS MUST CONFORM TO ASTM A563 REQUIREMENTS.

PROVIDE GRADE 60 REINFORCING STEEL. EPOXY COAT ALL REINFORCING STEEL. PROVIDE THE SAME LAPS AS REQUIRED FOR REINFORCING BARS. PROVIDE BAR LAPS, WHERE REQUIRED, AS FOLLOWS:

EPOXY COATED ~ #5 = 3'-0"

GENERAL: THIS RAIL HAS BEEN SUCCESSFULLY EVALUATED BY FULL-SCALE CRASH TEST TO MEET MASH TL-4 CRITERIA FOR SPEEDS OF 45 MPH AND LESS.

AVERAGE WEIGHT OF RAILING: 347 PLF TOTAL = 313 PLF (CONC) + 34 PLF (STEEL).

FOOTNOTES

1/ TERMINAL CONNECTORS AND ASSOCIATED HARDWARE ARE TO BE PAID FOR UNDER THE "TERMINAL" PAY ITEM WHICH IT CORRESPONDS TO.

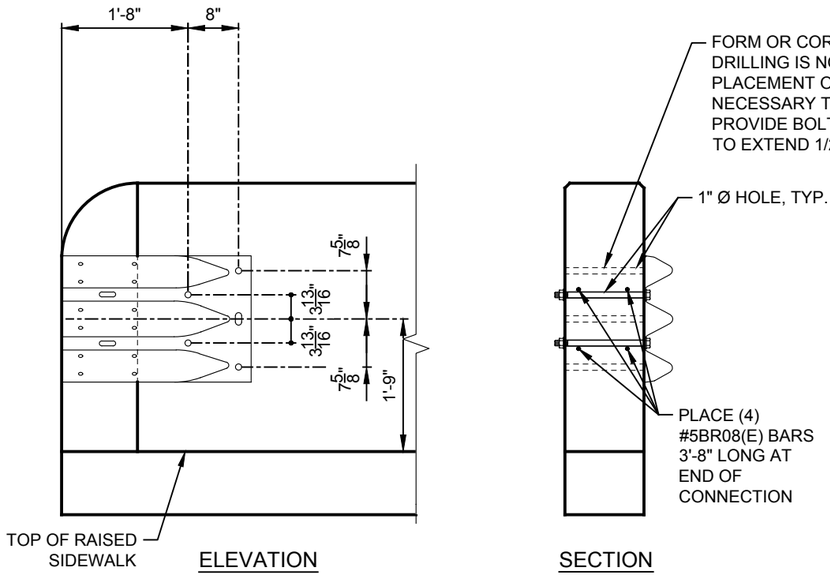
2/ UNLESS DIRECTED OTHERWISE BY THE ENGINEER, THE FABRICATOR MAY USE THE RECTANGULAR TUBE IN LIEU OF THE ELLIPTICAL TUBE FOR THE RAIL MEMBER.

3/ PIPE RAIL SECTIONS MUST HAVE AT LEAST 2 POSTS BUT NOT MORE THAN 4 POSTS.

4/ ONE SHOP SPLICE PER PIPE RAIL SECTION IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE V GROOVE. GRIND SMOOTH.

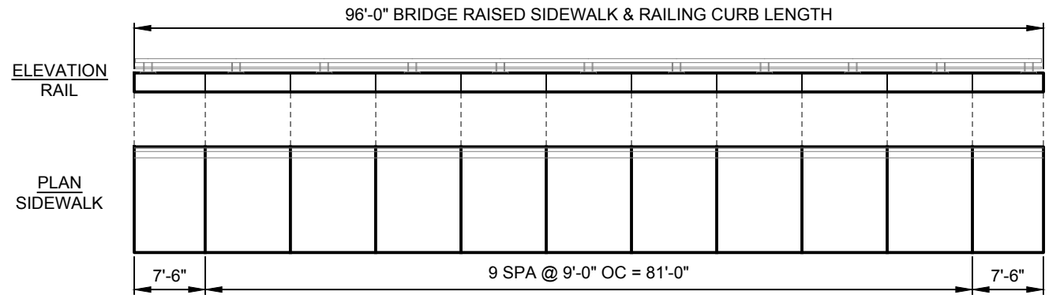
5/ PROVIDE 2.375" O.D., 0.154" WALL THICKNESS PIPE CONFORMING TO ASTM A53 GR. B, A1085 OR A500 GR. B.

6/ PROVIDE WALL CONTROL JOINTS AT SAME LOCATIONS AS SIDEWALK CONTROL JOINTS AT SPACING SPECIFIED PER DETAIL ON THIS SHEET.



TERMINAL CONNECTION DETAILS

SCALE: 1/2" = 1'-0"



SIDEWALK AND CURB CONTROL JOINTS

SCALE: NO SCALE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
DRAWN PAD DATE 08/2026
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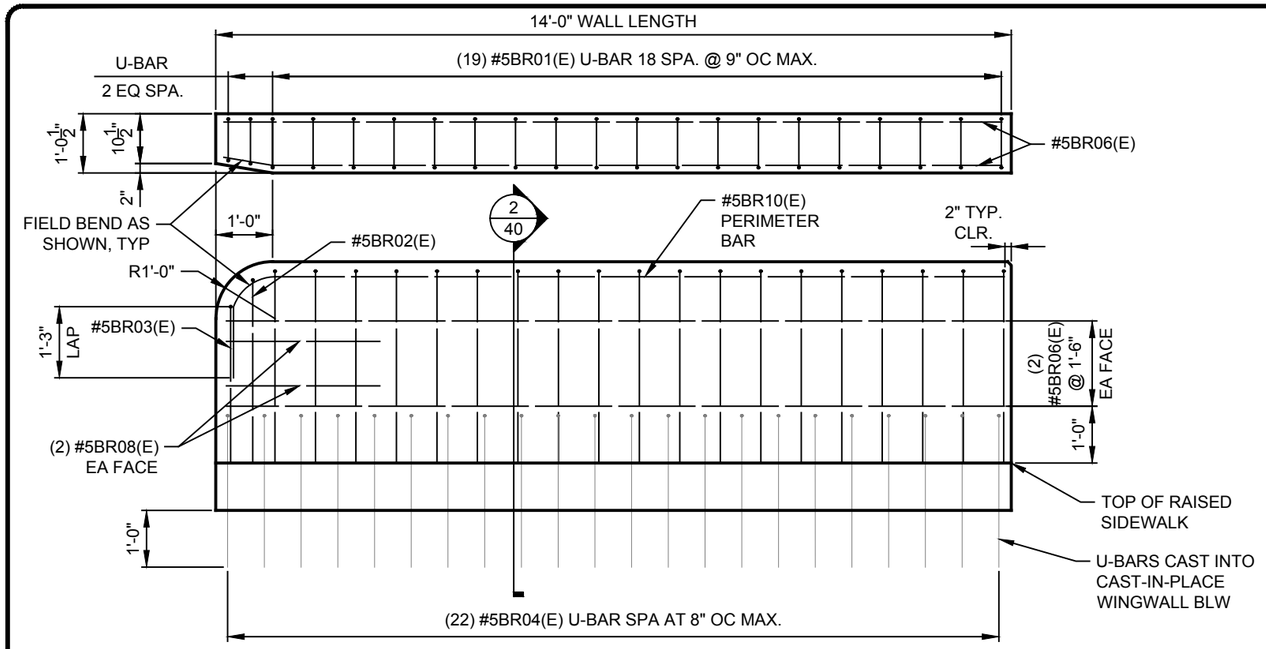
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BRIDGE RAIL DETAILS

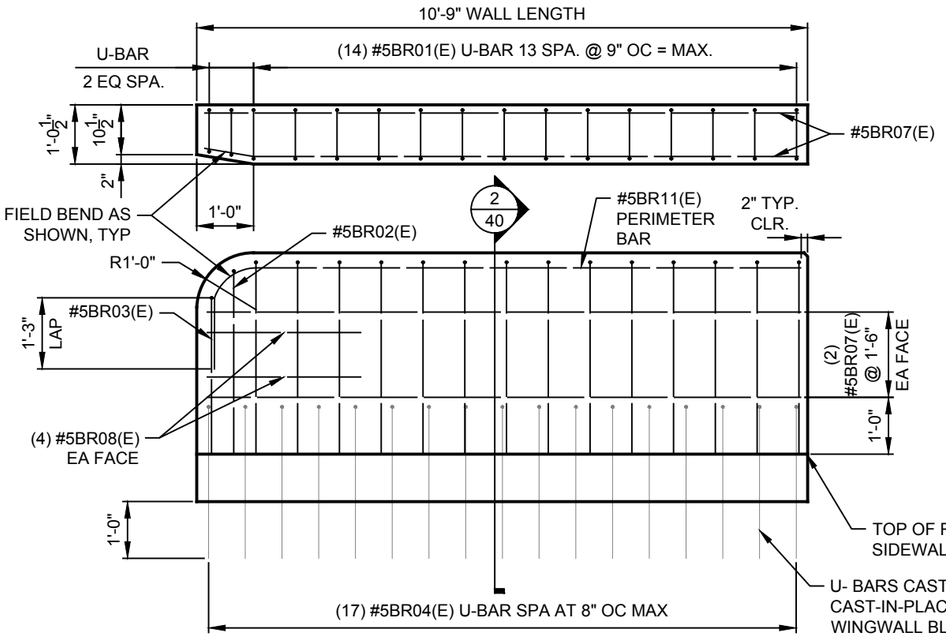
SHEET OF 39 47

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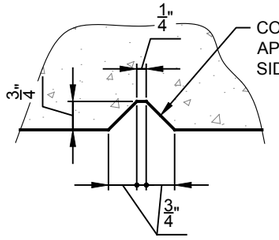
RAIL END ELEVATION AT ABUTMENT 1 WINGWALL

SCALE: 3/8" = 1'-0"



RAIL END ELEVATION AT ABUTMENT 2 WINGWALL

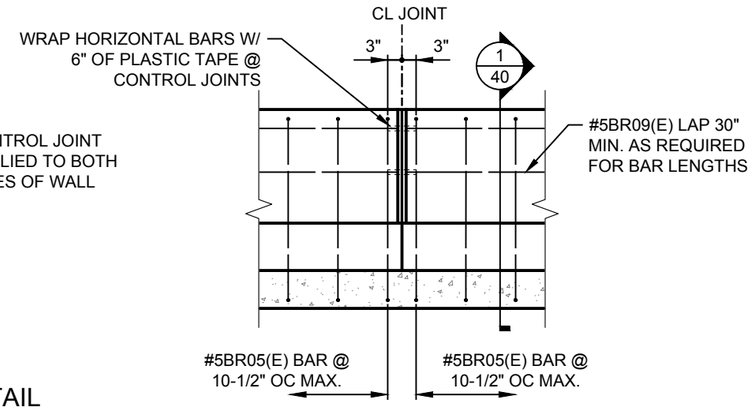
SCALE: 3/8" = 1'-0"



WALL CONTROL JOINT DETAIL

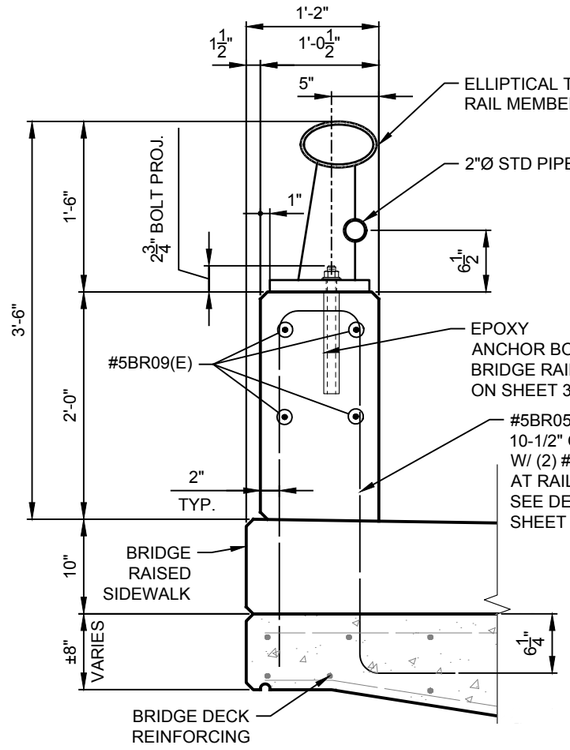
NOT TO SCALE

NOTE: BOTH FACES OF CONCRETE RAIL ENDS OVER WINGWALLS AND INSIDE FACES OF RAIL CURBS WILL BE COATED WITH ANTI-GRAFFITI COATING.



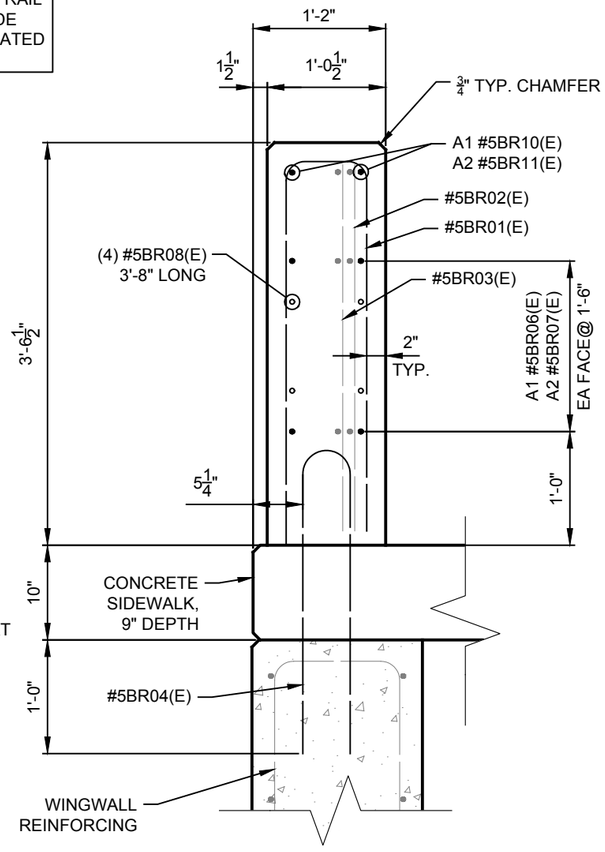
REINFORCING AT CONTROL JOINT

SCALE: 3/8" = 1'-0"



1 / 40 SECTION — BRIDGE RAIL ON BRIDGE

SCALE: 3/4" = 1'-0"



2 / 40 SECTION — BRIDGE RAIL ON ABUTMENT WINGWALLS

SCALE: 3/4" = 1'-0"

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MISSOULA COUNTY

BRIDGE RAIL DETAILS

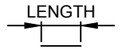
SHEET OF 40 47

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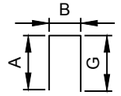
REINFORCING SCHEDULE - BRIDGE RAIL REBAR

MARK	SIZE	NO.	TYPE	LENGTH	A	B	C	D	G	H	O
#5BR01(E)	5	66	2	7' - 5"	3' - 4 1/2"	0' - 8 1/2"			3' - 4"		
#5BR02(E)	5	4	2	7' - 0 1/2"	3' - 2 3/4"	0' - 7 1/2"			3' - 2 1/4"		
#5BR03(E)	5	4	2	6' - 0"	2' - 9"	0' - 6 1/2"			2' - 8 1/2"		
#5BR04(E)	5	78	S11	5' - 6 3/4"		0' - 3 3/4"				2' - 8"	0' - 5"
#5BR05(E)	5	230	S4	7' - 10"		3' - 1 1/2"	0' - 8 1/2"	3' - 2"	0' - 10"		
#5BR06(E)	5	8	STR	13' - 8"							
#5BR07(E)	5	8	STR	10' - 5"							
#5BR08(E)	5	16	STR	3' - 8"							
#5BR09(E)	5	24	STR	34' - 0"							
#5BR10(E)	5	4	*STR	15' - 4"							
#5BR11(E)	5	4	*STR	12' - 1"							
#5BR12(E)	5	8	S5	7' - 8 1/2"	1' - 0"	2' - 6"	0' - 8 1/2"	2' - 6"	1' - 0"		

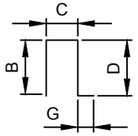
TYPE STR



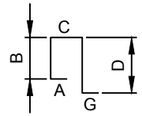
TYPE 2



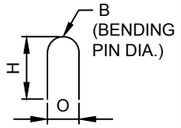
TYPE S4



TYPE S5



TYPE S11

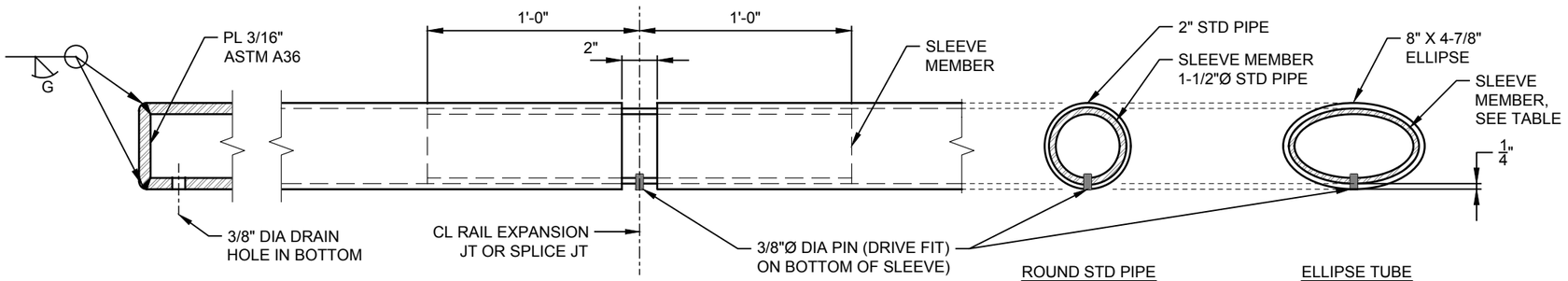


*NOTE: FIELD BEND TO FIT PER DETAILS.

ELLIPTICAL TUBE & ELLIPTICAL SLEEVE MEMBER

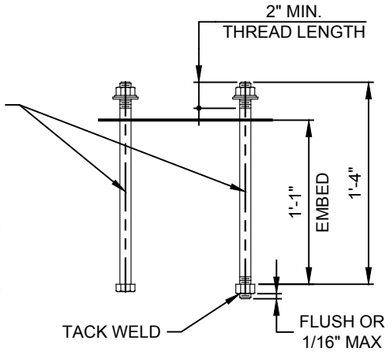
8" X 4-7/8" ELLIPSE	ELLIPTICAL SLEEVE MEMBER	
MATERIAL	MATERIAL	THICKNESS
6" DIA STD PIPE (ASTM A53 E OR S GR B)	ASTM A53 GR B	0.353"
	ASTM A36 OR A500 GR B	0.339"
	API-5LX52	0.224"
6-5/8" O.D. PIPE X 0.188" (API-5LX52)	ASTM A53 GR B	0.339"
	ASTM A36 OR A500 GR B	0.325"
	API-5LX52	0.188"

NOTE: OTHER SECTIONS OF EQUAL OR GREATER STRENGTH ARE ACCEPTABLE FOR ELLIPTICAL SLEEVES. THE MAJOR AND MINOR DIAMETERS OF THE RAIL MEMBER MAY VARY ± 0.1875" FROM PLAN DIMENSION. HOWEVER, THE DIFFERENCE BETWEEN THE OUTSIDE DIAMETERS OF THE ELLIPTICAL SLEEVE AND THE INSIDE DIAMETERS OF THE RAIL MEMBER MUST NOT EXCEED 0.25 INCHES.



AT RAIL ENDS

AT SPLICE OR EXP JTS

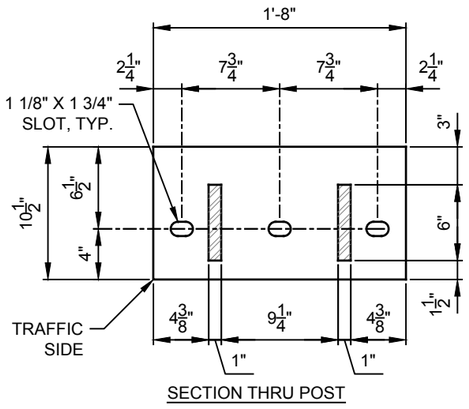


CAST-IN-PLACE ANCHOR BOLT OPTION

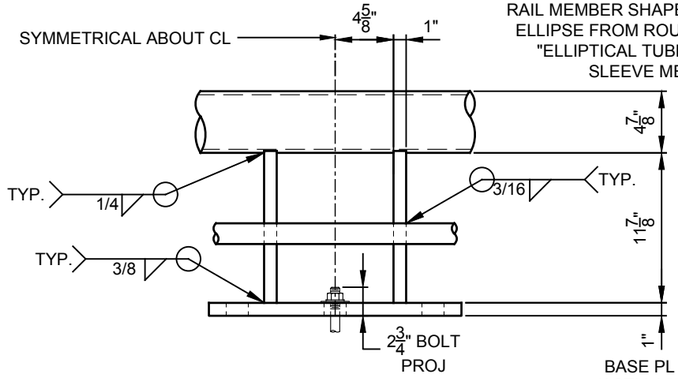
SCALE: 1" = 1'-0"

TUBE FRABRICATION DETIALS

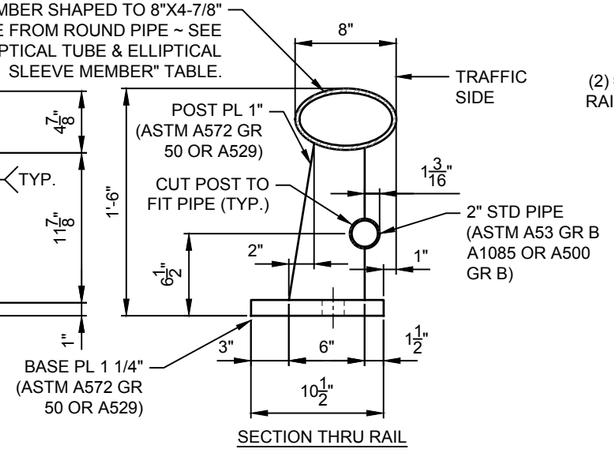
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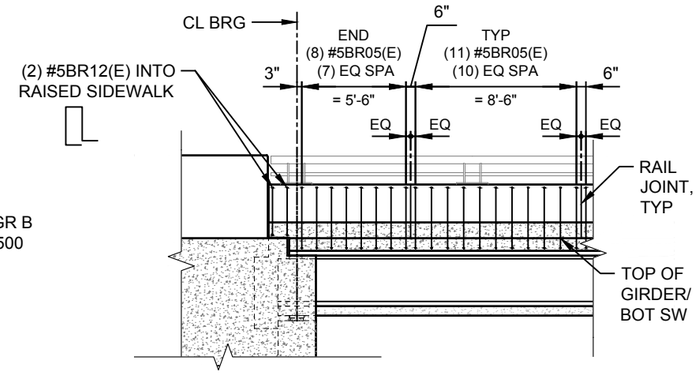
SECTION THRU POST



ELEVATION



SECTION THRU RAIL



RAIL REINFORCING SPACING

SCALE: NO SCALE

ELLIPTICAL TUBE W/ RAIL POST & ANCHORAGE DETAILS

SCALE: 1" = 1'-0"

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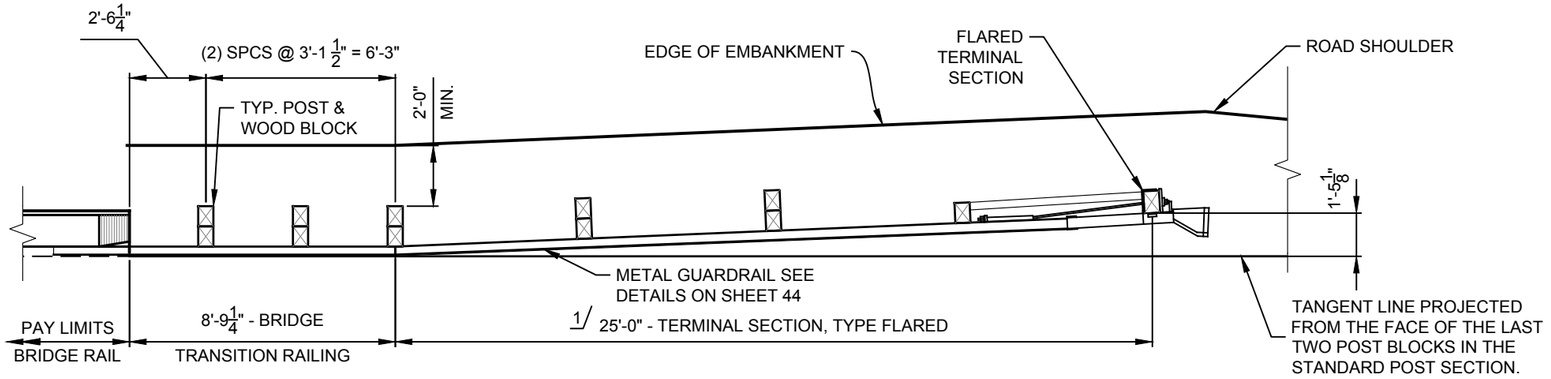
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LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

BRIDGE RAIL DETAILS

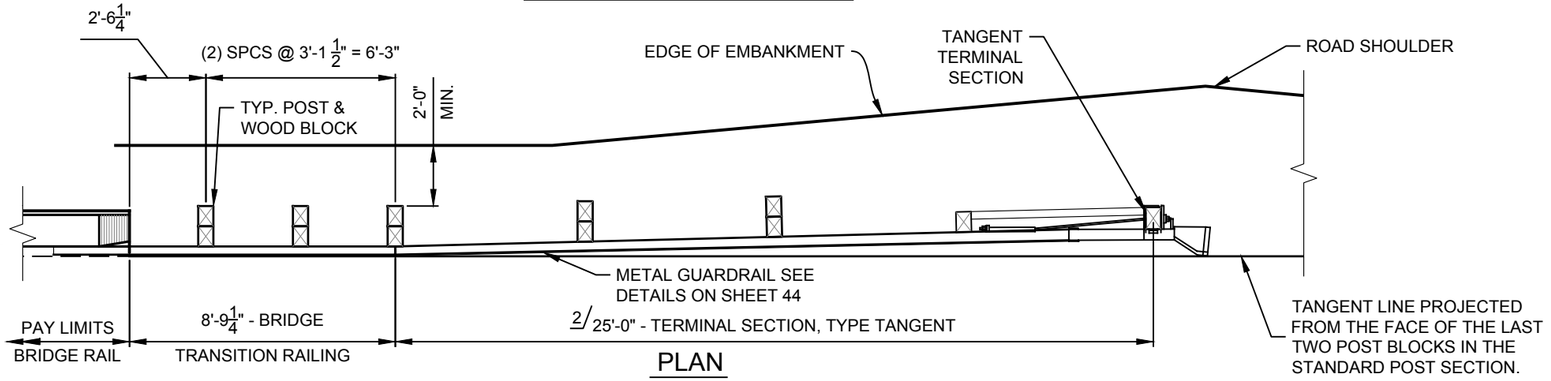
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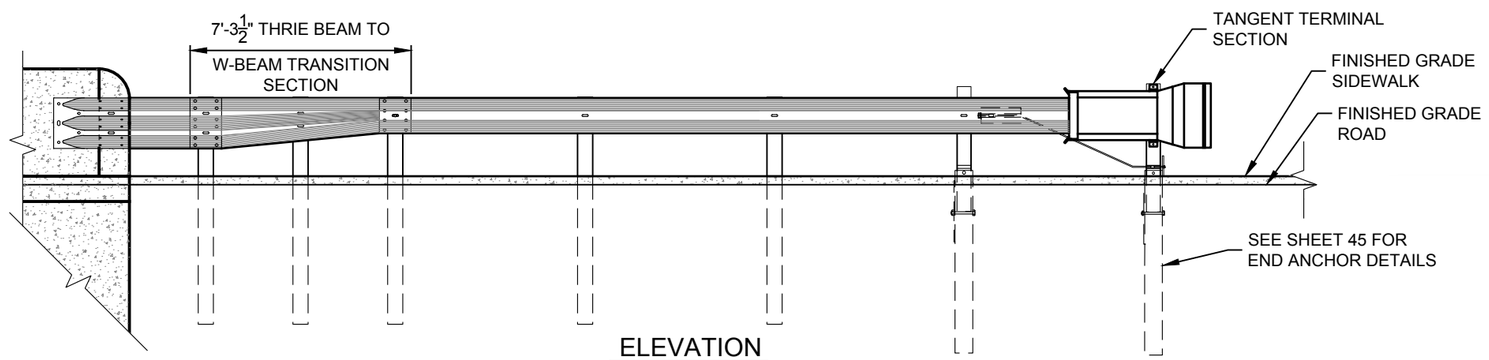
PLAN

TYPICAL FLARED RAILING



PLAN

TYPICAL TANGENT RAILING



ELEVATION

TYPICAL RAILING

NOT TO SCALE

FOOTNOTES

1/ INSTALL A FLARED BLOCKED-OUT W-BEAM GUARDRAIL TERMINAL THAT MEETS NCHRP-350 REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS. ENSURE THAT TERMINAL MEETS TEST LEVEL 2 (TL2).

2/ INSTALL A TANGENT BLOCKED-OUT W-BEAM GUARDRAIL TERMINAL THAT MEETS NCHRP-350 REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS. ENSURE THAT TERMINAL MEETS TEST LEVEL 2 (TL2).

3/ INSTALL TERMINAL AT 1:50 TAPER, ENSURING THAT THE END PIECE IS ENTIRELY OFF SHOULDER.

4/ DETAILS SHOWN ON SHEET 45 ARE FOR REFERENCE ONLY AND DO NOT SUPERSEDE MANUFACTURER'S REQUIREMENTS. SEE TERMINAL MANUFACTURER'S DRAWINGS FOR GOVERNING DETAILS.

CONSTRUCTION NOTES

1. INSTALL ALL BOLTS WITH HEADS ON TRAFFIC SIDE OF INSTALLATION.
2. ATTACH REFLECTORS TO POSTS EVERY 12'-6" WITH THE REFLECTORIZED SURFACE FACING ADJACENT TRAFFIC. FASTEN REFLECTOR TO WOOD POST USING TWO 10D GALVANIZED NAILS AND TWO 3/16" DIA. WASHERS IN PREDRILLED HOLES.
3. NO FIELD CUTTING OR WELDING IS PERMITTED ON GALVANIZED METAL UNLESS APPROVED BY THE ENGINEER.
4. SET ALL RAIL POSTS VERTICAL AND ERECT THE RAIL PARALLEL TO GRADE. SET POSTS IN 18" DIAMETER HOLES, UNLESS AUGURED OR DRVIEN. THOROUGHLY COMPACT THE BOTTOM OF EXCAVATED HOLES.
5. SPLICE RAILS ONLY AT POST. DO NOT HAVE MORE THAN ONE RAIL SPLICE PER POST WHEN DOUBLE-LAYER W-BEAM GUARDRAIL ELEMENTS ARE SPECIFIED.

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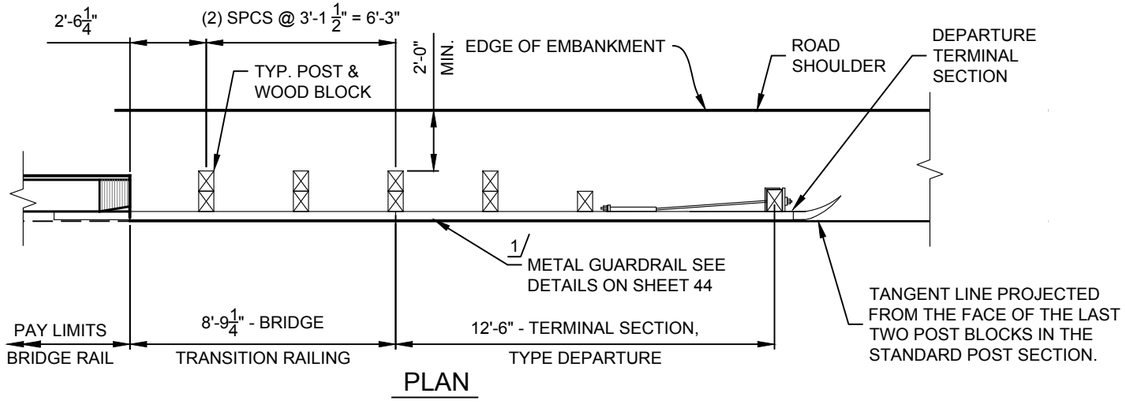
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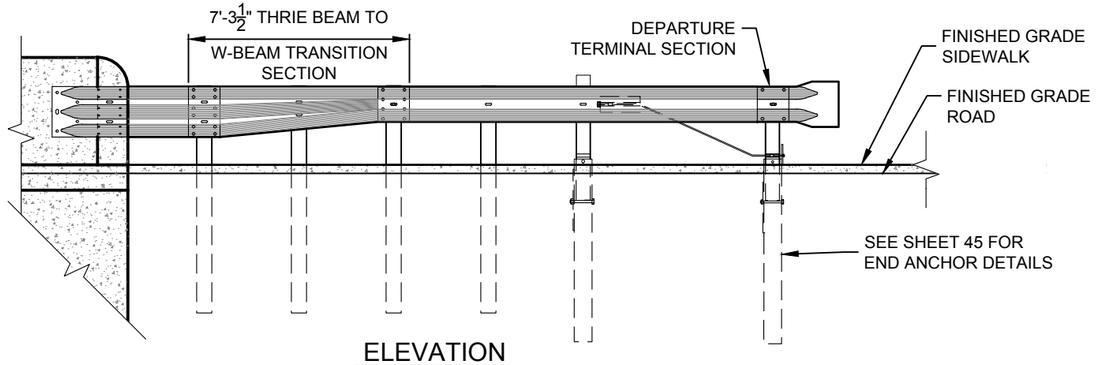
APPROACH RAIL DETAILS

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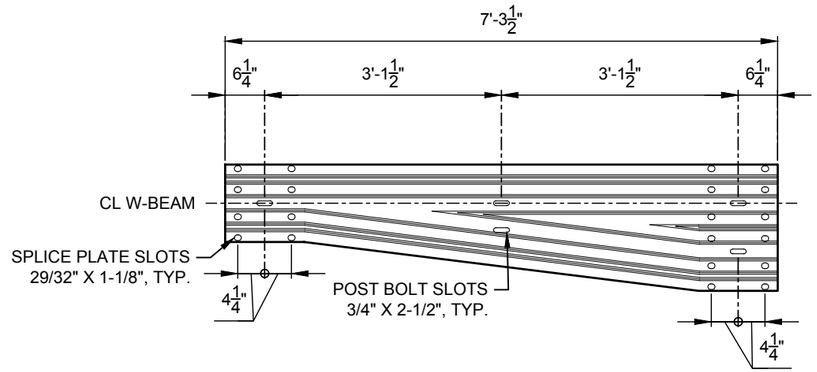
PLAN



ELEVATION

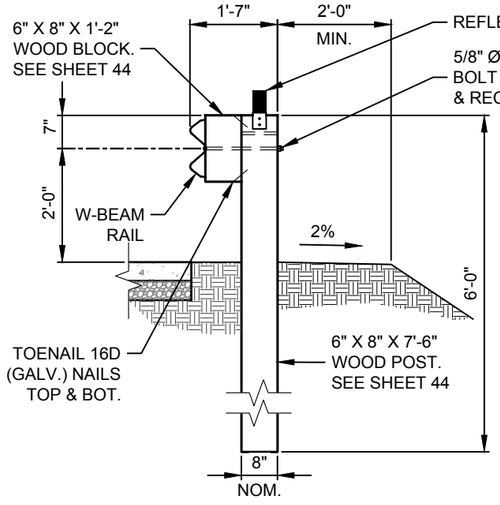
TYPICAL DEPARTURE RAILING

NOT TO SCALE



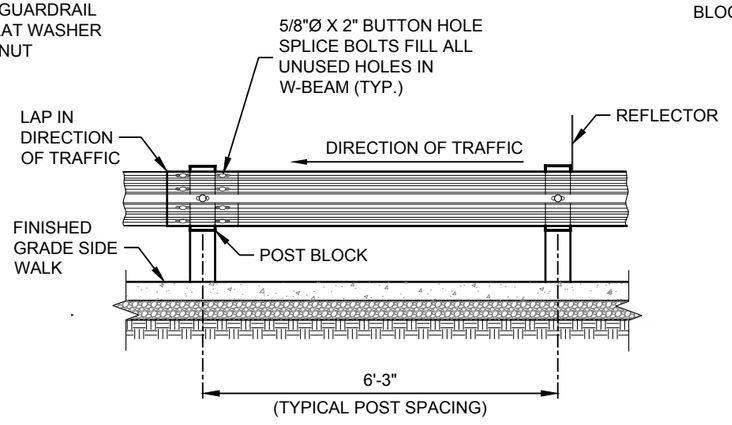
A / 43 DETAIL W-BEAM TO THRIE BEAM SECTION

SCALE: 1/2" = 1'-0"



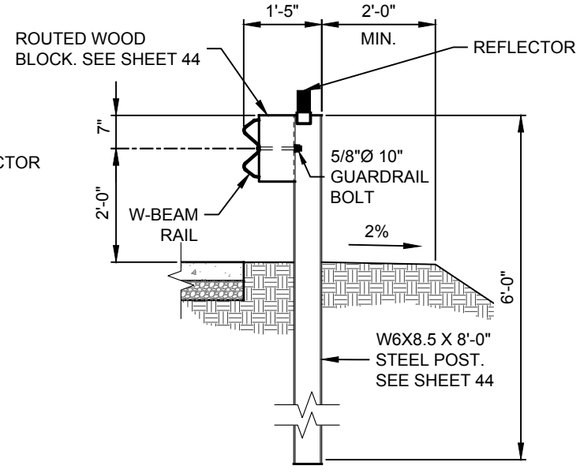
TYPICAL WOOD POST OPTION

NOT TO SCALE



GUARDRAIL SPLICE DETAIL

NOT TO SCALE



TYPICAL STEEL POST OPTION

NOT TO SCALE

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MISSOULA COUNTY

APPROACH RAIL DETAILS

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APPROACH GUARDRAIL NOTES

MATERIALS: USE STEEL SHAPES, PLATES AND BARS SHALL BE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 36, EXCEPT FOR STRUCTURAL TUBING USE ASTM A500 GRADE B, OR ASTM A501. GALVANIZE STEEL SHAPES, PLATES AND BARS IN ACCORDANCE WITH AASHTO M111 (ASTM #5A113) IF NOT COVERED BY 1 INCH OR MORE OF CONCRETE. USE W-BEAM GUARDRAIL AND ASSOCIATED HARDWARE MEETING AASHTO M180, CLASS A, TYPE I (GALVANIZED). USE CLASS B W-BEAM TERMINAL. USE BOLTS, NUTS AND WASHERS (EXCEPT BUTTONHEAD BOLTS) CONFORMING TO AASHTO M164 (ASTM A325 OR A449) AND GALVANIZED IN ACCORDANCE WITH AASHTO M232 (ASTM #5A143). GALVANIZE CABLE ASSEMBLY IN ACCORDANCE WITH AASHTO M30 (ASTM A741).

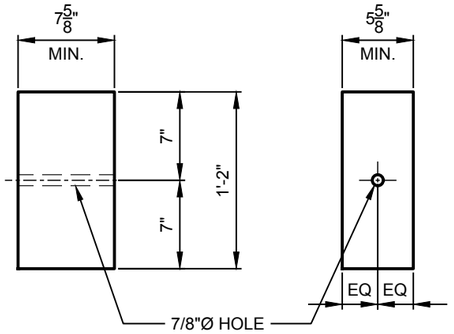
USE WESTERN WOOD (NO. 1 GRADE) TIMBERS CONFORMING TO THE CURRENT WWPA OR WCLIB GRADING RULES FOR WESTERN LUMBER.

GALVANIZED STEEL W-BEAM GUARDRAIL POSTS (SIZE PER PLAN) ARE AN ACCEPTABLE ALTERNATIVE TO TIMBER POSTS SHOWN.

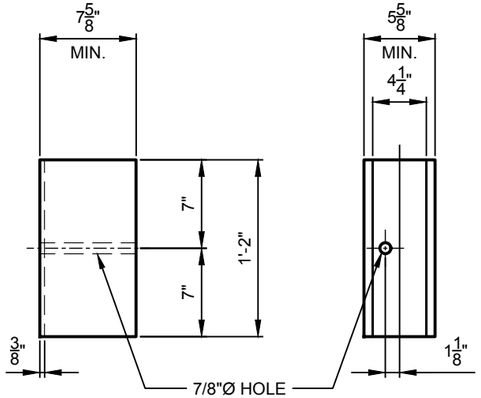
FABRICATION: COMPLETE ALL LUMBER FABRICATION BEFORE TREATMENT. ALL STRUCTURAL STEEL MUST BE SHOP FABRICATED. WELD IN ACCORDANCE WITH AWS STRUCTURAL WELDING CODE D1.1. A CERTIFIED WELDER IS REQUIRED. FABRICATE ALL STEEL PRIOR TO GALVANIZING, EXCEPT MINOR SHOP CUTTING. DRILLING AND WELDING IS PERMITTED ON GALVANIZED METAL, PROVIDED THESE AREAS ARE CLEANED AND REPAIRED WITH 2 COATS OF ZINC DUST-ZINC OXIDE PAINT MEETING FEDERAL SPECIFICATION TT-P-641 OR MILITARY SPECIFICATION MIL-P-21035. MAKE ALL RAIL SPLICES AT POSTS. SHOP BEND CURVED RAIL SECTIONS.

TREATMENT: AFTER FABRICATION, INCISE AND PRESSURE TREAT ALL TIMBER IN ACCORDANCE WITH AWPA U1, USE CATEGORY UC4A. PROVIDE TREATMENT IN COMPLIANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WWPA'S "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS." PROVIDE A CERTIFICATE OF COMPLIANCE UPON DELIVERY OF MATERIALS.

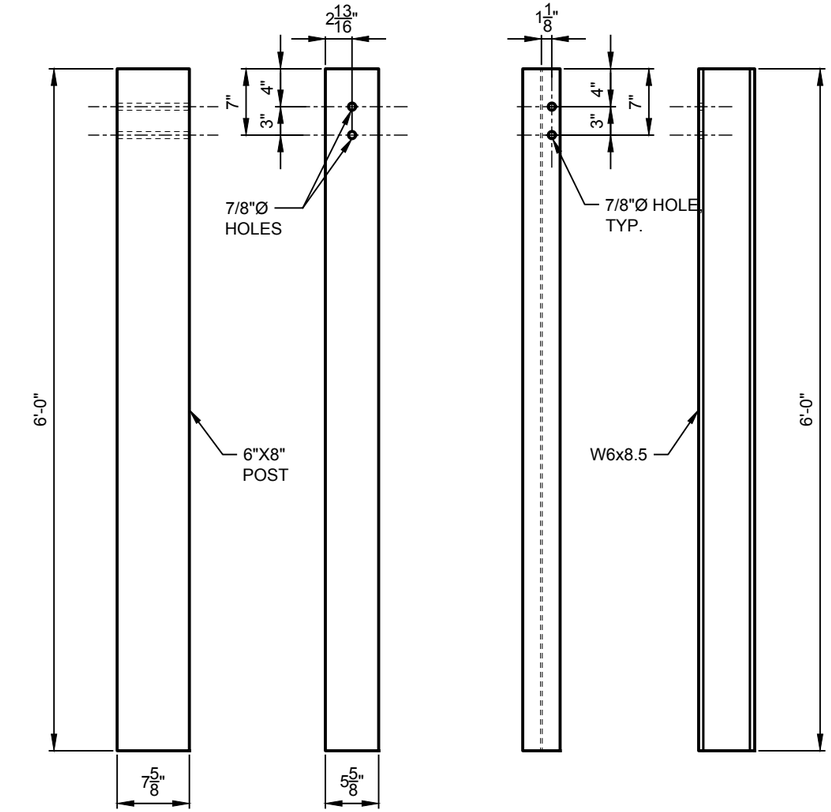
ERECTION: NO FIELD CUTTING OR WELDING IS PERMITTED ON GALVANIZED METAL UNLESS APPROVED BY THE CONTRACTING OFFICER. SET ALL RAIL POSTS VERTICALLY AND ERECT THE RAILING PARALLEL TO GRADE. FURNISH GALVANIZED STEEL SHIM PLATES AS REQUIRED TO ALIGN RAILING. MAKE APPROACH GUARDRAIL POST HOLES A MINIMUM OF 18" IN DIAMETER, UNLESS AUGERED OR DRIVEN. THOROUGHLY CLEAN THE BOTTOM OF EXCAVATED HOLES AND COMPACT BACKFILL IN 4-INCH LIFTS. FILL ALL UNUSED HOLES IN W-BEAM WITH STANDARD BUTTONHEAD BOLTS AND NUTS. AFTER ERECTION IS COMPLETE, BURR THREADS OF ALL RODS AND BOLTS TO PREVENT BACKING OFF OF NUTS. REPAIR ALL DAMAGED GALVANIZED SURFACES WITH 2 COATS OF ZINC PAINT AS SPECIFIED IN THE FABRICATION NOTE ABOVE. DO NOT USE MORE THAN ONE RAIL SPLICE PER POST WHEN DOUBLE-LAYER W-BEAM GUARDRAIL ELEMENTS ARE SPECIFIED.



WOOD BLOCK DETAIL
SCALE: 1" = 1'-0"

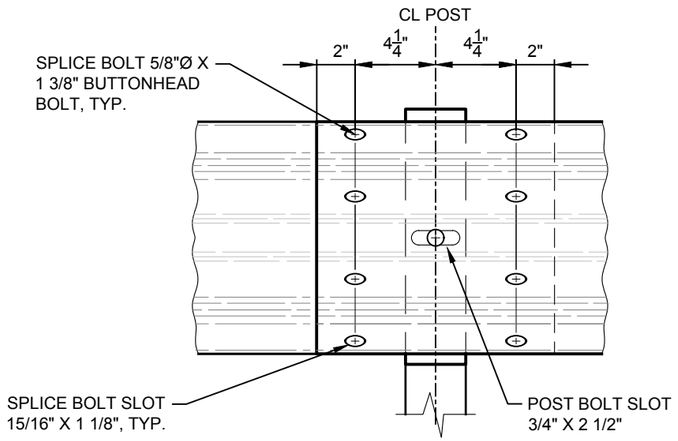


ROUTED WOOD BLOCK DETAIL
SCALE: 1" = 1'-0"

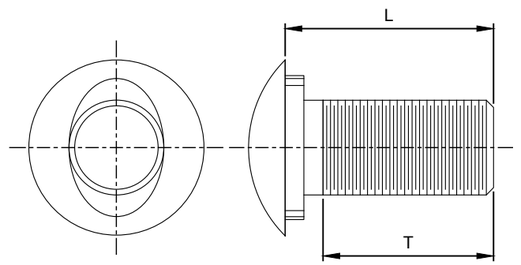


WOOD POST DETAIL
SCALE: 3/4" = 1'-0"

STEEL POST DETAIL
SCALE: 3/4" = 1'-0"



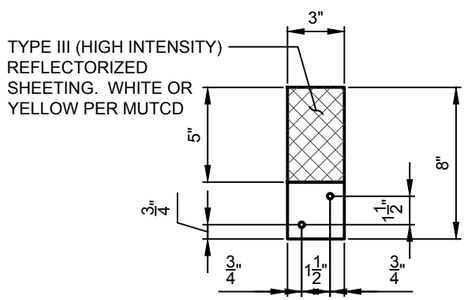
W-BEAM GUARDRAIL SPLICE DETAIL
SCALE: 1 1/2" = 1'-0"



5/8"Ø OVAL SHOULDERED BUTTONHEAD BOLT

TYPE	L	T
SPLICE BOLT	0'-1 3/8"	0'-1 1/8"
WOOD POST BOLT	1'-6"	4" MIN.
STEEL POST BOLT	0'-10"	4" MIN.

SPLICE & POST BOLT
SCALE: 1' = 1'-0"



REFLECTOR
SCALE: 1 1/2" = 1'-0"

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
CHECKED JWR | SURVEYED DJ&A P.C.

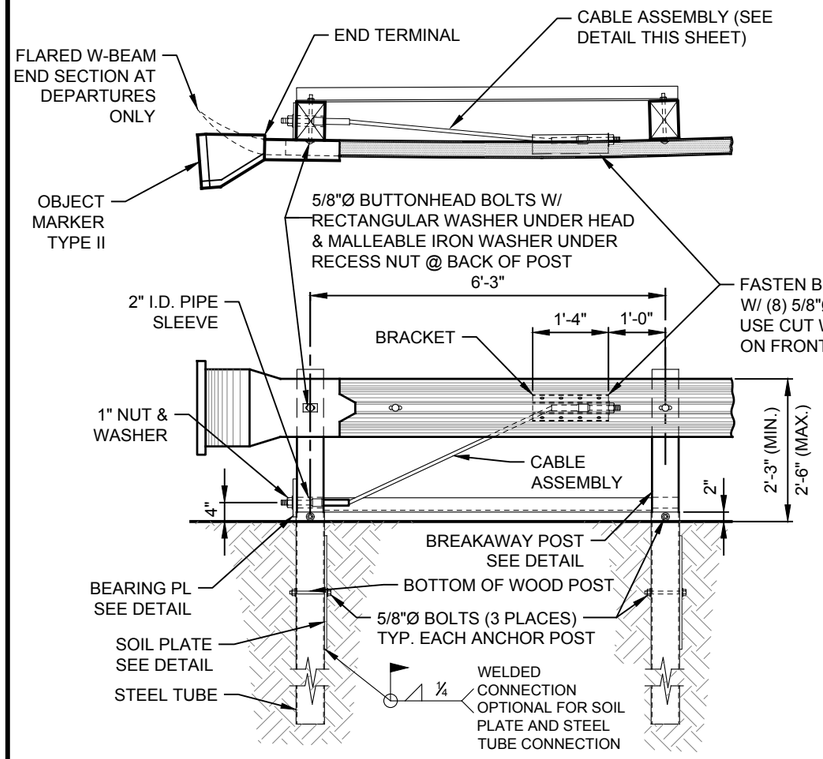
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

APPROACH RAIL DETAILS

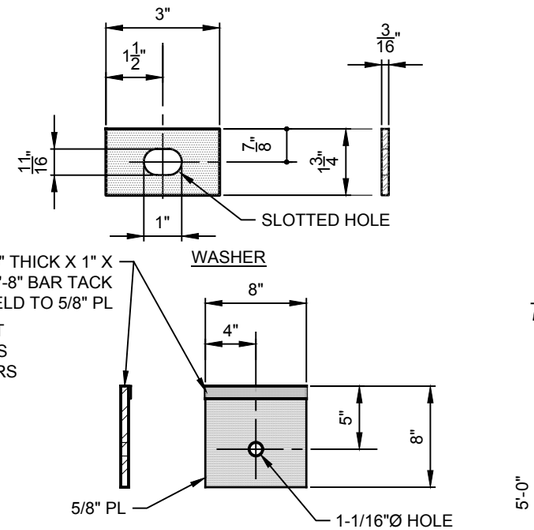
SHEET 44 OF 47

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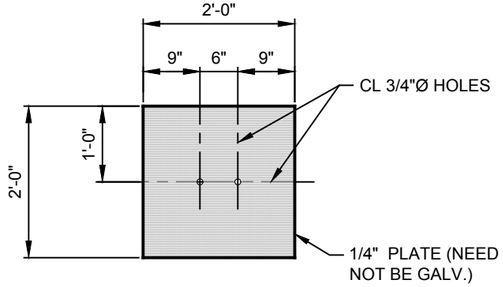
END ANCHOR DETAIL

SCALE: 3/8" = 1'-0"



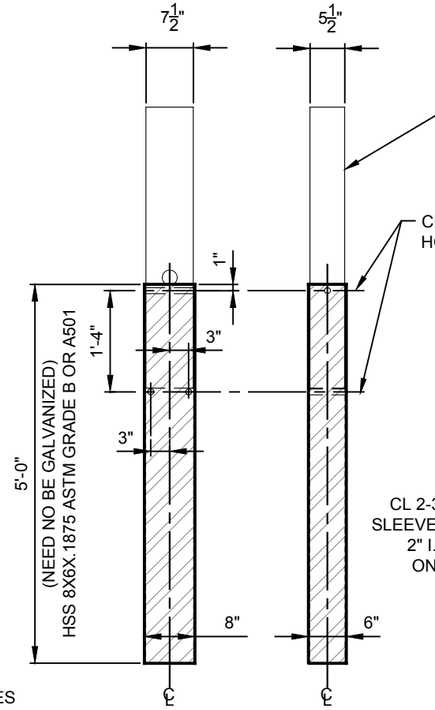
BEARING PLATE

SCALE: 1" = 1'-0"



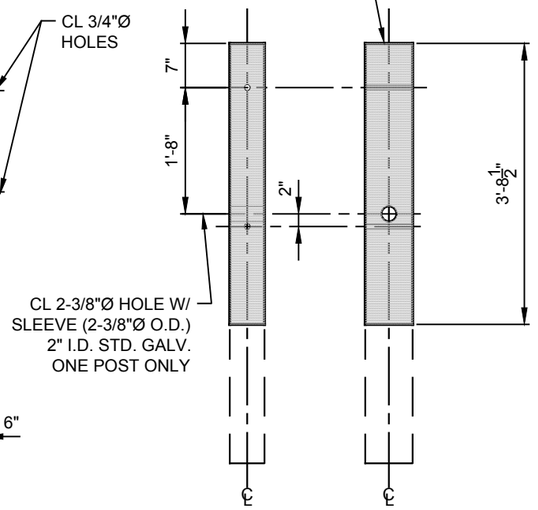
SOIL PLATE

SCALE: 1/2" = 1'-0"



STEEL TUBE

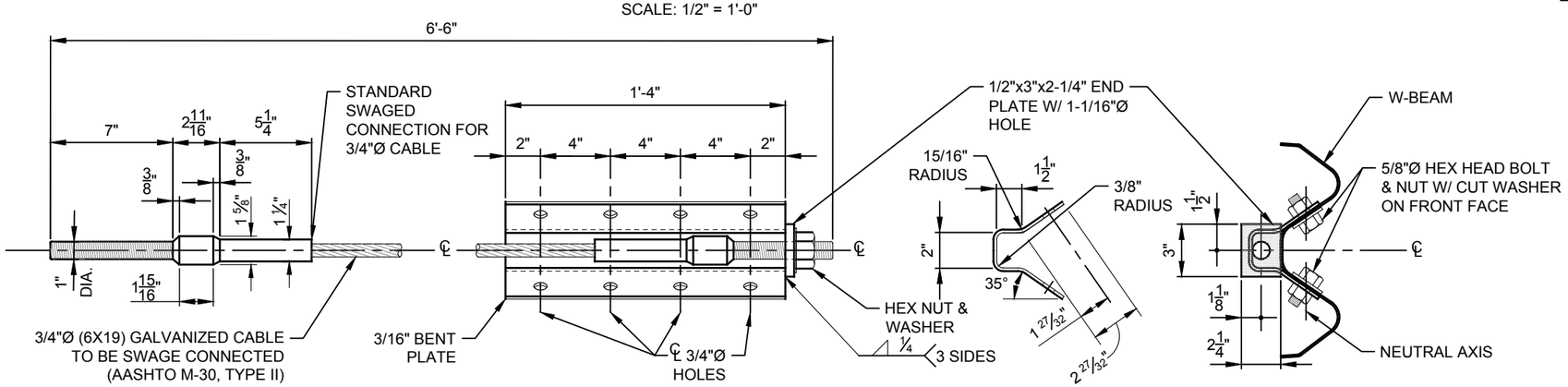
SCALE: 1/2" = 1'-0"



BREAKWAY POST

SCALE: 1/2" = 1'-0"

NOTE: THESE DETAILS ARE FOR REFERENCE ONLY AND DO NOT SUPERSEDE TERMINAL MANUFACTURER'S REQUIREMENTS.



ANCHOR BRACKET & CABLE ASSEMBLY DETAILS

SCALE: 1 1/2" = 1'-0"

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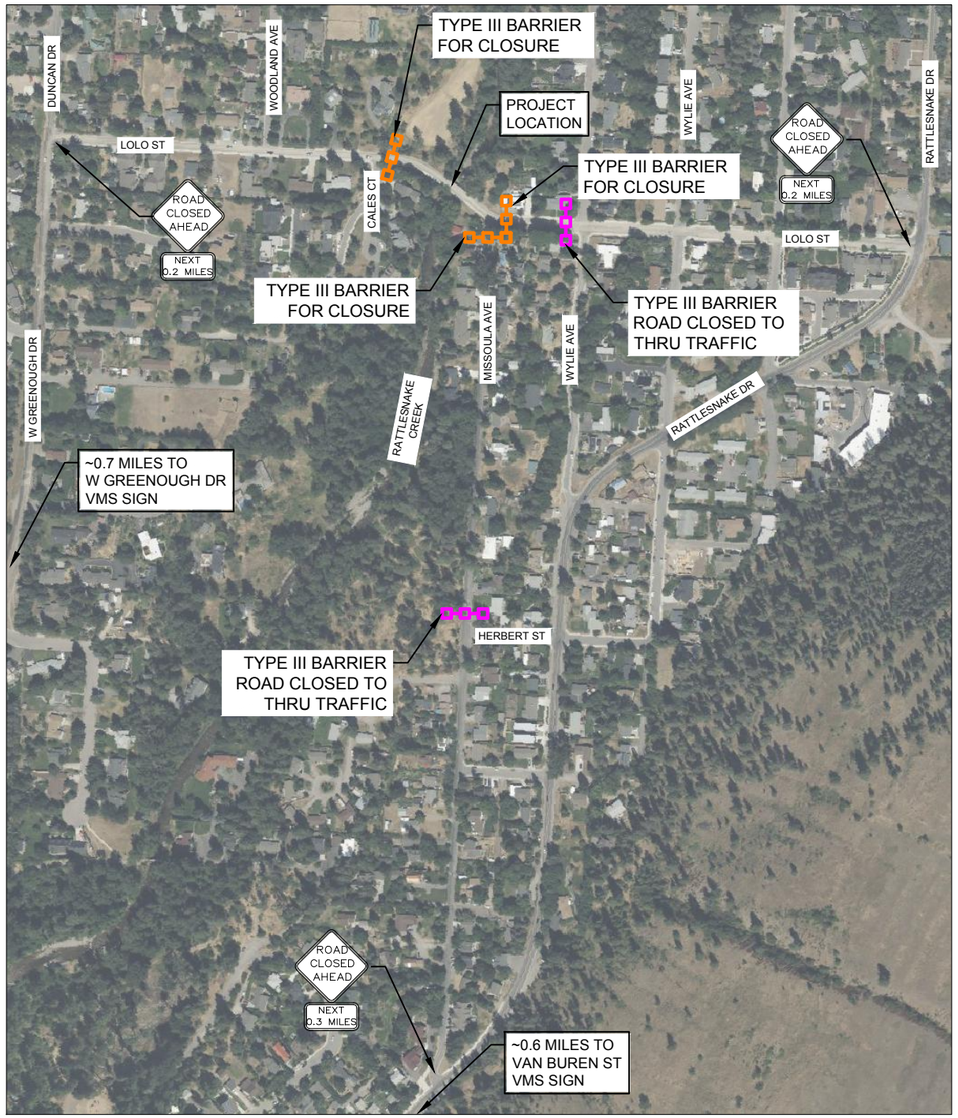
DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

APPROACH RAIL DETAILS

SHEET 45 OF 47

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VICINITY MAP

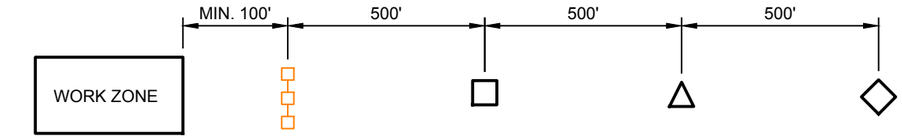
VARIABLE MESSAGE SIGNS:

1. PROVIDE VARIABLE MESSAGE SIGNS (VMS) 30 DAYS IN ADVANCE TO THE ROAD CLOSURE/DETOUR. SIGNAGE TO ALERT PUBLIC OF LOLO STREET BRIDGE CLOSURE AND THE ASSOCIATED TIMELINE OF THE CLOSURE. PROVIDE VMS SIGNS AT THE FOLLOWING LOCATIONS:

   - VAN BUREN ST, SOUTH OF THE INTERSECTION WITH POPLAR ST. SIGN TO BE REMOVED ONCE CLOSURE BEGINS.
   - W GREENOUGH DR, SOUTH OF THE INTERSECTION WITH VINE ST. SIGN TO REMAIN IN PLACE FOR DURATION OF CLOSURE.

1

CONCEPTUAL TRAFFIC CONTROL DIAGRAM



LEGEND

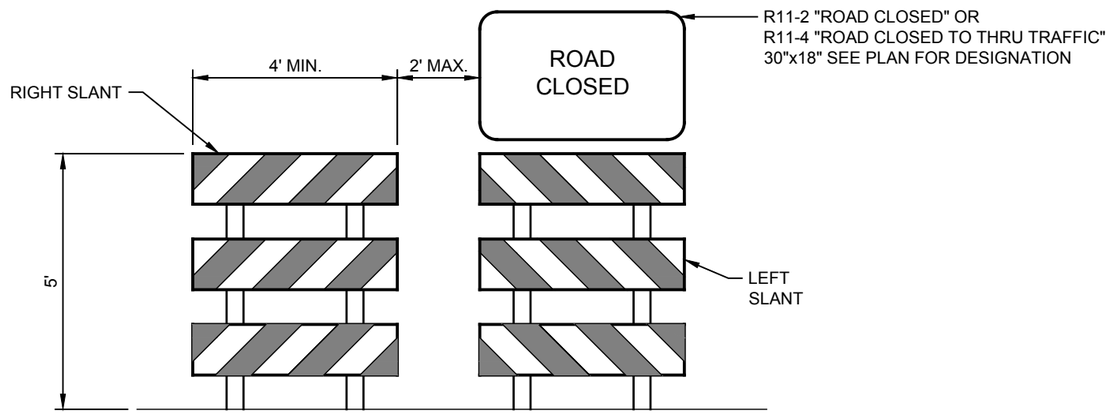
- "TRUCKS AHEAD" 36"x36"
- "ROAD CLOSED AHEAD" 36"x36"
- "ROAD WORK AHEAD" 36"x36"
- ROAD CLOSURE BARRICADE, TYPE III WITH ROAD CLOSED SIGN 30"x18"
- ROAD CLOSURE BARRICADE, TYPE III WITH ROAD CLOSED TO THRU TRAFFIC 30"x18"

SIGNAGE NOTES

1. SIGN DISTANCES AND LOCATIONS MAY BE ADJUSTED BASED ON ROAD CONDITIONS.
2. SIGNAGE MUST MEET MUTCD STANDARDS.
3. IN ADDITION TO THE SIGNS ABOVE, PLACE A "ROAD CLOSED AHEAD, XX MILES" WHERE SHOWN ON THE VICINITY MAP ON THIS SHEET.

TRAFFIC CONTROL NOTES:

1. SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW TO CITY OF MISSOULA AND MISSOULA COUNTY ACCORDING TO PROJECT SPECIFICATIONS.
2. THE CONCEPTUAL PLAN SHOWN REPRESENTS THE MINIMUM REQUIREMENTS FOR CLOSURE. THE CONTRACTOR IS RESPONSIBLE TO SUBMIT A TRAFFIC CONTROL PLAN AND FURNISH AND INSTALL ANY ADDITIONAL SIGNS THAT MAY BE REQUIRED BY THEIR OPERATIONS, AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. THE CLOSURE OF THE ROAD ALSO INCLUDES CLOSURE FOR ALL PEDESTRIAN AND BICYCLE TRAFFIC. CONTRACTOR TO PROVIDE ANY ASSOCIATED NECESSARY SIGNAGE IN ACCORDANCE WITH THE MUTCD.
4. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY CITY OF MISSOULA AND MISSOULA COUNTY IN WRITING AT LEAST 14 DAYS PRIOR TO ANY PROPOSED ROAD CLOSURE.
5. PERFORM NO WORK THAT INTERFERES OR CONFLICTS WITH TRAFFIC OR EXISTING ACCESS TO THE ROADWAY SURFACE UNTIL A TRAFFIC CONTROL PLAN HAS BEEN APPROVED. POST CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH MUTCD. ALL REQUIRED SIGNS WILL BE IN PLACE AND APPROVED PRIOR TO BEGINNING WORK ON PROJECT.
6. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL TRAFFIC CONTROL SIGNS. IMMEDIATELY REPLACE ANY MISSING OR DEFACED SIGNS. REMOVE ALL SIGNS AND BARRICADES AT THE END OF THE CLOSURE PERIOD.
7. SIGN DISTANCES AND LOCATIONS MAY BE ADJUSTED BASED ON ROAD CONDITIONS
8. CONTRACTOR TO ACCOMMODATE LOCAL ACCESS ONLY ALONG CLOSED PORTIONS OF MISSOULA AVE AND LOLO STREET. TEMPORARY REMOVAL OF DELINEATORS WILL BE NECESSARY ON MISSOULA AVE TO ALLOW FOR TEMPORARY 2-WAY LOCAL ACCESS.



TYPE III BARRIER FOR CLOSURE

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE | PROJ. NO. 7611
DRAWN PAD | DATE 08/2026
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DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

TRAFFIC CONTROL PLAN

SHEET OF 46 47

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EROSION CONTROL NOTES

1. CONTRACTOR IS TO BE FAMILIAR WITH THE REQUIREMENTS OF SECTION 402(P) OF THE FEDERAL CLEAN WATER ACT AND REGULATIONS ADOPTED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA). (AMENDMENTS TO TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, PART 122, PUBLISHED IN THE FEDERAL REGISTER ON NOVEMBER 16, 1990 AND ON APRIL 2, 1992.) ALSO, DEQ 1200-C PERMIT FOR THE CONTROL OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

2. CONTRACTOR IS TO BE FAMILIAR WITH ALL REQUIREMENTS OF THE SWPPP.

3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL JURISDICTION AND MONTANA DEQ FOR EROSION AND SEDIMENT CONTROL.

4. THE TEMPORARY POLLUTION CONTROL SYSTEM SHALL BE INSTALLED PRIOR TO ALL OTHER CONSTRUCTION.

5. ALL EQUIPMENT MAINTENANCE AND RE-FUELING SHALL BE CONDUCTED IN A SAFE MANNER AND SPILL KITS SHALL BE MAINTAINED ON-SITE TO CLEAN ANY SPILLS THAT MAY OCCUR.

6. ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF BEST MANAGEMENT PRACTICES (BMP'S), SUCH AS VEGETATIVE COVER, MULCHING, PLASTIC COVERING OR APPLICATION OF GRAVEL SURFACES IN AREAS TO BE GRAVELED. NO EXPOSED AND UNWORKED SOILS SHALL REMAIN UNSTABILIZED. ONCE CONSTRUCTION ACTIVITY IS COMPLETED IN AN AREA BETWEEN THE MONTHS OF OCTOBER 1 AND APRIL 30, PERMANENT SEEDING SHALL BE INSTALLED.

7. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL AT ALL TIMES DURING CONSTRUCTION.

8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER TRASH RECEPTACLES AND PORTABLE TOILET ON-SITE AS WELL AS THE REGULAR MAINTENANCE OF THESE FACILITIES.

9. ALL CLEARING LIMITS AND/OR EASEMENT SETBACKS, SENSITIVE/CRITICAL AREAS AND THEIR BUFFERS, SIGNIFICANT TREES AND DRAINAGE COURSES SHALL BE CLEARLY STAKED AND MARKED AS SHOWN ON PLANS.

10. PROPERTIES ADJACENT TO THE PROJECT SITE THAT ARE SUBJECT TO POTENTIAL EROSION CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION THROUGH THE USE OF SILT FENCE, HAY BALES OR OTHER BMP SELECTED BY THE CONTRACTOR.

11. ALL FACILITIES INTENDED TO TRAP SEDIMENT ON-SITE SHALL BE CONSTRUCTED AS A FIRST STEP IN GRADING. THESE FACILITIES SHALL BE FUNCTIONAL BEFORE ANY LAND DISTURBING ACTIVITIES TAKE PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS SHALL BE SEEDED AND MULCHED ACCORDING TO THE TIME PERIOD STATED IN #6 ABOVE.

12. ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. ALL SLOPES SHALL BE STABILIZED WITHIN THE TIME PERIOD STATED IN #6 ABOVE.

13. ALL STORM DRAINAGE INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED WITH A FILTER TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. THE FILTER MUST BE INSPECTED REGULARLY AND CLEANED WHEN NECESSARY.

14. THE FOLLOWING SHALL APPLY TO CONSTRUCTION OF UTILITY LINES:
    A. WHERE FEASIBLE, NO MORE THAN 500' OF TRENCH SHALL BE OPEN AT ONE TIME.
    B. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
    C. TRENCH DEWATERING DEVICES SHALL DISCHARGE AND SHALL REMAIN ON-SITE AND IN NO WAY ENTER PUBLIC PROPERTY OR WATERWAY.

15. WHEREVER CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED ROADS, A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) ONTO THE PAVED ROAD. IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE ROADS SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. STREET WASHING SHALL ONLY BE ALLOWED AFTER SEDIMENT IS REMOVED IN THIS MANNER. A MINIMUM OF ONE (1) ON-SITE STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED.

16. CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT ON-SITE UNLESS A PROPERLY CONSTRUCTED CONCRETE TRUCK WASHOUT AREA IS CONSTRUCTED AND MAINTAINED.

17. ALL TRUCKS USED TO HAUL EXCAVATED SOILS FROM THE SITE SHALL BE INSPECTED AND SWEPT CLEAN OF LOOSE SOIL PRIOR TO LEAVING THE SITE.

18. FUEL, LUBRICANTS AND OTHER FLUIDS REQUIRED FOR THE MAINTENANCE OF THE EQUIPMENT SHALL NOT BE STORED ON-SITE.

19. ALL TEMPORARY SEDIMENT AND EROSION CONTROL SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

20. ALL POLLUTANTS OTHER THAN SEDIMENT THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORM WATER OR THE SITE.

21. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSPECTED, MAINTAINED AND REPAIRED BY THE CONTRACTOR AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED USE. ALL ON-SITE EROSION AND CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT EQUAL TO OR GREATER THAN 0.25" OF RAIN PER 24 HOUR PERIOD. AN INSPECTION REPORT FILE SHALL BE MAINTAINED BY THE CONTRACTOR AND KEPT ON-SITE.

22. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ADDITIONAL TEMPORARY SEDIMENT PONDS/TRAPS AS SITE CONDITIONS REQUIRE. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER.

23. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ADDITIONAL EROSION CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO SILT FENCING, SEDIMENT PONDS/TRAPS, DIVERSION SWALES, CHECK DAMS, SEDIMENT BARRIERS, FILTER FABRIC MULCH AND SEEDING, AS CONDITIONS REQUIRE. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER.

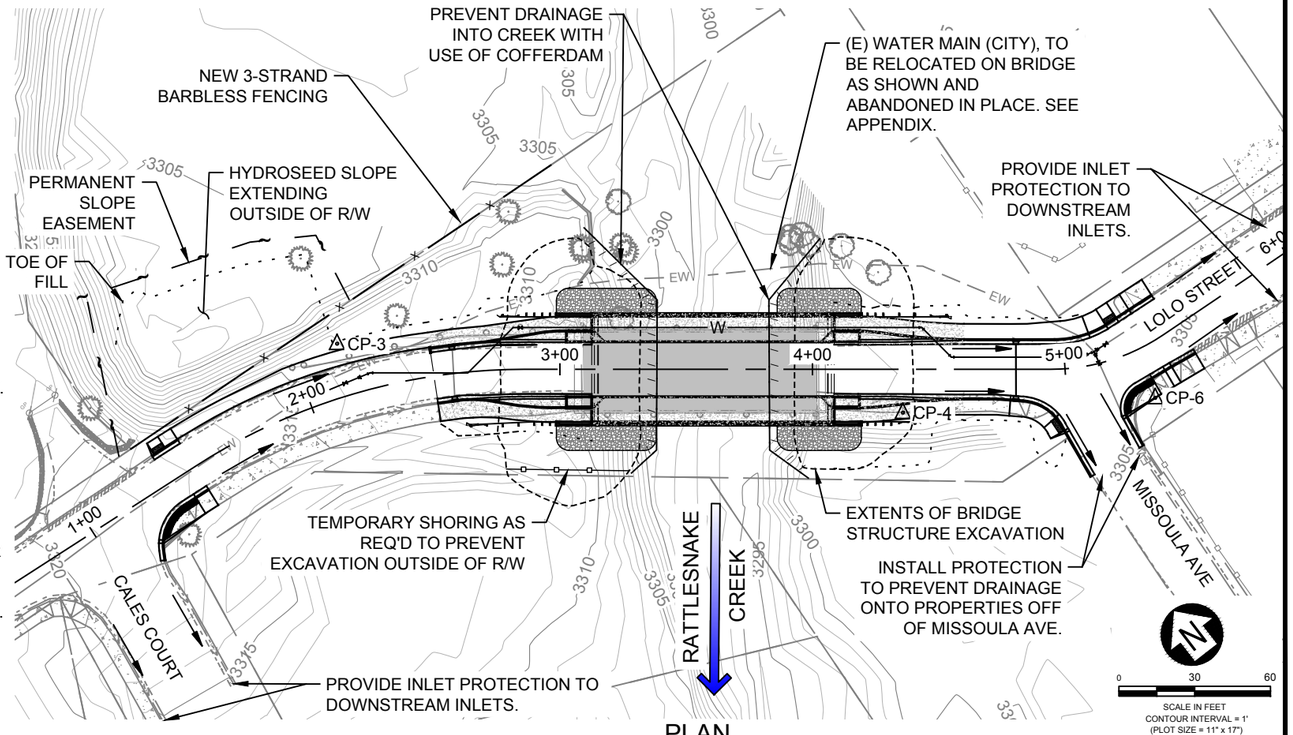
24. BMP'S TO LIMIT DISTURBANCE AND VEGETATIVE BUFFER AROUND LIMITS OF DISTURBANCE WHERE PRACTICAL.

25. CONTRACTOR TO PROVIDE SWPPP PACKET AND DEQ NOI CONFIRMATION LETTER TO CITY OF MISSOULA AND ACQUIRE CITY OF MISSOULA SWPPP PERMIT PRIOR TO ANY EARTH DISTURBING ACTIVITIES.

26. SWPPP INSPECTION RECORDS , NOT, AND NOT CONFIRMATION LETTER SHALL BE PROVIDED TO THE CITY OF MISSOULA AFTER THE PROJECT HAS REACHED FINAL STABILIZATION TO CLOSE OUT CITY PERMIT.

27. PUBLIC SIGNAGE IS REQUIRED PER SECTION 1.2.3 OF GENERAL PERMIT.

28. COFFERDAM ARE TO BE USED FOR FOUNDATION WORK AND FOR PLACEMENT OF KEYED IN RIPRAP. PUMPS WILL BE REQUIRED TO REMOVE WATER SEEPAGE FOR FOUNDATION WORK. REMOVE SEDIMENT FROM PUMPED WATER USING FILTRATION (E.G. "SILT BAGS"), DISPERSION ONTO LANDSCAPE (E.G. USING PERFORATED PIPE), SETTLING BASIN AND/OR ADDITION OF FLOCCULATES. CONTRACTOR IS RESPONSIBLE FOR SIZING ALL PIPES, DAMS, BYPASS PIPE, OPEN CHANNEL, AND ANY OTHER MEANS PROPOSED TO DIVERT STREAM FLOW.



PLAN

REVISION	DATE	DESCRIPTION
REV 1	10/27/26	MODIFICATIONS FOR READVERTISEMENT

DESIGNER TE PROJ. NO. 7611
DRAWN PAD DATE 08/2026
CHECKED JWR SURVEYED DJ&A P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

LOLO STREET BRIDGE REPLACMENT
MISSOULA COUNTY

EROSION CONTROL PLAN

SHEET OF 47 47

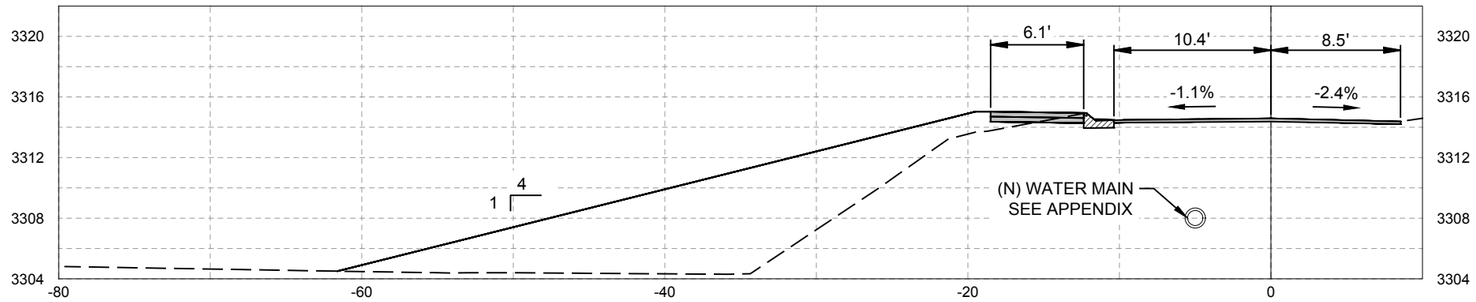
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LOLO STREET BRIDGE REPLACEMENT
ROAD CROSS SECTIONS

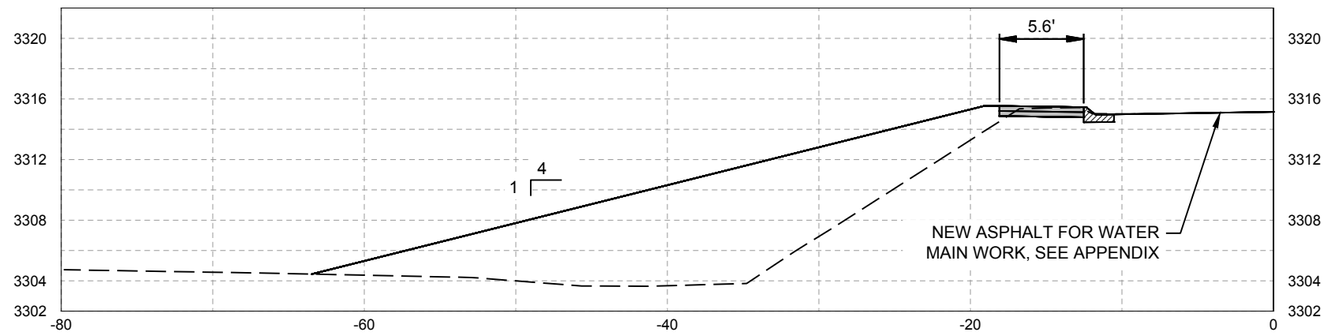
PREPARED BY : DJ&A ENGINEERS PLANNERS SURVEYORS

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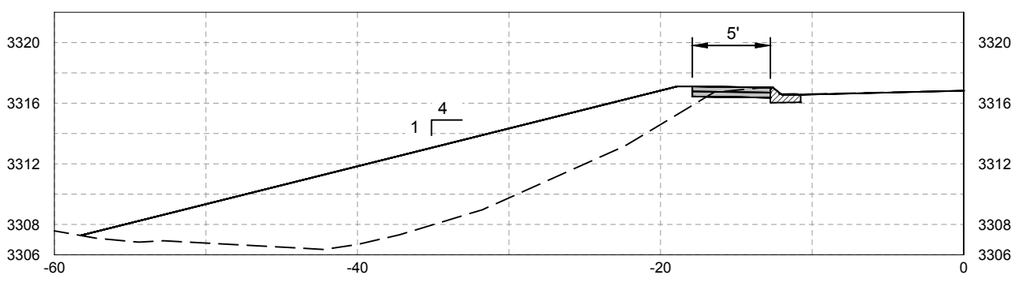
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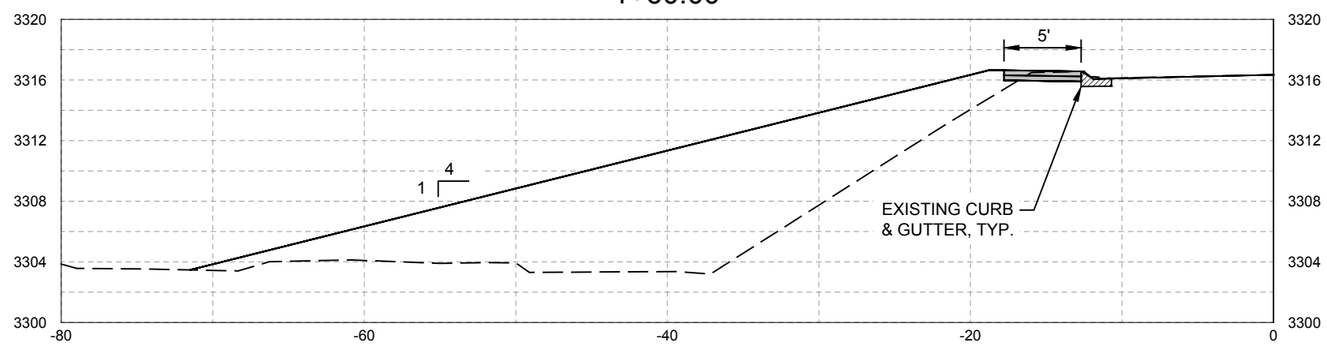
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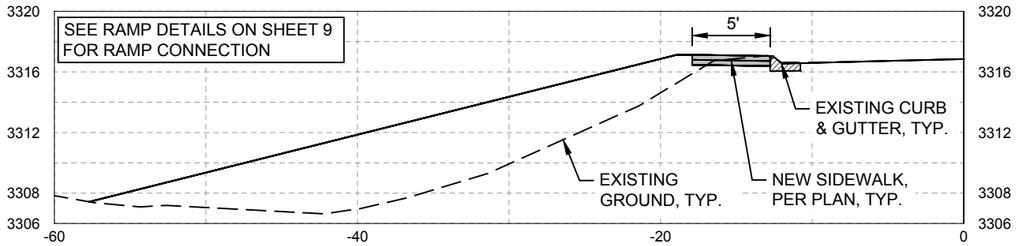
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1+48.01



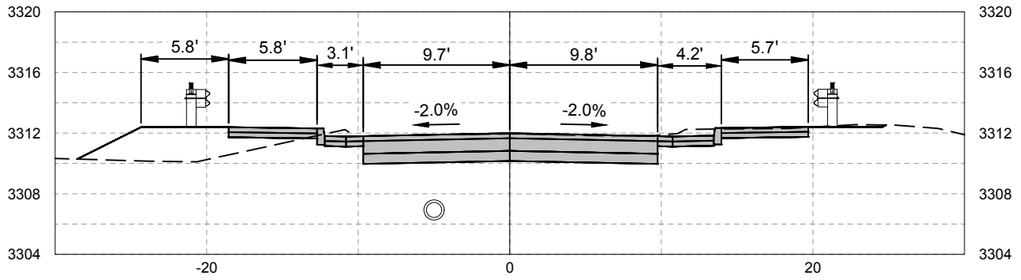
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LOLO STREET BRIDGE REPLACEMENT
ROAD CROSS SECTIONS

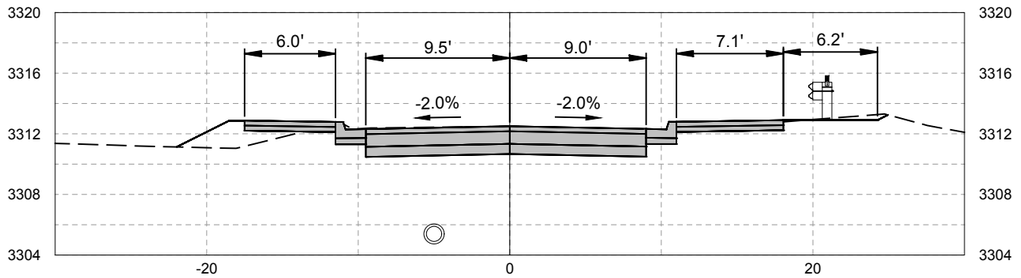
PREPARED BY : DJ&A ENGINEERS PLANNERS SURVEYORS

SHEET XS2 OF XS4

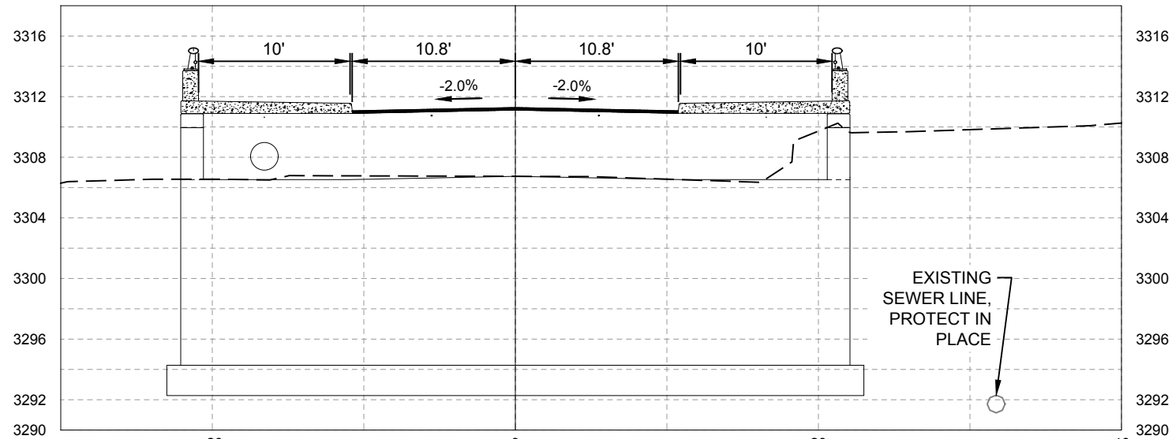
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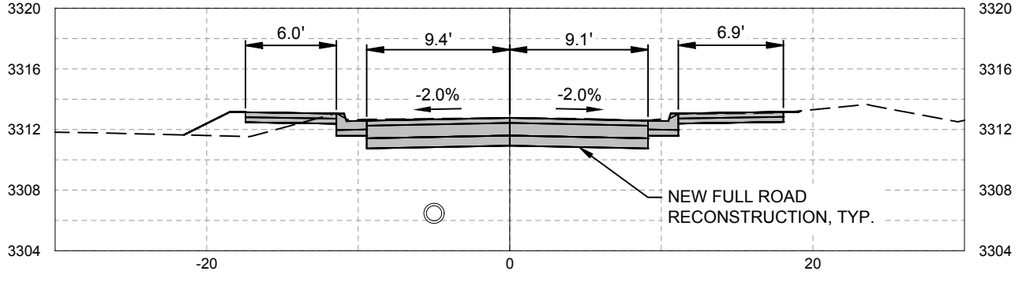
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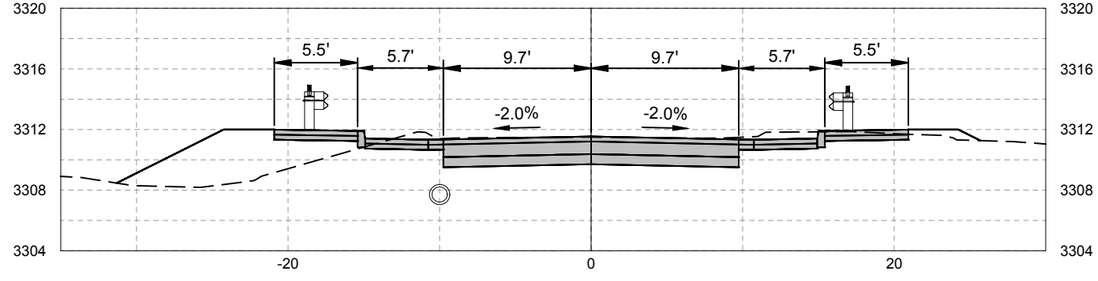
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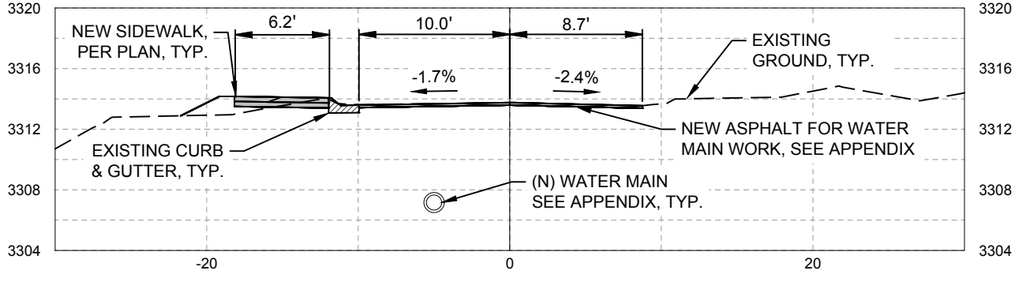
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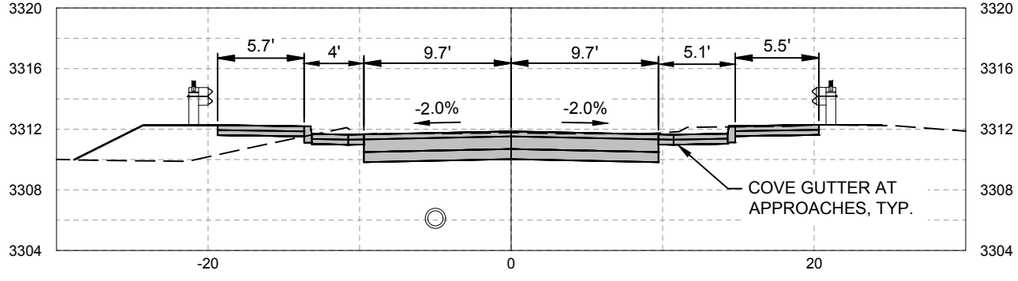
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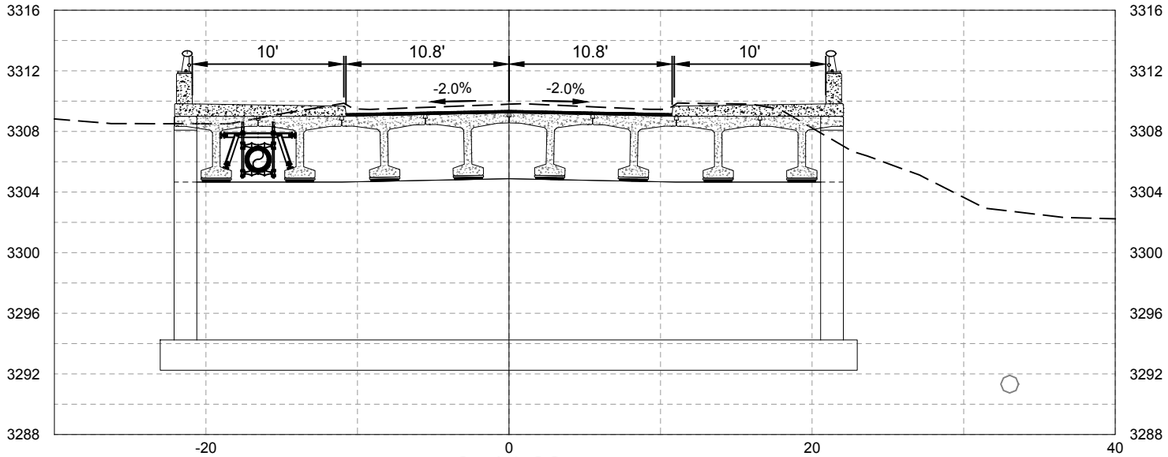
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LOLO STREET BRIDGE REPLACEMENT
ROAD CROSS SECTIONS

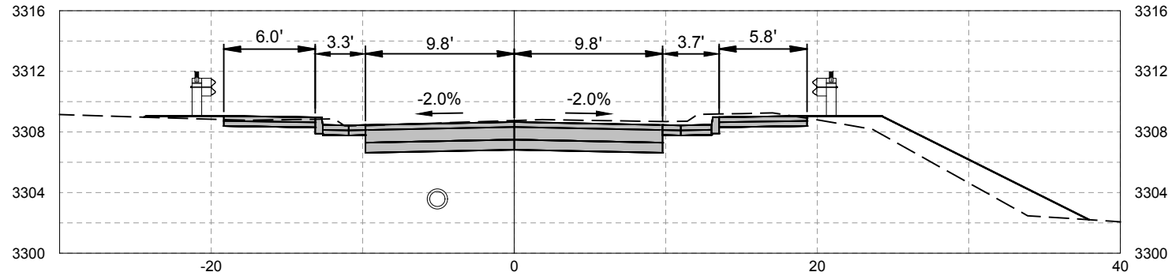
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SHEET XS3 OF XS4

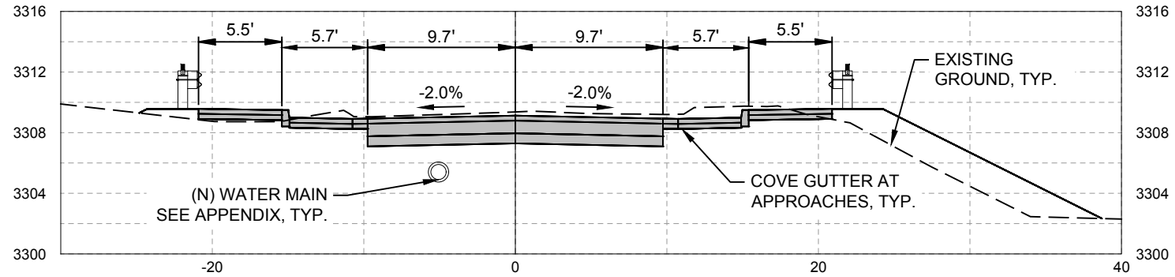
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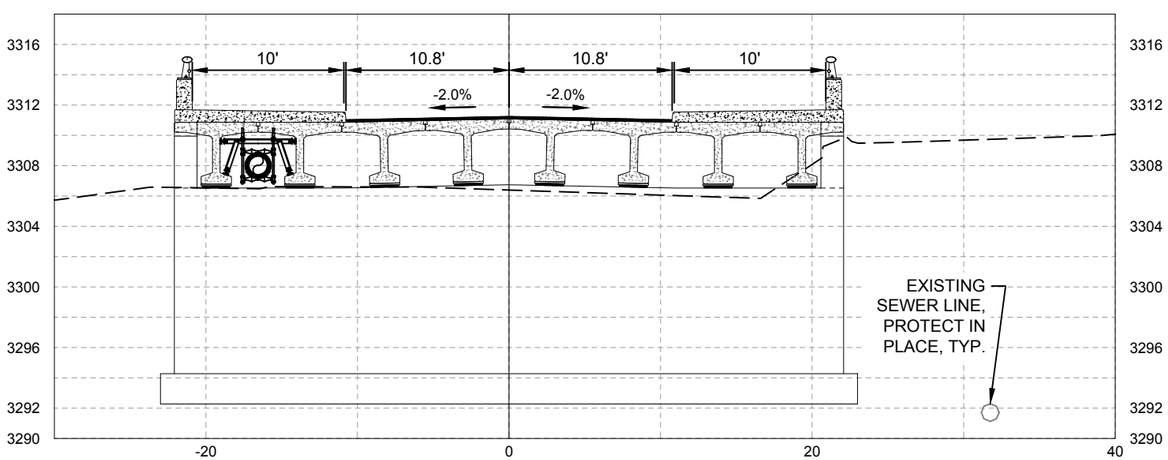
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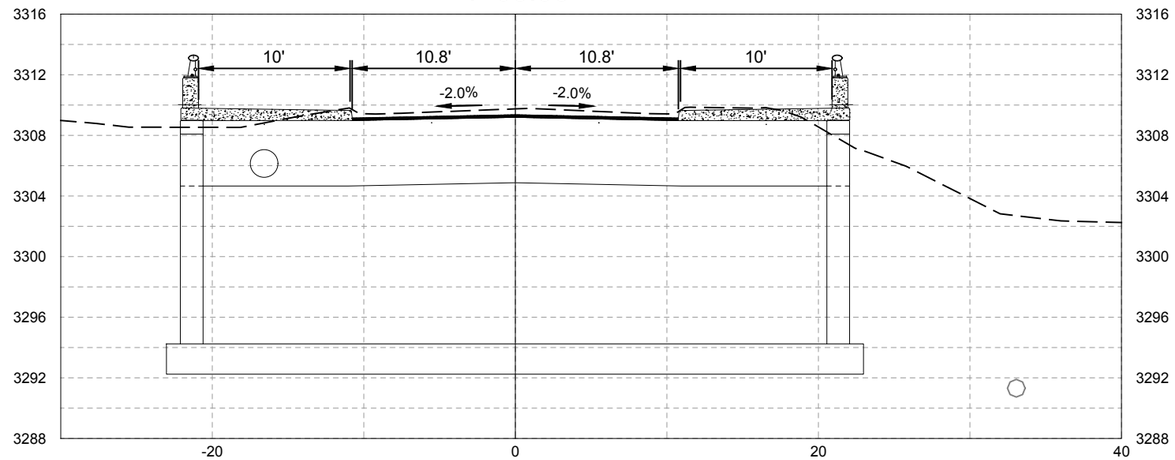
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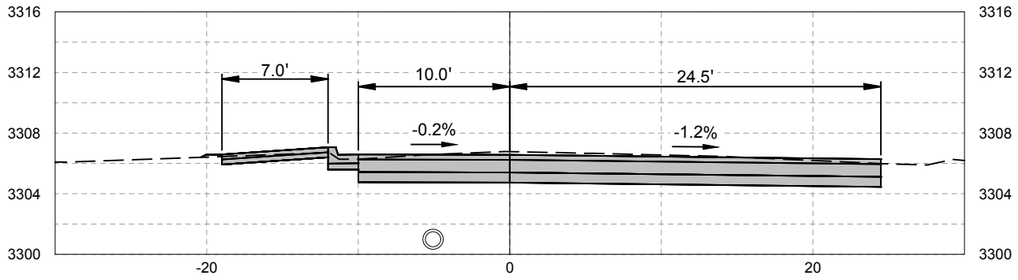
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LOLO STREET BRIDGE REPLACEMENT
ROAD CROSS SECTIONS

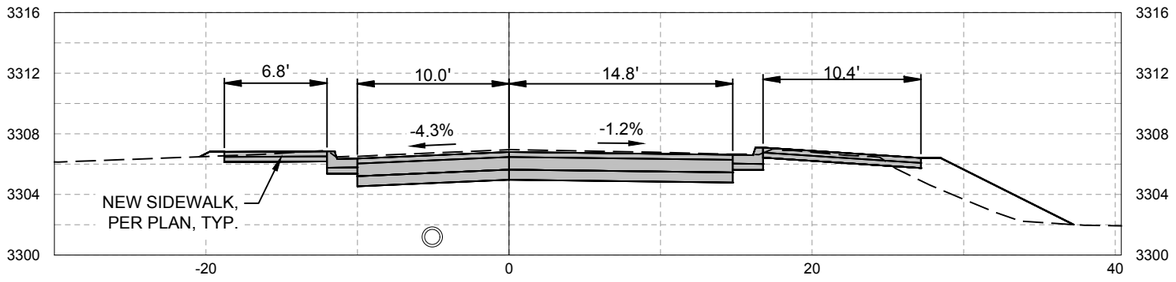
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SHEET XS4 OF XS4

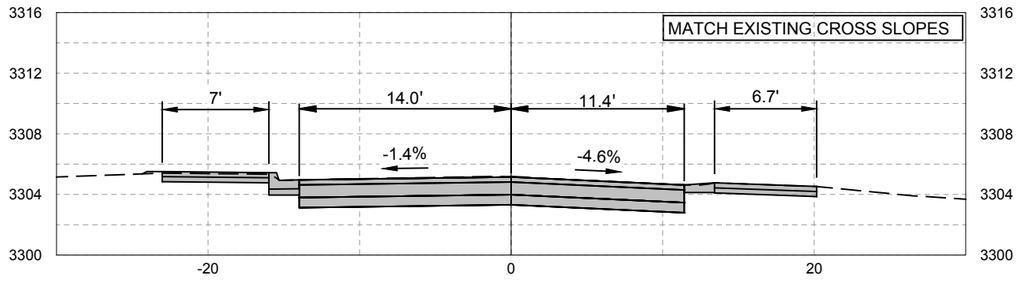
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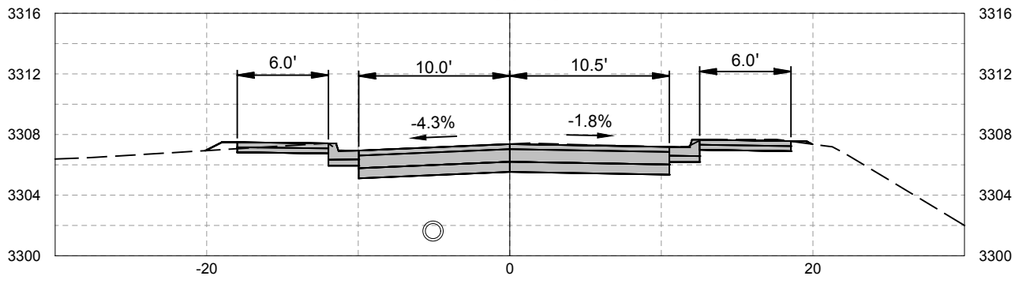
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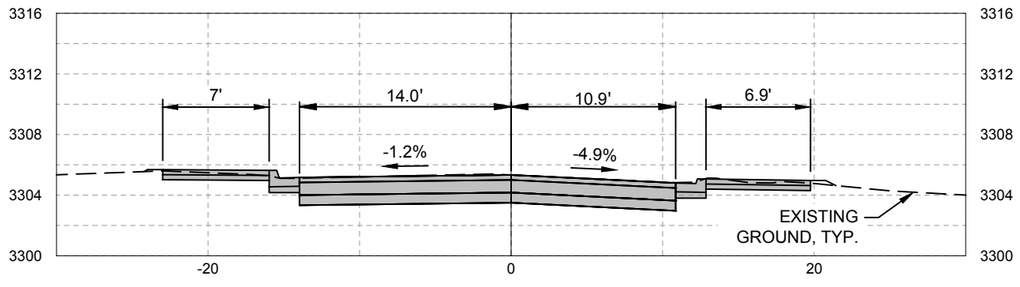
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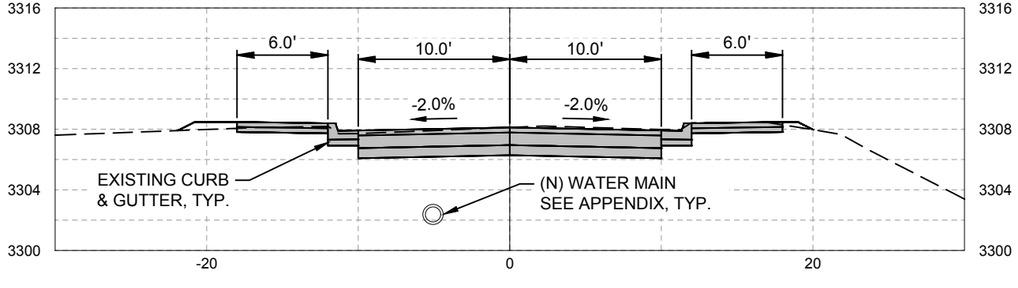
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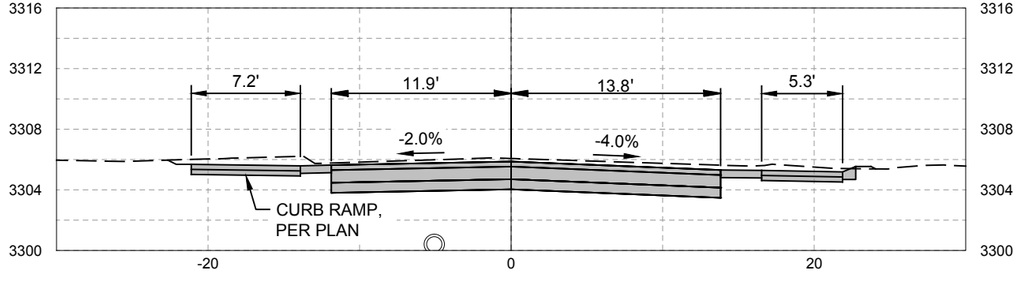
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4+60.00



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