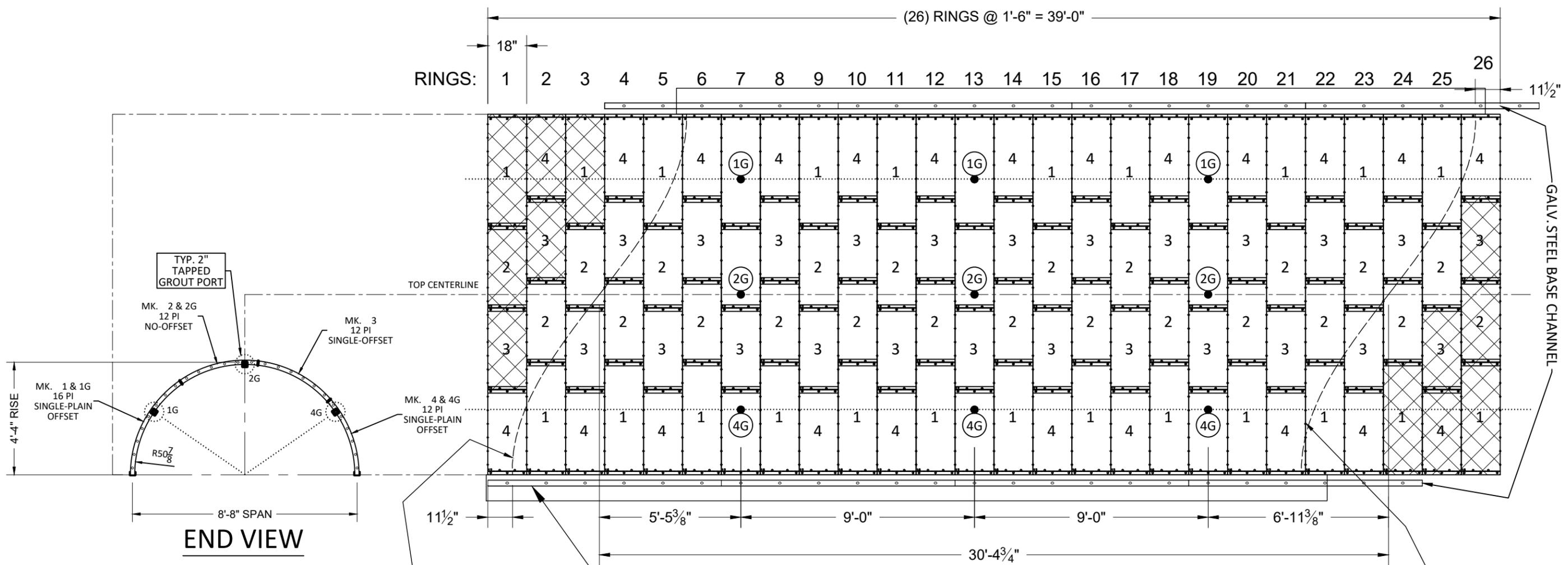


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ALL PLATES ARE

- .175 GAGE
- 50 ⁷/₈" RADIUS
- ALUM.

NOTE:
³/₄" X 4" ANCHOR BOLTS
 REQUIRED FOR SKEW
 CUT ENDS.
 FIELD DRILL ANCHOR BOLT
 HOLES 6" FROM THE EDGE
 18" ON CENTER

NOTE:
 CHANNELS ARE FURNISHED
 9'-0" LONG. FIELD CUTTING
 TO LENGTH IS REQUIRED.
 REPAIR DAMAGE TO
 GALVANIZED FINISH WITH A
 ZINC-RICH PAINT.

NOTE:
³/₄" X 4" ANCHOR BOLTS
 REQUIRED FOR SKEW
 CUT ENDS.
 FIELD DRILL ANCHOR BOLT
 HOLES 6" FROM THE EDGE
 18" ON CENTER

APPROVAL SIGNATURE/STAMP :

INLET	OUTLET	TYPE STRUCTURE
90	90	SIZE 52 Pi
BEVEL	0	SPAN = 8'-8"
		RISE = 4'-4"
		LENGTH @ C 31'-8"

PLANT ORDER NO.	N/A
SALES ORDER NO.	
DRAWING #:	666535-010-TLP-CON-A

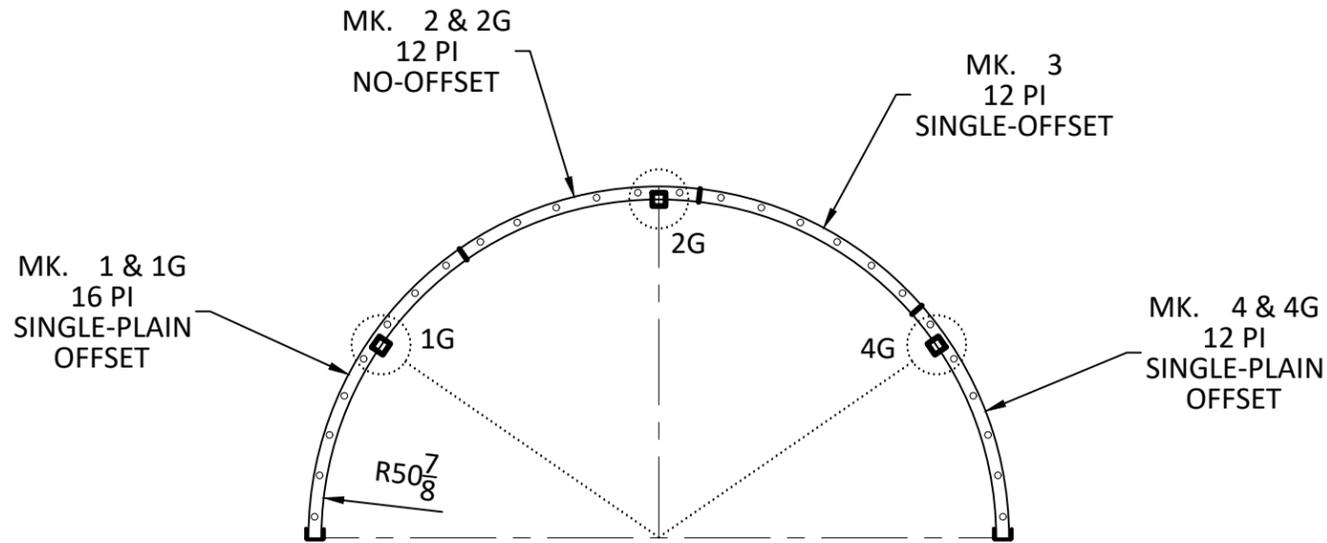
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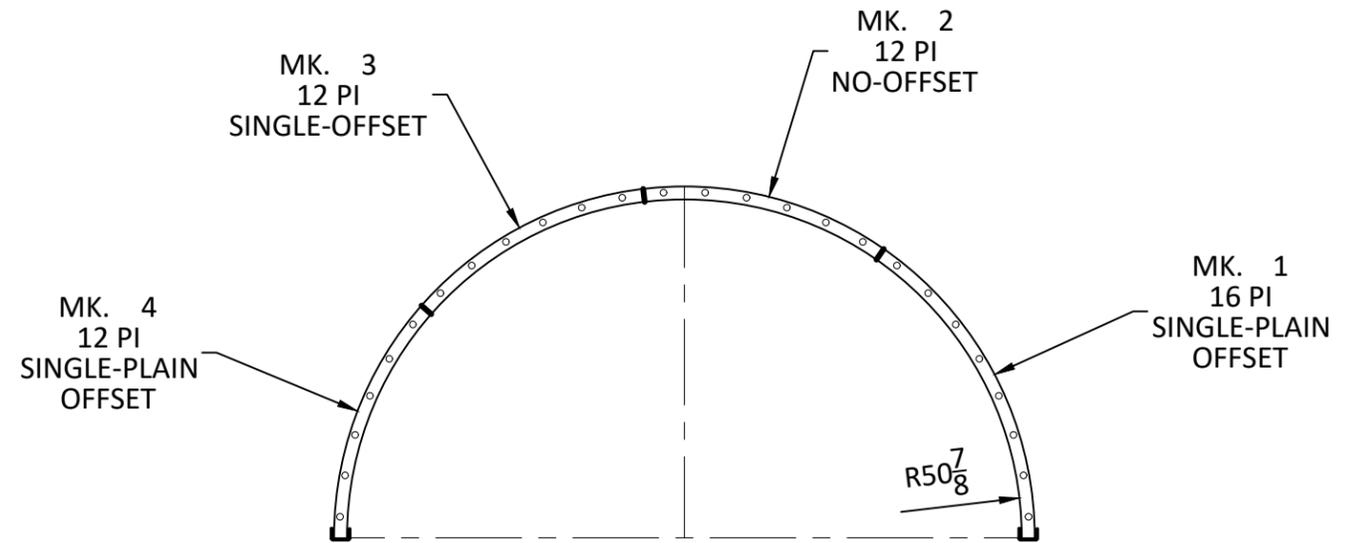
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 STRUCTURAL PLATE
 CONTRACT
 DRAWING

Logan County Bridge 44-1.76
 Bellefontaine, OH

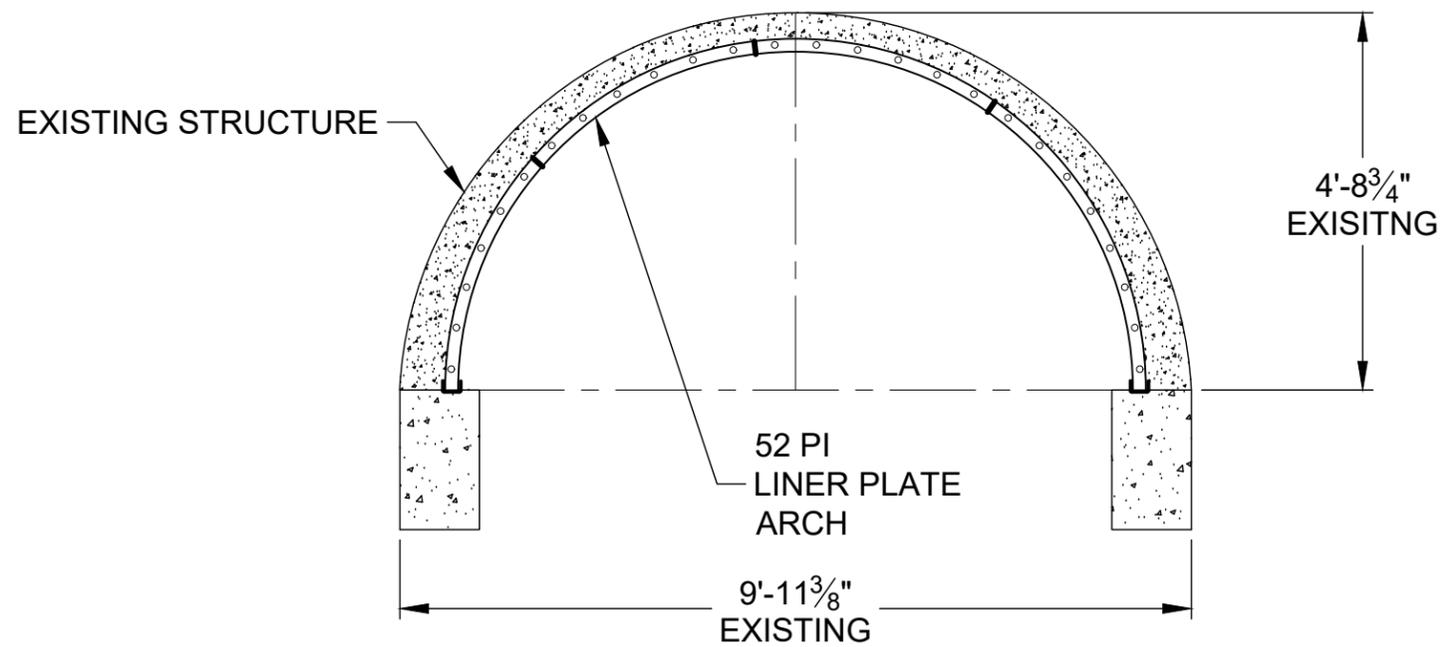
PROJECT No.:	666535	SEQ. No.:	010	DATE:	3/4/2021
DESIGNED:		DRAWN:	JMM / JSC	CHECKED:	JSC
SHEET NO.:	1	OF	6	APPROVED:	



END VIEW - "ODD" RINGS
OCCURS: 7,13,19



END VIEW - "EVEN" RINGS



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	INLET	OUTLET	TYPE STRUCTURE
SKREW	90	90	SIZE 52 Pi
BEVEL	0	0	SPAN = 8'-8"
			RISE = 4'-4"
			LENGTH @ C 31'-8"

PLANT ORDER NO.	N/A
SALES ORDER NO.	DRAWING #:
	666535-010-TLP-CON-A

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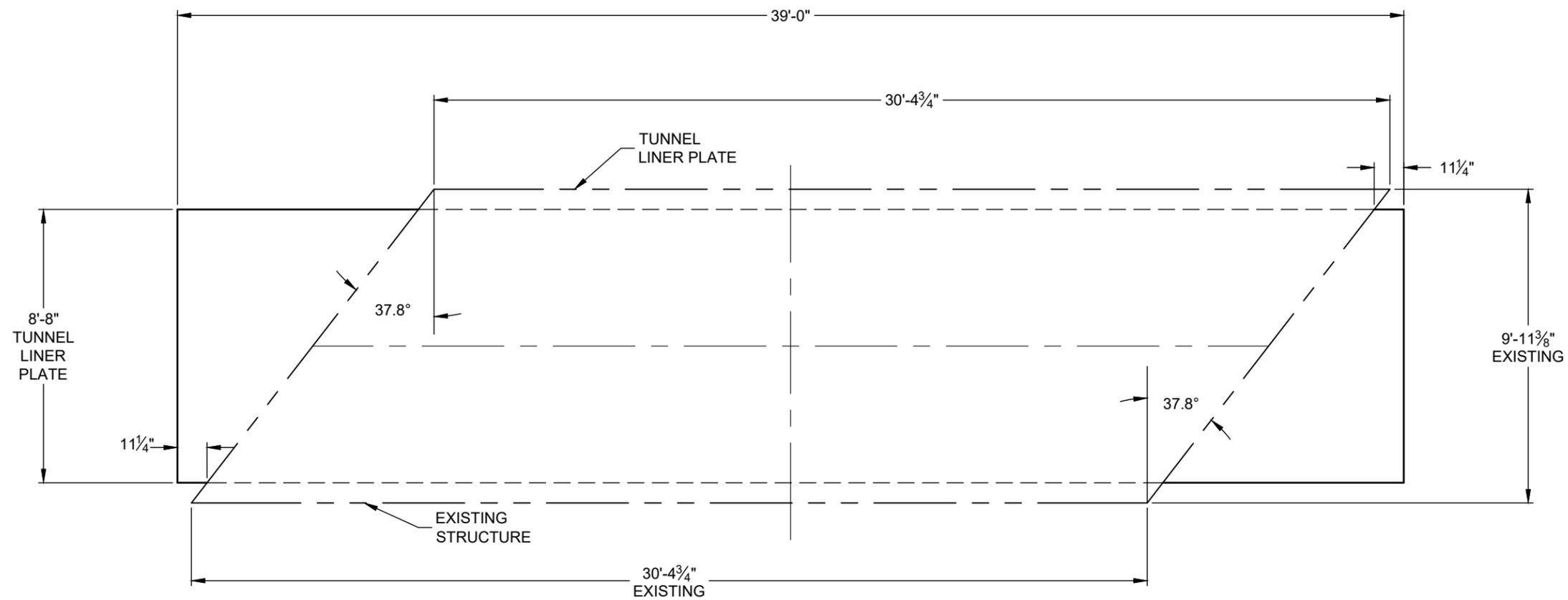
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Bellefontaine, OH

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JSC		
SHEET NO.:	2 OF 6	



PLAN VIEW

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	INLET	OUTLET	TYPE STRUCTURE
SKEW	90	90	SIZE 52 Pi
BEVEL	0	0	SPAN = 8'-8"
			RISE = 4'-4"
			LENGTH @ C 31'-8"

PLANT ORDER NO.
N/A

SALES ORDER NO. DRAWING #:
666535-010-TLP-CON-A

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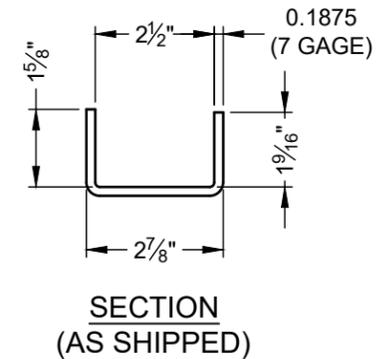
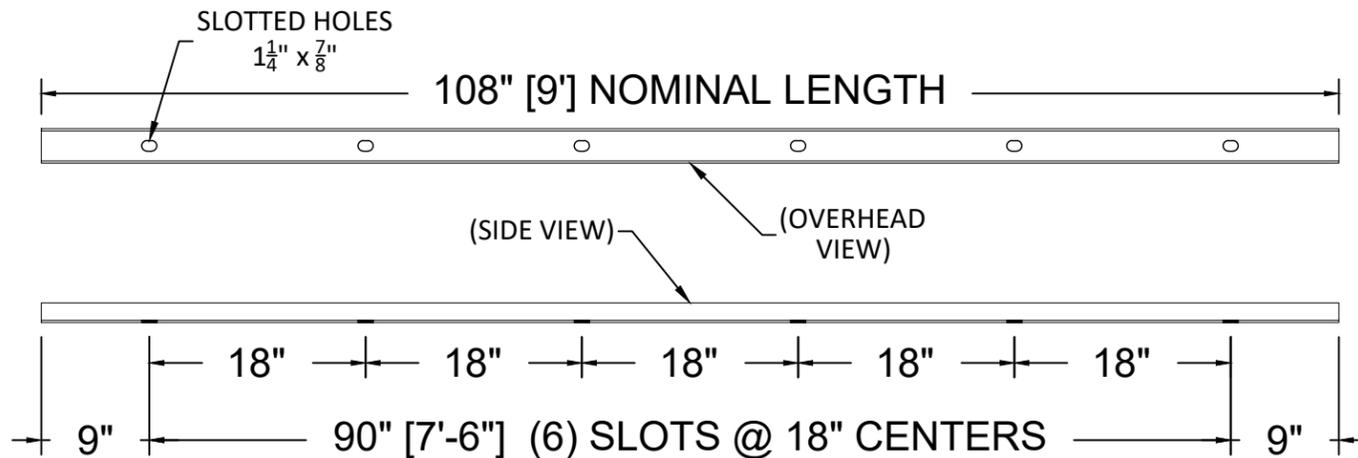
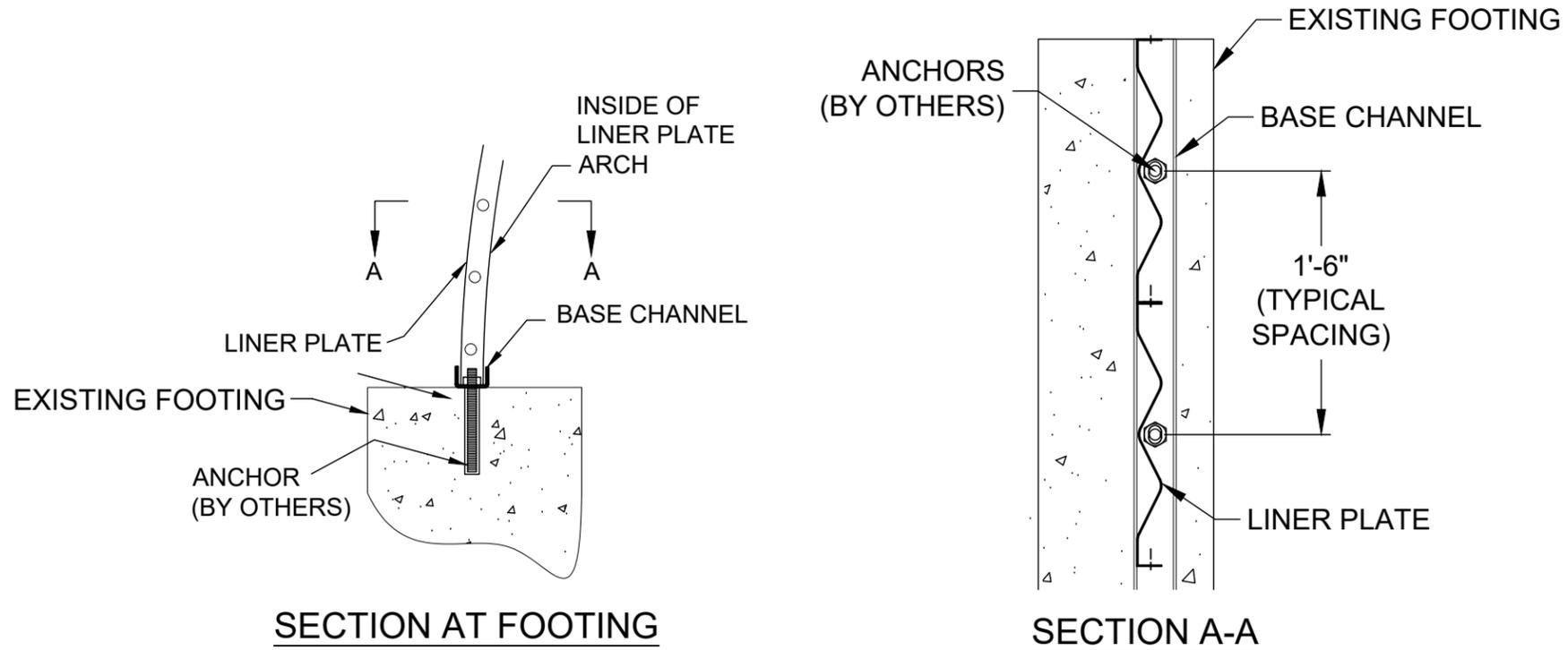
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SHEET NO.:	3	OF 6



**TUNNEL LINER PLATE
BASE CHANNEL**

MATERIAL: 7 GAGE STEEL

FINISH: HOT-DIP GALVANIZED

APPROVAL SIGNATURE/STAMP :

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INLET	OUTLET	TYPE STRUCTURE
90	90	SIZE 52 Pi
BEVEL	0	SPAN = 8'-8"
		RISE = 4'-4"
		LENGTH @ 31'-8"

PLANT ORDER NO.	N/A
SALES ORDER NO.	DRAWING #:
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JSC		
SHEET NO.:	4 OF 6	

PROPERTIES AND DIMENSIONS OF 2-FLANGE ALUMINUM TUNNEL LINER PLATE

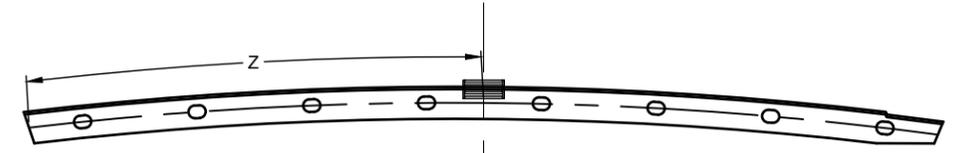
NOMINAL THICKNESS (INCHES) t	AREA (IN ² PER INCH) A	SECTION MODULUS (IN ³ PER INCH) S	MOMENT OF INERTIA (IN ⁴ PER INCH) I	RADIUS OF GYRATION (INCHES) r	APPROX. PLATE WEIGHTS INCLUDING BOLTS (POUNDS)			X* (IN.)
					12 PI PLATE	14 PI PLATE	16 PI PLATE	
0.125	0.160	0.0540	0.0583	0.603	15	17	19	0.782
0.150	0.191	0.0649	0.0711	0.610	17	19	22	0.799
0.175	0.227	0.0756	0.0842	0.610	19	22	25	0.827
0.200	0.260	0.0864	0.0972	0.611	21	24	27	0.842
0.225	0.292	0.0972	0.1108	0.615	24	27	30	0.851
0.250	0.325	0.1080	0.1230	0.615	26	30	33	0.874

ULTIMATE LONGITUDINAL SEAM STRENGTH OF 2-FLANGE ALUMINUM LINER PLATE (INCH LB / LIN. FT.)

NOMINAL THICKNESS	0.125	0.150	0.175	0.200	0.225	0.250
STRENGTH LB. / FT.	35,000	45,000	50,000	60,000	70,000	74,000

* X = DISTANCE FROM OUTER FACE TO NEUTRAL AXIS, IN INCHES .

REFER TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES SECTION 12, AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.14 FOR t, A, I and r.

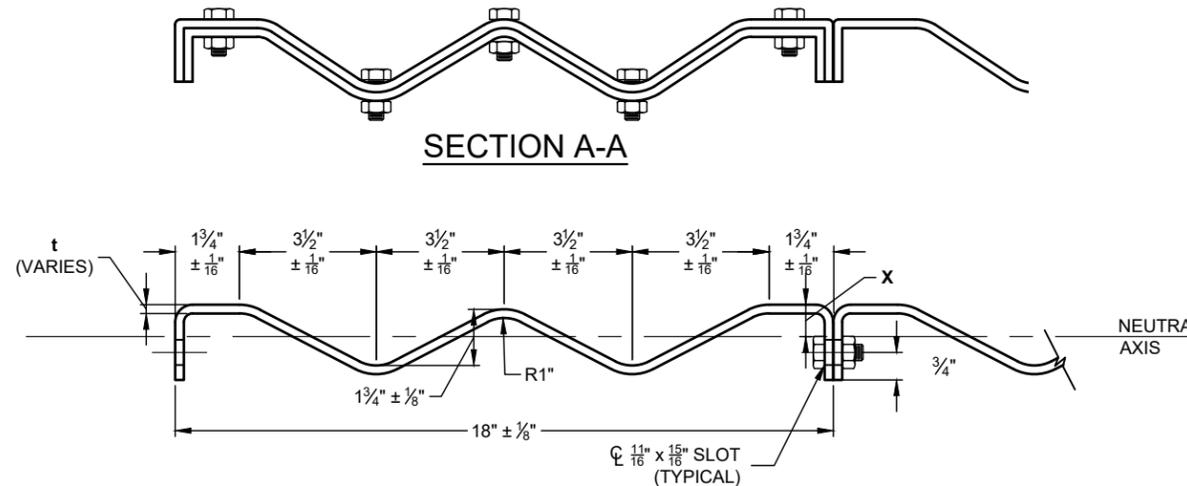


NOTE: TYPICAL 'Z' DIMENSION IS ONE-HALF OF THE OVERALL PLATE LENGTH.

SECTION D-D

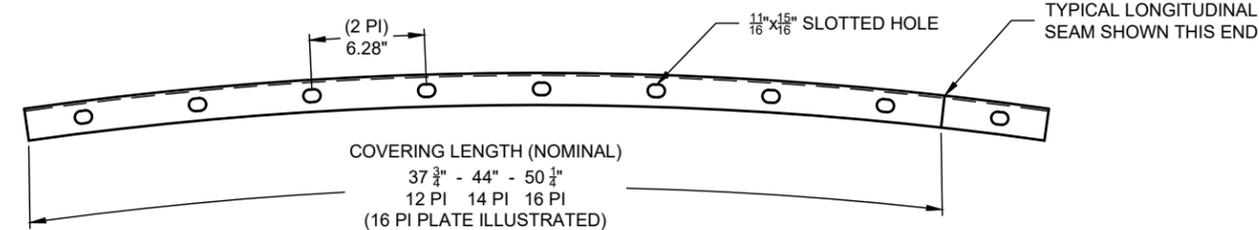


PLAN

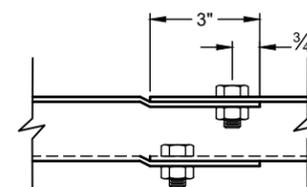


SECTION A-A

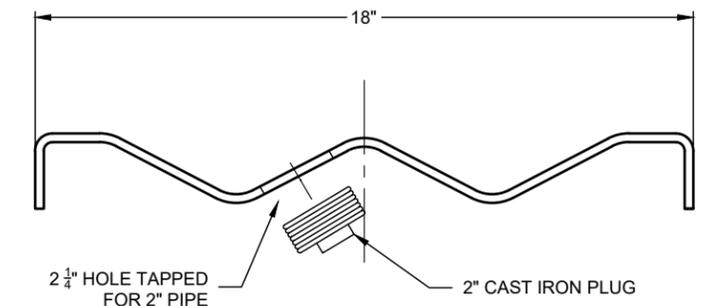
SECTION B-B



ELEVATION



SECTION C-C



TAPPED GROUT HOLE DETAIL

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Bellefontaine, OH

PROJECT No.: 666535	SEQ. No.: 010	DATE: 3/4/2021
DESIGNED:	DRAWN: JMM / JSC	
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SHEET NO.:	5	OF 6

SPECIFICATION
ALUMINUM
TUNNEL LINER PLATE

SCOPE:

THESE SPECIFICATIONS COVER ALUMINUM TUNNEL LINER PLATES, FABRICATED TO PERMIT IN-PLACE ASSEMBLY OF A CONTINUOUS SUPPORT SYSTEM. TUNNEL OR RELINED STRUCTURES SHALL BE OF THE DIAMETER AND/OR SHAPE AND GAGE AS SHOWN ON THE PLANS.

MATERIAL:

LINER PLATES SHALL BE FABRICATED FROM ALUMINUM PLATES CONFORMING TO THE CHEMICAL AND MECHANICAL PROPERTIES OF THE BASE METAL FOR ALLOY 5052-H141 TEMPER. PLATES SHALL BE OF THE GAGE SHOWN ON THE PLANS AND SHALL BE CURVED TO SUIT THE TUNNEL CROSS SECTION SHOWN.

ALL PLATES SHALL BE PUNCHED FOR BOLTING ON BOTH LONGITUDINAL AND CIRCUMFERENTIAL SEAMS AND SHALL BE SO FABRICATED AS TO PERMIT COMPLETE ERECTION FROM THE INSIDE OF THE TUNNEL. THE LONGITUDINAL SEAM SHALL BE OF THE LAPPED TYPE, WITH AN OFFSET EQUAL TO THE GAGE OF METAL FOR THE FULL WIDTH OF PLATE TO ALLOW THE CROSS SECTION OF THE PLATE TO BE CONTINUOUS THROUGH THE SEAM. CIRCUMFERENTIAL BOLT HOLE SPACING SHALL BE 6-1/4".

GROUT HOLES SHALL BE TWO INCHES (2") IN DIAMETER AND SHALL BE PROVIDED AS SHOWN ON THE PLANS TO PERMIT GROUTING AS THE ASSEMBLY OF THE LINER PLATE PROCEEDS.

BOLTS AND NUTS:

STEEL BOLTS AND NUTS SHALL BE 5/8" IN DIAMETER AND LENGTH AS RECOMMENDED BY THE MANUFACTURER. BOLTS SHALL CONFORM TO ASTM A 307. NUTS SHALL CONFORM TO ASTM A 563, GRADE A, HEX. BOLTS AND NUTS SHALL BE MECHANICALLY GALVANIZED AND CONFORM TO ASTM B695.

INSTALLATION:

LINER PLATE SHALL BE ASSEMBLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. LONGITUDINAL SEAMS SHALL BE STAGGERED BETWEEN RINGS. VOIDS OCCURRING BETWEEN LINER PLATE AND EXISTING STRUCTURE OR GROUND SHALL BE GROUTED UNTIL COMPLETELY FILLED. GROUT MATERIAL AND METHOD OF GROUTING SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

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PROJECT No.: 666535	SEQ. No.: 010	DATE: 3/4/2021
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CHECKED: JSC	APPROVED:	
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