

SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	7	16	01/STR/04	EXT	TOTAL												
												ROADWAY						
					LS	201	11000	LS				CLEARING AND GRUBBING						
		417			417	202	23000	417	SY			PAVEMENT REMOVED						
		85			85	202	35100	85	FT			PIPE REMOVED, 24" AND UNDER						
		375			375	202	38000	375	FT			GUARDRAIL REMOVED						
		42			42	203	10000	42	CY			EXCAVATION						
		143			143	203	20000	143	CY			EMBANKMENT						
		467			467	204	10000	467	SY			SUBGRADE COMPACTION						
		437.5			437.5	606	15051	437.5	FT			GUARDRAIL, TYPE MGS, AS PER PLAN	3					
		50			50	606	17360	50	FT			GUARDRAIL, TYPE MGS, LONG-SPAN, AS PER PLAN	3					
		4			4	606	26150	4	EACH			ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)						
												EROSION CONTROL						
			19		19	601	32110	19	CY			ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER						
77					77	659	00300	77	CY			TOPSOIL						
		696			696	659	10000	696	SY			SEEDING AND MULCHING						
0.09					0.09	659	20000	0.09	TON			COMMERCIAL FERTILIZER						
4					4	659	35000	4	MGAL			WATER						
												DRAINAGE						
88					88	605	31100	88	FT			AGGREGATE DRAINS						
			90		90	611	94720	90	FT			6' X 6' CONDUIT, TYPE A, 706.05						
												PAVEMENT						
		95			95	301	56000	95	CY			ASPHALT CONCRETE BASE, PG64-22, (449)						
		129			129	304	20000	129	CY			AGGREGATE BASE						
	20	46			66	407	10000	66	GAL			TACK COAT						
	10	35			45	441	70000	45	CY			ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22						
	50				50	617	10100	50	CY			COMPACTED AGGREGATE						
												TRAFFIC CONTROL						
4					4	621	00100	4	EACH			RPM						
4					4	621	54000	4	EACH			RAISED PAVEMENT MARKER REMOVED						
		12			12	626	00110	12	EACH			BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)						
0.06					0.06	642	00104	0.06	MILE			EDGE LINE, 6", TYPE 1						
0.03					0.03	642	00300	0.03	MILE			CENTER LINE, TYPE 1						
												STRUCTURE 20 FOOT SPAN AND UNDER (WYA-67-24.06)						
					LS	202	11001	LS				STRUCTURE REMOVED, AS PER PLAN	16					
					LS	503	11100	LS				COFFERDAMS AND EXCAVATION BRACING						
		235			235	503	21100	235	CY			UNCLASSIFIED EXCAVATION						
		4,137			4,137	509	10000	4,137	LB			EPOXY COATED STEEL REINFORCEMENT						
		13			13	511	46001	13	SY			CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	16					
					30	511	46511	30	CY			CLASS QC1 CONCRETE, FOOTING, AS PER PLAN	16					
					1	511	46610	1	CY			CLASS QC1 CONCRETE, HEADWALL						
					100	512	10000	100	SY			SEALING OF CONCRETE SURFACES						
					160	512	33000	160	SY			TYPE 2 WATERPROOFING						
					12	518	21200	12	CY			POROUS BACKFILL WITH GEOTEXTILE FABRIC						
					75	613	41200	75	CY			LOW STRENGTH MORTAR BACKFILL						
												MAINTENANCE OF TRAFFIC						
	20				20	253	01000	20	SY			PAVEMENT REPAIR						
	0.03				0.03	614	21400	0.03	MILE			WORK ZONE CENTER LINE, CLASS II						
	1				1	616	10000	1	MGAL			WATER						
												INCIDENTALS						
					LS	614	11000	LS				MAINTAINING TRAFFIC						
					5	619	16010	5	MNTH			FIELD OFFICE, TYPE B						
					LS	623	10000	LS				CONSTRUCTION LAYOUT STAKES AND SURVEYING						
					LS	624	10000	LS				MOBILIZATION						

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

DMLF

REVIEWER

MJM 02-13-23

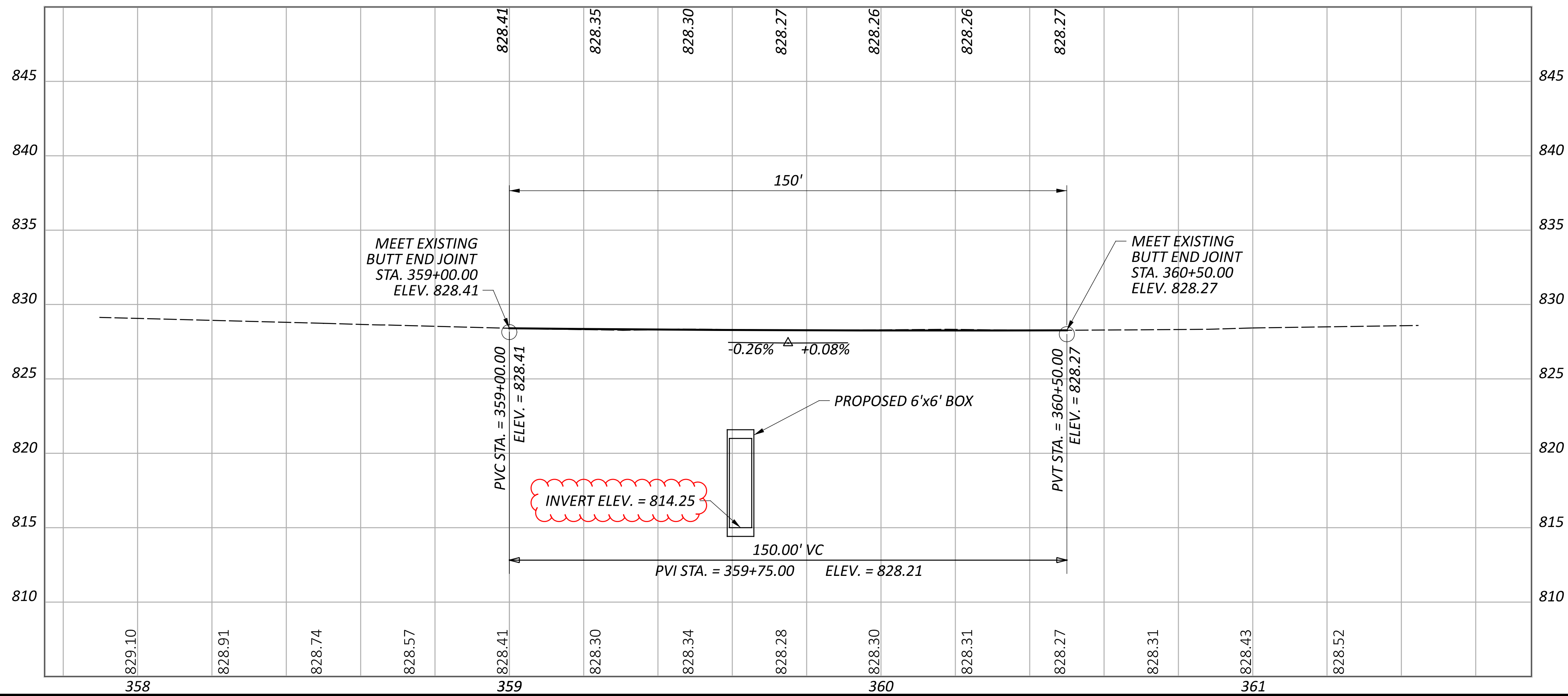
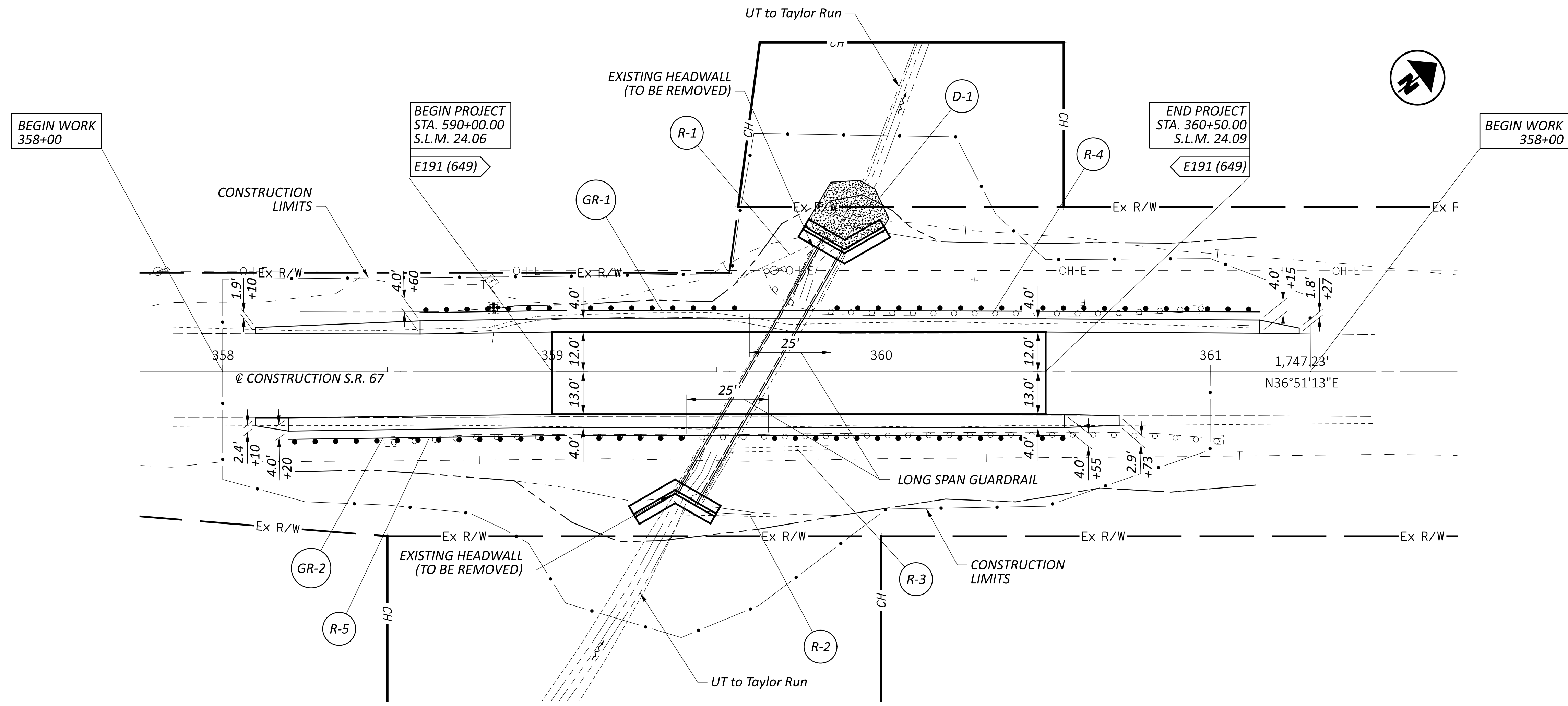
PROJECT ID

109100

SHEET TOTAL

P.6 | 19

FOR ESTIMATED QUANTITIES, SEE SHEET 7.
 FOR CULVERT DETAILS AND QUANTITIES, SEE SHEETS 15-19.



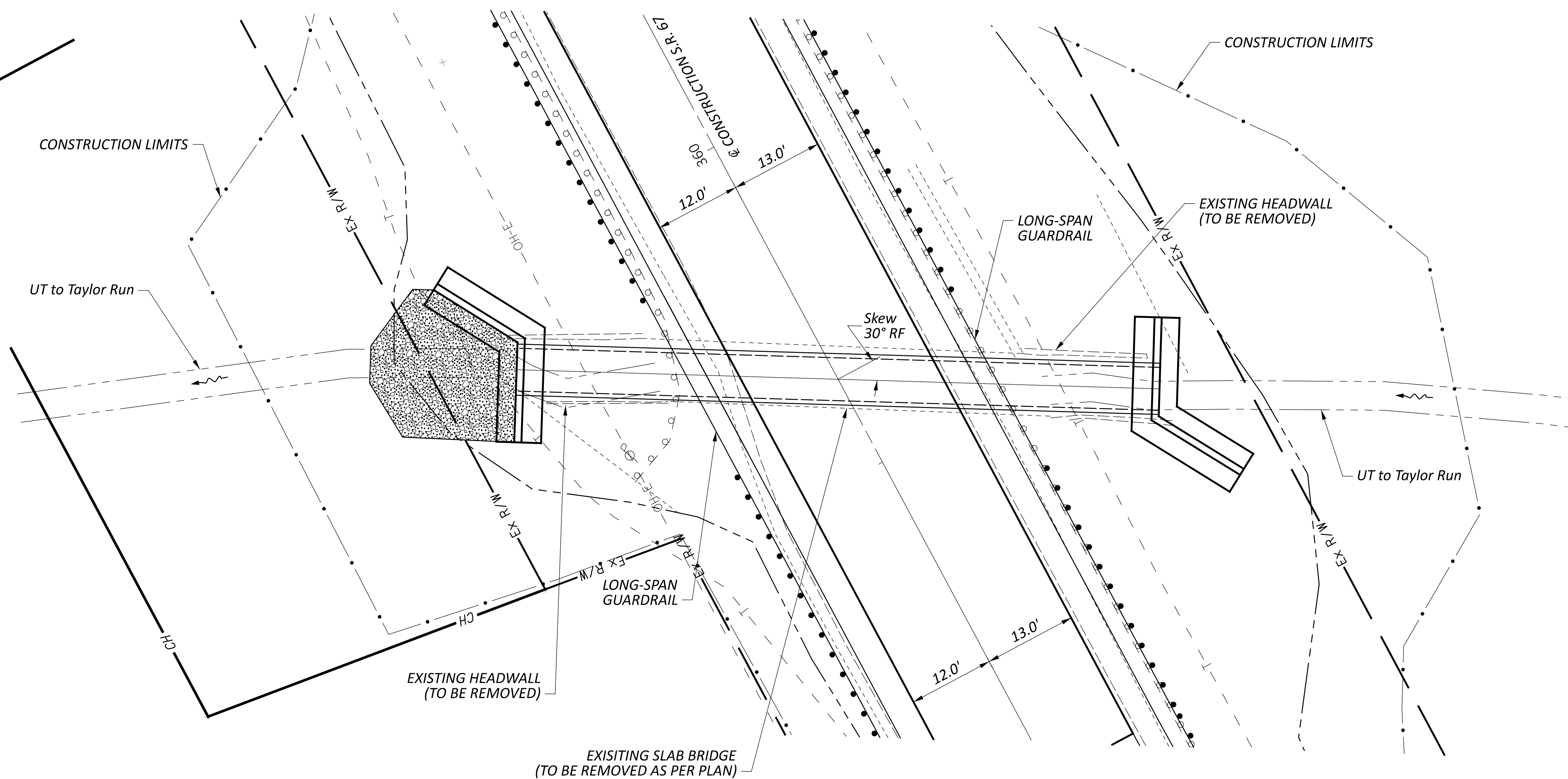
ROCK CHANNEL PROTECTION, TYPE B, WITH AGGREGATE FILTER

PLAN AND PROFILE
 STA. 357+75.00 TO STA. 361+75.00

DESIGN AGENCY



DESIGNER
 DMLF
 REVIEWER
 MJM 02-13-23
 PROJECT ID
 109100
 SHEET TOTAL
 P.8 19

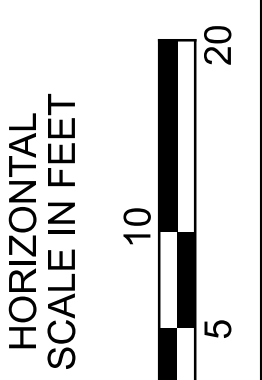
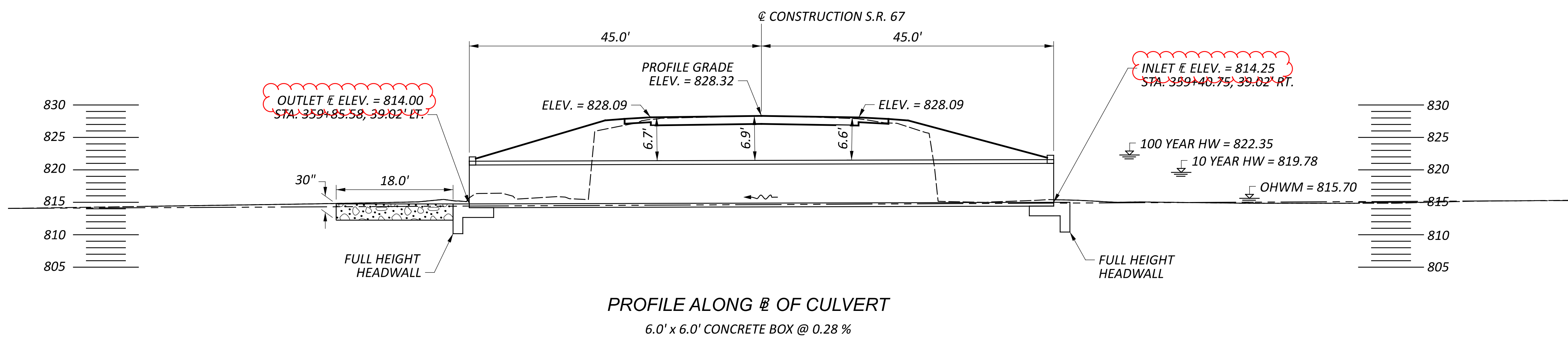


ITEM 601 - ROCK CHANNEL PROTECTION
 TYPE B, WITH AGGREGATE FILTER

HYDRAULIC DATA		
DRAINAGE AREA =	601 ACRES	
Q (10) =	V (10) = 7.98 FT/S	HW (10) = 819.78 FT
Q (100) =	V (100) = 11.1 FT/S	HW (100) = 822.35 FT
ORDINARY HIGH WATER MARK:	815.7 FT	
DESIGN SERVICE LIFE:	75 YEARS	
ABRASION LEVEL:	NON-ABRASIVE	
pH:	8.4	

EXISTING STRUCTURE
TYPE: SLAB BRIDGE (9'-0"± x 8'-8"±)
SKEW: 30° RF
ALIGNMENT: TANGENT
DATE BUILT: 1948
SFN: 8802328

PROPOSED STRUCTURE
TYPE: 6' x 6' REINFORCED CONCRETE BOX
SKEW: 30° R.F.
ALIGNMENT: TANGENT
CFN: 1991801



CULVERT PLAN AND PROFILE

DESIGN AGENCY	
DESIGNER	DMLF
REVIEWER	JMJ
PROJECT ID	02-13-23
SHEET	109100
TOTAL	19

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2007, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA

CAST-IN-PLACE STRUCTURES:
 CONCRETE CLASS QC - COMPRESSIVE STRENGTH 4000 PSI
 (FOOTING, WINGWALL AND FORESLOPE WALL)
 REINFORCING STEEL - ASTM A615, A616 OR A617
 GRADE 60 MINIMUM YIELD STRENGTH
 60,000 PSI
 (ALL REINFORCING STEEL SHALL BE EPOXY COATED)

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 & 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED ON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

CONDUIT FABRICATION AND APPROVAL

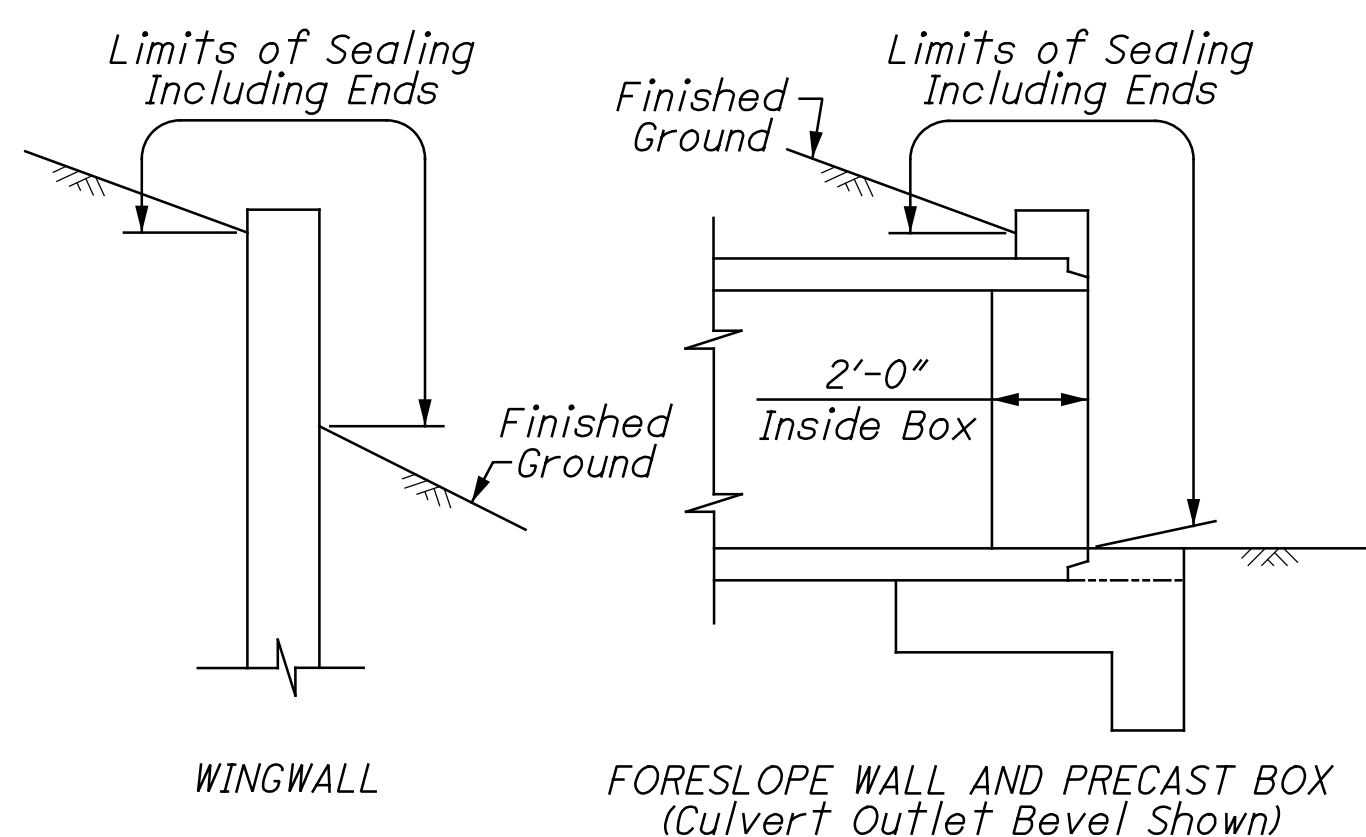
PRIOR TO CLOSING THE ROADWAY TO TRAFFIC, THE CONTRACTOR SHALL HAVE THE ITEM 611 TYPE A CONDUIT SPECIFIED IN THESE PLANS FABRICATED AND APPROVED. ALL COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PERTINENT CONDUIT.

ITEM 512 - SEALING OF CONCRETE SURFACES

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DETAILS BELOW.

THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE CULVERT SUBSUMMARY.

ITEM 512 - SEALING OF CONCRETE SURFACES = 100 SY
 (EPOXY-URETHANE)



ITEM 511 - CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN

IN ADDITION TO THE SPECIFICATIONS SHOWN FOR ITEM 511 IN THE CMS, THIS ITEM SHALL INCLUDE ANY AND ALL EXCAVATION AND EMBANKMENT NEEDED TO CONSTRUCT THE WINGWALLS. THE EXCAVATION AND EMBANKMENT SHALL FOLLOW THE SPECIFICATIONS OUTLINED IN THE CMS FOR ITEM 203 EXCAVATION AND ITEM 203 EMBANKMENT.

PAYMENT WILL BE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 511, CLASS QC1 CONCRETE. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE CULVERT SUBSUMMARY FOR THE WORK NOTED ABOVE.

ITEM 511 - CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN = 12.8 CY

ITEM 511 - CLASS QC1 CONCRETE, FOOTING, AS PER PLAN

IN ADDITION TO THE SPECIFICATIONS SHOWN FOR ITEM 511 IN THE CMS, THIS ITEM SHALL INCLUDE ANY AND ALL EXCAVATION AND EMBANKMENT NEEDED TO CONSTRUCT THE FOOTINGS. THE EXCAVATION AND EMBANKMENT SHALL FOLLOW THE SPECIFICATIONS OUTLINED IN THE CMS FOR ITEM 203 EXCAVATION AND ITEM 203 EMBANKMENT.

PAYMENT WILL BE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 511, CLASS QC1 CONCRETE, FOOTING. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE CULVERT SUBSUMMARY FOR THE WORK NOTED ABOVE.

ITEM 511 - CLASS QC1 CONCRETE, FOOTING, APP = 29.2 CY

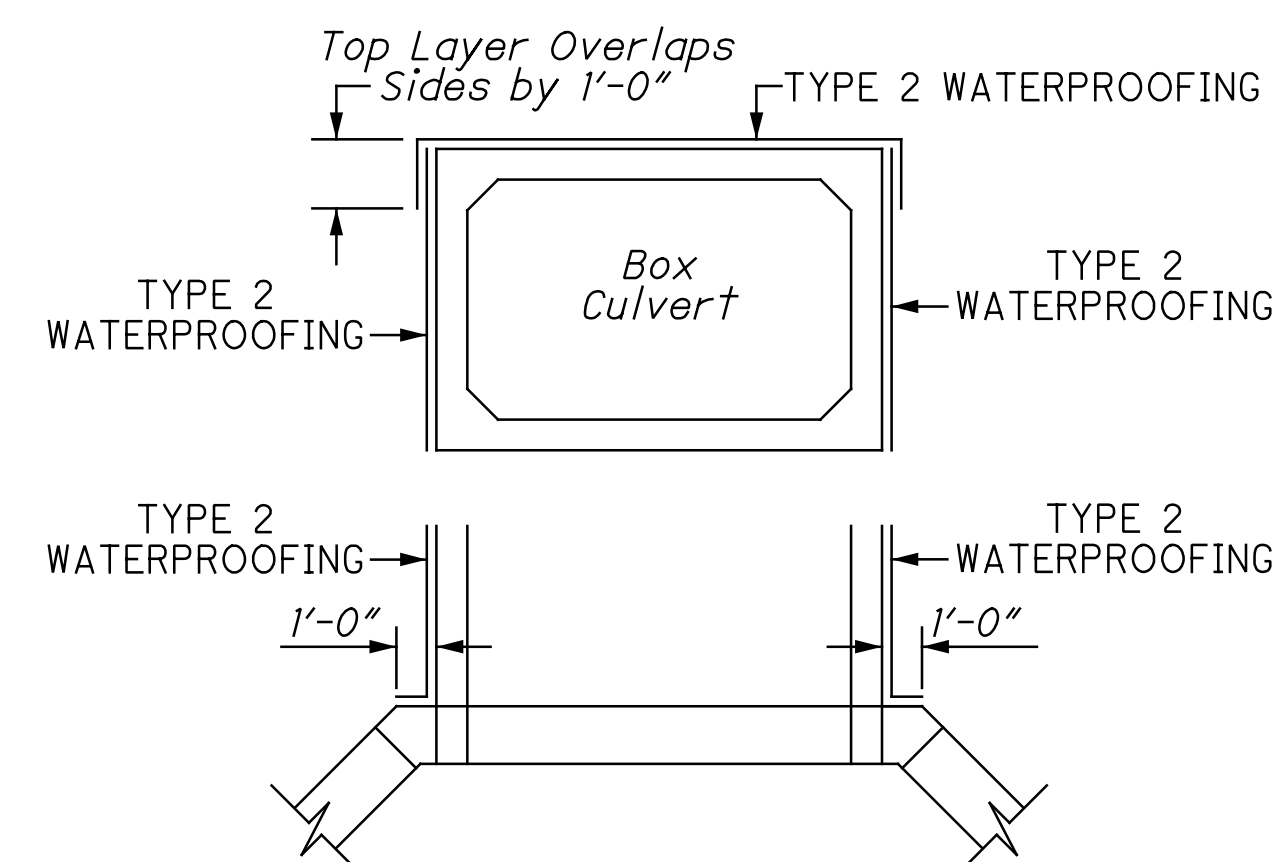
ITEM 512 - TYPE 2 WATERPROOFING

TYPE 2 WATERPROOFING SHALL EXTEND VERTICALLY DOWN ALL SIDES FOR THE PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. TYPE 2 WATERPROOFING SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND VERTICALLY DOWN 1' ON THE SIDE PORTIONS OF THE CULVERT.

THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 & 611.09 AND CONCRETE SEALING AS SPECIFIED IN 611.08 ARE NOT REQUIRED UNDER THE LIMITS OF THE TYPE 2 WATERPROOFING.

PAYMENT WILL BE AT THE CONTRACT BID PRICE PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE CULVERT SUBSUMMARY FOR THE WORK NOTED ABOVE.

ITEM 512 - TYPE 2 WATERPROOFING = 160 SY



ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC TYPE A SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEP HOLE.

THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE CULVERT SUBSUMMARY.

ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC = 12 CY

BACKFILL LIMITATION

THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE UNTIL THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION. THEN THE REMAINDER OF THE BACKFILL MAY BE PLACED.

ITEM 503 - UNCLASSIFIED EXCAVATION

EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503.09 EXCAVATION OUTSIDE THESE LIMITS NECESSARY TO REMOVE THE EXISTING STRUCTURE SHALL BE INCLUDED IN ITEM 202.

BASIS OF PAYMENT

ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE WINGWALLS ARE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING

ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTING ARE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, FOOTING.

ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FORESLOPE WALLS ARE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, HEADWALL.

PAYMENT FOR REINFORCING STEEL IS INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

ITEM 202 - STRUCTURE REMOVED, AS PER PLAN

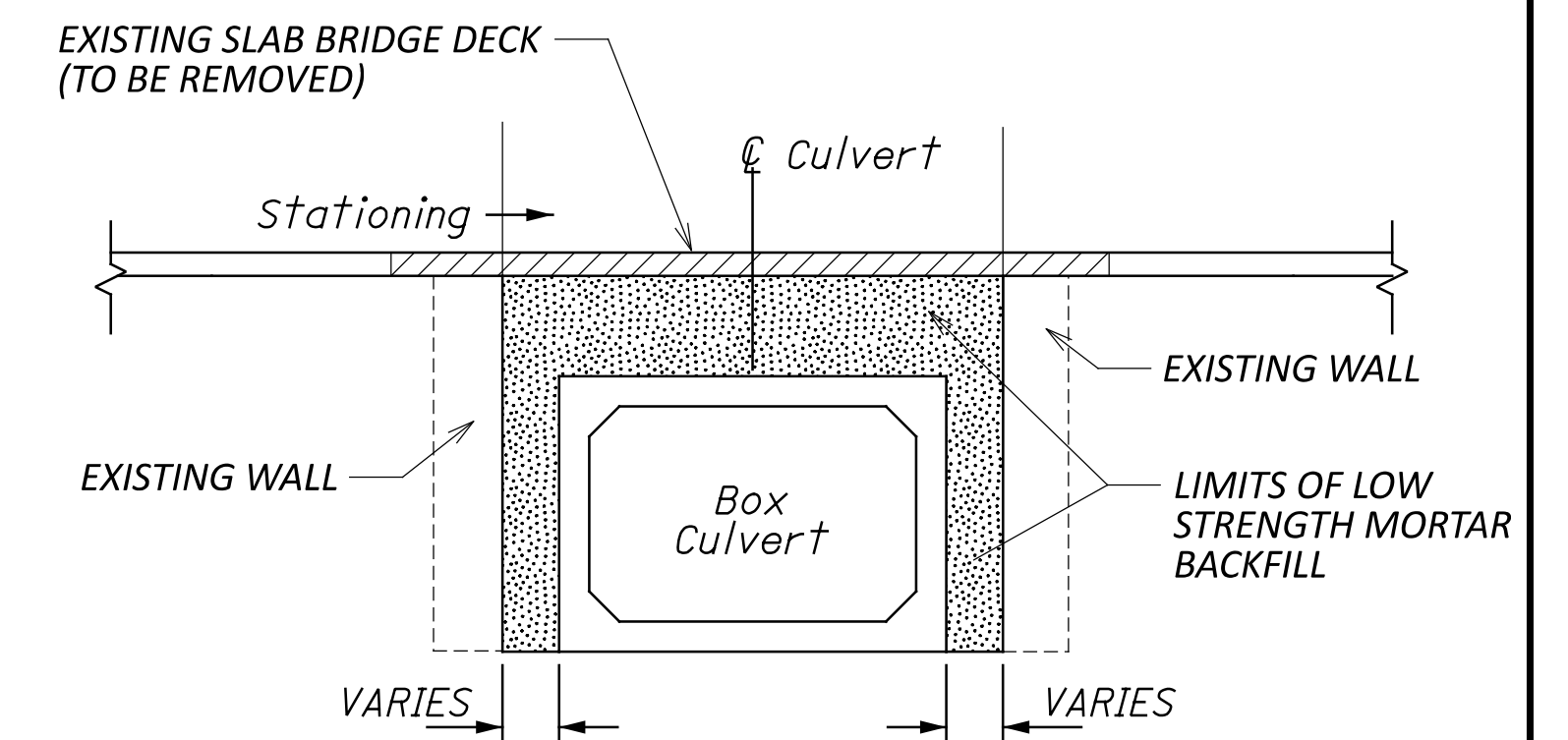
REMOVE THE EXISTING CONCRETE SLAB BRIDGE DECK AS SHOWN ON THE DETAIL ON THIS SHEET. DUE TO CONFLICTS WITH THE PROPOSED FOOTER, SECTIONS OF THE WINGWALL WILL NEED TO BE COMPLETELY REMOVED. PAYMENT FOR ALL CONCRETE REMOVED SHALL BE INCLUDED IN THE LUMP SUM FOR ITEM 202 STRUCTURE REMOVED, AS PER PLAN.

ITEM 613, LOW STRENGTH MORTAR BACKFILL

LOW STRENGTH MORTAR BACKFILL SHALL BE PLACED AS SHOWN AND Laterally TO ONE FOOT BEYOND THE EDGE OF PAVEMENT ON EACH SIDE. PAYMENT FOR LOW STRENGTH MORTAR BACKFILL SHALL BE MADE ONLY FOR BACKFILL PLACED TO THE LIMITS SHOWN.

THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE CULVERT SUBSUMMARY FOR THE WORK NOTED ABOVE.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL = 75 CY



ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
202	LS		STRUCTURE REMOVED, AS PER PLAN
503	LS		COFFERDAMS AND EXCAVATION BRACING
503	235	CY	UNCLASSIFIED EXCAVATION
509	4137	LB	EPOXY COATED REINFORCING STEEL
511	13	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN
511	30	CY	CLASS QC1 CONCRETE, FOOTING, AS PER PLAN
511	1	CY	CLASS QC1 CONCRETE, HEADWALL
512	100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	160	SY	TYPE 2 WATERPROOFING
518	12	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
611	90	FT	6" X 6" CONDUIT, TYPE A, 706.05
613	75	CY	LOW STRENGTH MORTAR BACKFILL
TOTALS CARRIED TO GENERAL SUMMARY			

CULVERT GENERAL NOTES

WYA-67-24.06

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DESIGN AGENCY

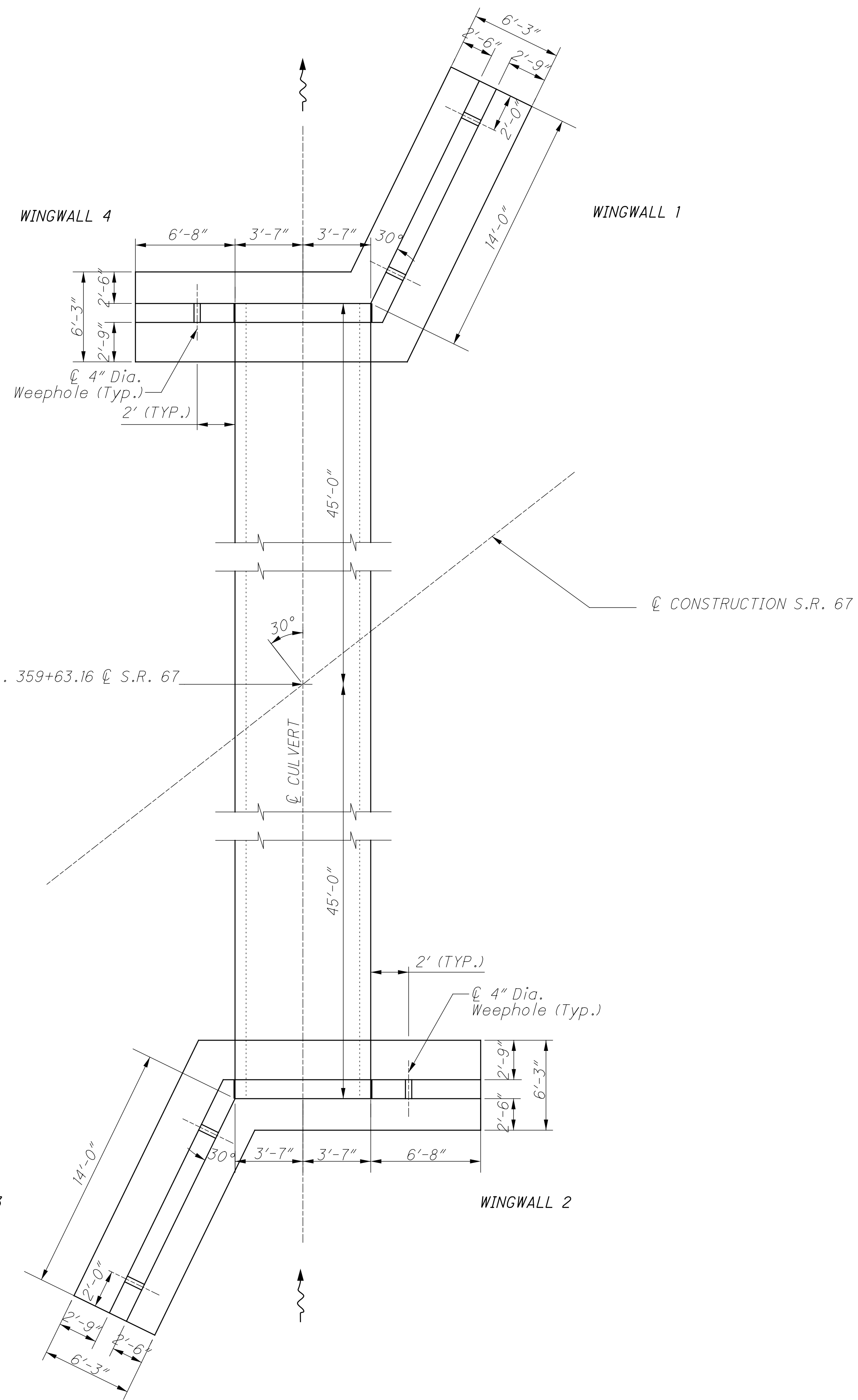
DESIGNER
DMLF

REVIEWER
MJM 02-13-23

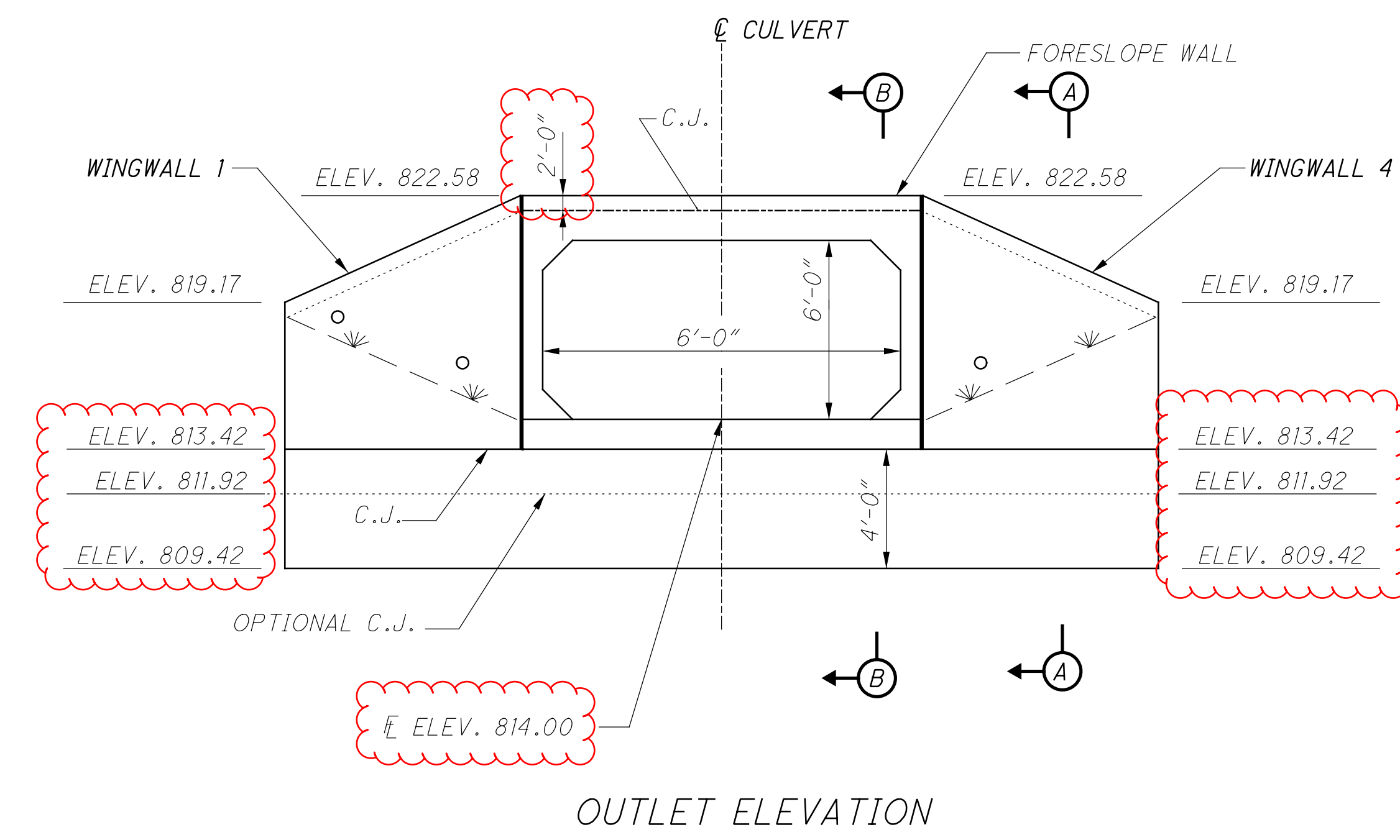
PROJECT ID
109100

SHEET TOTAL
P.16 | 19

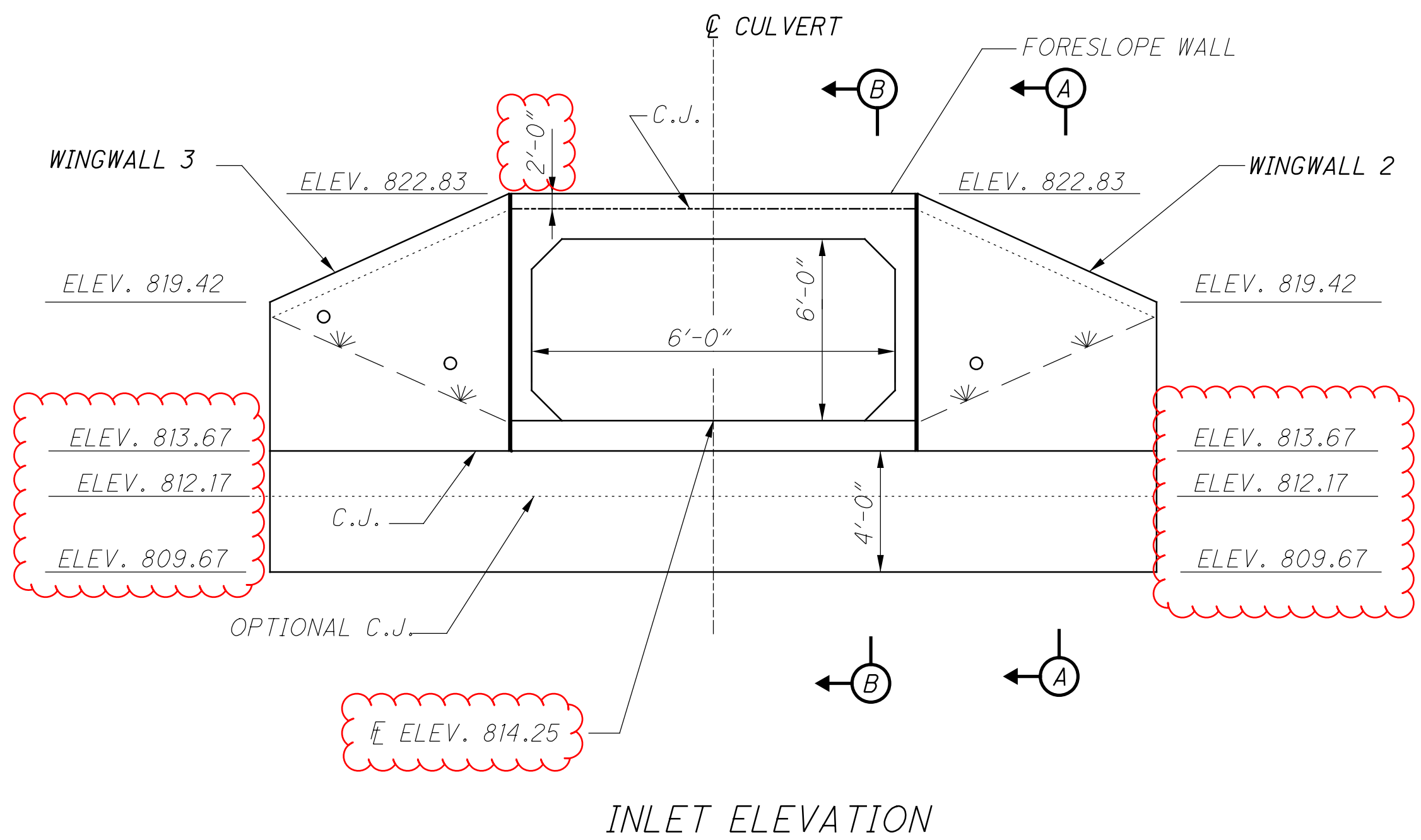
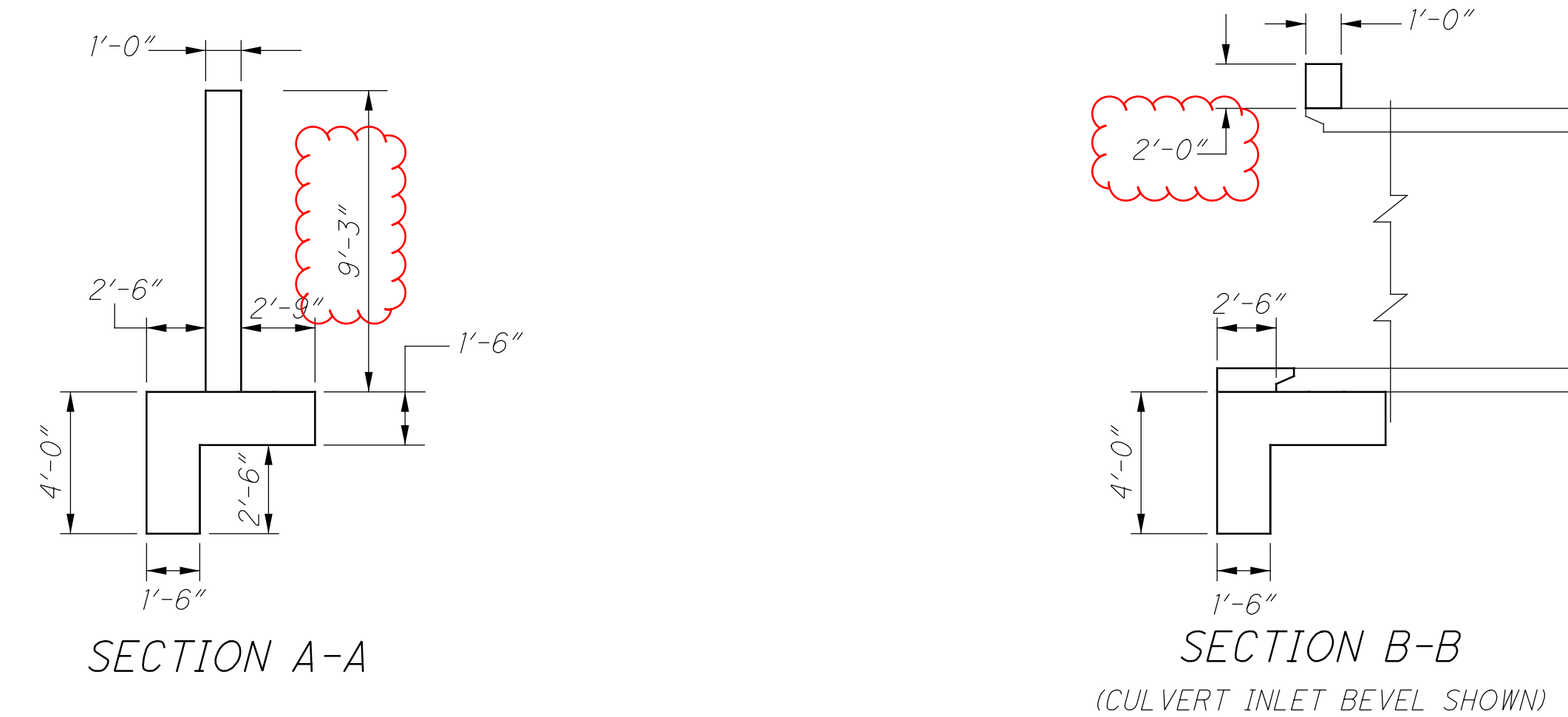
THE DETAILS ON THIS SHEET ARE NOT DRAWN TO A SPECIFIC SCALE AND SHALL BE CONSIDERED N.T.S.



CULVERT AND WINGWALL LAYOUT



OUTLET ELEVATION



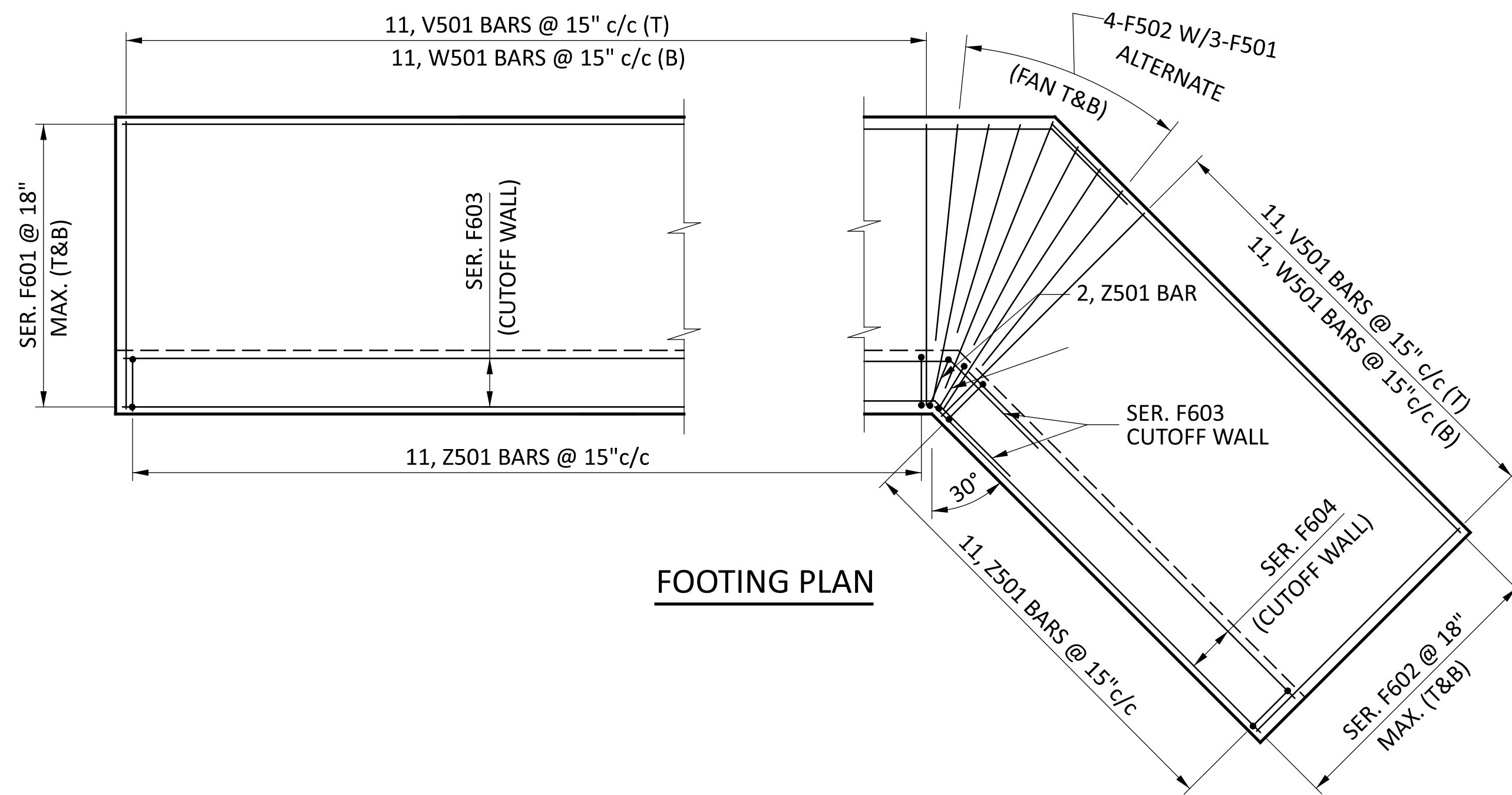
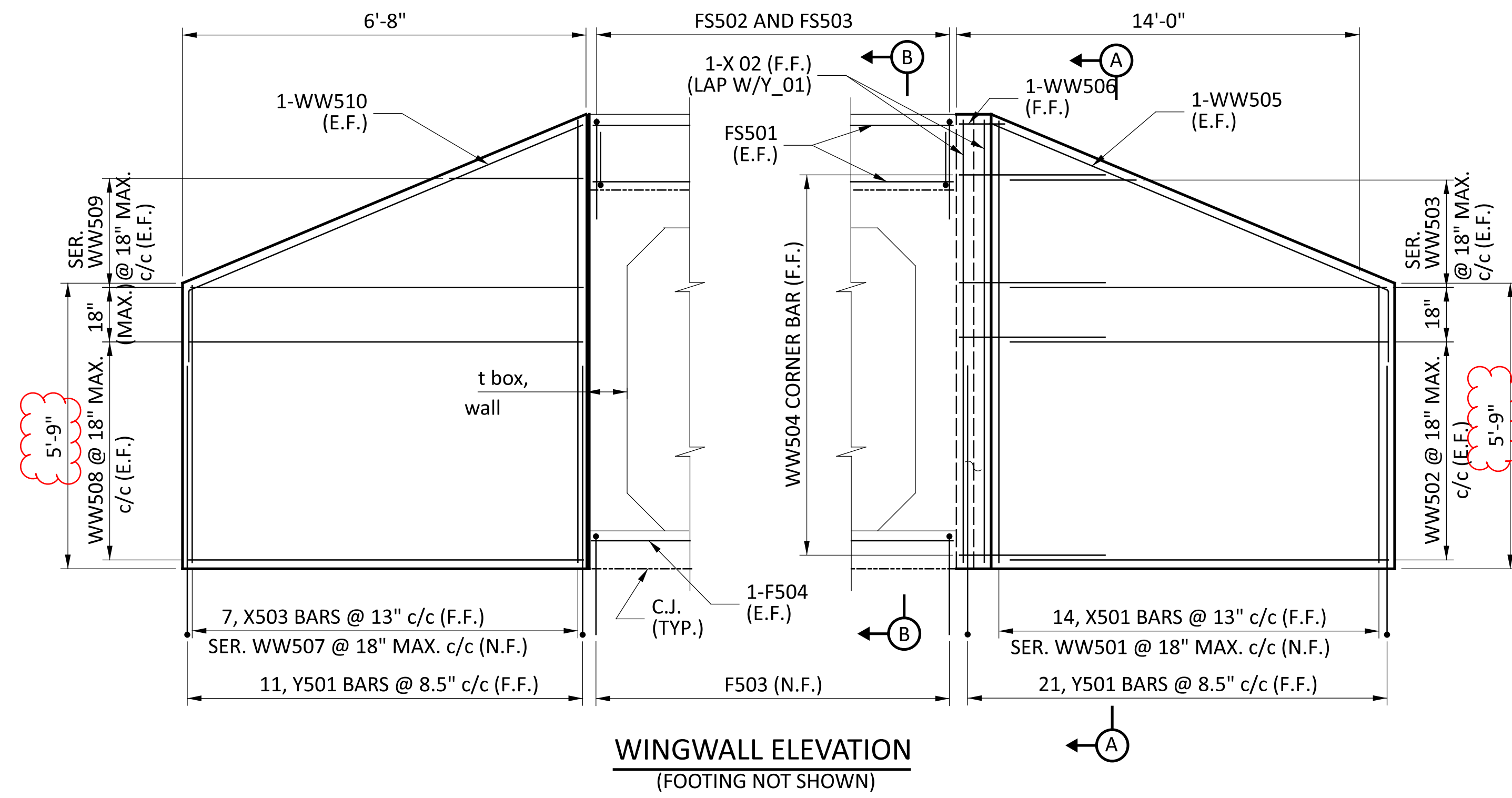
INLET ELEVATION

WYA-67-24.06

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CULVERT DETAILS

DESIGN AGENCY	
DESIGNER	DMLF
REVIEWER	MJM
PROJECT ID	109100
SHEET TOTAL	P.17 19



NOTES

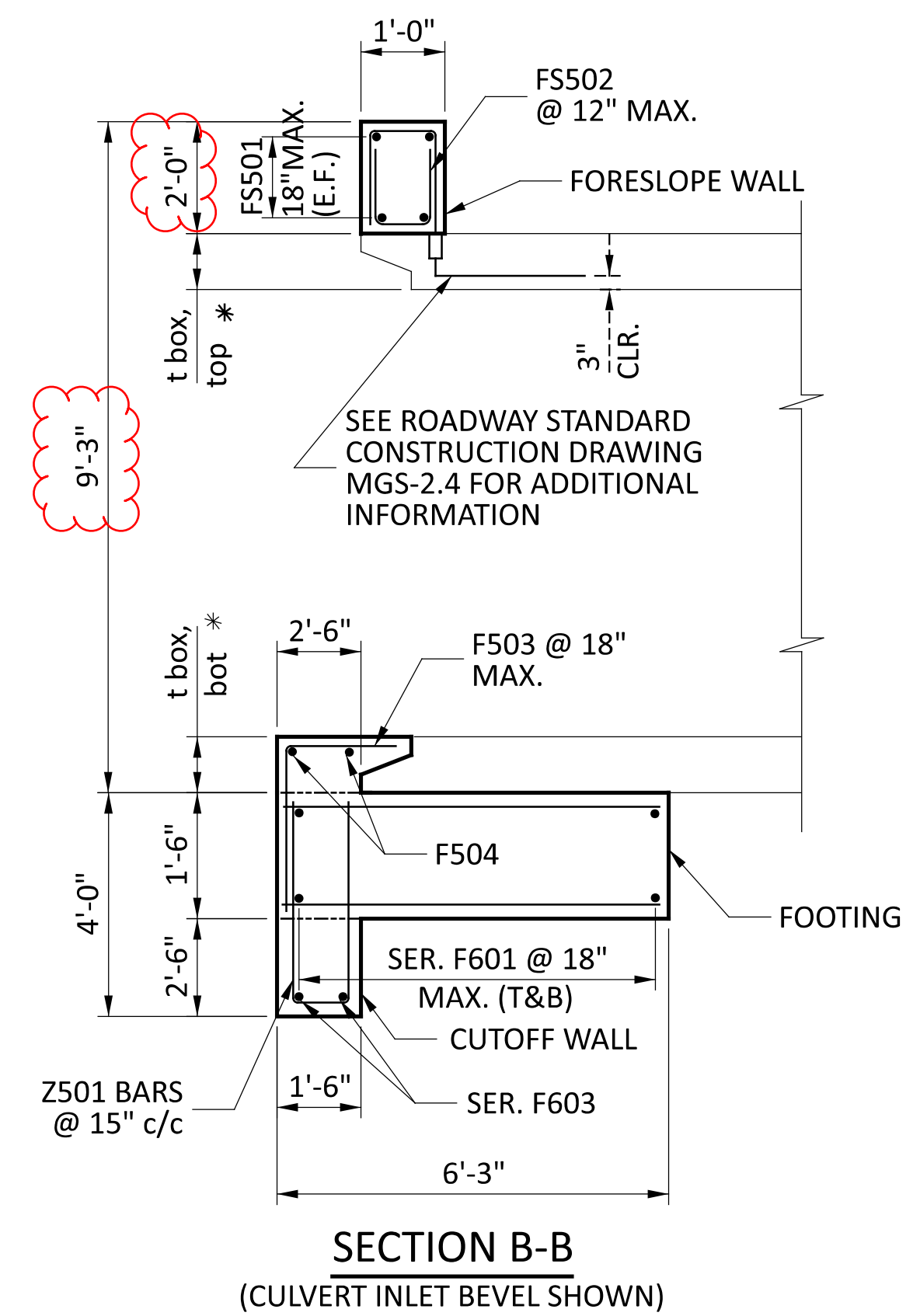
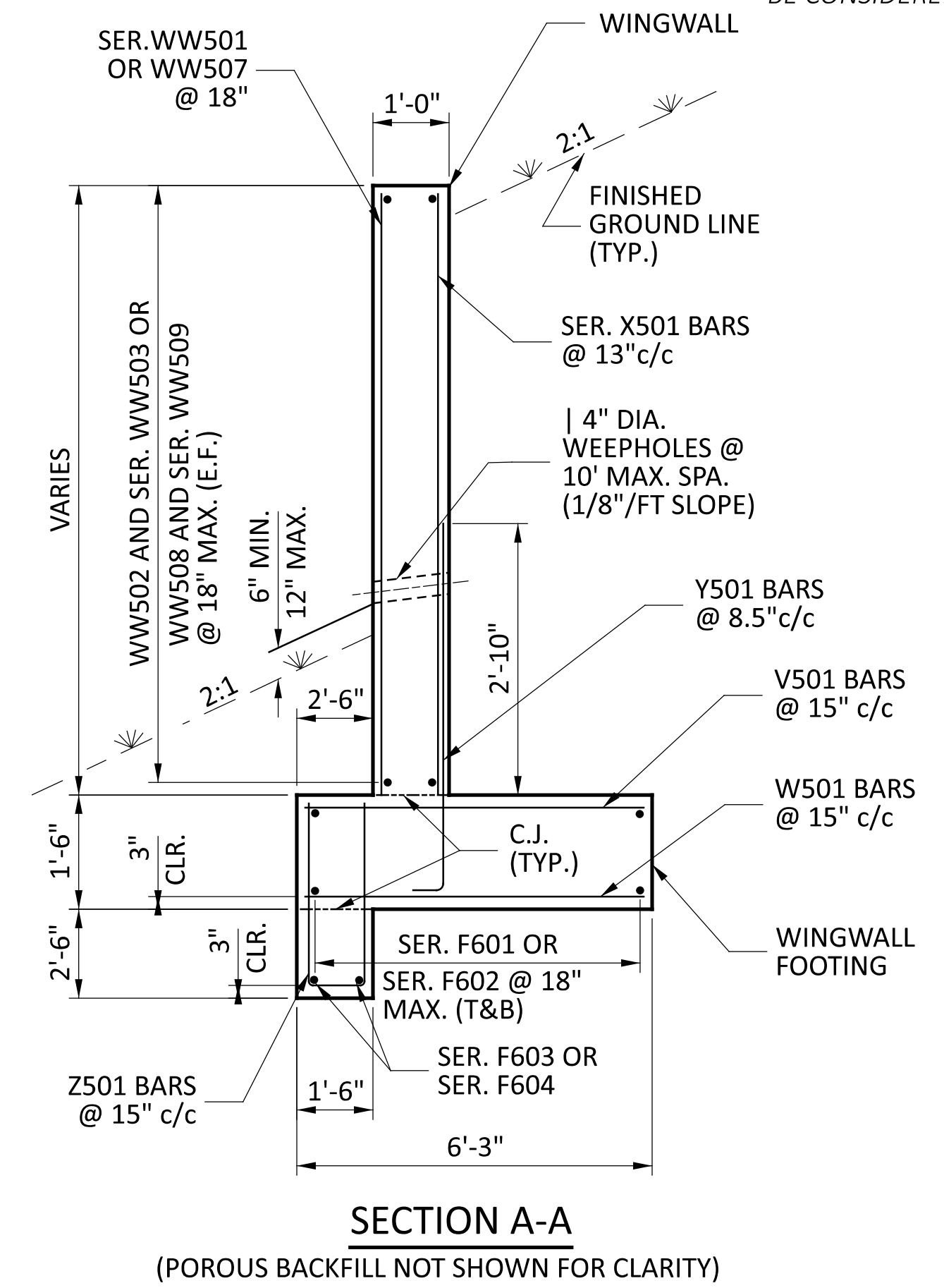
- FOR CULVERT LOCATION PLAN, SEE SHEET 1/5.
- FOR PRECAST BOX CULVERT DETAILS, SEE SHEET 2/5.
- THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, WW501 IS A NO.5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
- THE LAP SPLICE LENGTHS USED IN THESE DETAILS ARE AS FOLLOWS: 2'-5" FOR #5 BARS; 2'-11" FOR #6 BARS.

LEGEND:

C.J.	CONSTRUCTION JOINT	N.F.	NEAR FACE
CLR.	CLEAR	SER.	SERIES
DIA.	DIAMETER	STR.	STRAIGHT
E.F.	EACH FACE	(T)	TOP
F.F.	FAR FACE	(B)	BOTTOM
MAX.	MAXIMUM	T&B	TOP AND BOTTOM
MIN.	MINIMUM	TYP.	TYPICAL
PEJF	PREFORMED EXPANSION JOINT FILLER	INC.	INCREMENT

$\theta = \angle$ CULVERT SKEW FROM LINE NORMAL TO ROADWAY (ROUNDED TO NEAREST 15° INCREMENT FROM 0° TO 45°)

THE DETAILS ON THIS SHEET ARE NOT DRAWN TO A SPECIFIC SCALE AND SHALL BE CONSIDERED N.T.S.

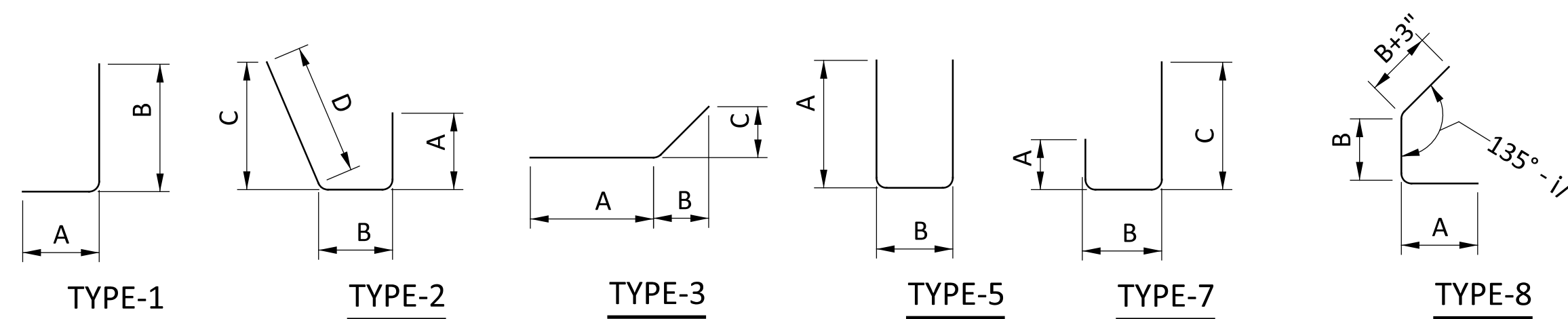


TYPE B HEADWALL REINFORCING SCHEDULE

BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS				INC.	
					A	B	C	D		
WINGWALLS										
X501	1	5'- 7"								
	SERIES	TO	108	STR.					0'- 3 1/4"	
	of 14	9'- 1"								
X502	2	9'- 1"	19	STR.						
X503	1	5'- 7"								
	SERIES	TO	54	STR.					0'- 7 "	
	of 7	9'- 1"								
Y501	33	4'- 9"	163	1	0'- 10"	4'- 1"				
WW501	1	5'- 7"								
	SERIES	TO	85	STR.					0'- 4 1/4"	
	of 11	9'- 1"								
WW502	8	13'- 8"	115	STR.						
	2	4'- 7"								
WW503	1	5'- 7"								
	SERIES	TO	58	STR.					4'- 6 1/2"	
	of 3	13'- 8"								
WW504	7	3'- 10"	28	2	0'- 7"	0'- 4 "	2'- 7 1/4"	3'- 0 "		
WW505	2	16'- 6"	35	3	2'- 5"	3'- 4"	13'- 8"			
WW506	1	1'- 5"	2	8	0'- 7"	0'- 4 "				
WW507	1	5'- 7"								
	SERIES	TO	46	STR.					0'- 8 1/2"	
	of 6	9'- 1"								
WW508	8	6'- 4"	53	STR.						
	2	2'- 2"								
WW509	1	5'- 7"								
	SERIES	TO	27	STR.					2'- 1 1/8"	
	of 3	6'- 4"								
WW510	2	9'- 7"	20	3	2'- 5"	3'- 4"	6'- 4"			
FOOTING & CUTOFF WALL										
V501	22	5'- 11"	136	STR.						
W501	22	5'- 11"	136	STR.						
Z501	24	8'- 2"	205	5	3'- 7"	1'- 2"				
F501	6	5'- 4"	34	STR.						
F502	8	4'- 2"	35	STR.						
F503	6	4'- 2"	27	1	2'- 6"	1'- 9"				
F504	2	6'- 10"	15	STR.						
F601	2	15'- 3"			12'- 4 "					
	SERIES	TO	255	3	TO	1'- 5 1/2"	2'- 6 1/2"		0'- 10 1/4"	
	of 5	18'- 8"			15'- 9 "					
	2	12'- 5"								
F602	1	15'- 3"			12'- 4 "					
	SERIES	TO	213	STR.					0'- 10 1/4"	
	of 5	15'- 10"								
F603	1	15'- 3"			12'- 4 "					
	SERIES	TO	47	3	TO	1'- 5 1/2"	2'- 6 1/2"		0'- 8 "	
	2	15'- 11"			13'- 0 "					
	1	12'- 5"								
F604	1	12'- 5"								
	SERIES	TO	39	STR.					0'- 9 "	
	2	13'- 2"								
FORESLOPE WALL										
FS501	6	6'- 10"	43	STR.						
FS502	8	3'- 11"	33	5	1'- 9"	0'- 8"				
FS503	8	4'- 5"	37	7	1'- 9"	0'- 8"	2'- 3"			
SUB-TOTAL			2,068	x2 (FOR INLET AND OUTLET)						
TOTAL			4137							

REINFORCING STEEL NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
3. REFER TO CMS SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
4. SER. OF - DENOTES SERIES BAR.
5. * FEMALE MECHANICAL CONNECTOR BARS.
6. ** MALE MECHANICAL CONNECTOR BARS.
7. FS503 AND FS553 BARS ARE FEMALE MECHANICAL CONNECTOR BARS AND ARE TO BE EMBEDDED INTO PRECAST CULVERT UNITS. INCLUDE WITH ITEM 611 FOR PAYMENT. THE CONTRACTOR MAY USE A THREADED INSERT WITH A MINIMUM PULLOUT STRENGTH EQUAL TO 60 KSI AS AN ALTERNATIVE TO THE MECHANICAL CONNECTOR.
8. F503 AND F553 BARS ARE FEMALE MECHANICAL CONNECTOR BARS AND ARE TO BE EMBEDDED INTO FOOTING. THE CONTRACTOR MAY USE A THREADED INSERT WITH A MINIMUM PULLOUT STRENGTH EQUAL TO 60 KSI AS AN ALTERNATIVE TO THE MECHANICAL CONNECTOR.



CULVERT DETAILS

WYA-67-24.06

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 4/27/2023 TIME: 1:27:05 PM USER: dfflick
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TOTALS CARRIED TO SHEET 16

DESIGN AGENCY



DESIGNER

DMLF

REVIEWER

MJM 02-13-23

PROJECT ID

109100

SHEET TOTAL

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