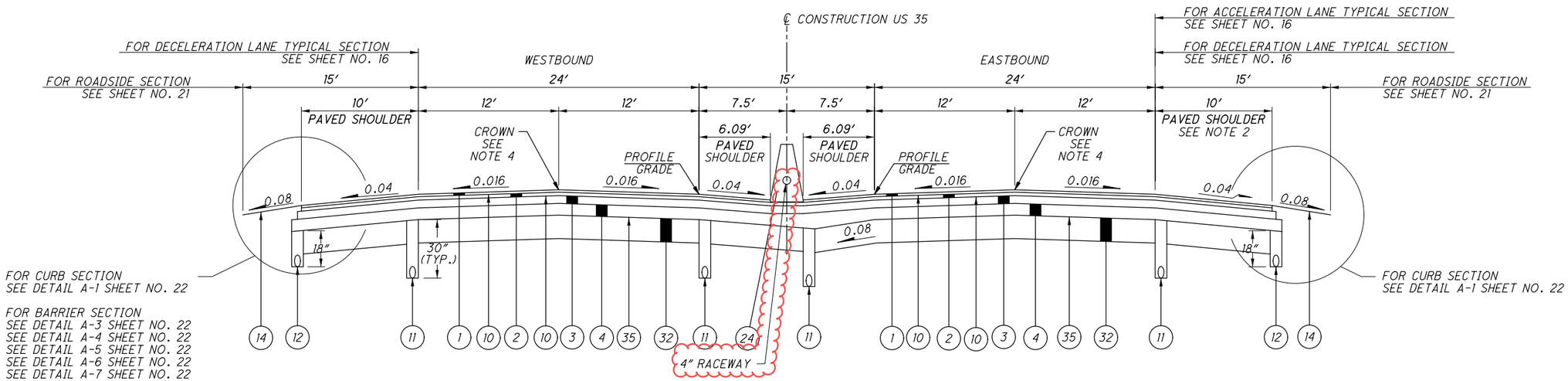
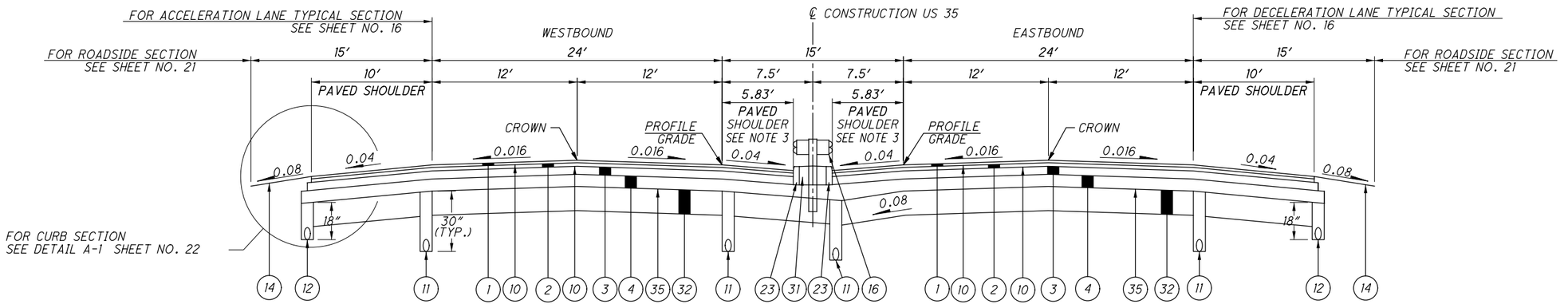


NORMAL SECTION - US 35

STA. 323+00.03 TO STA. 323+30.03
STA. 325+85.20 TO STA. 359+80.00



NORMAL SECTION - US 35

STA. 317+63.38 TO STA. 323+00.03

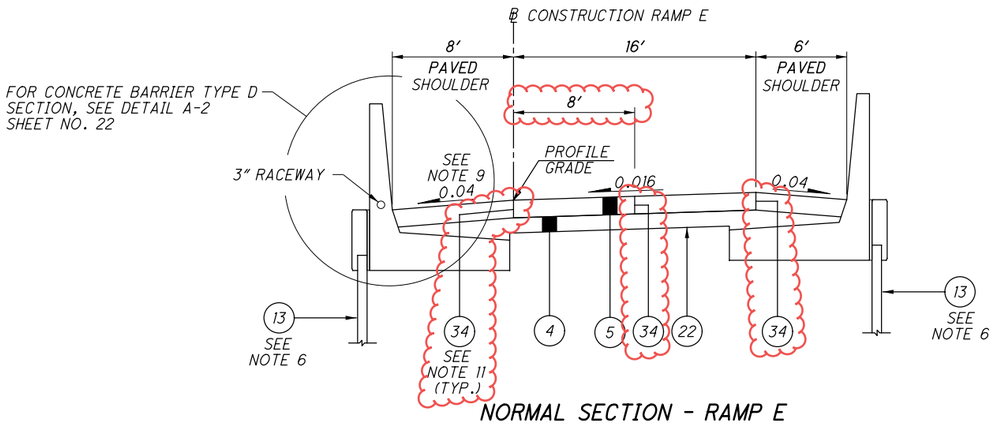
NOTES:

1. FOR LEGEND SEE SHEET NO. 11
2. VARIES FROM 10′ AT STA. 321+57.50 TO 16.07′ AT STA. 322+00.00
3. VARIES FROM 5.83′ AT STA. 322+76.28 TO 6.09′ AT STA. 322+81.28
4. FOR CROWN TRANSITION SEE SHEET NO. 413

CALCULATED | CHECKED

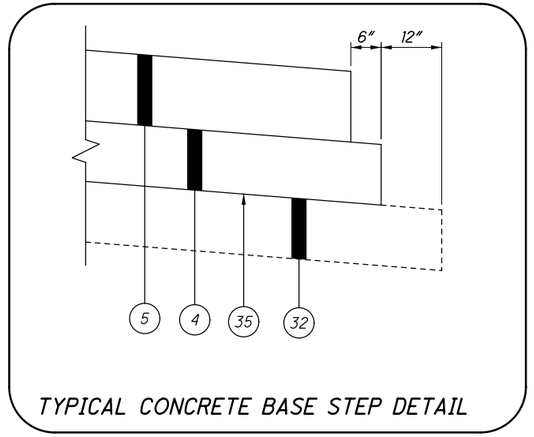
TYPICAL SECTIONS - US 35

GRE-US 35-5.63

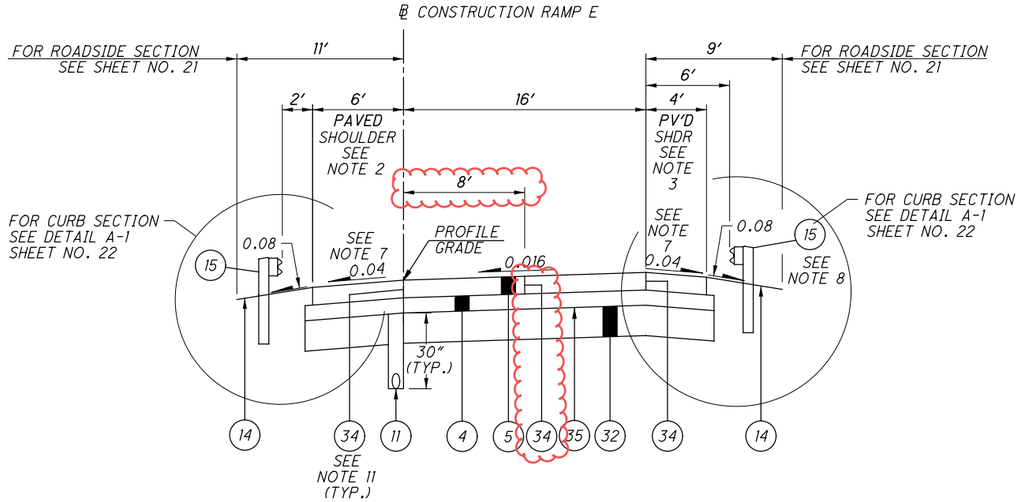


NORMAL SECTION - RAMP E

STA. 726+90.25 TO STA. 729+53.92

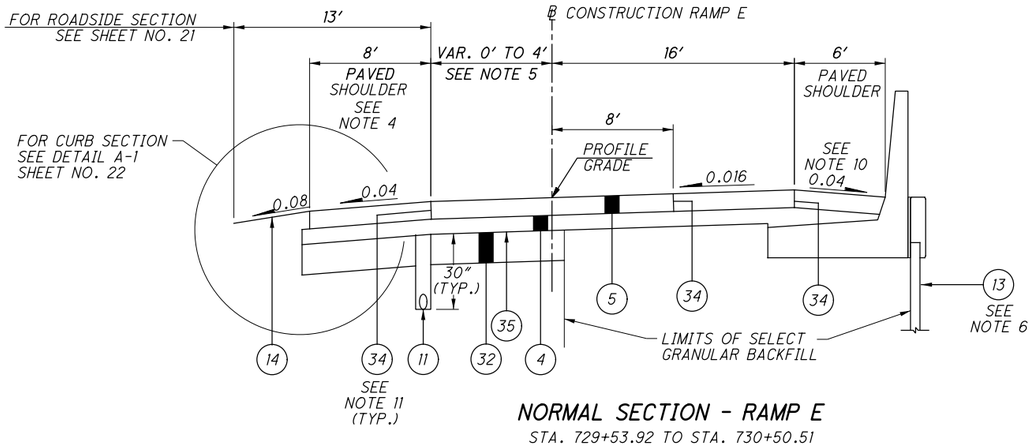


TYPICAL CONCRETE BASE STEP DETAIL



NORMAL SECTION - RAMP E

STA. 719+69.00 TO STA. 722+58.75 = 289.75 FT.



NORMAL SECTION - RAMP E

STA. 729+53.92 TO STA. 730+50.51

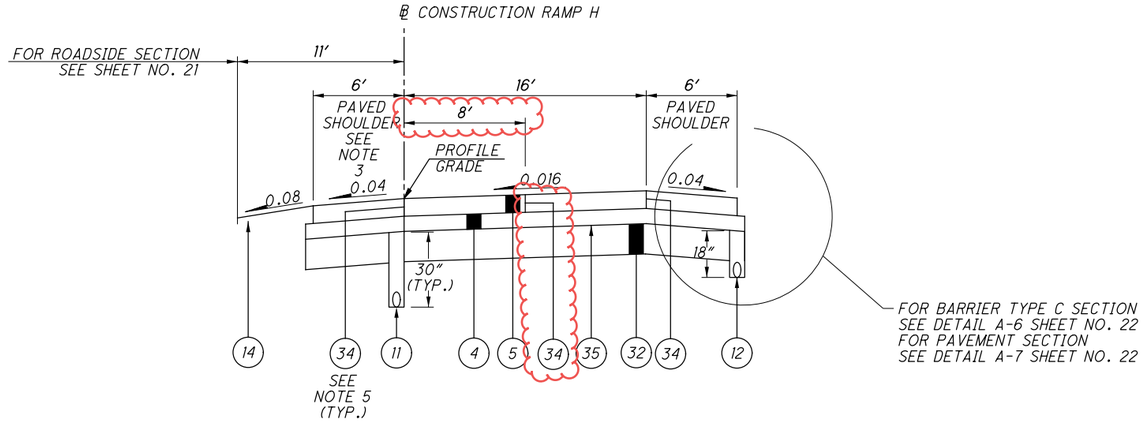
NOTES:

1. FOR LEGEND SEE SHEET NO. 11
2. VARIES FROM 8′ AT STA. 719+69.00 TO 6′ AT STA. 720+19.00
   VARIES FROM 6′ AT STA. 721+92.00 TO 8′ AT STA. 722+42.00
3. VARIES FROM 4′ AT STA. 721+92.00 TO 6′ AT STA. 722+42.00
4. VARIES FROM 8′ AT STA. 729+67.78 TO 4′ AT STA. 730+07.78
5. VARIES FROM 0′ AT STA. 729+67.78 TO 4′ AT STA. 730+07.78
6. SEE WALL SCHEMATIC PLAN FOR LIMITS
7. VARIES FROM 0.04 AT STA.722+22.75 TO 0.016 AT STA. 722+58.75
8. SEE PLAN SHEETS FOR LIMITS
9. VARIES FROM 0.016 AT STA. 726+90.25 TO 0.04 AT STA. 727+26.25
10. VARIES FROM 0.04 AT STA. 730+00.00 TO 0.0083 AT STA. 730+50.51
11. SEE JOINT DETAILS, SHEET NO. 424

CALCULATED | CHECKED

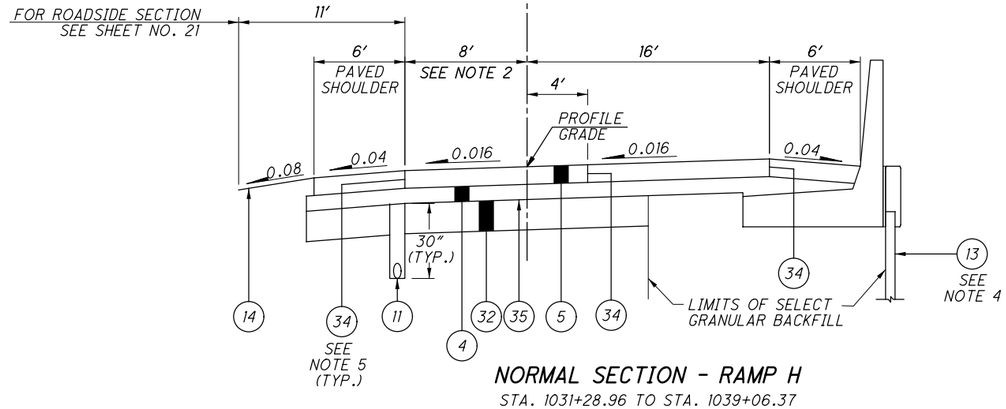
TYPICAL SECTIONS - RAMP E

GRE-US 35-5.63



NORMAL SECTION - RAMP H

STA. 1039+06.37 TO STA. 1043+41.08



NORMAL SECTION - RAMP H

STA. 1031+28.96 TO STA. 1039+06.37

NOTES:

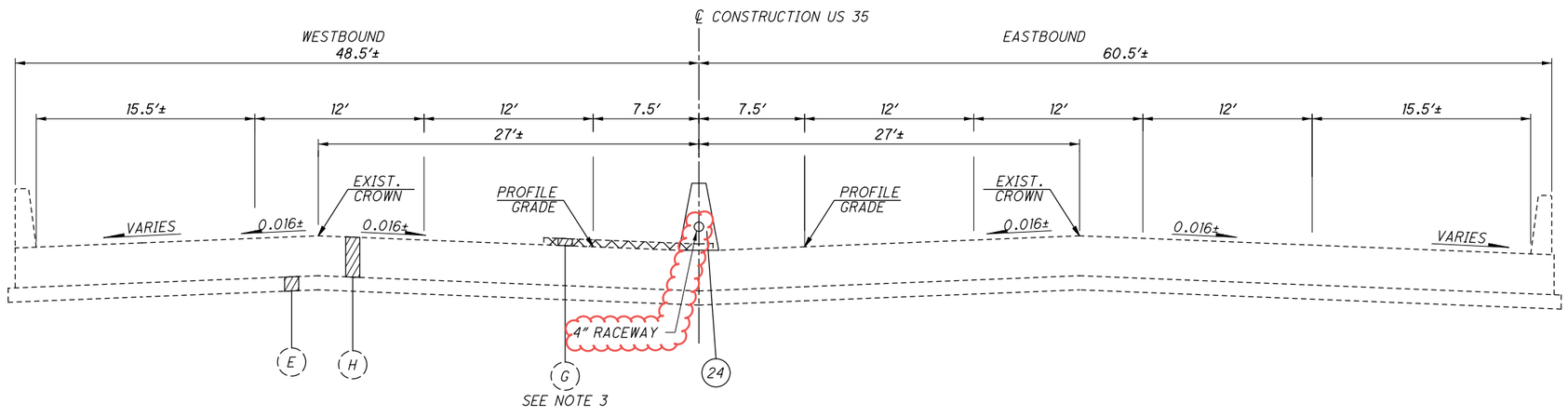
1. FOR LEGEND SEE SHEET NO. 11
2. VARIES FROM 8′ AT STA. 1034+25.00 TO 0′ AT STA. 1034+75.00
3. VARIES FROM 6′ AT STA. 1042+91.08 TO 8′ AT STA. 1043+41.08
4. SEE WALL SCHEMATIC PLAN FOR LIMITS
5. SEE JOINT DETAILS, SHEET NO. 424

CALCULATED | CHECKED

TYPICAL SECTIONS - RAMP H

GRE-US 35-5.63

20
698



EXISTING APPROACH SLAB SECTION - US 35 OVER LITTLE MIAMI RIVER (GRE-035-0614)

STA. 323+30.03 TO STA. 323+45.03 = 15.00 FT.
STA. 325+70.20 TO STA. 325+85.20 = 15.00 FT.

NOTES:

1. FOR LEGEND SEE SHEET NO. 11
2. VARIES 0.04 TO 0.016
3. EXISTING CONCRETE MEDIAN TO BE REMOVED.

CALCULATED | CHECKED

APPROACH SLAB TYPICAL SECTIONS - US 35

GRE-US 35-5.63

ITEM SPECIAL - SETTLEMENT PLATFORMS:

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE BOTTOM OF THE MSE WALLS AND APPROACH EMBANKMENT AT THE LOCATIONS INDICATED BELOW, UNLESS OTHERWISE DIRECTED BY ODOT.

CONTRACTOR HAS THE OPTION OF USING EITHER STEEL OR PLYWOOD PLATFORM BASE.

CONTRACTOR SHALL FURNISH MATERIALS AND LABOR TO EXTEND PIPE THROUGH ENTIRE FILL.

SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

SPECIFICATIONS:

DESCRIPTION:
THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT ADDITIONAL LOCATIONS.

INSTALL EACH SETTLEMENT PLATFORM ON THE EXISTING GROUND PRIOR TO COMMENCEMENT OF EMBANKMENT OPERATIONS. OBTAIN BASELINE READING IMMEDIATELY UPON SETTLEMENT PLATFORM INSTALLATION AND BEGIN WEEKLY READINGS.

SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING ANY SPECIFIED WAITING PERIOD. THE READINGS SHALL BE PLOTTED UTILIZING THE SETTLEMENT PLATFORM READINGS EXCEL SPREADSHEET AS DEVELOPED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING. A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, AFTER EACH SETTLEMENT READING IS RECORDED.

VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS MAY BE CONSIDERED IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO ODOT AT LEAST 14 DAYS PRIOR TO CONSTRUCTION.

THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES.

THE CONTRACTOR SHALL IDENTIFY, SET AND MAINTAIN AN APPROPRIATE NUMBER OF FIXED BENCHMARKS, REFERENCE POINTS, ETC. TO FACILITATE THE SURVEYING OF THE SETTLEMENT PLATFORMS.

MATERIALS:
SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2-½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 3'-0"x 3'-0"x⅛" MAY BE SUBSTITUTED FOR THE LUMBER, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS. IF EXISTING PAVEMENT IS ENCOUNTERED AT THE SPECIFIED LOCATIONS, THE PAVEMENT (INCLUDING ANY BASE MATERIAL) SHALL BE REMOVED AND THE SETTLEMENT PLATFORM SHALL BE SET ON THE EXPOSED SUBGRADE. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING CONSTRUCTION OF THE MSE WALL. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL.

ITEM SPECIAL - SETTLEMENT PLATFORMS (CONTINUED):

THE CONTRACTOR SHALL PROTECT SETTLEMENT PLATFORMS FROM CONSTRUCTION TRAFFIC/ACTIVITIES USING APPROPRIATE METHODS SUCH AS BARRICADES, CONES, GUARD-STAKES WITH HIGH VISIBILITY RIBBON, ETC. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION.

PRIOR TO PAVING: THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE. WHICHEVER IS APPLICABLE.

WAITING PERIOD:
SEE PILE DRIVING CONSTRAINTS NOTES FROM STRUCTURE GENERAL NOTES SHEET FOR MORE INFORMATION REGARDING WAITING PERIOD.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE SETTLEMENT PLATFORMS BY THE NUMBER EACH, COMPLETE IN PLACE.

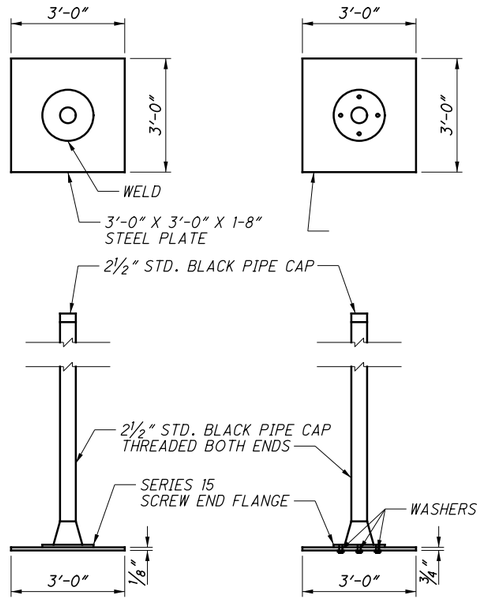
BASIS OF PAYMENT:
THE UNIT PRICE BID FOR ITEM SPECIAL - SETTLEMENT PLATFORM SHALL INCLUDE FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE BOTTOM OF THE FILL AT THE LOCATION INDICATED BELOW, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SETTLEMENT PLATFORM TABLE

SETTLEMENT PLATE DESIGNATION	ALIGNMENT	STATION	OFFSET
S.P. 1	VALLEY RD.	871+00	℄
S.P. 2	VALLEY RD.	873+50	℄
S.P. 3	VALLEY RD.	876+50	℄
S.P. 4	TREBEIN RD.	882+50	℄
S.P. 5	TREBEIN RD.	885+00	℄
S.P. 6	RAMP F	840+00	22.5' RT
S.P. 7	VALLEY RD.	878+87	30.4' LT
S.P. 8	VALLEY RD.	878+86	25.6' RT
S.P. 9	VALLEY RD.	880+81	24.3' LT
S.P. 10	VALLEY RD.	880+80	25.6' RT
S.P. 11	RAMP E	722+80	4.0' LT
S.P. 12	RAMP E	722+80	18.0' RT

ITEM SPECIAL - SETTLEMENT PLATFORMS (CONTINUED):



SETTLEMENT PLATFORM
NOT TO SCALE

625 MEDIAN JUNCTION BOX

THE CONTACTOR SHALL INSTALL MEDIAN JUNCTION BOXES PER SCD HL-30.41 AT THE FOLLOWING LOCATIONS:

LOCATIONS US 35 MEDAIN BARRIER:
US 35 STA. 323+20
US 35 STA. 326+00
US 35 STA. 330+00
US 35 STA. 334+00
US 35 STA. 337+00
US 35 STA. 341+00
US 35 STA. 345+00
US 35 STA. 349+00
US 35 STA. 353+00
US 35 STA. 357+00
US 35 STA. 329+75

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN ITEM 625 MEDIAN JUNCTION BOX. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 625 MEDIAN JUNCTION BOX 11 EACH

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MAST ARM POLES, MAST ARMS, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26. REMOVED ITEMS SHALL BE DISPOSED OF AND THE FOLLOWING ITEMS STORED ON THE PROJECT FOR SALVAGE BY ODOT IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

ITEM TO BE SALVAGED:
CONTROLLER
CABINET (AND ALL CONTENTS)
UPS
RADARS

SALVAGED ITEMS SHALL BE DELIVERED TO THE FACILITY WHOSE ADDRESS IS LISTED BELOW:

ODOT DISTRICT 8
ATTN: JIM JUDD (513-933-6692)
505 SOUTH SR 741
LEBANON, OH 45036

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION 1 EACH

PULL BOXES TO BE REMOVED ARE ITEMIZED SEPARATELY AND PAID FOR UNDER ITEM 625 PULL BOX REMOVED. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 625 PULL BOX REMOVED 7 EACH

CALCULATED | CHECKED

GENERAL NOTES

GRE-US 35-5.63

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
30		185	186	187		189		195	602	Office Calcs.	01/NHS/OT	02/NHS/BR	03/NHS/BR						
																		ROADWAY	
LS											LS			201	11000	LS		CLEARING AND GRUBBING	
24		64,886									64,910			202	23001	64,910	SY	PAVEMENT REMOVED, AS PER PLAN	32
		769									769			202	30600	769	SY	CONCRETE MEDIAN REMOVED	
		1,725									1,725			202	35100	1,725	FT	PIPE REMOVED, 24" AND UNDER	
		90				39					129			202	35200	129	FT	PIPE REMOVED, OVER 24"	
		5,485									5,485			202	38000	5,485	FT	GUARDRAIL REMOVED	
		9,132									9,132			202	38300	9,132	FT	GUARDRAIL REMOVED, BARRIER DESIGN	
		8									8			202	47800	8	EACH	IMPACT ATTENUATOR REMOVED	
		2									2			202	53100	2	EACH	MAILBOX REMOVED	
		1									1			202	56100	1	EACH	BUILDING DEMOLISHED, GRAIN SILO	
		11									11			202	58100	11	EACH	CATCH BASIN REMOVED	
		6									6			202	58200	6	EACH	INLET REMOVED	
									15,096		15,096			202	75000	15,096	FT	FENCE REMOVED	
									3		3			202	75250	3	EACH	GATE REMOVED	
		1									1			202	98100	1	EACH	REMOVAL MISC.: SEPTIC TANK AND LEACH FIELD	
		2									2			202	98100	2	EACH	REMOVAL MISC.: PRECAST CONCRETE OUTLET	
		2									2			202	98100	2	EACH	REMOVAL MISC.: PRIVATE WOODEN SIGN	
		9									9			202	98100	9	EACH	REMOVAL MISC.: CONCRETE BUMPER BLOCKS	
		2									2			202	98100	2	EACH	REMOVAL MISC.: CONCRETE FOUNDATION	
		21									21			202	98300	21	SY	REMOVAL MISC.: ROCK CHANNEL PROTECTION	
		10									10			202	98700	10	FT	ABANDON MISC.: PIPE 24" AND UNDER	
		131		24,705							24,836			203	10000	24,836	CY	EXCAVATION	
								1,479			1,479			203	10001	1,479	CY	EXCAVATION, AS PER PLAN (VERTICAL SIDES ONLY)	32
		2,753		227,731				84			230,568			203	20000	230,568	CY	EMBANKMENT	
										6,586	6,586			203	20001	6,586	CY	EMBANKMENT, AS PER PLAN	32
											12			SPECIAL	20365000	12	EACH	SETTLEMENT PLATFORM	35
										4,224	4,224			204	10000	4,224	SY	SUBGRADE COMPACTION	
										162	162			204	13000	162	CY	EXCAVATION OF SUBGRADE	
										162	162			204	30020	162	CY	GRANULAR MATERIAL, TYPE C	
57											57			204	45000	57	HOUR	PROOF ROLLING	
										2,517	2,517			204	50000	2,517	SY	GEOTEXTILE FABRIC	
										2,764	2,764			206	10500	2,764	TON	CEMENT	
										106,793	106,793			206	11000	106,793	SY	CURING COAT	
										106,793	106,793			206	15010	106,793	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
										LS	LS			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
										LS	LS			206	30001	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS PER PLAN	30
			12,175.5								12,175.5			606	15050	12,175.5	FT	GUARDRAIL, TYPE MGS	
			6,462								6,462			606	15100	6,462	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
			2,800								2,800			606	15550	2,800	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
			3								3			606	20000	3	EACH	FLARED END SECTION	
			12								12			606	26150	12	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
			14								14			606	26550	14	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			5								5			606	35002	5	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			5								5			606	35102	5	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				1							1			606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), SPEED = 60 MPH, HAZARD = 24"	
			3								3			606	60028	3	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), SPEED = 60 MPH, HAZARD = 36"	
									16,057		16,057			607	15000	16,057	FT	FENCE, TYPE 47	
									7		7			607	35000	7	FT	FENCE REMOVED AND REBUILT	
				2,785							2,785			622	10100	2,785	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
				205							205			622	10120	205	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
				40							40			622	10121	40	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	32
				862							862			622	10160	862	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
				94							94			622	10161	94	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN A	32
				156							156			622	10161	156	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN B	32
				1							1			622	24840	1	EACH	CONCRETE BARRIER END SECTION, TYPE B	
				2							2			622	24850	2	EACH	CONCRETE BARRIER END SECTION, TYPE B1	
				1							1			622	25000	1	EACH	CONCRETE BARRIER END SECTION, TYPE D	

CALCULATED TES CHECKED JAE

GENERAL SUMMARY

GRE-US 35-5.63

177
698

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
35	36	40	41		201		476	479	481	482	01/NHS/OT	02/NHS/BR	03/NHS/BR						
																		TRAFFIC CONTROL	
								2			2			630	89100	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30	
							2				2			630	89804	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115	
										1.8	1.8			644	00100	1.8	MILE	EDGE LINE, 4"	
										0.04	0.04			644	00200	0.04	MILE	LANE LINE, 4"	
										1.44	1.44			644	00300	1.44	MILE	CENTER LINE	
										421	421			644	00400	421	FT	CHANNELIZING LINE, 8"	
									18	36	54			644	00500	54	FT	STOP LINE	
										754	754			644	00700	754	FT	TRANSVERSE/DIAGONAL LINE	
									293		293			644	00720	293	FT	CHEVRON MARKING	
									39		39			644	00900	39	SF	ISLAND MARKING	
									12	7	19			644	01300	19	EACH	LANE ARROW	
									2		2			644	01350	2	EACH	LANE REDUCTION ARROW	
									2		2			644	01360	2	EACH	WRONG WAY ARROW	
										56	56			644	01510	56	FT	DOTTED LINE, 6"	
										15	15			644	01514	15	FT	DOTTED LINE, 8"	
									18		18			644	20800	18	FT	YIELD LINE	
										0.08	0.08			646	10000	0.08	MILE	EDGE LINE, 4"	
										156	156			646	10300	156	FT	CHANNELIZING LINE, 8"	
									12		12			646	10400	12	FT	STOP LINE	
										3	3			646	20300	3	EACH	LANE ARROW	
										155	155			646	20506	155	FT	DOTTED LINE, 8"	
										19	19			646	90000	19	FT	PAVEMENT MARKING, MISC.: CENTER LINE	497
									0.69		0.69			807	12010	0.69	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
									1		1			807	12110	1	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
									1		1			807	12410	1	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	
									7.7		7.7			807	13010	7.7	MILE	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"	
									3.4		3.4			807	13110	3.4	MILE	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
									4,389		4,389			807	13310	4,389	FT	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
									3,362		3,362			807	13410	3,362	FT	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
									10.62		10.62			850	10010	10.62	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
									3,592		3,592			850	10110	3,592	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
									4,370		4,370			850	10130	4,370	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
									1.21		1.21			850	20010	1.21	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
																		TRAFFIC SIGNALS	
11											11			625	29930	11	EACH	MEDIAN JUNCTION BOX	
7											7			625	31510	7	EACH	PULL BOX REMOVED	
1											1			632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
																		RETAINING WALLS (RW-01, RW-02A & RW-02B)	
																		FOR RETAINING WALL GENERAL SUMMARY	451
																		RETAINING WALLS (TEMPORARY RETAINING WALL NOS. 1 & 2)	
																		FOR RETAINING TEMPORARY WALL GENERAL SUMMARY	473
																		STRUCTURE 20 FOOT SPAN AND UNDER (GRE-035-0604)	
																		FOR US 35 OVER FLOOD PLAIN RELIEF DITCH GENERAL SUMMARY	524
																		STRUCTURE 20 FOOT SPAN AND UNDER (GRE-035-0654)	
																		FOR US 35 OVER TRIBUTARY TO LITTLE MIAMI RIVER GENERAL SUMMARY	529
																		STRUCTURE OVER 20 FOOT SPAN (GRE-035-0614)	
																		FOR US 35 OVER LITTLE MIAMI RIVER GENERAL SUMMARY	532
																		STRUCTURE OVER 20 FOOT SPAN (GRE-035-0610)	
																		FOR RAMP E OVER LITTLE MIAMI RIVER GENERAL SUMMARY	541
																		STRUCTURE OVER 20 FOOT SPAN (GRE-035-0627)	
																		FOR VALLEY/TREBEIN ROAD OVER US 35 GENERAL SUMMARY	575
			800								800			253	02000	800	CY	**MAINTENANCE OF TRAFFIC** PAVEMENT REPAIR	
		3									3			606	26500	3	EACH	ANCHOR ASSEMBLY, TYPE T	
	2,000										2,000			614	11110	2,000	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		2,412									2,412			614	11630	2,412	FT	INCREASED BARRIER DELINEATION	
					21						21			614	12380	21	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
					1						1			614	12390	1	EACH	WORK ZONE IMPACT ATTENUATOR, OVER 24" AND LESS THAN 36" WIDE HAZARDS, (UNIDIRECTIONAL)	

CALCULATED TES CHECKED JAE

GENERAL SUMMARY

GRE-US 35-5.63

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	609 CURB, TYPE 4-C (FT)	609 CONCRETE MEDIAN, 6" (CY)	
		US 35					
C-1	213	302+65.00	323+00.03	LT	2035.03		
C-2	213	302+65.00	323+00.03	RT	2035.03		
C-3	217	320+20.25	323+30.03	LT	309.78		
C-4	218	323+11.88	323+30.03	RT	18.15		
C-5	218	325+85.20	325+92.95	RT	7.75		
C-6	227	359+80.00	359+98.15	LT	18.15		
C-7	227	359+80.00	359+98.15	RT	18.15		
		RAMP E					
C-20	244	722+42.00	722+58.75	LT	16.75		
C-21	244	722+32.00	722+58.75	RT	26.75		
C-22	246	729+53.92	729+72.07	LT	18.15		
		RAMP F					
C-24	250	839+22.55	842+39.78	LT		35.5	
		VALLEY ROAD					
C-30	360	878+45.37	878+65.37	LT	20.00		
C-31	360	878+44.95	878+63.10	RT	18.15		
TOTALS CARRIED TO GENERAL SUMMARY					4542	35.5	

LOCATION	STATION FROM	STATION TO	659 SEEDING AND MULCHING (SY)	
US 35	273+67.00	275+82.00	940	
US 35	287+02.00	302+65.00	3150	
US 35	297+40.00	324+18.00	48220	
TREBEIN RD	880+69.00	898+00.00	58150	
VALLEY RD	859+51.00	879+60.00	104440	
US 35	343+93.00	365+10.00	60360	
US 35	359+80.00	365+73.00	770	
US 35	365+85.00	392+73.00	6230	
TOTALS CARRIED TO GENERAL SUMMARY			282260	

LOCATION	STATION FROM	STATION TO	203 EXCAVATION (CY)	203 EMBANKMENT (CY)	
US 35	289+00.00	391+00.00	37880	16248	
RAMP E	719+69.00	730+42.44	730	20463	
RAMP F	831+56.47	842+59.94	2234	20463	
RAMP G	933+34.65	943+49.70	987	9562	
RAMP H	1031+28.96	1043+41.08	1247	32116	
VALLEY RD./TREBEIN RD.	862+00.00	897+90.97	9064	154610	
GLENN THOMPSON ACCESS DR.	7+50.00	10+72.00	197	1216	
DRIVE AT VALLEY RD. 869+02.36 LT.	1+00.00	3+50.00	51	1216	
ITEM 204 EXCAVATION OF SUBGRADE			216		
ITEM 204 GRANULAR MATERIAL, TYPE C				-323	
ITEM 204 EMBANKMENT, AS PER PLAN				-6586	
EXISTING PAVEMENT REMOVAL ADJUSTMENT (AVG. THICKNESS 1.29') 64886 SY = (64886*9) = 583974 SF (58374*1.29)/27 = 27901 CY			-27901		
MSE WALL ADJUSTMENT (RW-01)				-2981	
MSE WALL ADJUSTMENT (RW-02)				-18273	
TOTALS CARRIED TO GENERAL SUMMARY			24705	227731	

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	606 IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) SPEED = 60 MPH HAZARD = 24" (EACH)		622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 (FT)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C (FT)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN A (FT)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D (FT)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN A (FT)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN B (FT)	622 CONCRETE BARRIER END SECTION, TYPE B (EACH)	622 CONCRETE BARRIER END SECTION, TYPE B1 (EACH)	622 CONCRETE BARRIER END SECTION, TYPE D (EACH)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1 (EACH)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C (EACH)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D (EACH)		626 BARRIER REFLECTOR, TYPE 1, ONE-WAY (WHITE) (EACH)	626 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL (YELLOW/YELLOW) (EACH)	626 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL (YELLOW/RED) (EACH)	626 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL (WHITE/RED) (EACH)	
		US 35																						
B-1	218	323+00.03	323+30.03	CL										1						4				
	218	323+30.03	325+85.20	CL																8				
B-2	218	325+85.20	359+80.00	CL			2785							1		28				70				
B-3	218	325+85.20	342+80.00	LT	1			205	40	862	94.2	155.2	1				4	14		18		5		
		RAMP E																						
B-20	246	729+39.92	729+53.92	LT											1								2	
TOTALS CARRIED TO GENERAL SUMMARY					1		2785	205	40	862	94	156	1	2	1	28	4	14		18	82	5	2	

CALCULATED JAE CHECKED DYB

ROADWAY SUBSUMMARY

GRE-US 35-5.63

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS

SBR-1-13	DATED	07-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

800	DATED	05-02-22
840	DATED	04-15-22
878	DATED	01-21-22

DESIGN SPECIFICATIONS

THIS STRUCTURES CONFORM TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH
4.0 KSI (COPING & LEVELING PAD)
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH
4.5 KSI (PARAPET & MOMENT SLAB)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
(ALL REINFORCING SHALL BE EPOXY COATED)

PROPRIETARY RETAINING WALL DATA

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (i.e. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURES LISTED IN TABLE ON THIS SHEET, K/FT APPLIED PERPENDICULAR TO THE FACE OF WALL AT BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

BRIDGE SUPERSTRUCTURE LOADINGS

MSE WALL	BRIDGE NO.	LOCATION	HORIZ. LOAD (K/FT)
RW-01	GRE-035-0627	REAR ABUT.	0.73
RW-02	GRE-035-0627	FWD. ABUT.	0.76

FOUNDATION BEARING RESISTANCE

THE FACTORED BEARING RESISTANCE AT THE BASE OF THE REINFORCED SOIL MASS FOR EACH WALL IS LISTED BELOW:

FACTORED BEARING RESISTANCE

MSE WALL	WALL LIMITS		FBR (PSF)
	FROM STA.	TO STA.	
RW-01	78+11.00	79+93.00	9.17
RW-02A	23+34.00	25+83.58	12.67
RW-02B	26+84.48	29+10.00	12.67
	29+10.00	31+50.00	10.63
	31+31.00	36+00.00	6.57
	36+00.00	39+07.00	4.76

ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE MOMENT SLAB AND PARAPETS ON MOMENT SLABS ALONG MSE WALL RW-02 SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL JOINT MATERIALS AND BOND BREAKERS IN CONTACT WITH THE MOMENT SLAB. ALL REINFORCING IN MOMENT SLAB AND PARAPETS ON TOP OF MOMENT SLAB SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL FOR PAYMENT.

ITEM 840, FOUNDATION PREPARATION, AS PER PLAN

BACKFILL THE FOUNDATION PREPARATION EXCAVATION TO WITHIN 12" OF THE LEVELING PAD BOTTOM WITH NO. 2 CRUSHED CARBONATE STONE.

THE TOP 12 OF THE FOUNDATION PREPARATION IS TO CONSIST OF GRANULAR MATERIAL, TYPE C. BOTH THE NO. 2 STONE AND GRANULAR MATERIAL, TYPE C ARE TO BE COMPRISED OF CRUSHED CARBONATE STONE. PLACE AND COMPACT BOTH MATERIALS PER ITEM 203.

ALL OTHER ITEMS OUTLINED IN SS840 FOR FOUNDATION PREPARATION APPLY.

MINIMUM SOIL REINFORCEMENT LENGTHS

PROVIDE STRAP LENGTHS IN ACCORDANCE WITH SS840 AND AS OUTLINED IN THE TABLE BELOW:

MINIMUM SOIL REINFORCEMENT LENGTHS

MSE WALL	WALL LIMITS		MIN. STRAP LENGTH
	FROM STA.	TO STA.	
RW-01	78+11.00	78+16.77	8.00'
	78+16.77	78+26.77	12.00'
	78+26.77	78+46.77	17.00'
	78+46.77	79+66.77	28.00'
	79+66.77	79+76.77	15.00'
	79+76.77	79+86.77	11.00'
	79+86.77	79+93.00	8.00'
RW-02A	23+34.00	23+45.00	12.00'
	23+45.00	23+55.00	15.00'
	23+55.00	23+65.00	16.00'
	23+65.00	24+50.00	15.00'
	24+50.00	25+25.00	14.00'
	25+25.00	25+83.58	13.00'
RW-02B	26+84.48	27+50.00	14.00'
	27+50.00	28+25.00	15.00'
	28+25.00	29+00.00	17.00'
	29+00.00	29+80.00	18.00'
	29+80.00	30+20.00	19.00'
	30+20.00	31+40.00	31.00'
	31+40.00	31+80.00	20.00'
	31+80.00	32+20.00	19.00'
	32+20.00	33+10.00	18.00'
	33+10.00	33+60.00	17.00'
	33+60.00	34+00.00	16.00'
	34+00.00	34+40.00	15.00'
	34+40.00	34+70.00	14.00'
	34+70.00	35+00.00	13.00'
	35+00.00	35+30.00	12.00'
	35+30.00	35+70.00	11.00'
	35+70.00	36+00.00	10.00'
	36+00.00	36+40.00	9.00'
	36+40.00	36+80.00	8.00'
	36+80.00	39+07.01	8.00'

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE WORK SHALL BE IN ACCORDANCE WITH ITEM 503, EXCEPT THAT STEEL SHEET PILING SATISFYING THE MINIMUM SECTION AND MATERIAL PROPERTIES LISTED BELOW SHALL BE USED.

MINIMUM SECTION MODULUS:	48.5 IN^3/FT
STRUCTURAL STEEL:	A709
MINIMUM YIELD STRENGTH:	50 KSI
MINIMUM EMBEDMENT DEPTH:	17.0 FT
MAXIMUM RETAINED HEIGHT:	12.0 FT
ESTIMATED WALL LENGTH:	120.0 FT

STATION LIMITS: RW-02B STA. 31+30.00 TO 32+50.00

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS A REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE RW-02B. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05.

ESTIMATED QUANTITIES

PART.									
02/NHS/BR	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	RW-01	RW-02A	RW-02B	SHEET
1841	203	20000	1841	CY	EMBANKMENT	603	210	1028	
1672	203	35110	1672	CY	GRANULAR MATERIAL, TYPE B	749		923	
LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	LS	LS		
LS	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN			LS	2/23
96418	509	10000	96418	LB	EPOXY COATED REINFORCING STEEL		16347	80071	
				CY					
847	511	53012	847		CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET		138	709	2/23
				SY					
4123	512	10100	4123		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	482	617	3024	
				SF					
2945	516	13900	2945		2" PREFORMED EXPANSION JOINT FILLER		499	2446	
				SF					
30633	840	20000	30633	CY	MECHANICALLY STABILIZED EARTH WALL	2831	5035	22767	
11137	840	21000	11137	SY	WALL EXCAVATION	1284	1670	8183	
3852	840	22001	3852	CY	FOUNDATION PREPARATION, AS PER PLAN	534	563	2755	2/23
21254	840	23000	21254	CY	SELECT GRANULAR BACKFILL	2981	3098	15175	
58	840	23050	58		NATURAL SOIL	58			
				FT					
3435	840	25010	3435	FT	6" DRAINAGE PIPE, PERFORATED	383	550	2502	
128	840	25020	128	FT	6" DRAINAGE PIPE, NON-PERFORATED	5	9	114	
1661	840	26000	1661	DAY	CONCRETE COPING	188	250	1223	
7	840	27000	7		ON-SITE ASSISTANCE	1	1	5	

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

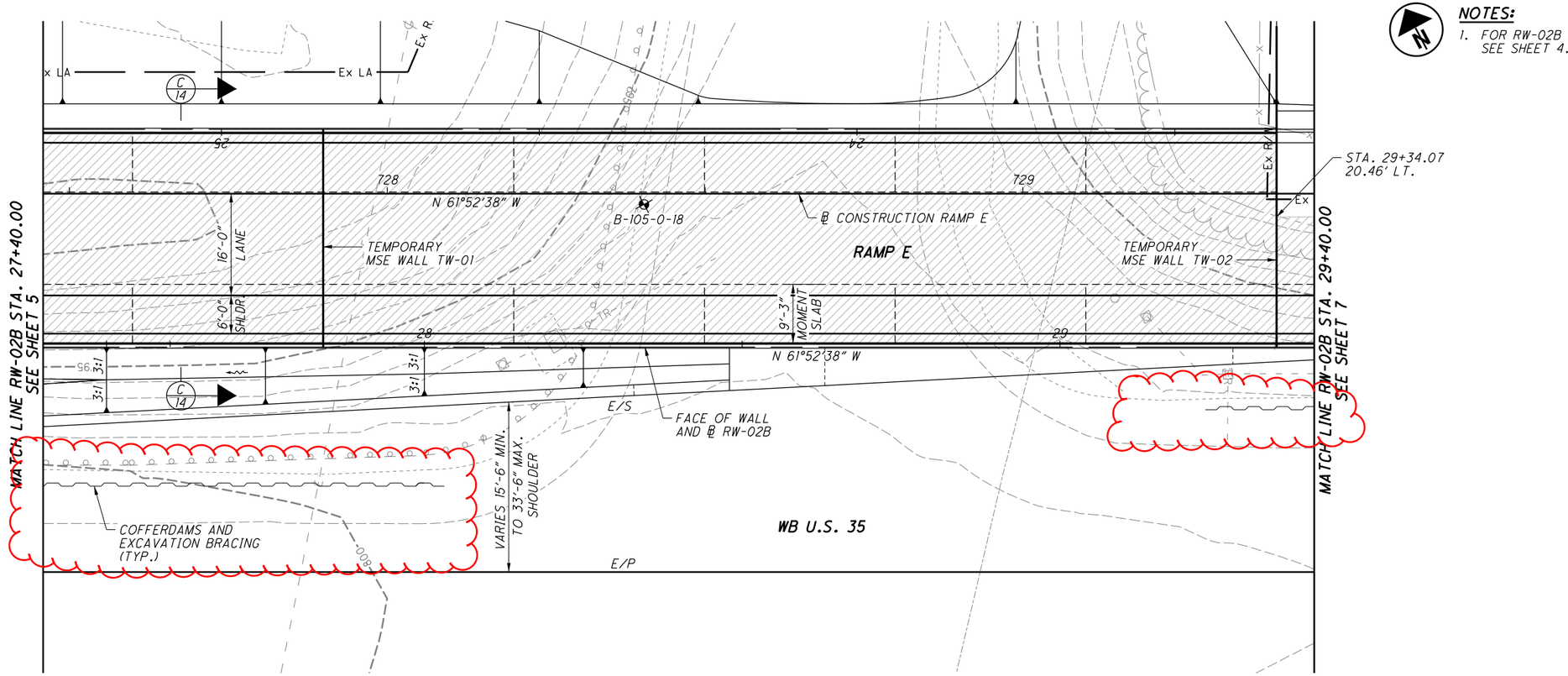
DESIGNED	DRAWN	REVIEWED	DATE
JTC	MME	FBW	9/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EJ			

RETAINING WALL GENERAL NOTES & ESTIMATED QUANTITIES

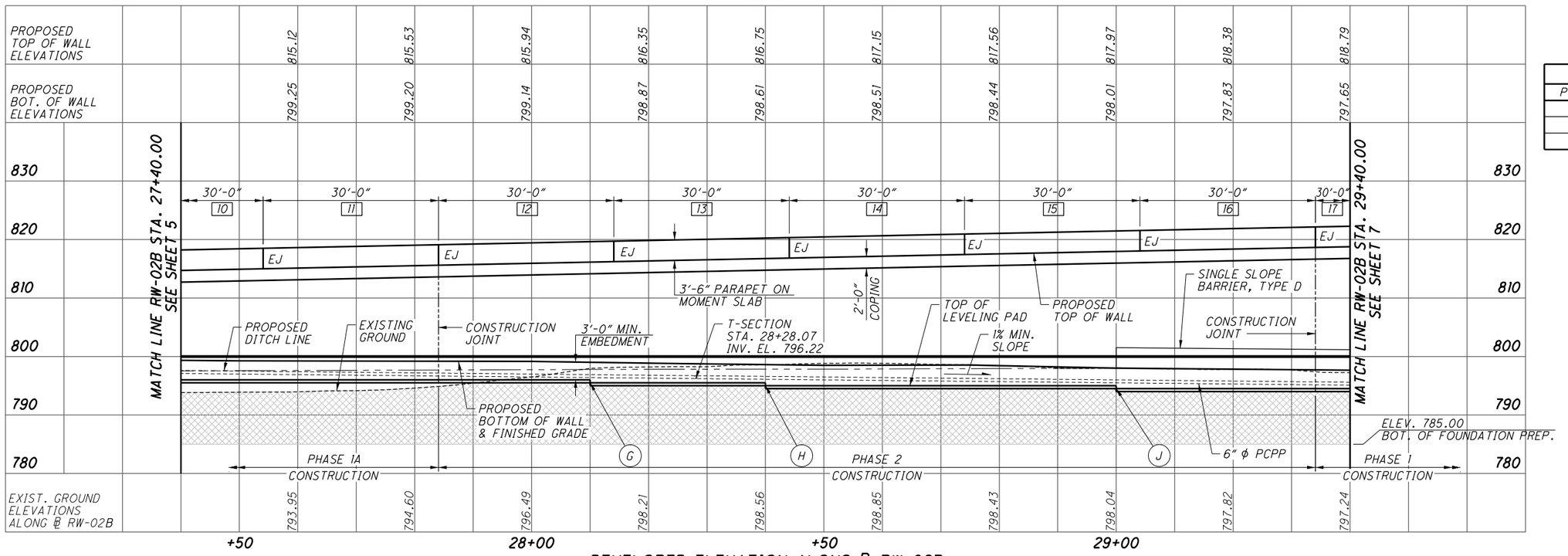
GRE-US 35-5.63
PID No. 107217

NOTES:

1. FOR RW-02B NOTES AND LEGEND, SEE SHEET 4.



PLAN



DEVELOPED ELEVATION ALONG ℄ RW-02B

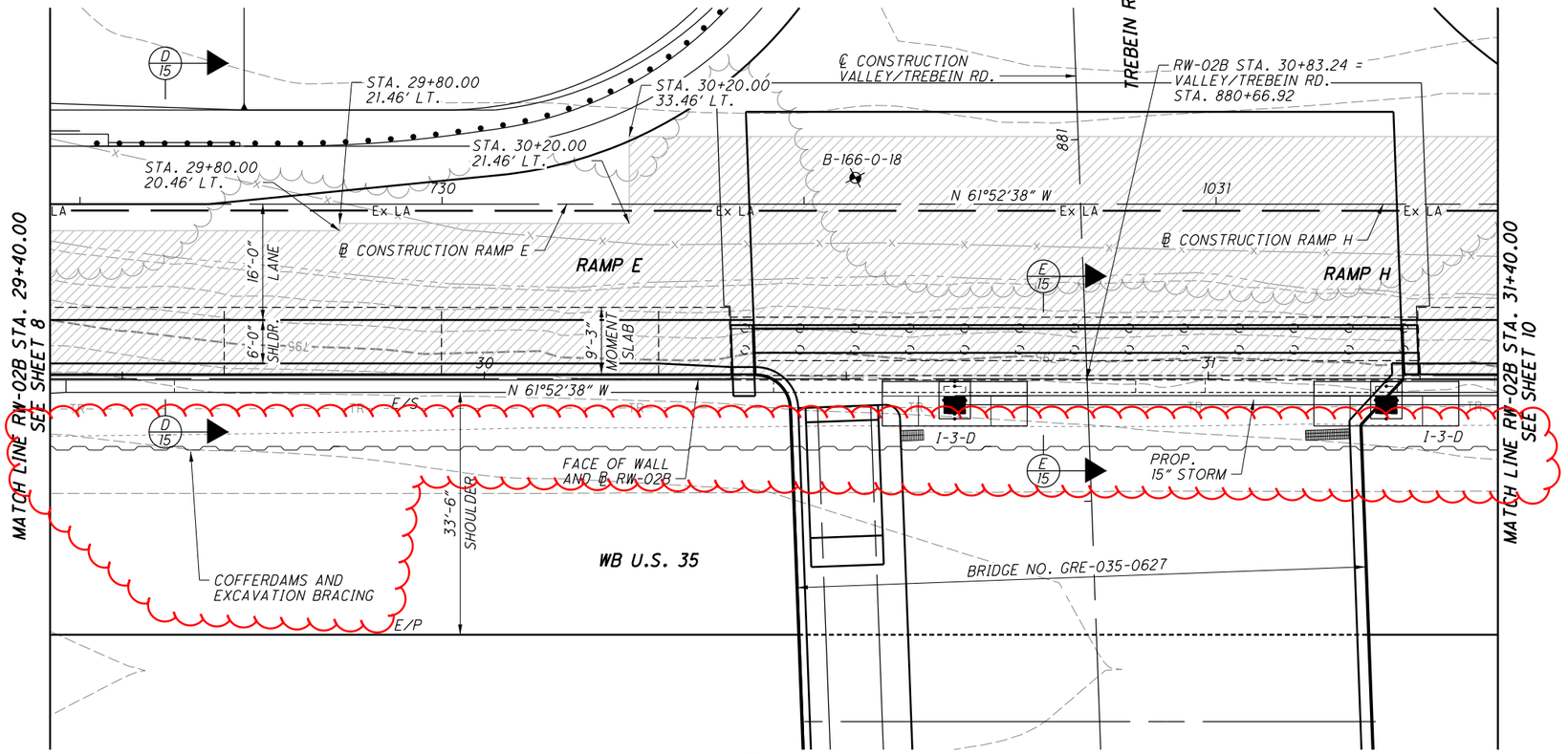
TOP OF LEVELING PAD		
POINT	WALL STA.	ELEV.
G	28+10.00	795.50
H	28+40.00	795.00
J	29+00.00	794.50

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

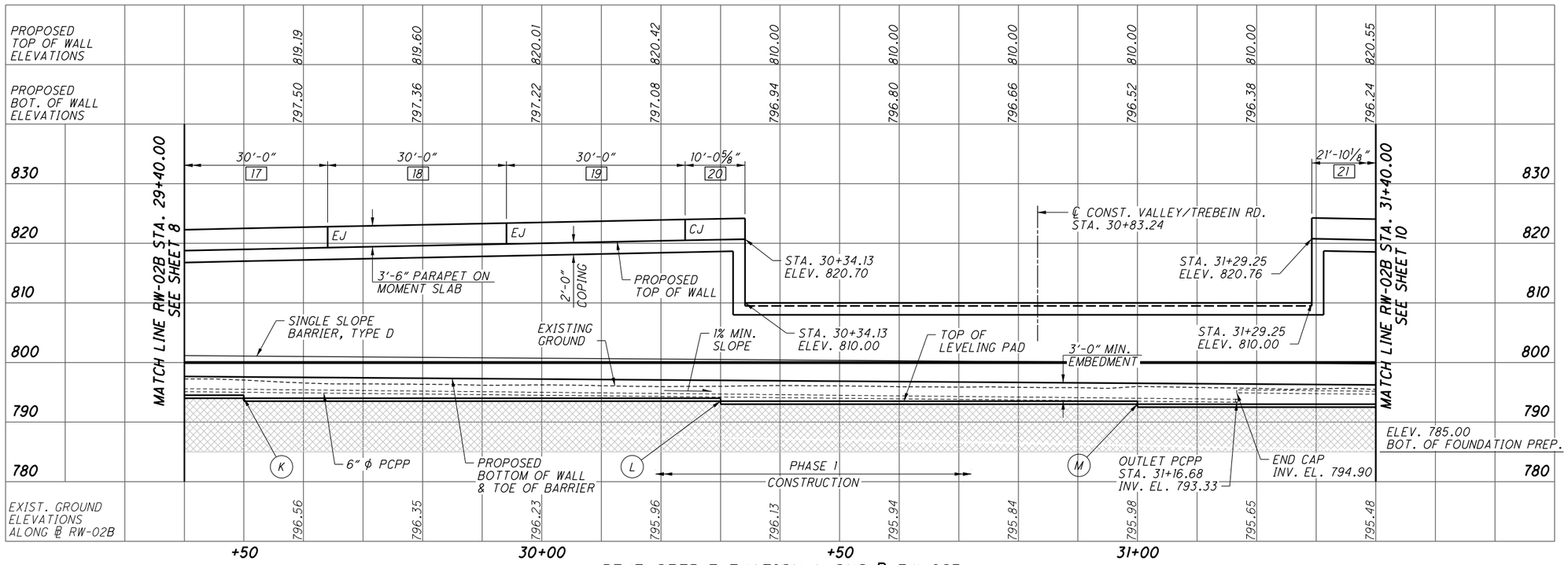
DESIGNED	DRAWN	REVIEWED	DATE
JTC	MME	FBW	9/19
CHECKED	REVISED		STRUCTURE FILE NUMBER
EJ			

PLAN AND PROFILE
RETAINING WALL RW-02B
STA. 27+40.00 TO STA. 29+40.00

GRE-US 35-5.63
PID No. 107217



PLAN



DEVELOPED ELEVATION ALONG ℄ RW-02B

TOP OF LEVELING PAD		
POINT	WALL STA.	ELEV.
K	29+50.00	794.00
L	30+30.00	793.50
M	31+00.00	793.00

NOTES:

1. FOR RW-02 B NOTES AND LEGEND, SEE SHEET 4.

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

DESIGNED	DRAWN	REVIEWED	DATE
JTC	MME	FBW	9/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EJ			

PLAN AND PROFILE
MSE RETAINING WALL RW-02B
STA. 29+40.00 TO STA. 31+40.00

GRE-US 35-5.63
PID No. 107217

9 / 23

458
698

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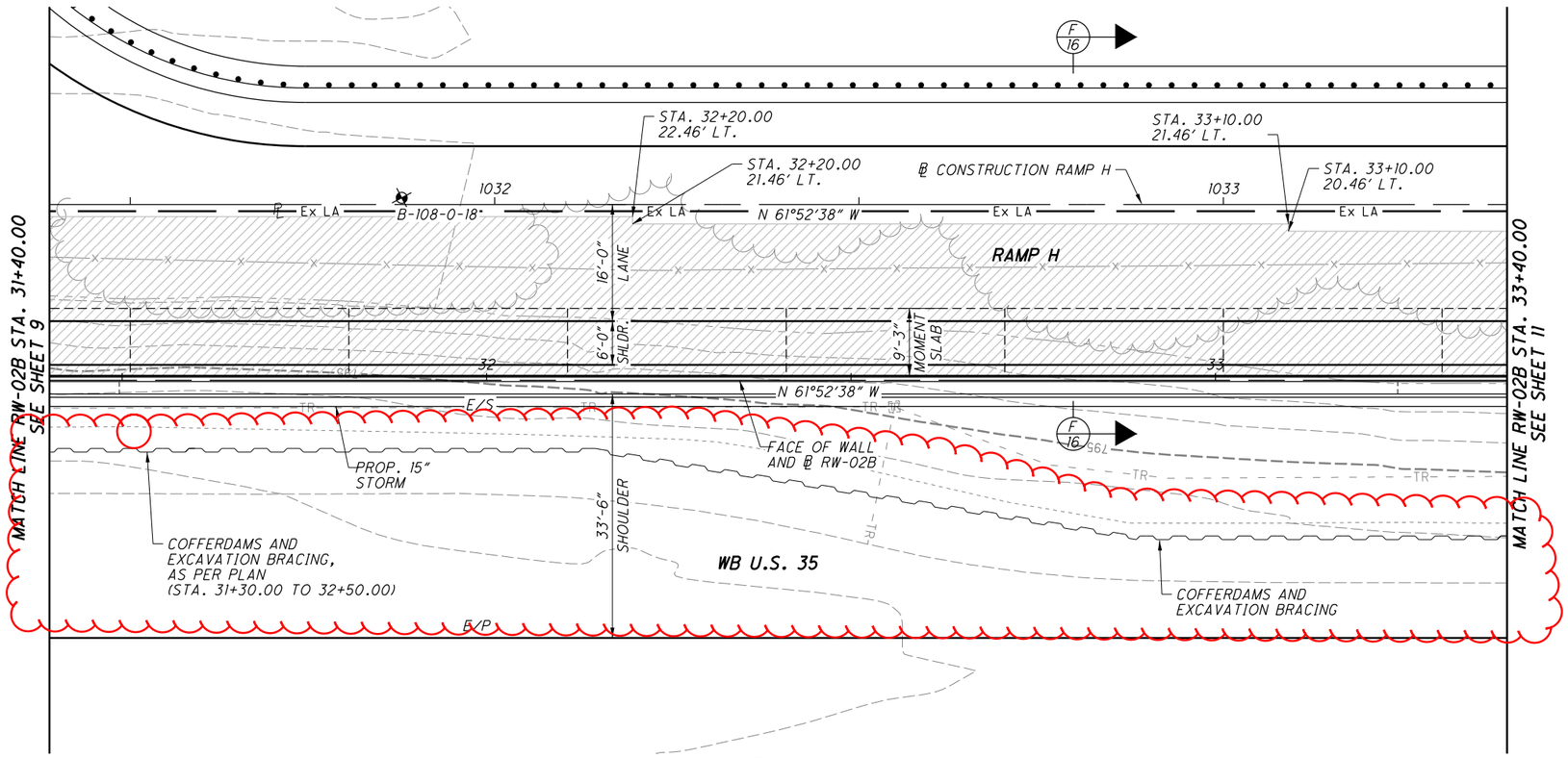
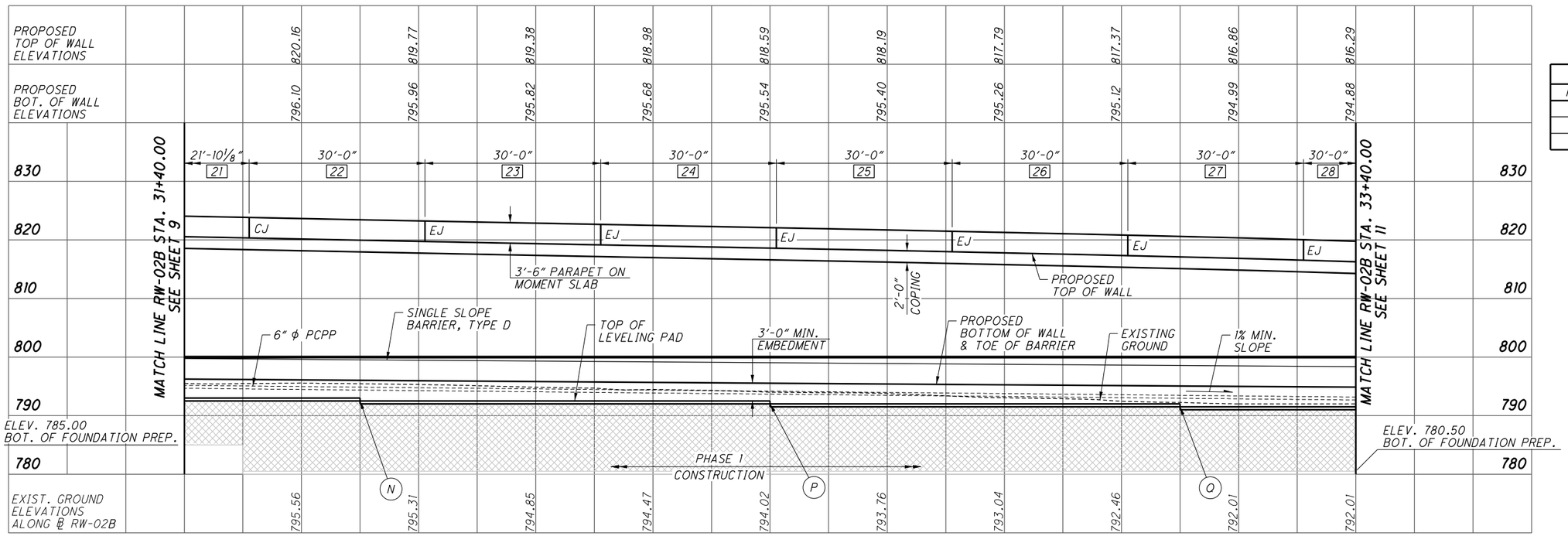
NOTES:

1. FOR RW-02 NOTES AND LEGEND, SEE SHEET 4.



PLAN



DEVELOPED ELEVATION ALONG ℄ RW-02B

TOP OF LEVELING PAD		
POINT	WALL STA.	ELEV.
N	31+70.00	792.50
P	32+40.00	792.00
O	33+10.00	791.50

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

DESIGNED	DRAWN	REVIEWED	DATE
JTC	MME	FBW	9/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EJ			

PLAN AND PROFILE
MSE RETAINING WALL RW-02B
STA. 31+40.00 TO STA. 33+40.00

GRE-US 35-5.63
PID No. 107217

10 / 23

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698

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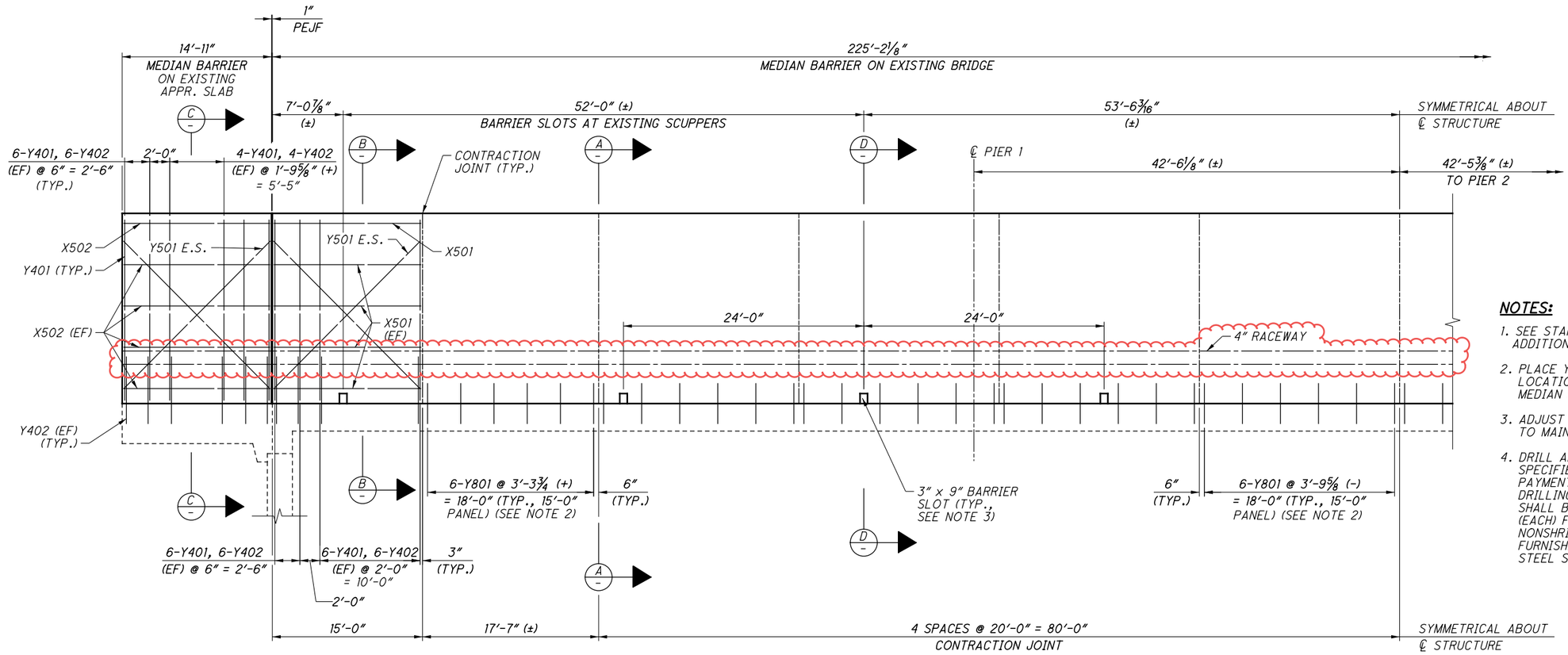
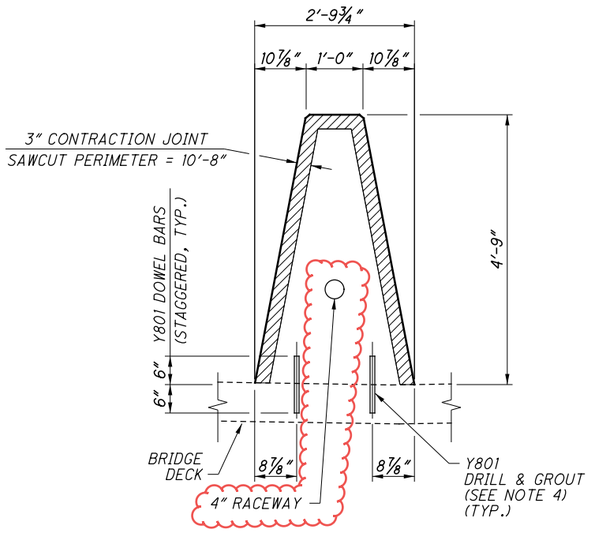


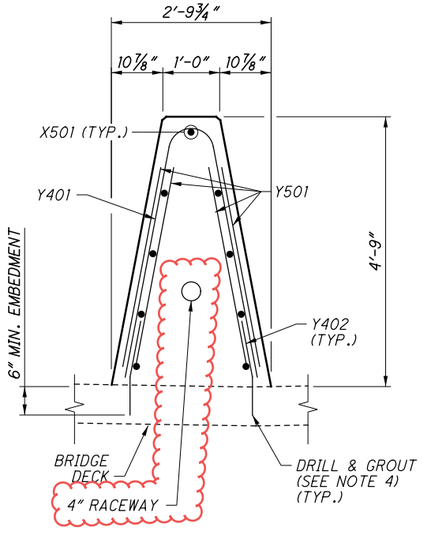
MEDIAN BARRIER ELEVATION

NOTES:

1. SEE STANDARD DRAWING SBR-2-20 FOR ADDITIONAL DETAILS.
2. PLACE Y801 DOWEL BARS AT STAGGERED LOCATIONS WITHIN THE UNREINFORCED MEDIAN BARRIER.
3. ADJUST SPACING FOR R503 AND R504 BARS TO MAINTAIN 2" CLEAR AT SLOT OPENINGS.
4. DRILL AND GROUT FOR DOWEL HOLES ARE SPECIFIED IN CMS SECTION 510.00. PAYMENT FOR WORK CONSISTING OF DRILLING AND PLACING GROUT INTO HOLES SHALL BE INCLUDED IN THE UNIT BID PRICE (EACH) FOR ITEM 510, DOWELS HOLES WITH NONSHRINK, NONMETALLIC GROUT. FURNISHING AND PLACING REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509.



A SECTION



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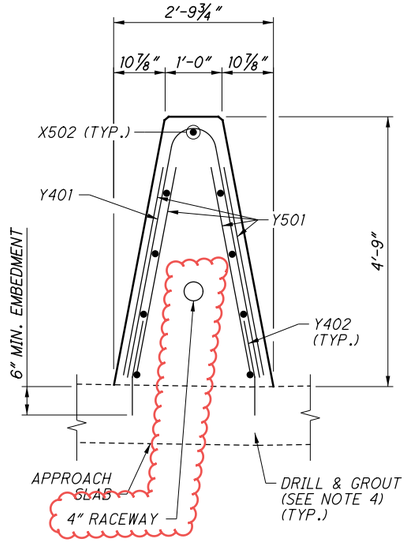
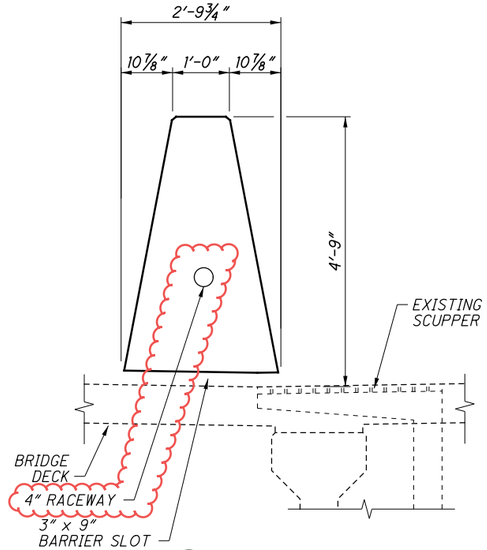


C SECTION



D SECTION

035_0614sa001.dgn Sheet 1/9/2023 5:22PM CH_ODOTV8i_Half_BW.pen ProjectWise Dynamic Composition Server JEGSVCPWU01

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

DESIGNED JTC
DRAWN JTC
CHECKED EJ
REVIEWED FBW
DATE 9/19
REVISED
STRUCTURE FILE NUMBER 2900289

MEDIAN BARRIER ELEVATION
BRIDGE NO. GRE-035-0614
U.S. 35 OVER LITTLE MIAMI RIVER

GRE-US 35-5.63
PID No. 107217

ITEM 511, CLASS OC2 CONCRETE WTIH OC/OA, BRIDGE DECK, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC 2 MEETING A DESIGN STRENGTH OF 4,500 PSI
CORROSION INHIBITOR	515.15

THE CLASS OC2 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS AND DIAPHRAGMS ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 511, CLASS OC2 CONCRETE WTIH OC/OA, BRIDGE DECK (PARAPET), AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC FIBERS, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS OC 2 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE CORROSION INHIBITOR	ASTM C 1116, TYPE III 515.15

THE CLASS OC2 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 5 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

ITEM 511, CLASS OC2 CONCRETE WTIH OC/OA, BRIDGE DECK (PARAPET), AS PER PLAN, CONT'D.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE. PLACING THE BAG THAT THE FIBERS COME IN INTO THE CONCRETE MIX IS NOT PERMITTED.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 5.0 LBS/CY OF CONCRETE. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO3#4OF ITS RATED CAPACITY OR 6 CUBIC YARDS, WHICHEVER IS SMALLER. THE FIRST THREE TRANSIT MIXER LOADS ARE REQUIRED TO BE AT THE MINIMUM YARDAGE LISTED ABOVE TO SHOW PROOF OF THE SUCCESSFUL BATCHING OPERATION. AFTER CONSISTENCY IN THE DELIVERED MATERIAL HAS BEEN ESTABLISHED, THE CONCRETE SUPPLIER MAY INCREASE THE BATCH DELIVERED QUANTITIES AS LONG AS THE QUALITY REMAINS ACCEPTABLE TO THE ENGINEER. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISEDTHAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. THIS SPECIFICATION IS INTENDED FOR USE ON NON DECORATIVE BRIDGE RAILING. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

DUE TO THE RECENT SUPPLY SHORTAGES, THE DEPARTMENT HAS BEEN MADE AWARE OF DIFFICULTIES THAT SUPPLIERS ARE HAVING IN OBTAINING THE NECESSARY MATERIALS FOR EPOXY. ON THIS PROJECT THE CONTRACTOR CAN USE TRADITIONAL EPOXY-URETHANE SEALERS APPROVED ON THE QPL OR ELECT TO SUBSTITUTE BRIDGE COTE XL-70 W/SILANE THAT IS LISTED ON THE APPROVED NOISE SUPPLIER LIST UNDER APPROVED SEALERS FOR NOISE BARRIERS. APPROVEDNOISESUPPLIERSLIST.PDF (OHIO.GOV).

IF BRIDGE COTE XL-70 W/SILANE IS CHOSEN, MEET THE REQUIREMENTS OF THE BRIDGE COTE XL-70 W/SILANE TECHNICAL DATA SHEET WITH THE EXCEPTION OF THE SURFACE PREPARATION THAT WILL STILL FOLLOW THE REQUIREMENTS LISTED UNDER C&MS 512 FOR EPOXY URETHANE SEALERS.

PART.	ESTIMATED QUANTITIES									
02/NHS/BR	ITEM	EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GEN.	SHEET
LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING		LS			
LS	503	21300	LS		UNCLASSIFIED EXCAVATION		LS			
LS	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	LS	LS			
7010	507	00600	7010	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	5060	1950			
7450	507	00650	7450	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	5350	2100			
198337	509	26000	198337	LB	GALVANIZED STEEL REINFORCEMENT	29535	31153	137649		
4	511	33500	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	4				
148	511	34412	148	CY	CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE			148		
436	511	34447	436	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK, AS PER PLAN			436		3/30
30	511	34451	30	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET), AS PER PLAN			30		3/30
70	511	41012	70	CY	CLASS OCI CONCRETE WITH OC/OA, PIER ABOVE FOOTINGS		70			
252	511	43512	252	CY	CLASS OCI CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING	252				
63	511	46512	63	CY	CLASS OCI CONCRETE WITH OC/OA, FOOTING		63			
97	511	51510	97	CY	CLASS OC2 CONCRETE, SIDEWALK			97		
682	512	10101	682	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	309	158	215		3/30
8	515	15110	8	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS,			8		
					LEVEL 3, TYPE WF60-49 (104'-9" LONG)					
8	515	15110	8	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS,			8		
					LEVEL 3, TYPE WF60-49 (73'-0" LONG)					
28	515	20000	28	EACH	INTERMEDIATE DIAPHRAGMS			28		
10	516	13600	10	SF	1" PREFORMED EXPANSION JOINT FILLER			10		
101	516	13900	101	SF	2" PREFORMED EXPANSION JOINT FILLER	101				
204	516	14020	204	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	204				
8	516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE	8				22/30
					(NEOPRENE), AS PER PLAN (14" x 21" X 2.5735" PAD WITH 16" x 25" 1.75" PL)					
8	516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE	8				22/30
					(NEOPRENE), AS PER PLAN (14" x 19.5" X 2.5735" PAD WITH 16" x 25" 1.75" PL)					
16	516	44101	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE		16			22/30
					(NEOPRENE), AS PER PLAN (14" x 19.5" X 2.5735" PAD WITH 16" x 40" 1.75" PL)					
206	517	75120	206	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)			206		
3	518	12301	3	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			3		27/30
213	518	40000	213	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	213				
54	518	40010	54	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	54				
57	518	51101	57	FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN			57		27/30
44	518	51201	44	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (10")			44		27/30
6	523	20000	6	EACH	DYNAMIC LOAD TESTING	4	2			
6	523	20500	6	EACH	RESTRIKE	4	2			
561	526	30011	561	SY	REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17"), AS PER PLAN				561	23/30
79	526	90010	79	FT	TYPE A INSTALLATION			79		
165	607	39910	165	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC			165		
165	607	39930	165	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC			165		
20	608	53020	20	SF	DETECTABLE WARNING			20		
110	625	25504	110	FT	CONDUIT, 3", 725.051				110	
1	625	30706	1	EACH	PULL BOX, 725.08, 24"				1	
LS	690	98400	LS		SPECIAL - MISC.: TEMPORARY SURCHARGE				LS	2/30
33	846	00110	33	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				33	

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

DESIGNED MM | DRAWN MM | CHECKED FBW | REVIEWED JTC | DATE 5/2022 | REVISED | STRUCTURE FILE NUMBER 2900213

GENERAL NOTES II & ESTIMATED QUANTITIES

BRIDGE NO. GRE-035-0627
VALLEY/TREBEIN ROAD OVER U.S. 35

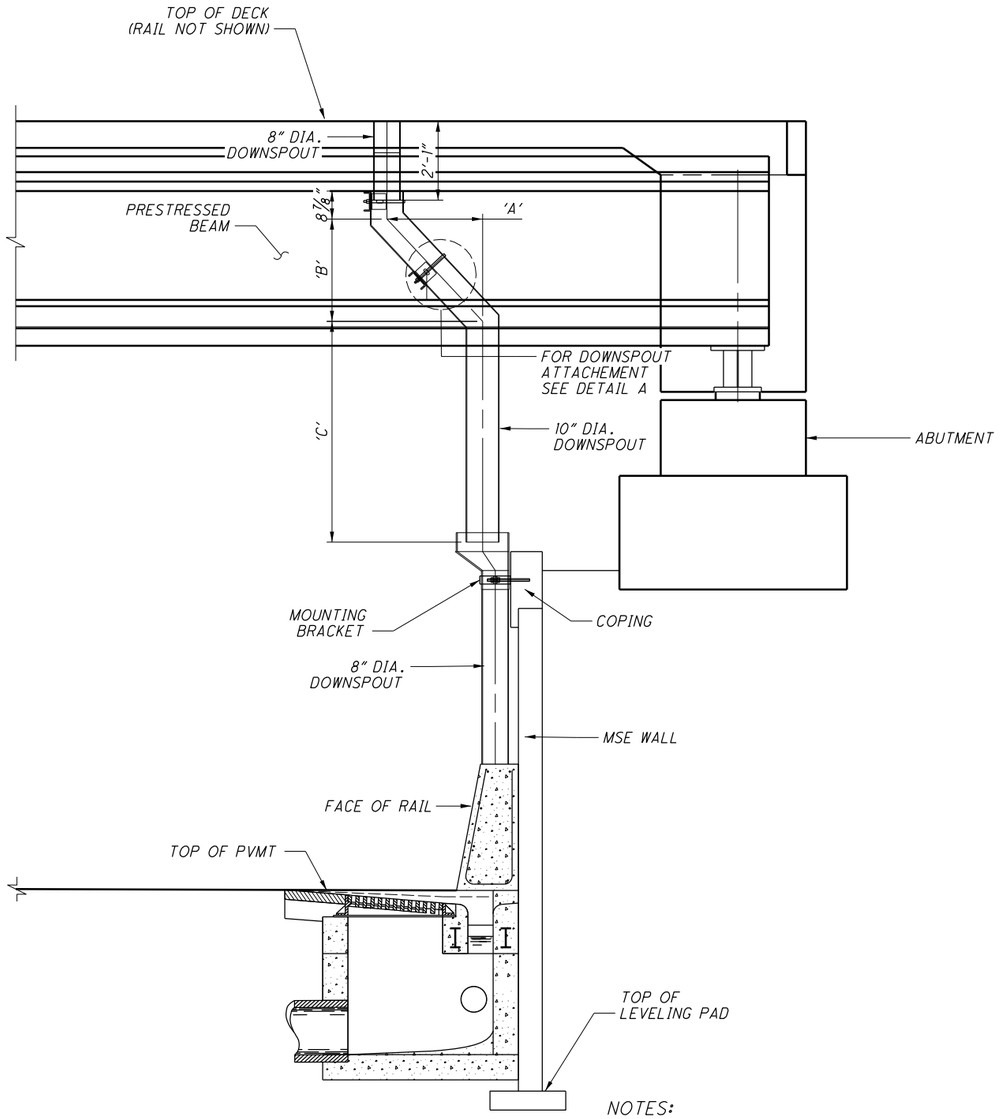
GRE-US 35-5.63
PID No. 107217

3 / 30

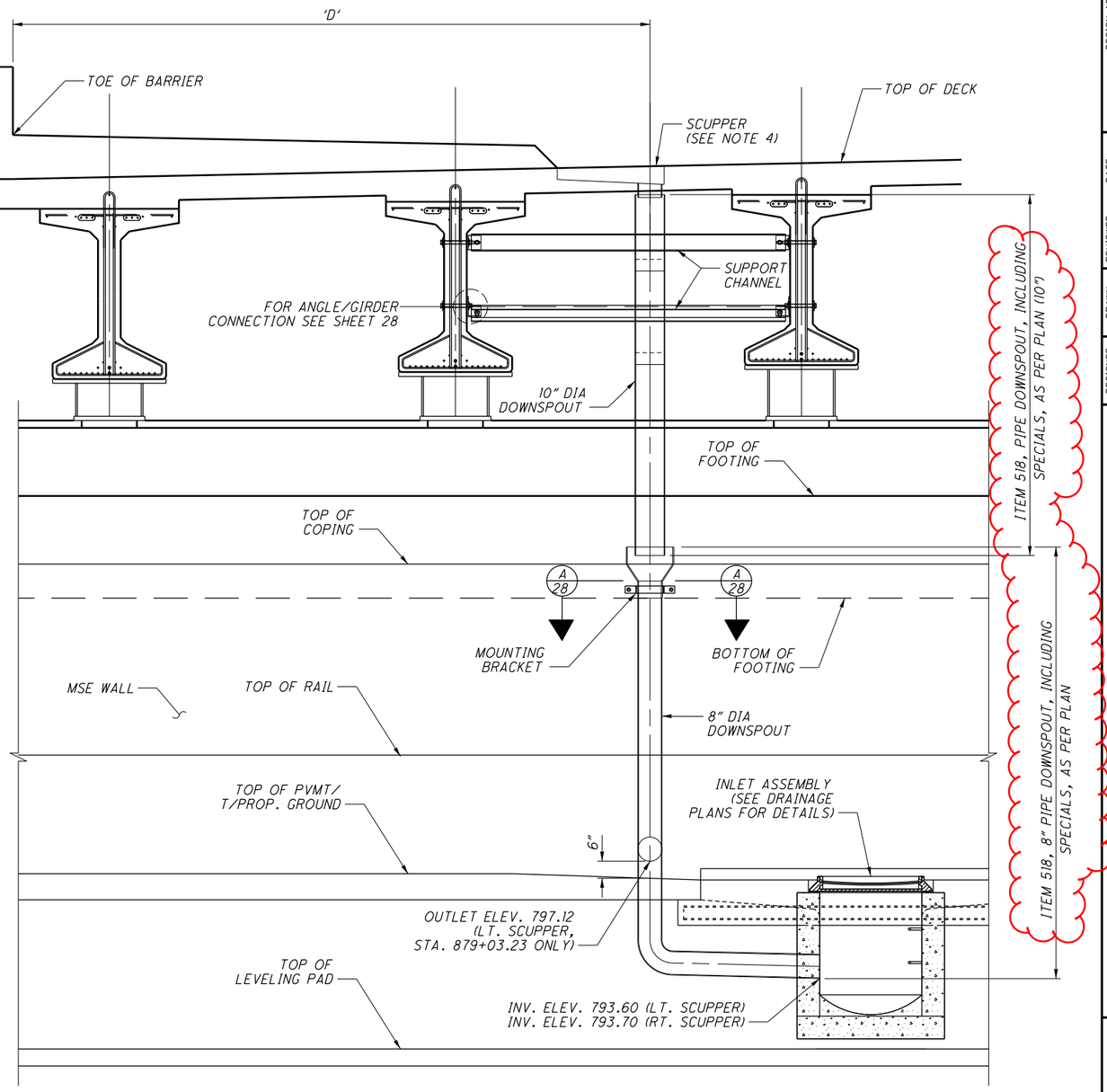
575
698

Jason.Centers@jacobs.com

DIMENSION	STA. 879+03.23 LT.	STA. 880+60.00 LT.	STA. 880+58.00 RT.
'A'	0'-0"	6'-8 7/16"	6'-8 3/4"
'B'	2'-8 7/16"	2'-8 7/16"	2'-8 7/16"
'C'	8'-6 3/8"	5'-9 15/16"	5'-9 15/16"
'D'	2'-8 11/16"	2'-8 11/16"	5'-7 3/8"



LEFT SIDE ELEVATION
(RIGHT SIDE SIMILAR)



LEFT SIDE SECTION
(RIGHT SIDE IS A MIRROR IMAGE OF THE LEFT)

NOTES:

1. DOWNSPOUT PIPE SHALL BE PER CMS 748.06.
2. DOWNSPOUTS AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED PER CMS 711.02.
3. SEE SHEET 28 FOR ADDITIONAL SCUPPER AND DOWNSPOUT DETAILS.
4. FOR THE LEFT SCUPPERS, PROVIDE A NEENAH FOUNDRY MODEL R-3910-V OR AN APPROVED EQUAL. FOR THE RIGHT SCUPPER, PROVIDE A NEENAH FOUNDRY MODEL R-3945-A DESIGNED FOR CONTINUOUS TRAFFIC LOADING WITH 2% SLOPE) OR AN APPROVED EQUAL. SCUPPERS, SUPPORT CHANNELS AND HARDWARE ARE INCLUDED WITH ITEM 518, SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN FOR PAYMENT.

DESIGN AGENCY
JACOBS
1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

DESIGNED	DRAWN	REVIEWED	DATE
MM	MM	JTC	5/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FBW		2900213	

SCUPPER DETAILS
BRIDGE NO. GRE-035-0627
VALLEY/TREBEIN ROAD OVER U.S. 35

GRE-US 35-5.63
PID No. 107217

27 / 30

599
698

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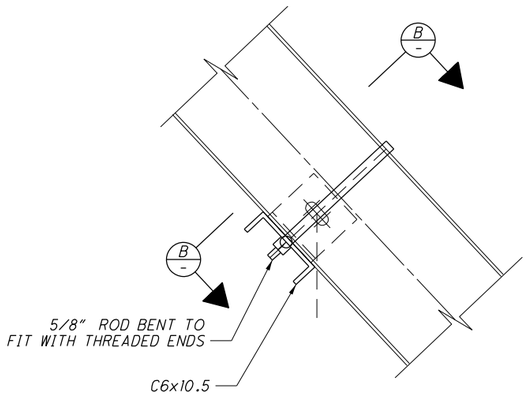
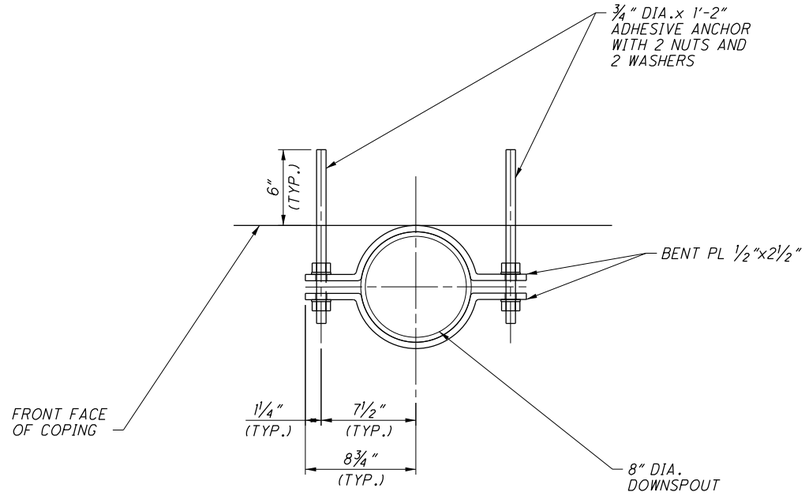
NOTES:

1. SCUPPER AND DOWNSPOUT STEEL PIPE IN ACCORDANCE WITH CMS 748.06. ALL OTHER STEEL SHAPES SHALL BE ASTM A709 GRADE 50. BOLTS SHALL BE ASTM A325, TYPE 1.
2. GALVANIZE SCUPPER, DOWNSPOUT PIPE, ALL ASSOCIATED STEEL HARDWARE, AND BOLTS IN ACCORDANCE WITH CMS 711.02.
3. ADHESIVE ANCHORS SHALL BE ANCHOR BOLTS IN HOLES FILLED WITH NONSHRINKING EPOXY GROUT MEETING THE REQUIREMENTS OF CMS 705.20. CARE SHALL BE TAKEN NOT TO DAMAGE REINFORCING STEEL WHILE DRILLING FOR ADHESIVE ANCHORS.
4. SEE SHEET 27 FOR SECTION A-A LOCATION.

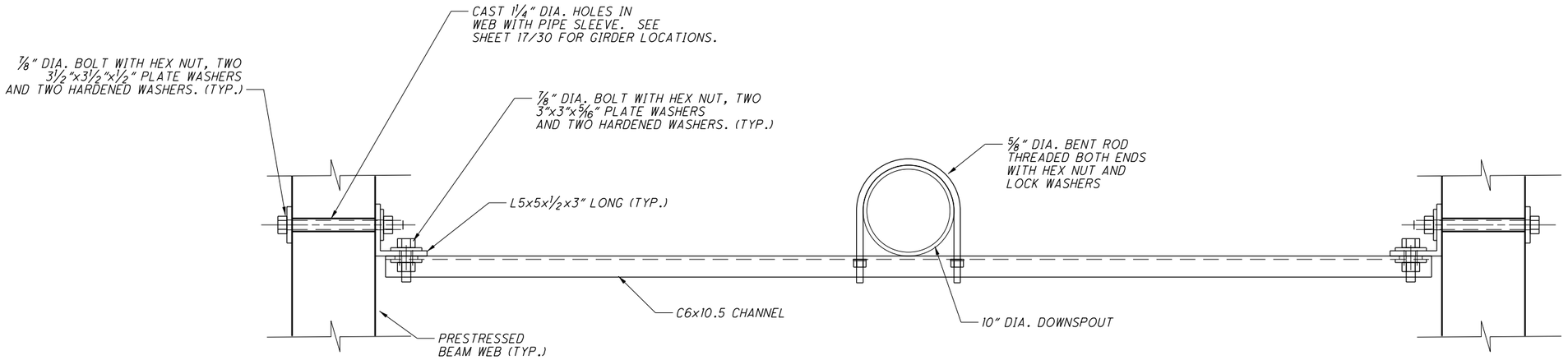


DETAIL A

(LOWER SUPPORT BRACKET SHOWN, UPPER SUPPORT BRACKET SIMILAR)



SECTION A-A



SECTION B-B

DESIGN AGENCY
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1880 WAYCROSS ROAD
CINCINNATI, OHIO 45240

DESIGNED	DRAWN	REVIEWED	DATE
MM	MM	JTC	5/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FBW		2900213	

SCUPPER DETAILS

BRIDGE NO. GRE-035-0627

VALLEY/TREBEIN ROAD OVER U.S. 35

GRE-US 35-5.63

PID No. 107217

28 / 30

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