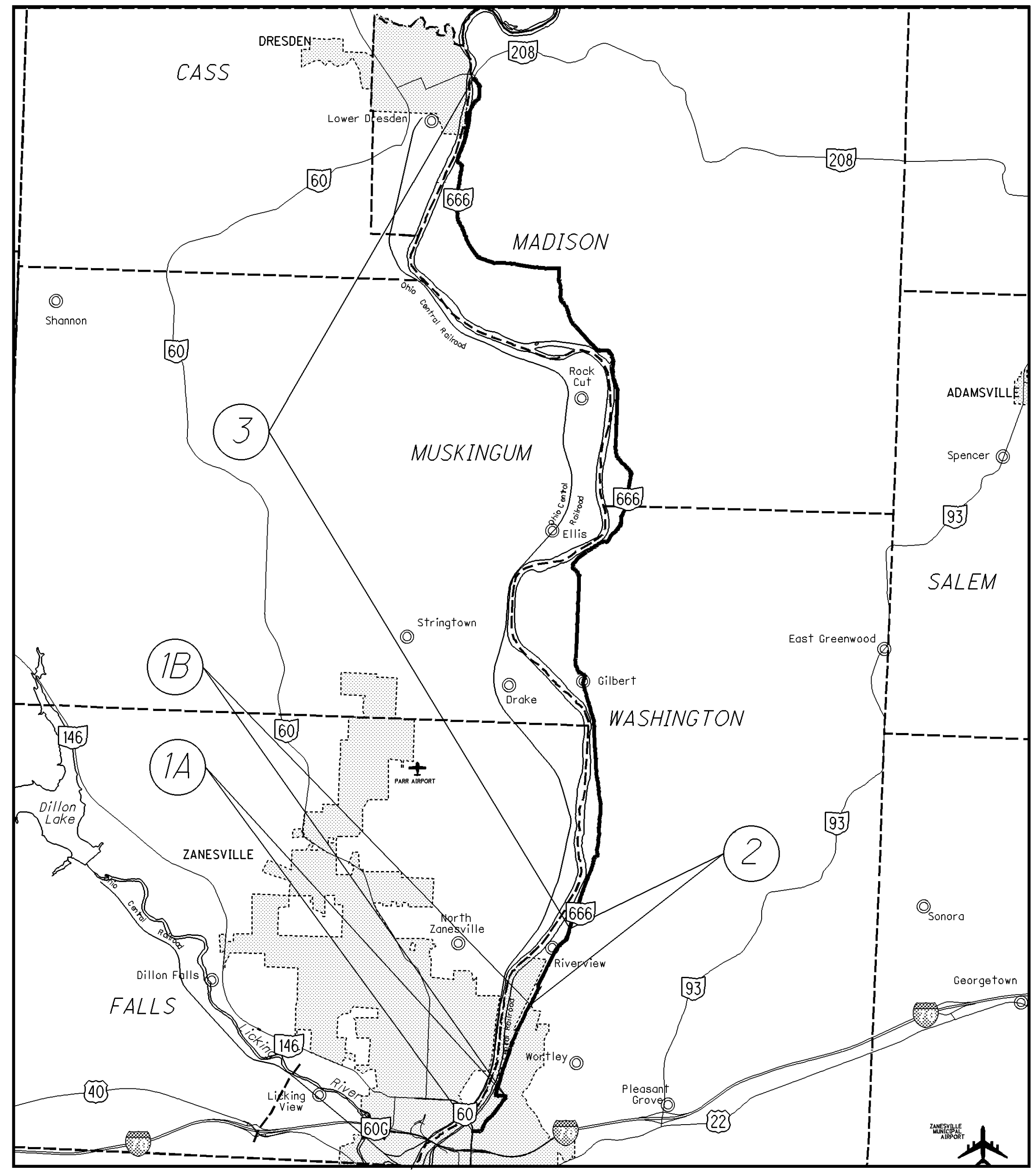




LOCATION MAP MUSKINGUM COUNTY  
 LATITUDE: 40°02'53" N LONGITUDE: 81°58'06" W



PORTION TO BE IMPROVED .....  
 INTERSTATE & DIVIDED HIGHWAY .....  
 UNDIVIDED STATE & FEDERAL ROUTES .....  
 OTHER ROADS .....

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\_MTS\_002.dgn 14-JUL-2015 8:24AM jnelson1

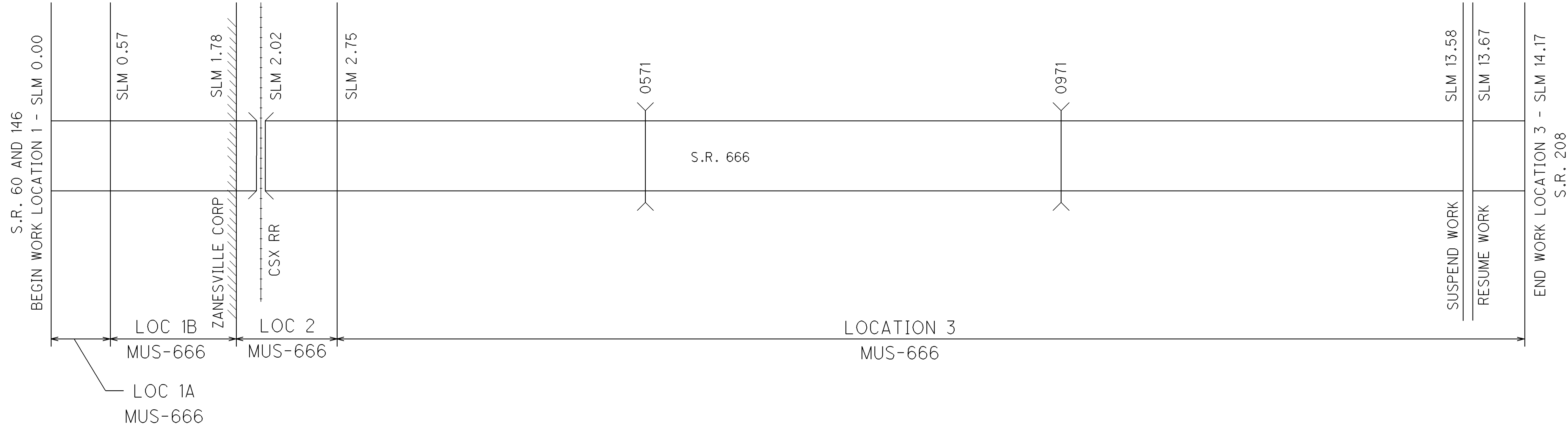
CALCULATED  
 JKIN  
 CHECKED  
 DNM

LOCATION MAP

MUS-666-0.00

2  
 12

NOTES  
 1. BEGIN SINGLE CHIP SEAL AND FOG SEAL ON THE NORTH SIDE OF CSX RAILROAD OVERPASS AT SLM 2.02.  
 2. SUSPEND WORK AT SLM 13.58 AND RESUME WORK AT SLM 13.67. SEE PART 2 FOR WORK IN THIS SECTION.



P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\T1\_MGN\_001.dgn 14-JUL-2015 8:40AM jnelson1

**UTILITIES**

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

**CONTINGENCY QUANTITIES**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

**NOTIFICATION OF ROAD CLOSURE OR RESTRICTION**

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT [D05.PIO@DOT.STATE.OH.US](mailto:D05.PIO@DOT.STATE.OH.US)

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT [BRIAN.BOSCH@DOT.STATE.OH.US](mailto:BRIAN.BOSCH@DOT.STATE.OH.US)

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT [HAULING.PERMITS@DOT.STATE.OH.US](mailto:HAULING.PERMITS@DOT.STATE.OH.US)

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

**PAVEMENT MARKING**

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. THE CONTRACTOR SHALL DOCUMENT ALL OF THE EXISTING PAVEMENT MARKING LOCATIONS THAT WILL BE REMOVED/OBLITERATED DURING THIS PROJECT. THE CONTRACTOR SHALL PLACE NEW PAVEMENT MARKINGS AT THE LOCATION OF THE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS. THE METHOD OF DOCUMENTATION SHALL BE APPROVED BY THE ENGINEER IN ORDER TO PROVIDE AN ACCEPTABLE TOLERANCE BETWEEN THE EXISTING AND PROPOSED PAVMENT MARKINGS.

**PROFILE AND ALIGNMENT**

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS, SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 5 OFFICE.

**ITEM 253, PAVEMENT REPAIR**

AN ESTIMATED QUANTITY FOR PAVEMENT REPAIR HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER. REPAIRS SHALL TAKE PLACE PRIOR TO ANY PLANING OPERATIONS OR PLACING OF CHIP SEAL COURSE. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF PAVEMENT WHICH HAVE COMPLETELY FAILED (PUMPING OF SUB-BASE MATERIAL) AND NOT TO CORRECT SURFACE IRREGULARITIES. DEPTH OF EXCAVATION SHALL BE 7". **THE MINIMUM WIDTH SHALL BE 5 FT, THOUGH SOME LOCATIONS MAY REQUIRE FULL DEPTH REPAIR FOR THE FULL LANE WIDTH.**

AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 7" OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED IN TWO LIFTS).

REPAIR QUANTITIES MAY BE USED ON THE MAINLINE PAVEMENT OR ON PAVED SHOULDERS. ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 253 PAVEMENT REPAIR. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUBSUMMARIES:

**ITEM 253 PAVEMENT REPAIR**  
**LOCATION 1A – 113 CU YD**  
**LOCATION 1B – 239 CU YD**  
**LOCATION 2 – 191 CU YD**  
**LOCATION 3 – 2,162 CU YD**

**ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN**

DEPTH OF PLANING SHALL BE AS SHOWN ON SHEET 6 OR AS DIRECTED BY THE ENGINEER. THE ROADWAY SHALL BE PLANED FULL WIDTH SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE LANE LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

SEE SHEET 7, "REPAIR DATA", FOR QUANTITIES.

**SPOT LEVELING**

QUANTITIES AND DETAILS, AS SHOWN ON SHEET 6, HAVE BEEN PROVIDED, TO BE USED AS DIRECTED BY THE ENGINEER, TO RESTORE THE ROADWAY CROWN/PROFILE OF S.R. 666.

**ITEM 407, TACK COAT**

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

**ITEM 407, TACK COAT FOR INTERMEDIATE COURSE**

THE RATE OF APPLICATION OF THE 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.050 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

**ITEM 621 RAISED PAVEMENT MARKER REMOVED**

RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO PLACEMENT OF CHIP SEAL. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

**ITEM 422 SINGLE CHIP SEAL, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS FOR A SINGLE CHIP SEAL, THIS ITEM SHALL ALSO INCLUDE A FOG SEAL APPLICATION AS DESCRIBED IN THE NOTES BELOW.

ON THIS PROJECT, FOG SEAL THE TOP COURSE OF THE SINGLE CHIP SEAL AT THE LIMITS DESCRIBED IN THE PLANS.

FOG SEAL AFTER SWEEPING AND BEFORE PLACEMENT OF PERMANENT PAVEMENT MARKINGS. USE 702.04 SS-1H BINDER DILUTED 1:1. CONSTRUCT A 100 FT TEST STRIP. APPLY 0.07 TO 0.18 GALLONS PER SQ YD OF THE DILUTED SOLUTION. REVIEW THE APPLICATION OF BINDER AND ADJUST THE APPLICATION RATE, MINIMIZING OVERSPRAY. OVERLAP THE FOG SEAL AT THE PAVEMENT CROWN/ CENTERLINE 6 INCHES INTO BOTH LANES. DO NOT ALLOW TRAFFIC ON FOG SEAL UNTIL IT HAS FINISHED CURING. APPLY NEW PAVEMENT MARKINGS AFTER CURING.

ALL MATERIALS, EQUIPMENT, LABOR, TOOLS, TRAFFIC CONTROL, AND INCIDENTALS SHALL BE INCLUDED FOR PAYMENT WITH **ITEM 422 SINGLE CHIP SEAL, AS PER PLAN.**

**ITEM 642, PAVEMENT MARKINGS**

THE FOLLOWING QUANTITIES SHALL BE USED TO REPLACE CENTER LINES AND EDGE LINES THROUGHOUT THE LIMITS OF THE PROJECT.

LOCATION 1A:  
ITEM 642, EDGE LINE, TYPE 1 – **1.14 MILE**  
ITEM 642, CENTER LINE – **.57 MILE**  
ITEM 642, CHANNELIZING LINE, 8" – **288 FT**  
ITEM 642, STOP LINE – **24 FT**  
ITEM 642, LANE ARROW – **6 EACH**  
ITEM 642, WORD ON PAVEMENT, 96" – **4 EACH**

LOCATION 1B:  
ITEM 642, EDGE LINE, TYPE 1 – **2.42 MILE**  
ITEM 642, CENTER LINE – **1.21 MILE**  
ITEM 642, STOP LINE – **12 FT**

LOCATION 2:  
ITEM 642, EDGE LINE, TYPE 1 – **1.94 MILE**  
ITEM 642, CENTER LINE – **0.97 MILE**

LOCATION 3:  
ITEM 642, EDGE LINE, TYPE 1 – **22.84 MILE**  
ITEM 642, CENTER LINE – **11.42 MILE**  
ITEM 642, STOP LINE – **20 FT**

CALCULATED  
JKN  
CHECKED  
DNM

GENERAL NOTES

MUS-666-0.00

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\_MGN\_002.dgn 14-JUL-2015 8:52AM jnelson1

**MAINTAINING TRAFFIC**

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON S.R. 666 BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-97.10 OR MT-97.12.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT, IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**WORK ZONE PAVEMENT MARKINGS**

ITEM 614 WORK ZONE CENTER LINE, CLASS II HAS BEEN ITEMIZED IN THE PLAN FOR USE. SURFACE COURSE TEMPORARY MARKINGS SHALL BE PLACED AS PER CMS 614.11, AS STATED, FULL RATE WORK ZONE MARKINGS CANNOT BE PLACED ON THE SURFACE COURSE. SINCE WE ARE USING SPRAY THERMOPLASTIC FINAL PAVEMENT MARKINGS. ALL OTHER WORK ZONE PAVEMENT MARKINGS NECESSARY SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTAINING TRAFFIC.

**ITEM 614, WORK ZONE MARKING SIGN**

IN ACCORDANCE WITH CMS SECTION 614.04, THE QUANTITIES OF WORK ZONE MARKING SIGN HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO BE USED AS DIRECTED BY THE ENGINEER.

W8-H12a (NO EDGE LINES):  
LOCATION 1A- 2 EACH, LOCATION 1B- 2 EACH, LOCATION 2 – 8 EACH,  
LOCATION 3 – 21 EACH

R4-1 (DO NOT PASS):  
LOCATION 1- 9 EACH, LOCATION 1B- 5 EACH LOCATION 2 – 8 EACH,  
LOCATION 3 – 33 EACH

R4-2 (PASS WITH CARE): LOCATION 3 – 17 EACH

**ITEM 614, WORK ZONE MARKING SIGN**

**LOCATION 1A – 11 EACH**  
**LOCATION 1B – 5 EACH**  
**LOCATION 2 – 16 EACH**  
**LOCATION 3 – 71 EACH**

IN ADDITION, THE CONTRACTOR SHALL ERECT A "GROOVED PAVEMENT" SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. ENSURE THESE SIGNS ARE IN PLACE BEFORE OPENING THE ROADWAY TO TRAFFIC. ERECT THESE SIGNS AT INTERSECTIONS OF THROUGH ROUTES TO WARN TRAFFIC OF THIS SURFACE CONDITION. "GROOVED PAVEMENT" SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

**DROPOFFS IN WORK ZONES**

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS SHALL BE TREATED AS PER STD. CONST. DWG. MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

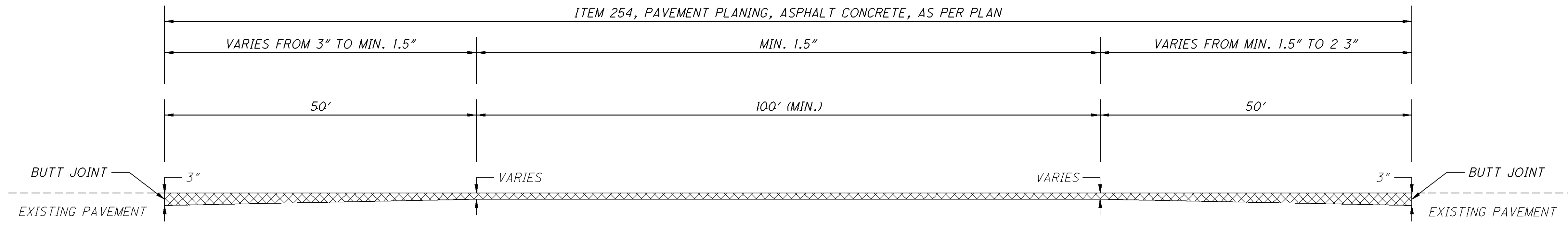
CALCULATED  
JKIN  
CHECKED  
DNM

**GENERAL NOTES**

**MUS-666-0.00**

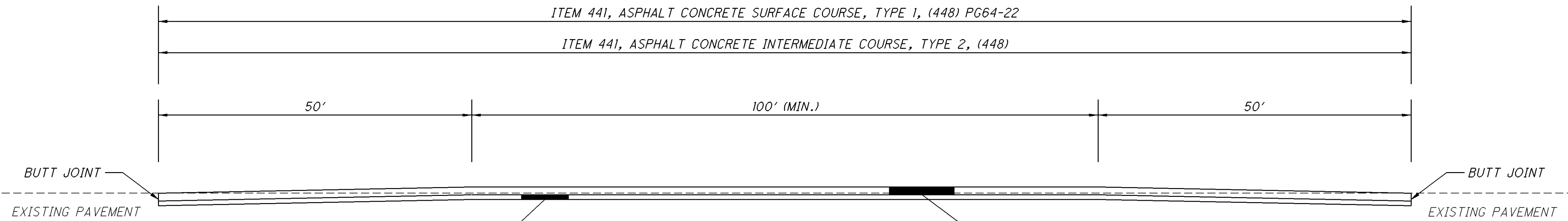
5  
12

**REMOVAL DETAIL**  
S.R. 666



@ LOCATIONS AS DIRECTED BY THE ENGINEER.  
20' (PAVEMENT WIDTH) X 200' (MINIMUM LENGTH)

**PROPOSED DETAIL**  
S.R. 666



ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE

ESTIMATED REPAIR AREAS

- LOCATION 1A  
(600 FT X 20 FT)/9 = 1,333.3 SQ. YD.
- LOCATION 1B  
(1,600 FT X 20 FT)/9 = 3,555.6 SQ. YD.
- LOCATION 2A  
(200 FT X 20 FT)/9 = 444.4 SQ. YD.
- LOCATION 2B  
(400 FT X 20 FT)/9 = 888.9 SQ. YD.
- LOCATION 3A  
(10,800 FT X 20 FT)/9 = 24,000 SQ. YD.
- LOCATION 3B  
(200 FT X 20 FT)/9 = 444.4 SQ. YD.

ITEM 441, ASPHALT CONCRETE SURFACE COURSE

CALCULATED  
JLS  
CHECKED  
DNM

PLAN DETAIL SHEET (SPOT LEVELING)

MUS-666-0.00

6  
12

Jnelson1

14-JUL-2015 8:55AM

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\MDS\_001.dgn

PAVEMENT DATA																		
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		PAVEMENT WIDTH	254		407		422		441 ASPHALT CONCRETE				614
					MILES	LIN. FT.		THICKNESS	PAVEMENT PLANING (FROM SHEET 6)	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	SINGLE CHIP SEAL, AS PER PLAN	FOG SEAL (APPROX. 0.18 GAL./SY) (INFORMATION ONLY)	THICKNESS	SURFACE COURSE, TYPE 1, (448), PG 64-22	THICKNESS	INTERMEDIATE COURSE, TYPE 2, (448)	WORK ZONE CENTER LINE, CLASS II
								INCHES	SQ. YD.	GAL.	GAL.	SQ. YD.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	MILE
1A	MUS	S.R. 666	0.00	0.57	0.57	3,009.6	20.0	SEE SHEET 6	1,333.3	100	67			1.25	46.3	1.75	64.9	1.14
LOCATION 1A TOTALS (CARRIED TO SUB-SUMMARY)									1,333.3	100	67			46.3		64.9	1.14	
1B	MUS	S.R. 666	0.57	1.78	1.21	6,388.8	20.0	SEE SHEET 6	3,555.6	267	178			1.25	123.5	1.75	172.9	2.42
LOCATION 1B TOTALS (CARRIED TO SUB-SUMMARY)									3,555.6	267	178			123.5		172.9	2.42	
2	MUS	S.R. 666	1.78	2.02	0.24	1,267.2	20.0	SEE SHEET 6	444.4	34	23			1.25	15.5	1.75	21.7	0.48
			2.02	2.75	0.73	3,854.4	20.0	SEE SHEET 6	888.9	67	45	8,565	1,542	1.25	30.9	1.75	43.3	1.46
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)									1,333.3	101	68	8,565	1,542	46.4		65.0	1.94	
3	MUS	S.R. 666	2.75	13.58	10.83	57,182.4	20.0	SEE SHEET 6	24,000.0	1,800	1,200	127,072	22,873	1.25	833.4	1.75	1,166.7	21.66
			13.67	14.17	0.50	2,640.0	20.0	SEE SHEET 6	444.4	34	23	5,867	1,056	1.25	15.5	1.75	21.7	1.00
LOCATION 3 TOTALS (CARRIED TO SUB-SUMMARY)									24,444.4	1,834	1223	132,939	23,929	848.9		1,188.4	22.66	

REPAIR DATA

MUS - 666 - 0.00

DETAIL	SEE STD. DWG. TC-65.11
1	ENTRANCE RAMP
2	EXIT RAMP
3	MULTI-LANE DIVIDED HIGHWAY

DETAIL	SEE STD. DWG. TC-65.11
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE-LANE BRIDGE
7	STOP APPROACH
8	THROUGH APPROACH
9	TWO-WAY LEFT TURN LANE

DETAIL	SEE STD. DWG. TC-65.11
10	APPROACH WTH LEFT-TURN LANE
11	HORIZONTAL CURVE 40'
12	HORIZONTAL CURVE ALT.
GAP	CENTERLINE AT 80' TYP.

REM=REMARKS

ITEM 621 RPM SUB-SUMMARY													
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		DETAIL	621		INFORMATION ONLY		REMARKS	
					MILES	LIN.FT.		RPM	RAISED PAVEMENT MARKER REMOVED	PRISMATIC RETRO-REFLECTOR COLORS			
										EACH	EACH		WHITE
2	MUS	S.R. 666	1.78	2.10	0.32	1,690	12	79	79		79	PC = 1.78 PT = 2.10 L=1584' 20' SPACING ON CENTERLINE	
			2.10	2.62	0.52	2,746	GAP	34	34		34		
			2.62	2.75	0.13	666	12	23	23		23	PC = 2.71 PT = 2.75 L=211' DEG 16 - CONTINUED BELOW	
SUBTOTALS FOR INFORMATION ONLY												136	
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								136	136				
3	MUS	S.R. 666	2.75	2.84	0.09	475	12	12	12		12	PC = 2.71 PT = 2.75 L=211' DEG 16 - CONTINUED FROM ABOVE	
			2.84	2.96	0.12	634	GAP	8	8		8		
			2.96	3.18	0.22	1,162	12	35	35		35	PC = 3.05 PT = 3.09 L=211' DEG 8	
			3.18	3.62	0.44	2,323	GAP	29	29		29		
			3.62	3.75	0.13	666	12	21	21		21	PC = 3.71 PT = 3.74 L=158' DEG 29	
			3.75	3.82	0.07	370	12	16	16		16	PC = 3.75 PT = 3.80 L=264' DEG 25	
			3.82	3.93	0.11	581	12	17	17		17	PC = 3.82 PT = 3.84 L=106' DEG 15	
			3.93	3.99	0.06	317	GAP	4	4		4		
			3.99	4.19	0.20	1,056	12	29	29		29	PC = 4.08 PT = 4.10 L=106' DEG 9	
			4.19	4.52	0.33	1,742	GAP	22	22		22		
			4.52	4.72	0.20	1,056	12	29	29		29	PC = 4.61 PT = 4.63 L=106' DEG 11	
			4.72	5.66	0.94	4,963	GAP	62	62		62		
			5.66	5.81	0.15	792	12	26	26		26	PC = 5.75 PT = 5.80 L=264' DEG 13	
			5.81	5.90	0.09	475	12	20	20		20	PC = 5.81 PT = 5.87 L=317' DEG 27	
			5.90	6.00	0.10	528	12	19	19		19	PC = 5.90 PT = 5.94 L=211' DEG 19	
			6.00	6.12	0.12	634	12	20	20		20	PC = 6.00 PT = 6.03 L=158' DEG 16	
			6.12	6.94	0.82	4,330	GAP	54	54		54		
			6.94	7.15	0.21	1,109	12	32	32		32	PC = 7.03 PT = 7.06 L=158' DEG 15	
			7.15	7.50	0.35	1,848	GAP	23	23		23		
			7.50	7.65	0.15	792	12	26	26		26	PC = 7.59 PT = 7.63 L=211' DEG 14	
			7.65	7.76	0.11	581	12	20	20		20	PC = 7.65 PT = 7.69 L=211' DEG 26	
			7.76	7.82	0.06	317	12	12	12		12	PC = 7.76 PT = 7.79 L=158' DEG 12	
			7.82	7.92	0.10	528	12	16	16		16	PC = 7.82 PT = 7.84 L=106' DEG 12	
			7.92	8.01	0.09	475	12	18	18		18	PC = 7.92 PT = 7.96 L=211' DEG 13	
			8.01	8.13	0.12	634	12	20	20		20	PC = 8.01 PT = 8.04 L=158' DEG 15	
			8.13	8.25	0.12	634	12	20	20		20	PC = 8.13 PT = 8.16 L=158' DEG 11	
			8.25	8.40	0.15	792	GAP	10	10		10		
			8.40	8.63	0.23	1,214	12	37	37		37	PC = 8.49 PT = 8.54 L=264' DEG 19	
			8.63	8.86	0.23	1,214	12	36	36		36	PC = 8.73 PT = 8.77 L=211' DEG 12	
			8.86	9.41	0.55	2,904	GAP	36	36		36		
			9.41	9.62	0.21	1,109	12	32	32		32	PC = 9.50 PT = 9.53 L=158' DEG 12	
			9.62	9.78	0.16	845	12	24	24		24	PC = 9.67 PT = 9.69 L=106' DEG 17	
			9.78	9.86	0.08	422	GAP	5	5		5		
			9.86	10.11	0.25	1,320	12	43	43		43	PC = 9.95 PT = 10.02 L=370' DEG 17	
			10.11	11.03	0.92	4,858	GAP, 7	74	74	16	58	STOP APPROACH AT MOLLIES ROCK RD	
			11.03	14.17	3.14	16,579	GAP, 7	246	246	16	230	STOP APPROACH AT SR 208	
SUBTOTALS FOR INFORMATION ONLY											32	1,121	
LOCATION 3 TOTALS (CARRIED TO SUB-SUMMARY)								1,153	1,153				

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\_LSS\_001.dgn 14-JUL-2015 9:11AM Jnelson1

LOCATION 1A SHEET TOTALS			ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
4	5	7					
							<b>ROADWAY</b>
113			253	02000	113	CU YD	PAVEMENT REPAIR
		1,334	254	01000	1,334	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
		100	407	10000	100	GALLON	TACK COAT
		67	407	14000	67	GALLON	TACK COAT FOR INTERMEDIATE COURSE
		47	441	50000	47	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 64-22M
		65	441	50300	65	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
1.14			642	00100	1.14	MILE	EDGE LINE, 4", TYPE 1
0.57			642	00300	0.57	MILE	CENTER LINE, TYPE 1
288			642	00390	288	FT	CHANNELIZING LINE, 8"
24			642	00490	24	FT	STOP LINE
6			642	01290	6	EACH	LANE ARROW
4			642	01408	4	EACH	WORD ON PAVEMENT, 96"
	11		614	12460	11	EACH	WORK ZONE MARKING SIGN
		1.14	614	21400	1.14	MILE	WORK ZONE CENTER LINE, CLASS II

LOCATION 1B SHEET TOTALS			ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
4	5	7					
							<b>ROADWAY</b>
239			253	02000	239	CU YD	PAVEMENT REPAIR
		3,556	254	01000	3,556	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
		267	407	10000	267	GALLON	TACK COAT
		178	407	14000	178	GALLON	TACK COAT FOR INTERMEDIATE COURSE
		124	441	50000	124	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 64-22M
		173	441	50300	173	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
2.42			642	00100	2.42	MILE	EDGE LINE, 4", TYPE 1
1.21			642	00300	1.21	MILE	CENTER LINE, TYPE 1
12			642	00490	12	FT	STOP LINE
	5		614	12460	5	EACH	WORK ZONE MARKING SIGN
		2.42	614	21400	2.42	MILE	WORK ZONE CENTER LINE, CLASS II

CALCULATED  
JKIN  
CHECKED  
DNM

LOCATION 1 SUB-SUMMARY

MUS - 666 - 0.00

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\_LSS\_002.dgn 13-JUL-2015 1:33PM dmorgan

LOCATION 2 SHEET TOTALS				ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
4	5	7	8					
								<i>ROADWAY</i>
191				253	02000	191	CU YD	PAVEMENT REPAIR
		1,334		254	01000	1,334	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
		101		407	10000	101	GALLON	TACK COAT
		68		407	14000	68	GALLON	TACK COAT FOR INTERMEDIATE COURSE
		8,565		422	10001	8,565	SQ YD	SINGLE CHIP SEAL, AS PER PLAN
		47		441	50000	47	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 64-22M
		65		441	50300	65	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
			136	621	00100	136	EACH	RPM
			136	621	54000	136	EACH	RAISED PAVEMENT MARKER REMOVED
1.94				642	00100	1.94	MILE	EDGE LINE, 4", TYPE 1
0.97				642	00300	0.97	MILE	CENTER LINE, TYPE 1
	16			614	12460	16	EACH	WORK ZONE MARKING SIGN
		1.94		614	21400	1.94	MILE	WORK ZONE CENTER LINE, CLASS II

CALCULATED JKIN CHECKED DNM	<b>LOCATION 2 SUB-SUMMARY</b>		
<b>MUS - 666 - 0.00</b>			
<table border="1" style="margin: auto;"> <tr> <td style="padding: 5px;">10</td> </tr> <tr> <td style="padding: 5px;">12</td> </tr> </table>		10	12
10			
12			

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\_LSS\_003.dgn 13-JUL-2015 1:34PM dimorgan

LOCATION 3 SHEET TOTALS				ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
4	5	7	8					
								<i>ROADWAY</i>
2,162				253	02000	2,162	CU YD	PAVEMENT REPAIR
		24,445		254	01000	24,445	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
		1,834		407	10000	1,834	GALLON	TACK COAT
		1,223		407	14000	1,223	GALLON	TACK COAT FOR INTERMEDIATE COURSE
		132,939		422	10001	132,939	SQ YD	SINGLE CHIP SEAL, AS PER PLAN
		849		441	50000	849	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 64-22
		1,189		441	50300	1,189	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
			1,153	621	00100	1,153	EACH	RPM
			1,153	621	54000	1,153	EACH	RAISED PAVEMENT MARKER REMOVED
22.84				642	00100	22.84	MILE	EDGE LINE, 4", TYPE 1
11.42				642	00300	11.42	MILE	CENTER LINE, TYPE 1
20				642	00490	20	FT	STOP LINE
	71			614	12460	71	EACH	WORK ZONE MARKING SIGN
		22.66		614	21400	22.66	MILE	WORK ZONE CENTER LINE, CLASS II

CALCULATED JKIN CHECKED DNM	<b>LOCATION 3 SUB-SUMMARY</b>
<b>MUS - 666 - 0.00</b>	
11 12	

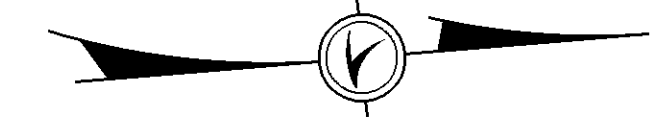
P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247PT1\_MGS\_001.dgn 30-JUL-2015 12:20PM dmorgan

PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1A 01/S<2/PV/ZANE	LOCATION 1B 04/NFA/PV/ZANE	LOCATION 2 02/NFA/PV	LOCATION 3 03/NFA/PV						
								<b>ROADWAY</b>	
113	239	191	2,162	253	02000	2,705	CU YD	PAVEMENT REPAIR	
1,334	3,556	1,334	24,445	254	01000	30,669	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
100	267	101	1,834	407	10000	2,302	GALLON	TACK COAT	
67	178	68	1,223	407	14000	1,536	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
		8,565	132,939	422	10001	141,504	SQ YD	SINGLE CHIP SEAL, AS PER PLAN	4
47	124	47	849	441	50000	1,067	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 64-22M	
65	173	65	1,189	441	50300	1,492	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
		136	1,153	621	00100	1,289	EACH	RPM	
		136	1,153	621	54000	1,289	EACH	RAISED PAVEMENT MARKER REMOVED	
1.14	2.42	1.94	22.84	642	00100	28.34	MILE	EDGE LINE, 4", TYPE 1	
0.57	1.21	0.97	11.42	642	00300	14.17	MILE	CENTER LINE, TYPE 1	
288				642	00390	288	FT	CHANNELIZING LINE, 8"	
24	12		20	642	00490	56	FT	STOP LINE	
6				642	01290	6	EACH	LANE ARROW	
4				642	01408	4	EACH	WORD ON PAVEMENT, 96"	
11	5	16	71	614	12460	103	EACH	WORK ZONE MARKING SIGN	
1.14	2.42	1.94	22.66	614	21400	28.16	MILE	WORK ZONE CENTER LINE, CLASS II	
								<b>INCIDENTALS</b>	
4%	9%	7%	80%	103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
4%	9%	7%	80%	614	11000	LUMP		MAINTAINING TRAFFIC	
4%	9%	7%	80%	619	16000	2	MONTH	FIELD OFFICE, TYPE A	
4%	9%	7%	80%	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
4%	9%	7%	80%	624	10000	LUMP		MOBILIZATION	

<b>GENERAL SUMMARY</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">CALCULATED</td> <td style="width: 50%; text-align: center;">JKIN</td> </tr> <tr> <td style="width: 50%; text-align: center;">CHECKED</td> <td style="width: 50%; text-align: center;">DNM</td> </tr> </table>	CALCULATED	JKIN	CHECKED	DNM
CALCULATED	JKIN				
CHECKED	DNM				
<b>MUS - 666 - 0.00</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">12</td> <td style="width: 50%; text-align: center;">12</td> </tr> </table>	12	12		
12	12				



P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\_Schematic1.dgn 09-JUL-2015 4:36PM dmorgan

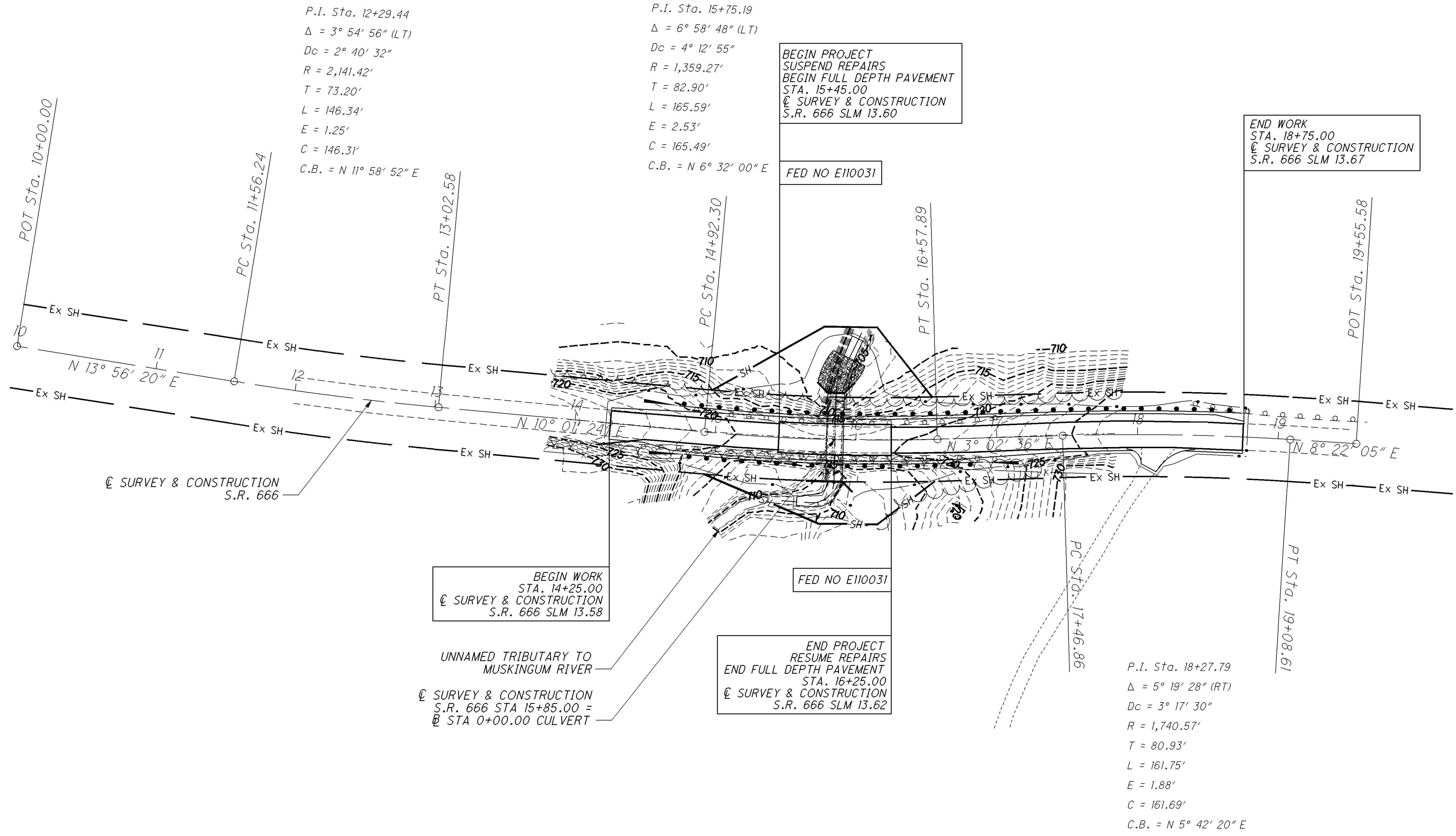


CALCULATED  
BCT  
CHECKED  
DNM

0 20 40 60  
HORIZONTAL  
SCALE IN FEET

MUS - 666 - 13.58  
2  
38

**SCHEMATIC PLAN**



BEGIN PROJECT  
SUSPEND REPAIRS  
BEGIN FULL DEPTH PAVEMENT  
STA. 15+45.00  
@ SURVEY & CONSTRUCTION  
S.R. 666 SLM 13.60

FED NO E110031

END WORK  
STA. 18+75.00  
@ SURVEY & CONSTRUCTION  
S.R. 666 SLM 13.67

BEGIN WORK  
STA. 14+25.00  
@ SURVEY & CONSTRUCTION  
S.R. 666 SLM 13.58

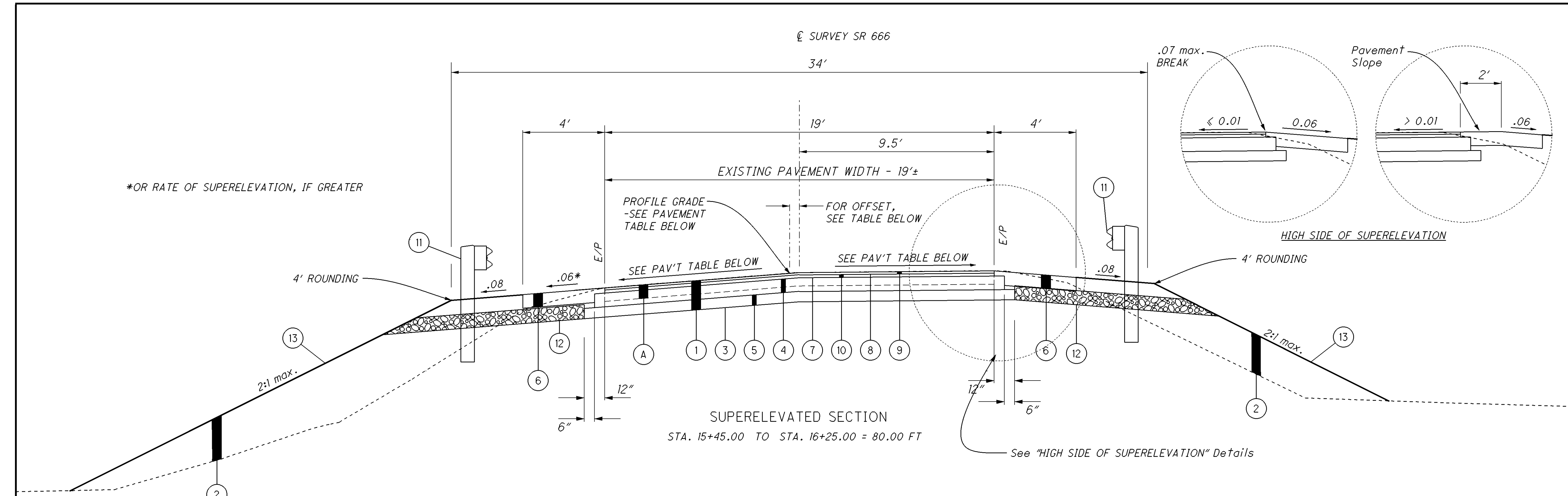
FED NO E110031

END PROJECT  
RESUME REPAIRS  
END FULL DEPTH PAVEMENT  
STA. 16+25.00  
@ SURVEY & CONSTRUCTION  
S.R. 666 SLM 13.62

UNNAMED TRIBUTARY TO  
MUSKINGUM RIVER  
@ SURVEY & CONSTRUCTION  
S.R. 666 STA 15+85.00 =  
@ STA 0+00.00 CULVERT

P.I. Sta. 18+27.79  
Δ = 5° 19' 28" (RT)  
Dc = 3° 17' 30"  
R = 1,740.57'  
T = 80.93'  
L = 161.75'  
E = 1.88'  
C = 161.69'  
C.B. = N 5° 42' 20" E

☉ SURVEY SR 666



\*OR RATE OF SUPERELEVATION, IF GREATER

SUPERELEVATED SECTION  
STA. 15+45.00 TO STA. 16+25.00 = 80.00 FT

See "HIGH SIDE OF SUPERELEVATION" Details

MARK	ITEM	DESCRIPTION
(A)		EXISTING ASPHALT CONCRETE PAVEMENT ±8"
(1)	203	EXCAVATION
(2)	203	EMBANKMENT
(3)	204	SUBGRADE COMPACTION
(4)	301	6" BITUMINOUS AGGREGATE BASE, PG 64-22
(5)	304	6" AGGREGATE BASE
(6)	617	COMPACTED AGGREGATE, AS PER PLAN (8" THICKNESS)
(7)	407	TACK COAT (@ 0.075 GAL./SQ. YD.)
(8)	407	TACK COAT FOR INTERMEDIATE COURSE (@ 0.05 GAL./SQ. YD.)
(9)	441	1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22
(10)	441	1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
(11)	606	GUARDRAIL, TYPE MGS
(12)	605	AGGREGATE DRAINS
(13)	659	SEEDING AND MULCHING, 3B

NOTE:  
AGGREGATE SHOULDERS SHALL BE CONSTRUCTED FROM STA. 14+25.00 TO STA. 18+70.00. FOR DIMENSIONS AND CALCULATED QUANTITIES, SEE SHEET 15.

PAVEMENT TABLE

LT AGGREGATE SHOULDER			LT EDGE OF PAVEMENT			STATION	PROFILE GRADE		RT EDGE OF PAVEMENT			RT AGGREGATE SHOULDER		
ELEVATION	SLOPE	WIDTH	ELEVATION	SLOPE	WIDTH		OFFSET	ELEVATION	WIDTH	SLOPE	ELEVATION	WIDTH	SLOPE	ELEVATION
718.81	-6.00%	4.0'	719.09	-3.67%	9.5'	15+45.00	-0.40	719.44	9.5'	-3.25%	719.13	4.0'	-6.00%	718.83
718.42	-6.00%	4.0'	718.72	-4.92%	9.5'	15+65.00	-0.22	719.19	9.5'	-1.87%	718.98	4.0'	-6.00%	718.87
718.03	-7.37%	4.0'	718.42	-7.37%	9.5'	15+85.00	-0.14	719.12	9.5'	-0.45%	719.07	4.0'	-6.00%	718.83
718.13	-7.96%	4.0'	718.45	-7.96%	9.5'	16+05.00	-0.07	719.32	9.5'	+0.90%	719.42	4.0'	-6.00%	719.18
718.52	-8.09%	4.0'	718.84	-8.09%	9.5'	16+25.00	-0.12	719.72	9.5'	+2.34%	719.98	4.0'	-4.66%	719.91

TYPICAL SECTIONS

MUS - 666 - 13.58

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\_PTS.dgn 10-JUL-2015 12:09PM Jnelson1

**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN IF OTHERWISE SHOWN.

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

**CABLE:**

TIME WARNER CABLE  
3760 INTERCHANGE DRIVE  
COLUMBUS, OHIO 43204  
ATTN: RAY MAURER  
614-481-5262

**GAS:**

NATIONAL GAS AND OIL  
120 O'NEIL DRIVE  
HEBRON, OHIO 43155  
ATTN: GREG WILSON  
740-348-1254

**ELECTRIC:**

GUSERNSEY MUSKINGUM  
ELECTRIC COOPERATIVE, INC.  
17 SOUTH LIBERTY STREET  
NEW CONCORD, OHIO 43762  
ATTN: BOB CAMPBELL  
740-826-7661

**TELEPHONE:**

AT&T OHIO  
160 NORTH SIXTH STREET  
ZANESVILLE, OHIO 43701  
ATTN: BARRETT TAMASOVICH  
740-454-3552

**AMERICAN ELECTRIC  
POWER CO.**

850 TECH CENTER DRIVE  
GAHANNA, OHIO 43230  
ATTN: PAUL PAXTON  
614-883-6831

**WATER:**

CITY OF ZANESVILLE WATER  
DEPARTMENT  
1084 CENTRAL AVENUE  
ZANESVILLE, OHIO 43701  
ATTN: JOHN SMITH  
740-819-8816

UNDERGROUND UTILITY LOCATIONS ARE SHOWN FOR INFORMATIONAL PUPOSES ONLY. THOUGH THEY ARE BELIEVED TO BE ACCURATE, THEIR LOCATION IS AS MARKED ON THE GROUND BY THE UTILITY COMPANIES  
PER OUPS CONFIRMATION # **A 309 900 080** AND OGPUPS # **102251** AND THOSE MARKINGS SUBSEQUENTLY BEING SURVEYED AS A PART OF THIS PROJECT.

**CONTINGENCY QUANTITIES**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR THE PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**CONTRACTOR'S USE OF ODOT RIGHT-OF-WAY**

THE CONTRACTOR IS REQUIRED TO HIRE A CULTURAL RESOURCE ENVIRONMENTAL CONSULTANT PER CONSTRUCTION AND MATERIAL SPECIFICATIONS IN 105.16.

**NOTIFICATION OF ROAD CLOSURE OR RESTRICTION**

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT [D05.PIO@DOT.STATE.OH.US](mailto:D05.PIO@DOT.STATE.OH.US)

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT [BRIAN.BOSCH@DOT.STATE.OH.US](mailto:BRIAN.BOSCH@DOT.STATE.OH.US)

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT [HAULING.PERMITS@DOT.STATE.OH.US](mailto:HAULING.PERMITS@DOT.STATE.OH.US)

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

**ELEVATION DATUM**

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

**VERTICAL POSITIONING:**  
ORTHOMETRIC HEIGHT DATUM: **NAVD 88**  
GEOID: **GEOID12A (Conus)**

**HORIZONTAL POSITIONING:**  
REFERENCE FRAME: **NAD83 (CORS 96)**  
ELLIPSOID: **GRS 80**  
MAP PROJECTION: **LAMBERT CONFORMAL CONIC**  
COORDINATE SYSTEM: **OHIO STATE PLANE (SOUTH ZONE)**

**UNITS ARE IN U.S. SURVEY FEET.**

**CONTROL POINTS**

Point	North	East	Elevation	Station	Offset
SV1	770.023.8031	2,108,227.4543	721.355	14+51.98	-17.3628
SV2	770.324.3265	2,108,260.9303	724.562	17+56.59	-14.7618

Features (2): CNPT  
Descriptions (2): 1" REBAR W/ALUM. ODOT CAP

**ENDANGERED SPECIES**

THE PROJECT IS WITHIN THE KNOWN RANGE OF THE FEDERALLY ENDANGERED INDIANA BAT AND FEDERALLY THREATENED NORTHERN LONG-EARED BAT AND SUITABLE ROOSTING TREES HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. CLEARING OF ANY TREES THAT HAVE SUITABLE SUMMER BROOD REARING OR ROOSTING HABITAT FOR THE INDIANA AND/OR NORTHERN LONG-EARED BATS (E.G. TREES WITH EXFOLIATING BARK AND/OR CAVITIES), SHALL OCCUR BEFORE APRIL 1 AND AFTER SEPTEMBER 30 WHEN THE BATS WOULD NOT BE USING SUCH HABITAT.

FEDERALLY LISTED FRESHWATER MUSSELS ARE KNOWN TO OCCUR IN THE MUSKINGUM RIVER NEAR DRESDEN. UNDER NO CIRCUMSTANCES MAY ANY WORK OCCUR IN THE MUSKINGUM RIVER WHICH IS LOCATED DOWNSTREAM OF THE PROJECT AREA. STREAM IMPACTS DOWNSTREAM OF THE CULVERT SHALL BE KEPT TO THE MINIMUM POSSIBLE. BMP'S MUST BE UTILIZED TO MINIMIZE THE CREATION OF TURBIDITY AND SEDIMENTATION FROM THE PROJECT AREA.

**ITEM 201, CLEARING AND GRUBBING**

THE DEPARTMENT HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE **LUMP** SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

REMOVE ALL TREES AND STUMPS FOR THE CONSTRUCTION OF THE PROPOSED GUARDRAIL, ALONG WITH ANY TREES WITHIN 5.5' OF THE PROPOSED GUARDRAIL UNDER THE **LUMP** SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

**ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN**

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH ACCORDING TO SECTION 209.06 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

ALL EXCESS MATERIAL REMAINING AROUND GUARDRAIL AND OTHER AREAS AFTER THE GRADER WORK IS COMPLETED AND NOT DISPOSED OF ON THE SITE, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL EQUIPMENT, LABOR, OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

THIS WORK MAY BE INTERMITTENT AND SPREAD THROUGHOUT THE PROJECT LIMITS, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL ONLY BE PAID FOR INTERSECTIONS AND GAPS IF THEY ARE WITHIN THE LIMITS OF A SECTION MARKED BY THE ENGINEER FOR GRADING.

**ITEM 407, TACK COAT & TACK COAT FOR INTERMEDIATE COURSE**

THE RATE OF APPLICATION OF THE 407 TACK COAT AND 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 FOR TACK COAT AND 0.05 GALLONS PER SQUARE YARD FOR TACK COAT FOR INTERMEDIATE COURSE FOR ESTIMATING PURPOSES ONLY.

**ITEM 408, PRIME COAT, AS PER PLAN**

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GALLON PER SQUARE YARD TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

PRIME COAT QUANTITIES ARE CALCULATED ON SHEET 15 AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

CALCULATED  
DNM  
CHECKED  
DNM

GENERAL NOTES

MUS - 666 - 13.58

4  
38

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\_GGN\_001.dgn 10-JUL-2015 12:16PM jnelson1

**SAFETY EDGE PLAN NOTE**

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANS TECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TransTech Systems, Inc.  
1594 State Street  
Schenectady, NY 12304  
1-800-724-6306  
[www.transtechsys.com](http://www.transtechsys.com)

Advant-Edge Paving Equipment, LLC.  
P.O. Box 9163  
Niskayuna, NY 12309-0163  
518-280-6090  
[www.advantaedgепaving.com](http://www.advantaedgепaving.com)

Carlson Safety Edge End Gate  
18425 50<sup>th</sup> Avenue East  
Tacoma, WA 98446  
253-875-8000

Troxler Electronics Laboratories, Inc.  
3008 E. Cornwallis Rd.  
Research Triangle Park, NC 27709  
1-877-TROXLER  
[www.troxlerlabs.com](http://www.troxlerlabs.com)

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 mm) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO PROVIDE EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

**ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22 - 39 CU. YD.**

**ITEM 621 RAISED PAVEMENT MARKER**  
**ITEM 621 RAISED PAVEMENT MARKER REMOVED**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS TO REMOVE AND REPLACE RAISED PAVEMENT MARKERS (RPM'S) WITHIN THE WORK LIMITS OF THIS PROJECT. RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO DETOURING TRAFFIC. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

THE CONTRACTOR SHALL INSTALL NEW RPM'S ALONG THE CENTERLINE OF S.R. 666. THE RPM'S SHALL BE TWO-WAY, YELLOW/YELLOW. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

**ITEM 621 RPM - 7 EACH**  
**ITEM 621 RAISED PAVEMENT MARKER REMOVED - 7 EACH**

**ITEM SPECIAL - MAILBOX SUPPORT**

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

THE CONTRACTOR SHALL REFER TO FIGURE 803-1 IN VOLUME ONE (ROADWAY DESIGN) OF THE LOCATION AND DESIGN MANUAL FOR MORE INFORMATION.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181. ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR **ITEM SPECIAL - MAILBOX SUPPORT SYSTEM, (SINGLE)**. FOR LOCATIONS, SEE SHEET 16. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

**ITEM SPECIAL - MAILBOX SUPPORT SYSTEM (SINGLE) - 4 EACH**

**ITEM 511 PRECAST WINGWALLS OR HEADWALLS FOR ITEM 611 ITEMS**

FOR ITEMS 706.05, 706.051, 706.052 AND 706.053 WITH A CAST-IN-PLACE WINGWALL OR HEADWALL, A PRECAST ALTERNATIVE MAY BE FURNISHED PER 611.03. THE PRECAST ALTERNATIVE WILL MEET THE CAST-IN-PLACE STRUCTURAL DESIGN LOADINGS, DESIGN HEIGHT AND DESIGN LENGTH DIMENSIONS.

FULL COMPENSATION FOR THE PRECAST WINGWALL OR HEADWALL IS THE NUMBER OF CUBIC YARDS OF ITEM 511 OR SUPPLEMENTAL SPECIFICATION 898, AND POUNDS OF ITEM 509 FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

**ITEM 617, COMPACTED AGGREGATE, AS PER PLAN**

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE. ALL QUALITY REQUIREMENTS EXCEPT SHALE SHALL BE WAIVED. OTHER GRADATION REQUIREMENTS SHALL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX SHALL BE WAIVED. IF SO PERMITTED, THE CONTRACTOR MAY USE RECYCLED ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

**SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

**ITEM 659, SEEDING AND MULCHING, CLASS 1 1,988 SY**  
(Total carried from Sheet 17)

**ITEM 659, REPAIR SEEDING AND MULCHING 100 SY**  
(5% of the permanent seeded area)  
0.05 x 1,988 = 99.4

**ITEM 659, COMMERCIAL FERTILIZER 0.54 TON**  
(One Ton per 7,410 SY of the permanent seeded area)  
2 x (1,988 ÷ 7,410) = 0.54

**ITEM 659, LIME 0.41 ACRE**  
(Permanent seeded area)  
1,988 SY x 9 SF/SY ÷ 43,560 SF/ACRE = 0.41 ACRE

**ITEM 659, WATER 17 MGAL**  
(0.0027 MGAL per SY of the permanent seeded area)  
3 x (1,988 x 0.0027) = 16.1

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSSOVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

CALCULATED  
DMM  
CHECKED  
DMM

GENERAL NOTES

MUS - 666 - 13.58

5  
38

**ITEM 614, MAINTAINING TRAFFIC**

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON SR 666 SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR WHEN THROUGH TRAFFIC MAY BE DETOURED AS PER PROPOSAL NOTE 124. DAMAGES SHALL BE AS PER PROPOSAL NOTE 124 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED TIME. **THE CONTRACTOR CANNOT CLOSE THE ROAD UNTIL AFTER JUNE 13, 2016.**

THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES, GATES AND LIGHTS, AS DETAILED IN SCD MT-101.60, AT THE LOCATIONS SHOWN ON SHEET 9, DURING THE PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE CONTRACTOR SHALL SUBMIT, IN WRITING A SCHEDULE OF OPERATIONS TO THE DISTRICT DEPUTY DIRECTOR AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IMMEDIATELY, AS PER 614.03 (C).

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT, IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**ACCESS TO ADJACENT PROPERTIES**

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL RESIDENTIAL DRIVES AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 614.

DRIVEWAYS SHALL BE CLOSED TO TRAFFIC FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING APRON AND CONSTRUCT THE NEW APRON.

THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS A FIVE DAY MINIMUM WRITTEN NOTICE AS TO WHEN THE DRIVEWAYS WILL BE CLOSED FOR CONSTRUCTION.

TEMPORARY ACCESS WILL BE MAINTAINED, AS DIRECTED BY THE PROJECT ENGINEER, USING ITEM 410, COMPACTED SURFACE, TYPE A OR B.

**DROPOFFS IN WORK ZONES**

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

**BUTT JOINT**

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT THE EXTRA AREAS WITH WEARING COURSE REMOVED.

**BUTT JOINTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-3.1 UNLESS OTHERWISE SHOWN IN THE PLANS.**

MINIMUM BUTT JOINT LENGTHS SHALL BE 35' ON THE MAINLINE AND 10' ON THE EXTRA AREAS.

Location	Description	ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
		CY
S.R. 555	Begin Work	1.2
S.R. 555	End Work	1.1
Twp. Rd. 129	End Work	1.0
Twp. Rd. 467	End Work	0.9
<b>Total (Carried to General Summary)</b>		<b>4.2</b>

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN**

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, TWO CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 475 FT. AND 650 FT. RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (cont'd.)**

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN ONE HOUR FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTORS NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER.

2 PCMS FOR 30 DAYS (2 X30 = 60)

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN,  
AS PER PLAN 60 DAY**

**A + B BIDDING**

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO CLOSE AND DETOUR TRAFFIC ON S.R. 666 (MUS-666-13.58 PART 2) AS SHOWN ON SHEETS 8-9.

SEE PROPOSAL NOTE 124 FOR INFORMATION ON CLOSURE PERIOD AND TABLE BELOW.

USE THE FOLLOWING INFORMATION IN COMBINATION WITH THE PROPOSAL NOTE A + B BIDDING. THE CONTRACTOR WILL BID THE NUMBER OF CALENDAR DAYS TO COMPLETE THE SEGMENT AS LISTED IN THE PROPOSAL.

CONTRACT SEGMENT – LOCATION OF CRITICAL WORK	MINIMUM DAYS	MAXIMUM DAYS	MAXIMUM INCENTIVE DAYS	INCENTIVE/ DISINCENTIVE \$ PER TIME PERIOD	MAXIMUM INCENTIVE
INSTALLATION OF CULVERT MUS-666-13.58 PART 2	7	10	3	10,000	30,000

THE FINAL COMPLETION DATE FOR THE PROJECT WILL BE AS LISTED IN THE PROPOSAL.

THE FINAL SURFACE COURSE AND PAVEMENT MARKINGS ON S.R. 666 CAN BE COMPLETED AS A FLAGGING OPERATION.

S.R. 666 SHALL ONLY BE CLOSED TO TRAFFIC DURING THE TIME THAT LOCAL SCHOOLS ARE CLOSED FOR THE SUMMER (APPROXIMATELY JUNE 13, 2016 TO AUGUST 12, 2016).

**DETOUR ROUTES**

THE ROUTES ARE SHOWN ON SHEET 8 & 9. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THE ROUTES IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DETOUR ROUTES SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DETOUR ROUTES.

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22 25 CU. YD.

ITEM 407, TACK COAT 54 GAL.

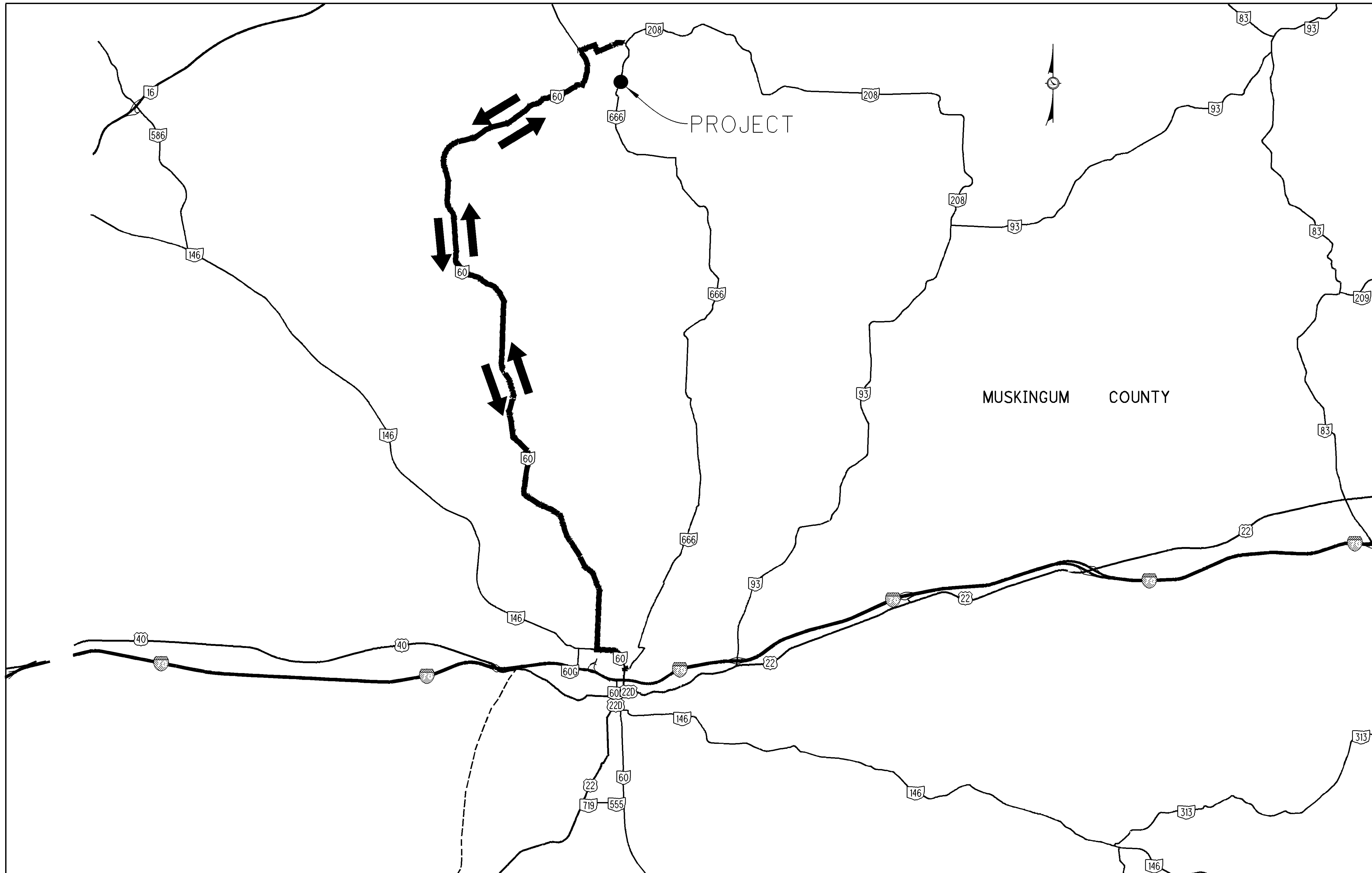
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 5 CU. YD.

CALCULATED  
DNM  
CHECKED  
DNM

MAINTENANCE OF TRAFFIC GENERAL NOTES

MUS - 666 - 13.58

STATE DETOUR MAP



**DESIGNATED STATE DETOUR ROUTE**

THE STATE DETOUR ROUTE WHICH IS SR 208 AND SR 60. (FOR DETOUR LIMITATIONS, SEE "ITEM 614 MAINTAINING TRAFFIC" NOTE ON SHEET 6.)



**ITEM 614 DETOUR SIGNING, AS PER PLAN**

THE CONTRACTOR SHALL SUPPLY, ERECT, MAINTAIN, AND REMOVE THE DETOUR SIGNING. ROUTE SIGNS DESIGNATED IN THE PLAN AS "ODOT SUPPLIED" SHALL BE PICKED UP AND RETURNED BY THE CONTRACTOR TO THE ODOT DISTRICT FIVE OFFICE LOCATED AT 9600 JACKSONTOWN ROAD, JACKSONTOWN, OH 43030. A MINIMUM OF SEVEN DAYS PRIOR TO PICK UP OF ALL ROUTE SIGNS DESIGNATED IN THE PLAN AS "ODOT SUPPLIED", THE CONTRACTOR SHALL NOTIFY THE DISTRICT 5 ROADWAY SERVICES MANAGER AT 740-323-4400. PAYMENT FOR ALL MATERIAL, LABOR, AND EQUIPMENT TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 DETOUR SIGNING, AS PER PLAN (FOR SIGNING DETAILS, SEE SHEET 9).

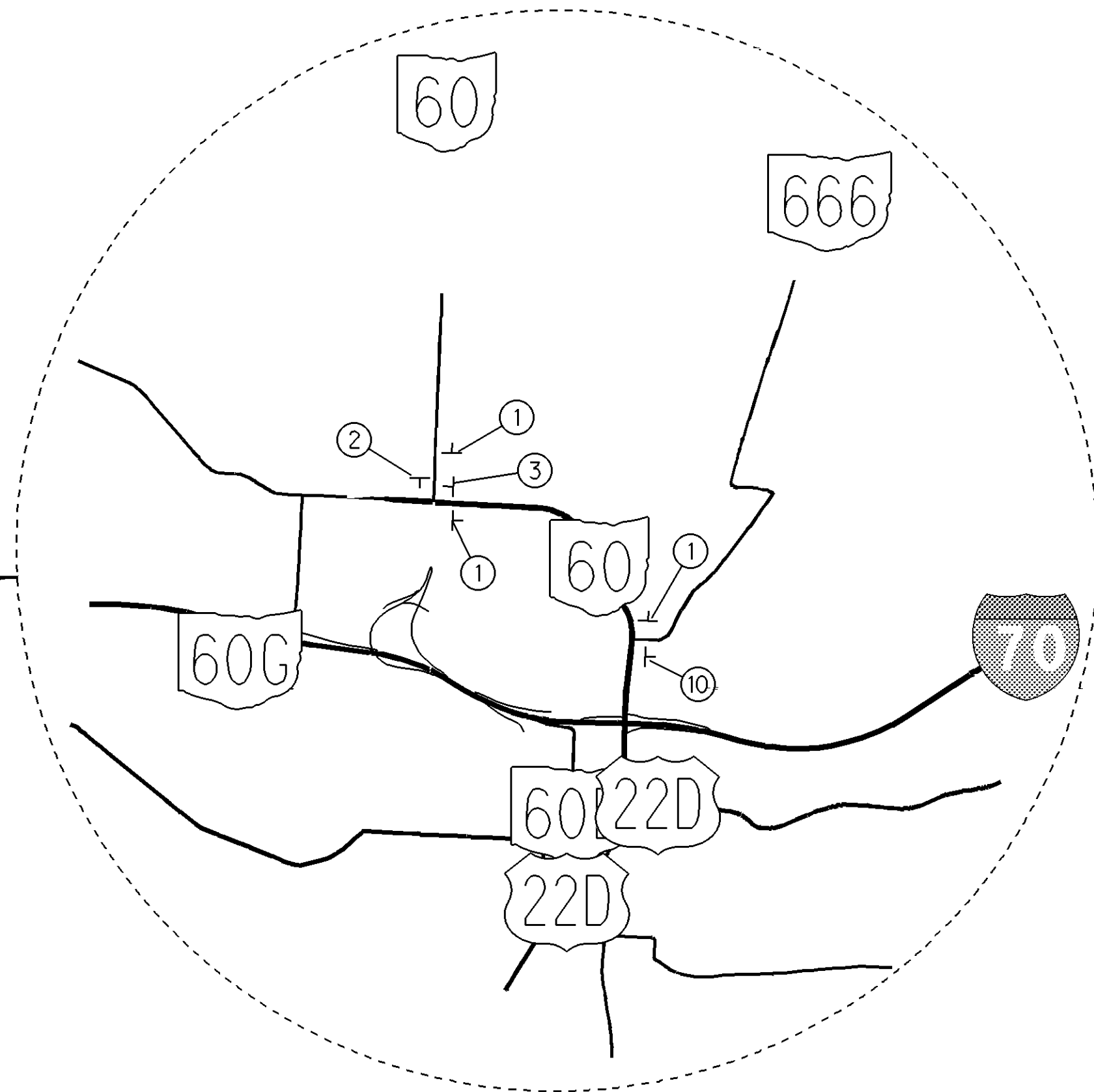
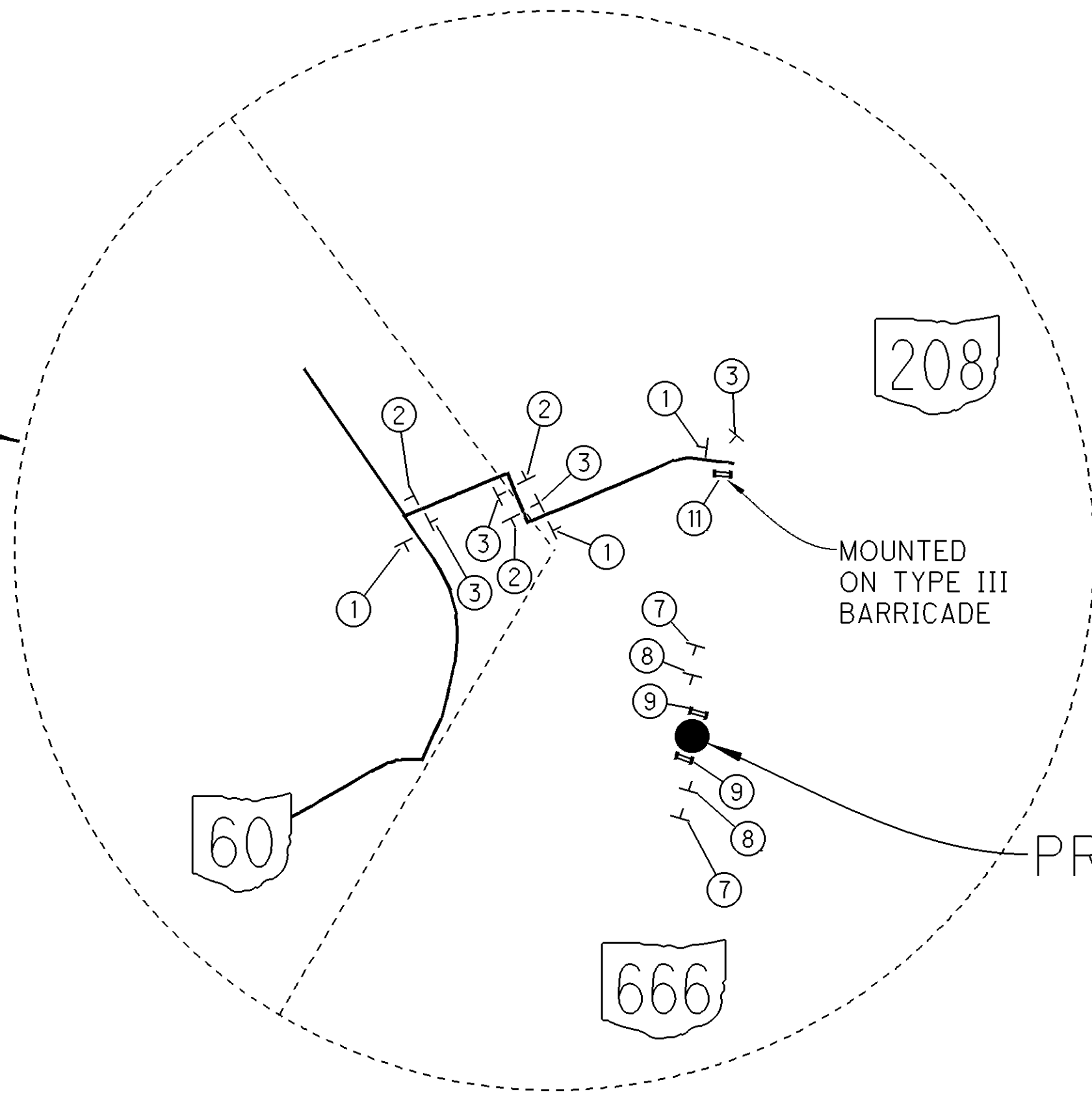
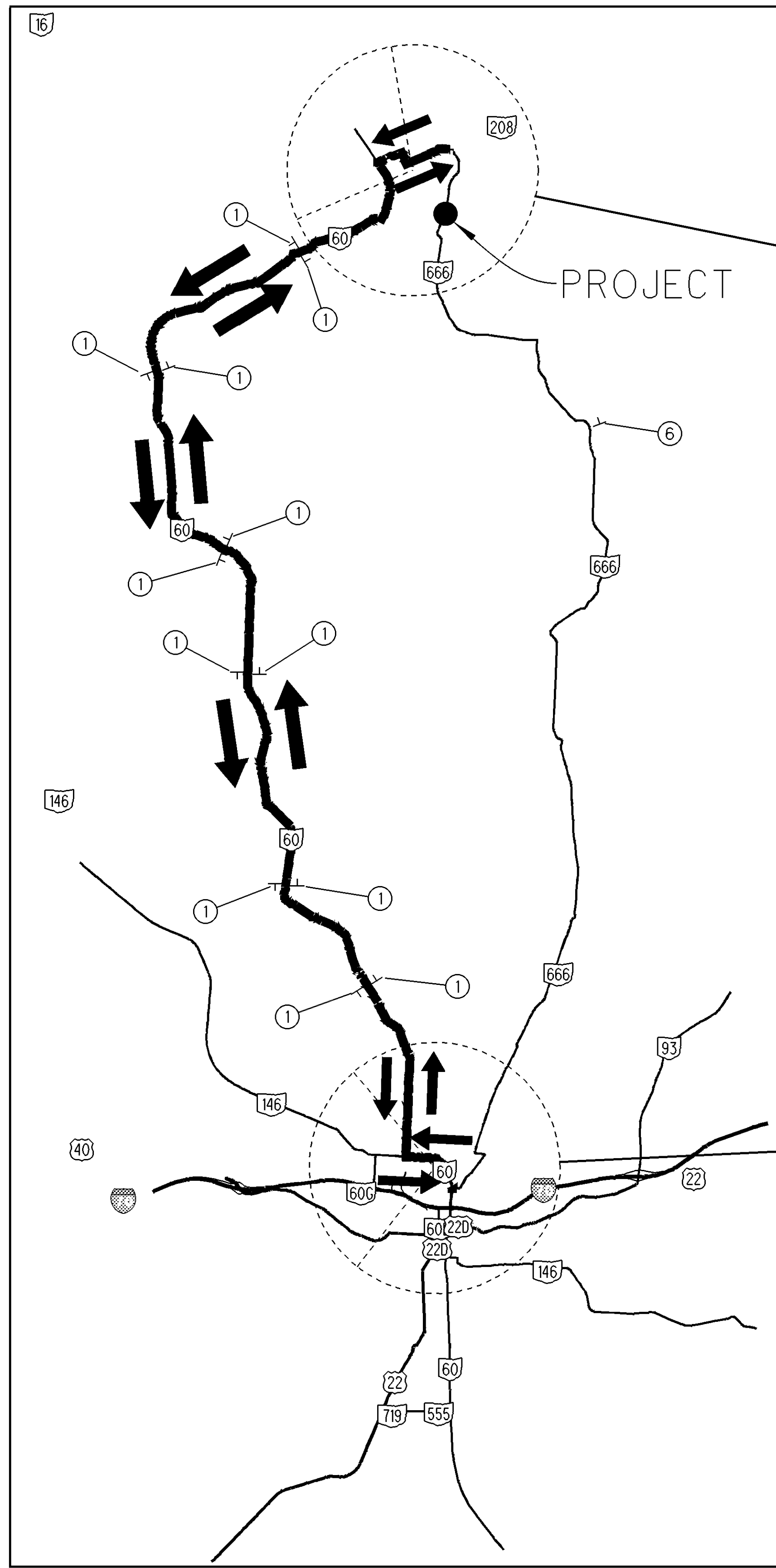
P:\MUS\89247\Design\Roadway\Plan\_Sheets\MOT\89247\_Detour1.dgn 09-JUL-2015 4:48PM dmergan

CALCULATED	BLT
CHECKED	DNM

STATE DETOUR MAP

MUS - 666 - 13.58

8  
38



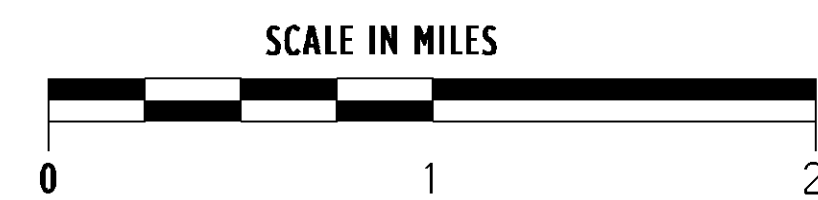
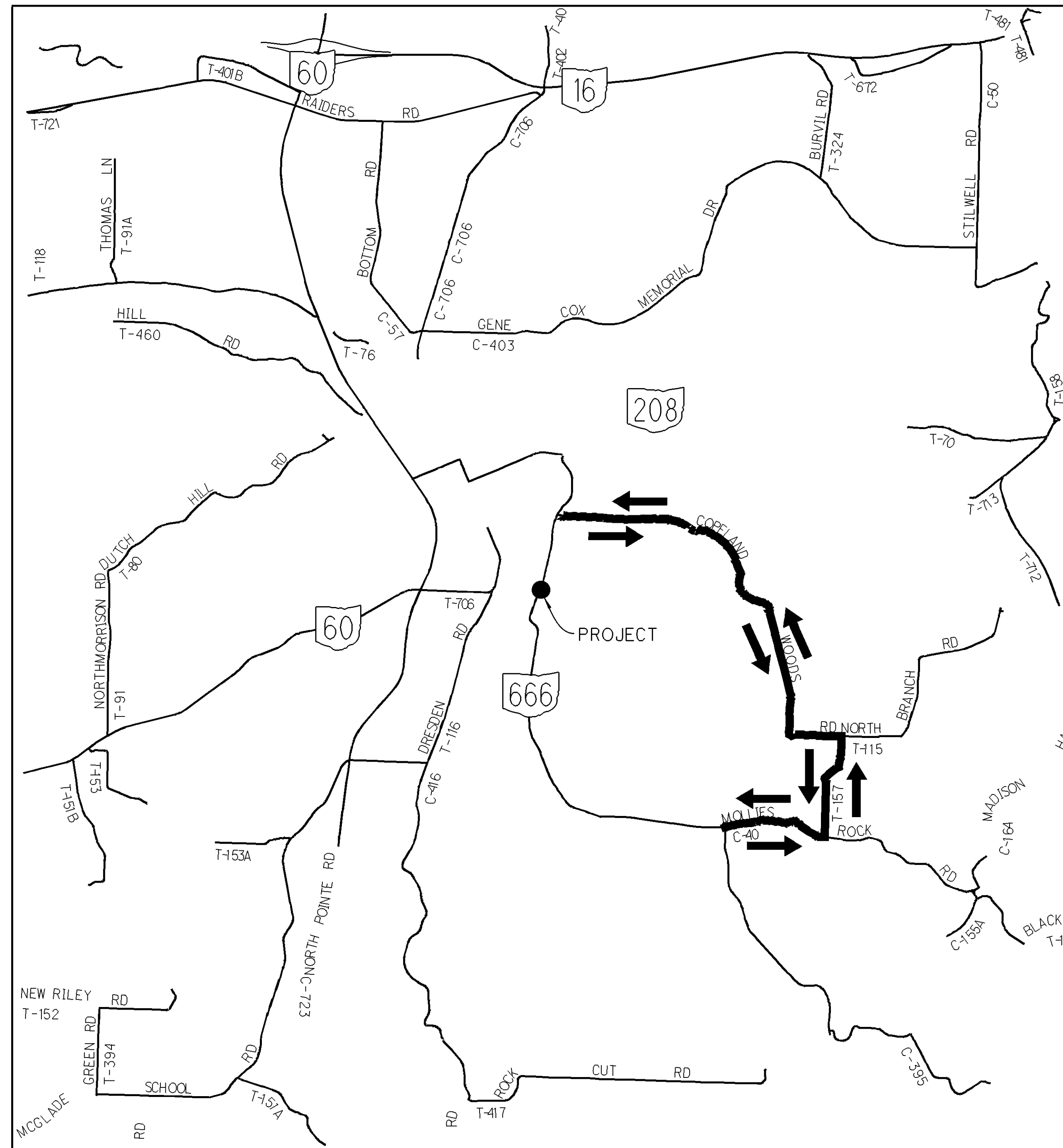
① DETOUR M4-8-24  MI-5-24-2	② DETOUR M4-8-24  MI-5-24-2  M5-1L-21	③ DETOUR M4-8-24  MI-5-24-2  M5-1R-21
④ DETOUR M4-8-24  MI-5-24-2  M6-1L-21	⑤ DETOUR M4-8-24  MI-5-24-2  M6-1R-21	

ALL ROUTE SIGNS SHOWN ABOVE, i.e., SIGNING CONFIGURATIONS "1" THRU "5", SHALL BE ODOT SUPPLIED.

FOR "ITEM 614 DETOUR SIGNING, AS PER PLAN", SEE SHEET 8.

⑥ ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60	⑦  ROAD CLOSED 1000 FT W20-3-36	⑧  ROAD CLOSED 500 FT W20-3-36
⑨ ROAD CLOSED R11-2-48 "ROAD CLOSED" SIGN MOUNTED ON TYPE III BARRICADE	⑩ ROAD CLOSED 13 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60  M4-10L-48	⑪ ROAD CLOSED 0.5 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60  M4-10R-48

LOCAL DETOUR MAP

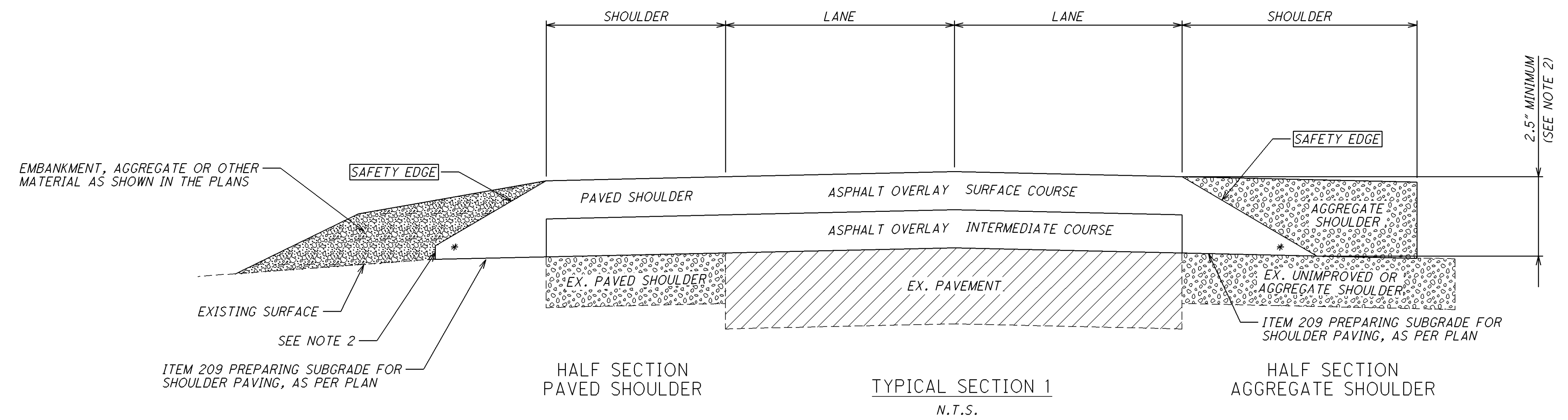


**DESIGNATED LOCAL DETOUR ROUTE**

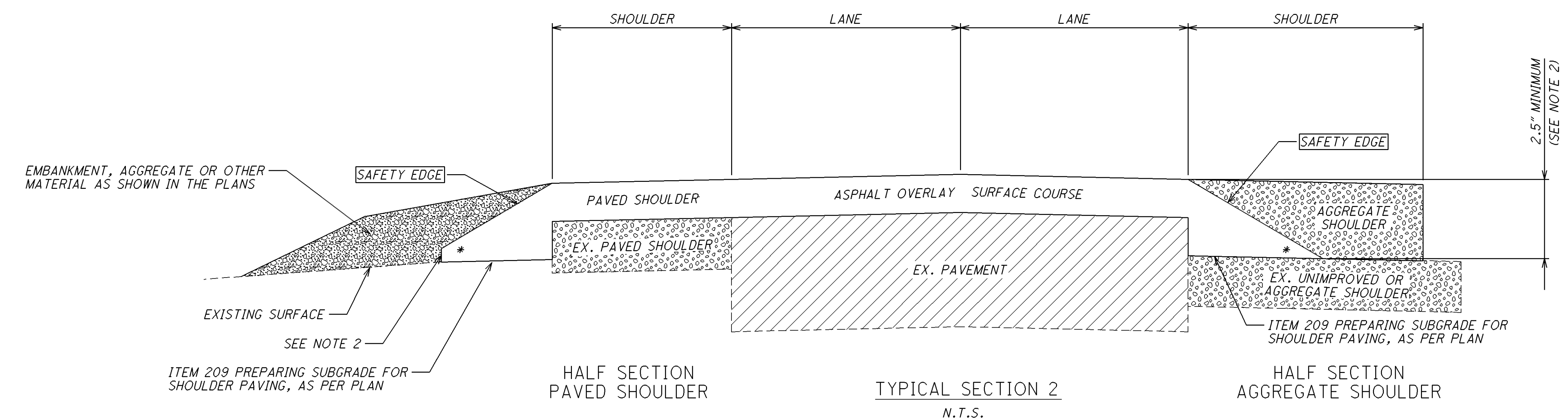
IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE". THIS ROUTE IS SHOWN ON THIS SHEET. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE TR 157 (COPELAND WOODS RD) AND CR 40 (MOLLIES ROCK RD).

3.5 MILES OF TR 157 AND 0.7 MILES CR 40:  
**407 TACK COAT 100 GAL.**  
**441 ASHALT CONCRETE, MISC.: SPOT TREATMENT 50 CU.YD.**

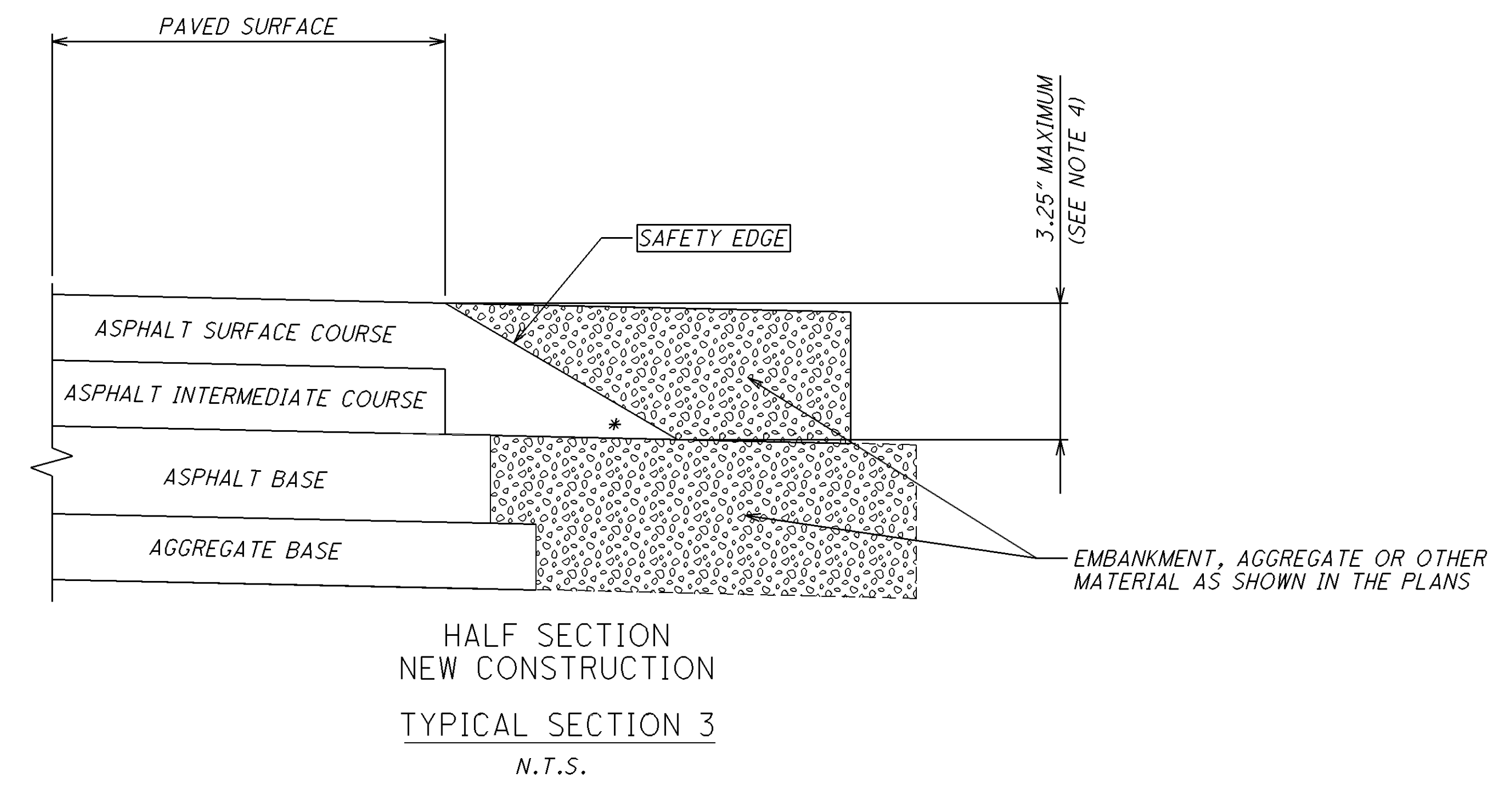
QUANTITIES CARRIED TO GENERAL SUMMARY.



HALF SECTION PAVED SHOULDER      TYPICAL SECTION 1      HALF SECTION AGGREGATE SHOULDER  
N.T.S.



HALF SECTION PAVED SHOULDER      TYPICAL SECTION 2      HALF SECTION AGGREGATE SHOULDER  
N.T.S.



HALF SECTION  
NEW CONSTRUCTION  
TYPICAL SECTION 3  
N.T.S.

**NOTES:**

- 1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).
  - 2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" (63MM) WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6" (150MM). CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6" (150 MM).
  - 3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.
  - 4.) FOR NEW PAVEMENT CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25" (82 MM).
- \* 40° MAX

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\_SED\_001.dgn 09-JUL-2015 4:53PM dmorgn

P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\_GGS\_001.dgn 30-JUL-2015 12:21PM dmo.rgn

SHEET NUMBER								ITEM	ITEM EXT.	05/NFA/CV	UNIT	DESCRIPTION	SEE SHEET
4	5	7	10	14	15	25	26						
<b>ROADWAY</b>													
LUMP								201	11000	LUMP		CLEARING AND GRUBBING	4
						98		202	35200	98	FT	PIPE REMOVED, OVER 24"	
			500					202	38000	500	FT	GUARDRAIL REMOVED	
			159					202	75000	159	FT	FENCE REMOVED	
					913			203	10000	913	CU YD	EXCAVATION	
					1075			203	20000	1,075	CU YD	EMBANKMENT	
						24		203	35110	24	CU YD	GRANULAR MATERIAL, TYPE B	
					196			204	10000	196	SQ YD	SUBGRADE COMPACTION	
0.18								209	72051	0.18	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	4
						38		252	01500	38	FT	FULL DEPTH PAVEMENT SAWING	
					763			254	01000	763	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
					40			301	46000	40	CU YD	ASPHALT CONCRETE BASE, PG64-22	
					36			304	20000	36	CU YD	AGGREGATE BASE	
		54	100		76			407	10000	230	GALLON	TACK COAT	
					49			407	14000	49	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
					131			408	10001	131	GALLON	PRIME COAT, AS PER PLAN	4
	39	25			36			441	50000	100	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
					48			441	50300	48	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
			50					441	90000	50	CU YD	ASPHALT CONCRETE, MISC: SPOT TREATMENT	
							LUMP	503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	
							LUMP	503	21300	LUMP		UNCLASSIFIED EXCAVATION	
							4002	509	10000	4,002	POUND	EPOXY COATED REINFORCING STEEL	
							12.4	511	46000	12.4	CU YD	CLASS C CONCRETE, RETAINING WALL OR WINGWALL	
							33.6	511	46500	33.6	CU YD	CLASS C CONCRETE, FOOTING	
							0.8	511	46600	0.8	CU YD	CLASS C CONCRETE, HEADWALL	
							62	512	10100	62	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
							99	512	33000	99	SQ YD	TYPE 2 WATERPROOFING	
							88	512	33010	88	SQ YD	TYPE 3 WATERPROOFING	
							34	516	13600	34	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
							LUMP	518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	

CALCULATED DNM CHECKED DNM	GENERAL SUMMARY	MUS - 666 - 13.58		
<table border="1" style="margin: auto;"> <tr> <td style="padding: 5px;">12</td> </tr> <tr> <td style="padding: 5px;">38</td> </tr> </table>			12	38
12				
38				



P:\MUS\89247\Design\Roadway\Plan\_Sheets\General\89247\_GGB.dgn 13-JUL-2015 1:27PM dmorgan

REF NO.	SHEET NO.	LOCATION	STATION		SIDE	202		606		626	642			
			FROM	TO		GUARDRAIL REMOVED FT	FENCE REMOVED FT	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE A EACH	BARRIER REFLECTOR EACH	EDGE LINE MILE	CENTER LINE MILE		
GR1	16	SR 666	14+47.5	14+72.5	LT				1					
GR1	16	SR 666	14+72.5	18+73.3B	LT			212.5		6				
GR2	16	SR 666	14+54.4	14+79.4	RT				1					
GR2	16	SR 666	14+79.4	16+89.8	RT			400.0		6				
GR2	16	SR 666	16+89.8	17+14.8	RT				1					
R1	16	SR 666	14+81.8	17+11.2	LT	225								
R2	16	SR 666	14+46.2	16+98.5	RT	256.25								
R3	16	SR 666	18+36.8	18+73.3B	LT	18.75								
R4	16	SR 666	16+24.39	17+71.22	RT		159							
EL-1	16	SR 666	14+25.00	18+70.00	LT						0.09			
EL-2	16	SR 666	14+25.00	18+70.00	RT						0.09			
CL-1	16	SR 666	14+25.00	18+70.00	CL							0.09		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>						500	159	612.5	3	12	0.18	0.09		

LOCATION OF GUARDRAIL  
THE LOCATION OF PROPOSED GUARDRAIL SHALL BE AS SHOWN IN PLAN SHEETS AND SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE.

CALCULATED  
DNM  
CHECKED  
DNM

**ROADWAY SUBSUMMARY**

**MUS - 666 - 13.58**

**SR 666 FULL DEPTH PAVEMENT REPLACEMENT**

STA. 15+45.00 TO STA. 16+25.00 = 80.0 FT  
 $(80.0)(22.0) / 9 = 195.6$

EXTRA AREA FOR 6" STEP:  
 $80 \times 0.5 / 9 = 4.5$  SY

EXTRA AREA FOR 12" STEP:  
 $80 \times 1.0 / 9 = 8.9$  SY

ITEM 204 SUBGRADE COMPACTION  
 195.6 SY use 196 SY

ITEM 301 ASPHALT CONCRETE BASE, PG 64-22 (6")  
 $(195.6 + 4.5 + 8.9) \times (6/36) = 34.1$  CY use 35 CY

ITEM 304 AGGREGATE BASE (6")  
 $(195.6 + 8.9 + 8.9) \times (6/36) = 35.6$  CY use 36 CY

ITEM 407 TACK COAT  
 $195.6 \times 0.075 \text{ GAL/SY} = 14.7$  GAL use 15 GAL

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE  
 $195.6 \times 0.05 \text{ GAL/SY} = 9.8$  GAL use 10 GAL

ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)  
 $195.6 \times (1.75/36) = 9.5$  CY use 10 CY

ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22  
 $195.6 \times (1.25/36) = 6.9$  CY use 7 CY

**RESURFACING & PLANING**

STA. 14+25.00 to STA. 15+45.00 = 120.0 FT  
 STA. 16+25.00 to STA. 18+70.00 = 245.0 FT  
 $(120 + 245)(18.8 \text{ avg}) / 9 = 762.5$  SY

ITEM 254 PAVEMENT PLANING ASPHALT CONCRETE  
 762.5 use 763 SY

ITEM 407 TACK COAT  
 $762.5 \times 0.075 \text{ GAL/SY} = 57.2$  GAL use 58 GAL

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE  
 $762.5 \times 0.05 \text{ GAL/SY} = 38.2$  GAL use 39 GAL

ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)  
 $762.5 \times (1.75/36) = 37.1$  CY use 38 CY

ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22  
 $762.5 \times (1.25/36) = 26.5$  CY use 27 CY

**ITEM 605 AGGREGATE DRAIN**

STA. 15+45.00 LT 10 FT  
 STA. 15+45.00 RT 10 FT  
 STA. 15+70.00 LT 10 FT  
 STA. 15+85.00 RT 10 FT  
 STA. 16+00.00 LT 10 FT  
 STA. 16+25.00 LT 10 FT  
 STA. 16+25.00 RT 10 FT

TOTAL = 70 FT

**AGGREGATE SHOULDERS**

**LEFT SIDE:**

STA. 14+25.00 TO STA. 15+25.00 = 100.0 FT  
 $(100)(3 \text{ avg}) = 300$  SF  
 STA. 15+25.00 TO STA. 15+45.00 = 20.0 FT  
 $(20)(4) = 80$  SF  
 STA. 15+45.00 TO STA. 16+25.00 = 80.0 FT  
 $(80)(4) = 320$  SF  
 STA. 16+25.00 TO STA. 18+55.00 = 230.0 FT  
 $(230)(4) = 920$  SF  
 STA. 18+55.00 TO STA. 18+70.00 = 15.0 FT  
 $(15)(3 \text{ avg}) = 45$  SF  
 TOTAL = 300 + 80 + 320 + 920 + 45 = 1,665 SF  
 $1,665/9 \times .40 \text{ GAL/SY} = 74$  GAL  
 $1,665 \times (8/12) / 27 = 41.1$  CY

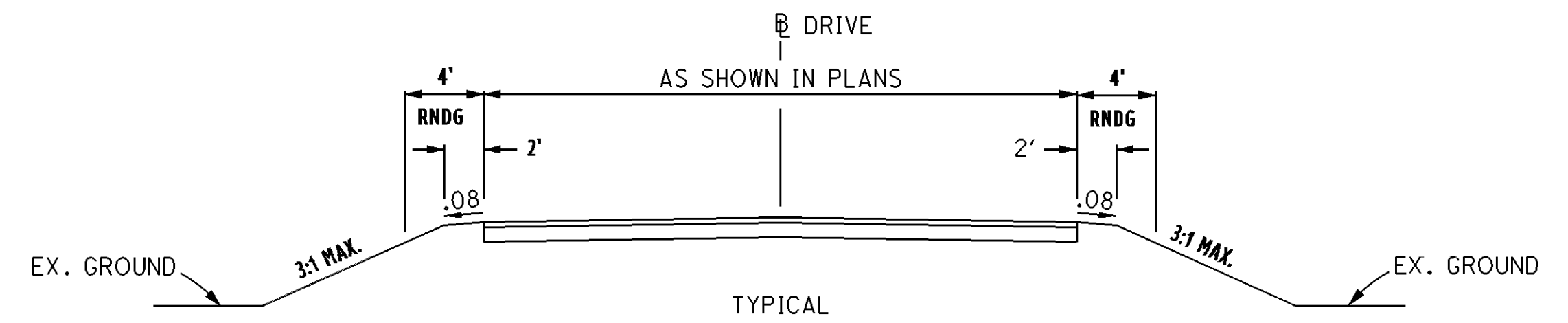
**RIGHT SIDE:**

STA. 14+25.00 TO STA. 14+50.00 = 25.0 FT  
 $(25)(2) = 50$  SF  
 STA. 14+50.00 TO STA. 14+70.00 = 20.0 FT  
 $(20)(3 \text{ avg}) = 60$  SF  
 STA. 14+70.00 TO STA. 15+45.00 = 75.0 FT  
 $(75)(4) = 300$  SF  
 STA. 15+45.00 TO STA. 16+25.00 = 80.0 FT  
 $(80)(4) = 320$  SF  
 STA. 16+25.00 TO STA. 16+60.00 = 35.0 FT  
 $(35)(4) = 140$  SF  
 STA. 16+60.00 TO STA. 17+50.00 = 90.0 FT  
 $(90)(3 \text{ avg}) = 270$  SF  
 STA. 17+50.00 TO STA. 17+92.5 = 42.5 FT  
 $(42.5)(2) = 85$  SF  
 STA. 18+41.0 TO STA. 18+70.00 = 29.0 FT  
 $(29)(2) = 58$  SF

TOTAL:  
 $50 + 60 + 300 + 320 + 140 + 270 + 85 + 58 = 1,283$  SF  
 $1,283/9 \times .40 \text{ GAL/SY} = 58$  GAL  
 $1,283 \times (8/12) / 27 = 31.7$  CY

ITEM 408 PRIME COAT, AS PER PLAN  
 $74+58 = 131$  GAL

ITEM 617 COMPACTED AGGREGATE, AS PER PLAN  
 $41.1 + 31.7 = 72.8$  CY use 73 CY



1.25" ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22  
 3.75" ITEM 301 ASPHALT CONCRETE BASE, PG 64-22

**RESIDENCE DRIVE**

STA. 18+15.3, AREA = 39 SY  
 ITEM 203 EXCAVATION  
 $39 \times (5/36) = 5.4$  CY use 6 CY  
 ITEM 203 EMBANKMENT  
 2 CY  
 ITEM 301 ASPHALT CONCRETE BASE, PG 64-22  
 $39 \times (3.75/36) = 4.1$  CY use 5 CY  
 ITEM 407 TACK COAT  
 $39 \times 0.075 \text{ GAL/SY} = 2.9$  GAL use 3 GAL  
 ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22  
 $39 \times (1.25/36) = 1.4$  CY use 2 CY

**TOTALS CARRIED TO GENERAL SUMMARY**

ITEM 203 EXCAVATION  
 $907* + 6 = 913$  CY  
 ITEM 203 EMBANKMENT  
 $1,073* + 2 = 1,075$  CY  
 ITEM 204 SUBGRADE COMPACTION  
 196 SY  
 ITEM 254 PAVEMENT PLANING ASPHALT CONCRETE  
 763 SY  
 ITEM 301 ASPHALT CONCRETE BASE, PG 64-22  
 $35 + 5 = 40$  CY  
 ITEM 304 AGGREGATE BASE  
 36 CY  
 ITEM 407 TACK COAT  
 $15 + 58 + 3 = 76$  GAL  
 ITEM 407 TACK COAT FOR INTERMEDIATE COURSE  
 $10 + 39 = 49$  GAL  
 ITEM 408 PRIME COAT, AS PER PLAN  
 131 GAL  
 ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)  
 $10 + 38 = 48$  CY  
 ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22  
 $7 + 27 + 2 = 36$  CY  
 ITEM 605 AGGREGATE DRAIN  
 70 FT  
 ITEM 617 COMPACTED AGGREGATE, AS PER PLAN  
 73 CY

\* NOTE: EXCAVATION, EMBANKMENT AND SEEDING QUANTITIES CARRIED FROM SHEET 17.

VERTICAL DATUM = N.A.V.D. 1988 (GPS DERIVED)

**BENCHMARK #1**  
TOP OF 1 INCH REBAR WITH ODOT CAP;  
17.3628 FEET LEFT OF EXISTING SR 661  
@ SURVEY STATION 14+51.98  
ELEVATION = 721.355

**BENCHMARK #2**  
TOP OF 1 INCH REBAR WITH ODOT CAP;  
14.7618 FEET LEFT OF EXISTING SR 661  
@ SURVEY STATION 17+56.59  
ELEVATION = 724.562

**LEGEND**

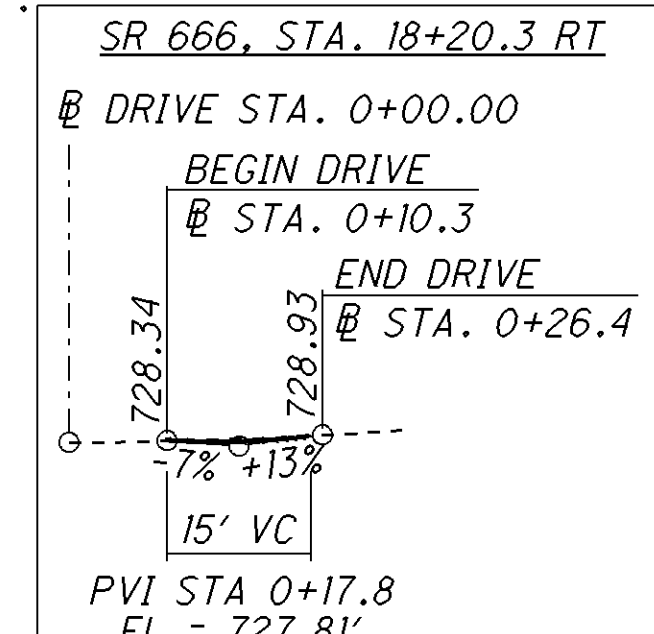
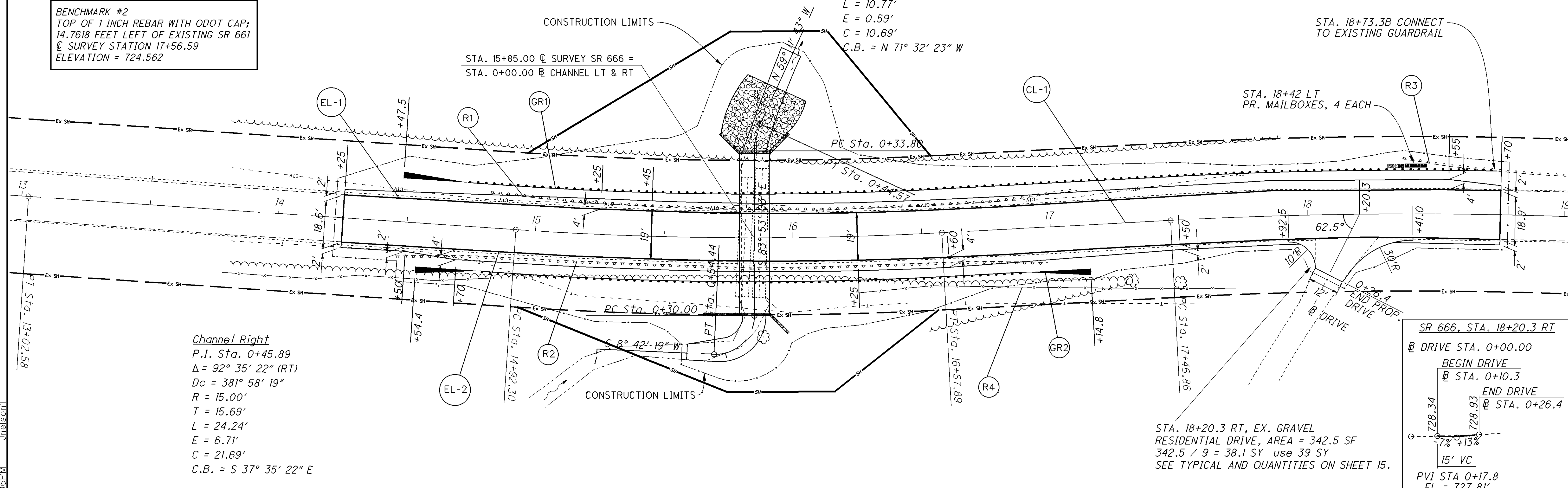
FOR ROADWAY QUANTITIES SEE ROADWAY SUBSUMMARY SHEET 14  
FOR PAVEMENT QUANTITIES SEE ESTIMATED CALCULATIONS SHEET 15  
FOR S.R. 666 CROSS SECTIONS SEE SHEETS 17-24  
FOR CULVERT DETAILS SEE SHEETS 25-30

**Channel Left**

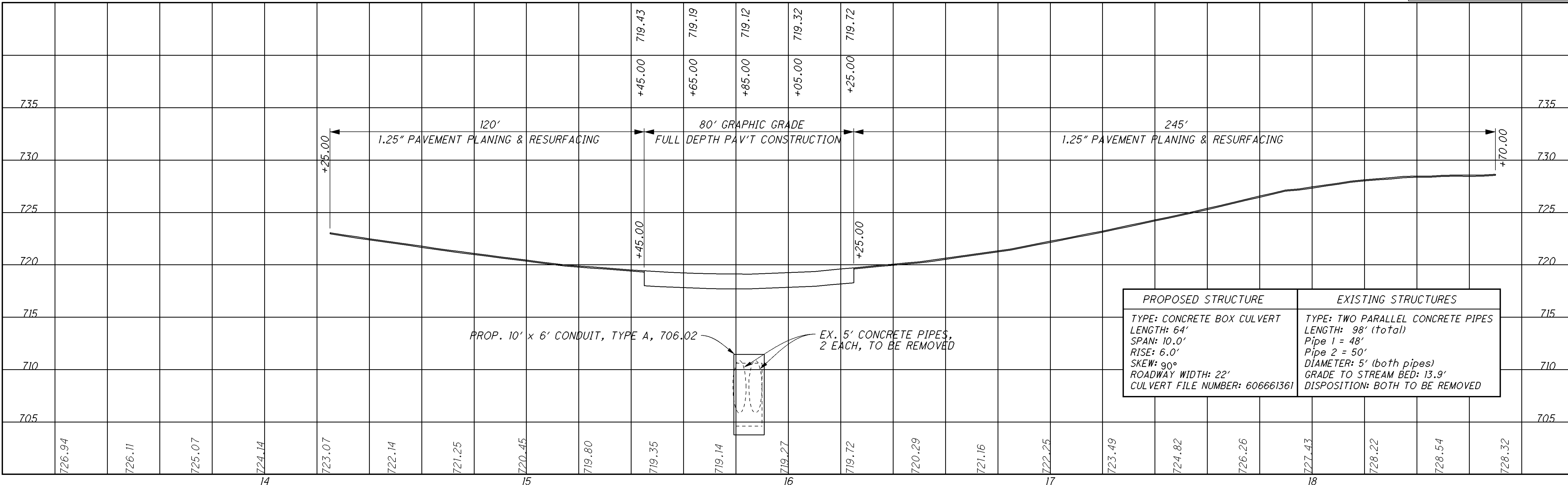
P.I. Sta. 0+39.27  
 $\Delta = 24^\circ 41' 20''$  (RT)  
 $D_c = 229^\circ 10' 59''$   
 $R = 25.00'$   
 $T = 5.47'$   
 $L = 10.77'$   
 $E = 0.59'$   
 $C = 10.69'$   
C.B. = N 71° 32' 23" W

**Channel Right**

P.I. Sta. 0+45.89  
 $\Delta = 92^\circ 35' 22''$  (RT)  
 $D_c = 381^\circ 58' 19''$   
 $R = 15.00'$   
 $T = 15.69'$   
 $L = 24.24'$   
 $E = 6.71'$   
 $C = 21.69'$   
C.B. = S 37° 35' 22" E



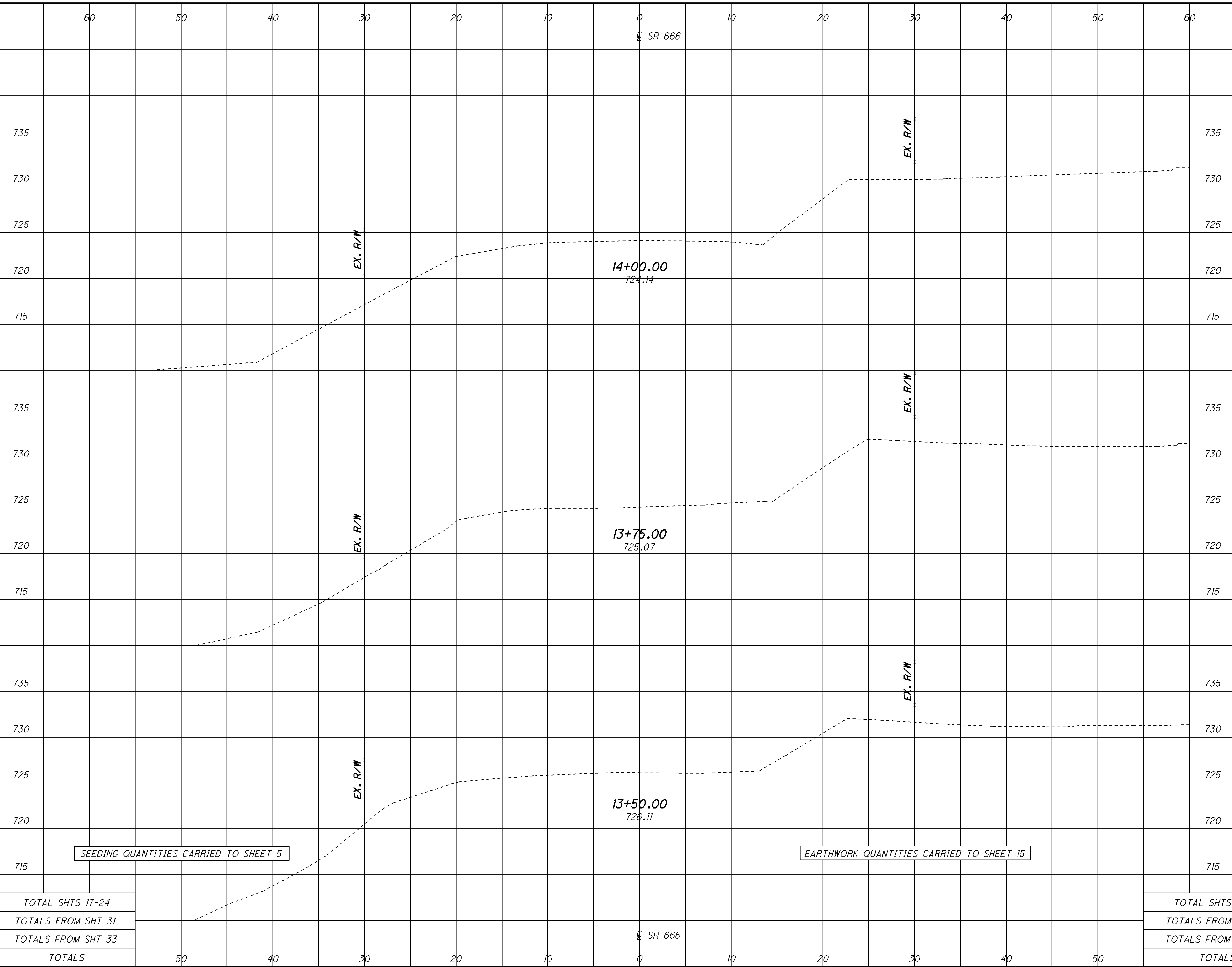
P:\MUS\89247\Design\Roadway\Plan\_Sheets\Plan\_Profile\89247\_PPP.dgn 10-JUL-2015 2:06PM jnelson1



**MUS-666-13.58**  
**PLAN AND PROFILE**  
**STA. 13+20.00 to STA. 18+80.00**  
 CALCULATED BCT CHECKED DNM  
 10 HORIZONTAL SCALE IN FEET  
 20 40

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 3:49PM dmorgan

SEEDING	
END WIDTH	SO. YDS.
1678	TOTAL SHTS 17-24
175	TOTALS FROM SHT 31
135	TOTALS FROM SHT 33
1988	TOTALS

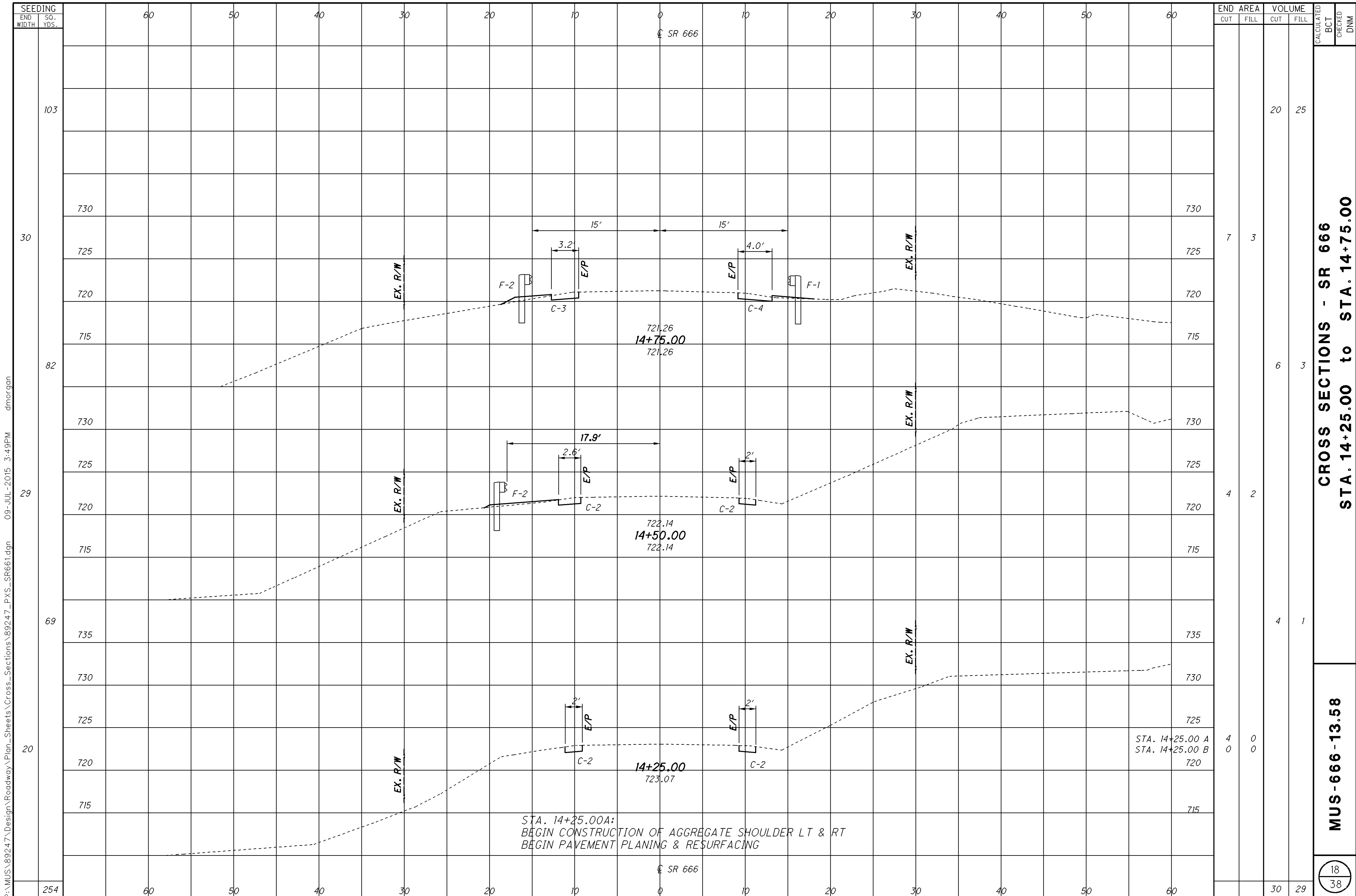


END AREA		VOLUME	
CUT	FILL	CUT	FILL
		824	1068
		25	5
		58	0
		907	1073

**CROSS SECTIONS - SR 666**  
**STA. 13+50.00 to STA. 14+00.00**

**MUS-666-13.58**

CALCULATED BCT  
 CHECKED DNM



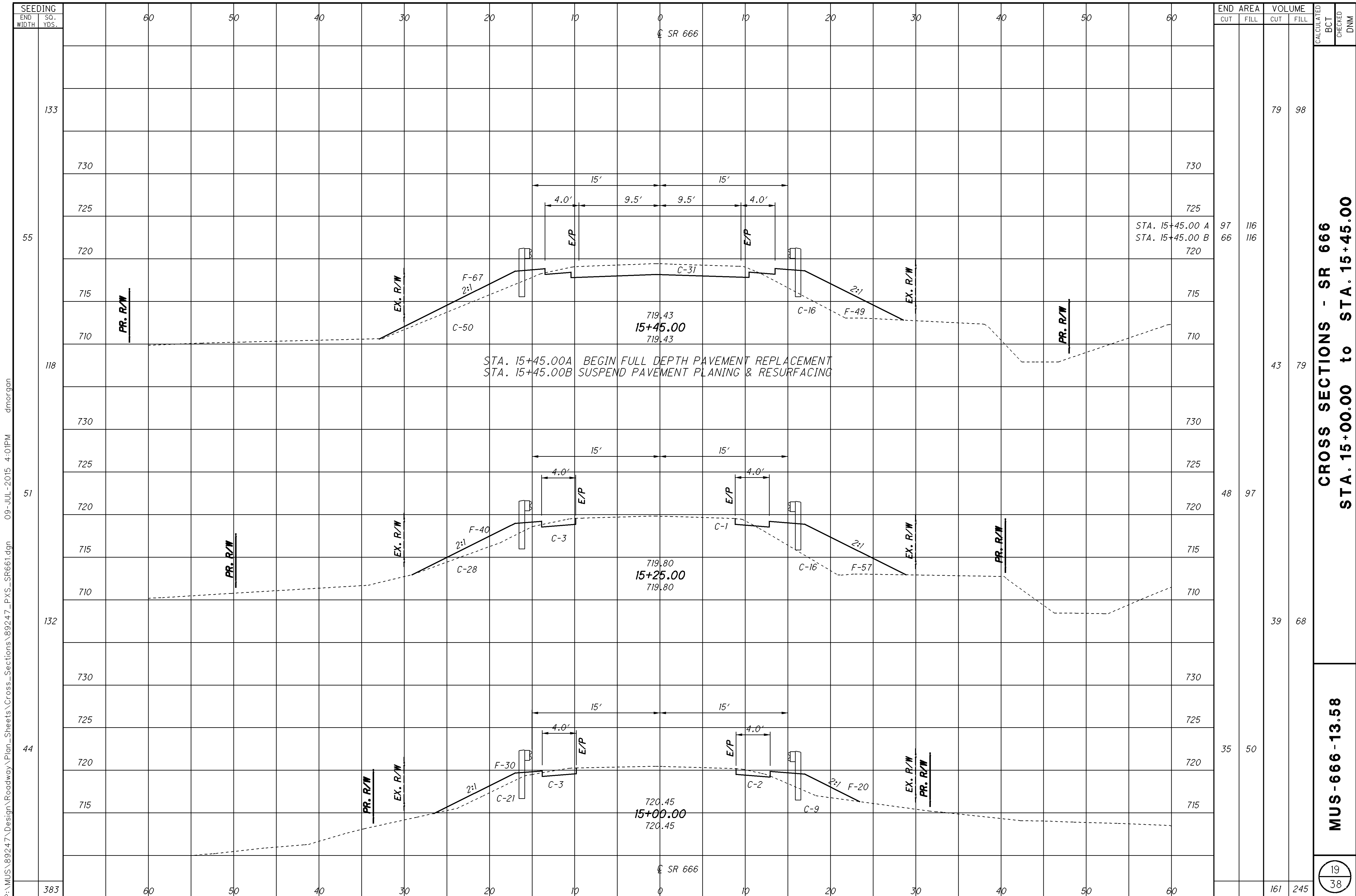
SEEDING														END AREA		VOLUME		CALCULATED		
END WIDTH	SO. YDS.	60	50	40	30	20	10	0	10	20	30	40	50	60	CUT	FILL	CUT	FILL	BCT	CHECKED
103																	20	25		
30															7	3				
82																	6	3		
29															4	2				
69																	4	1		
20															4	0	0	0		
254		60	50	40	30	20	10	0	10	20	30	40	50	60			30	29		

**CROSS SECTIONS - SR 666**  
**STA. 14+25.00 to STA. 14+75.00**

**MUS-666-13.58**

18  
38

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 3:49PM dmorgan



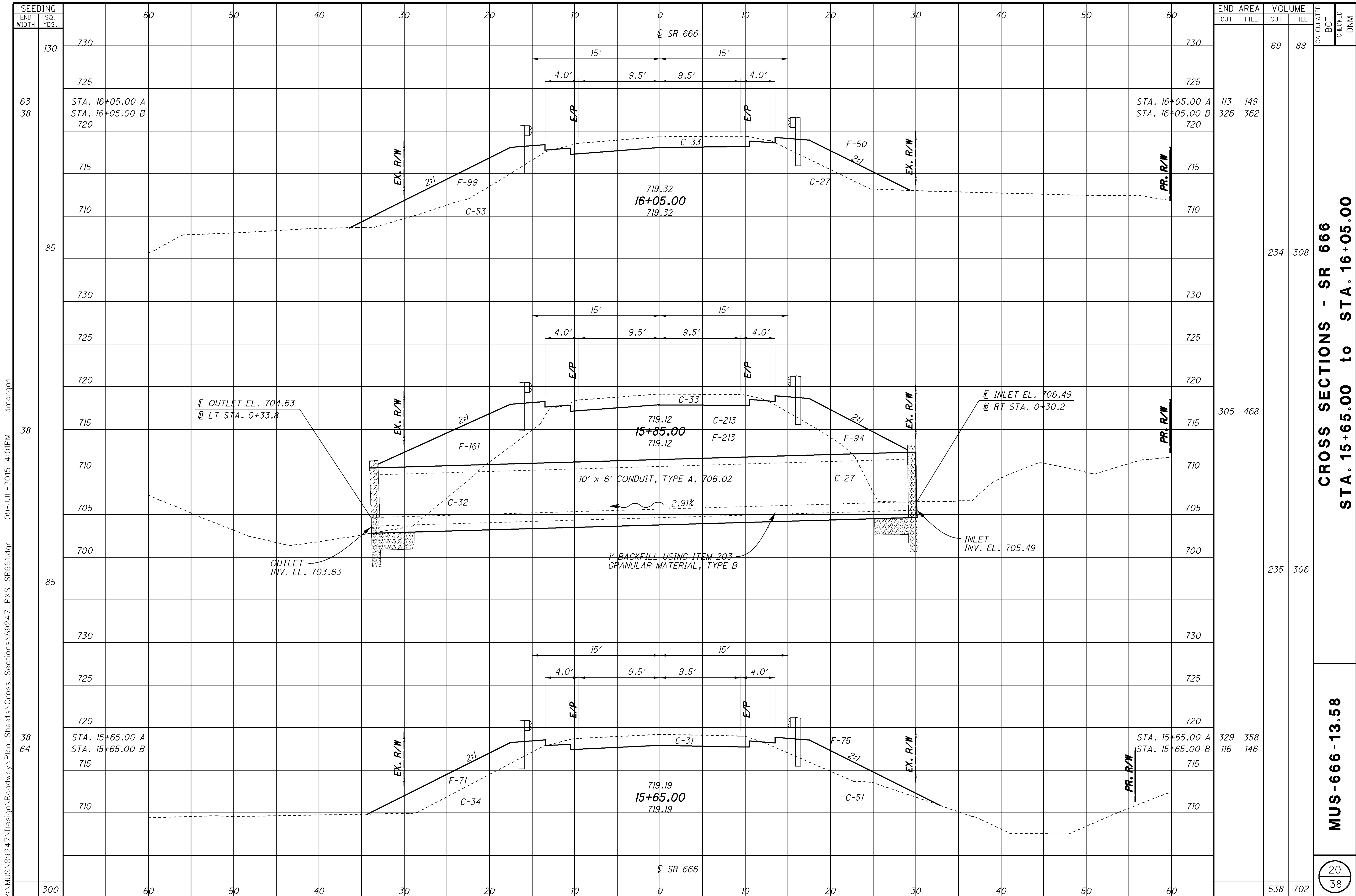
SEEDING														END AREA		VOLUME		CALCULATED				
END WIDTH	SO. YDS.	60	50	40	30	20	10	0	10	20	30	40	50	60	CUT	FILL	CUT	FILL	BCT	CHECKED		
133								SR 666														
55															97	116	79	98				
118															66	116						
51															48	97						
132															39	68						
44															35	50						
383																	161	245				

**CROSS SECTIONS - SR 666**  
**STA. 15+00.00 to STA. 15+45.00**

**MUS-666-13.58**

19  
38

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 4:01PM dmmorgan

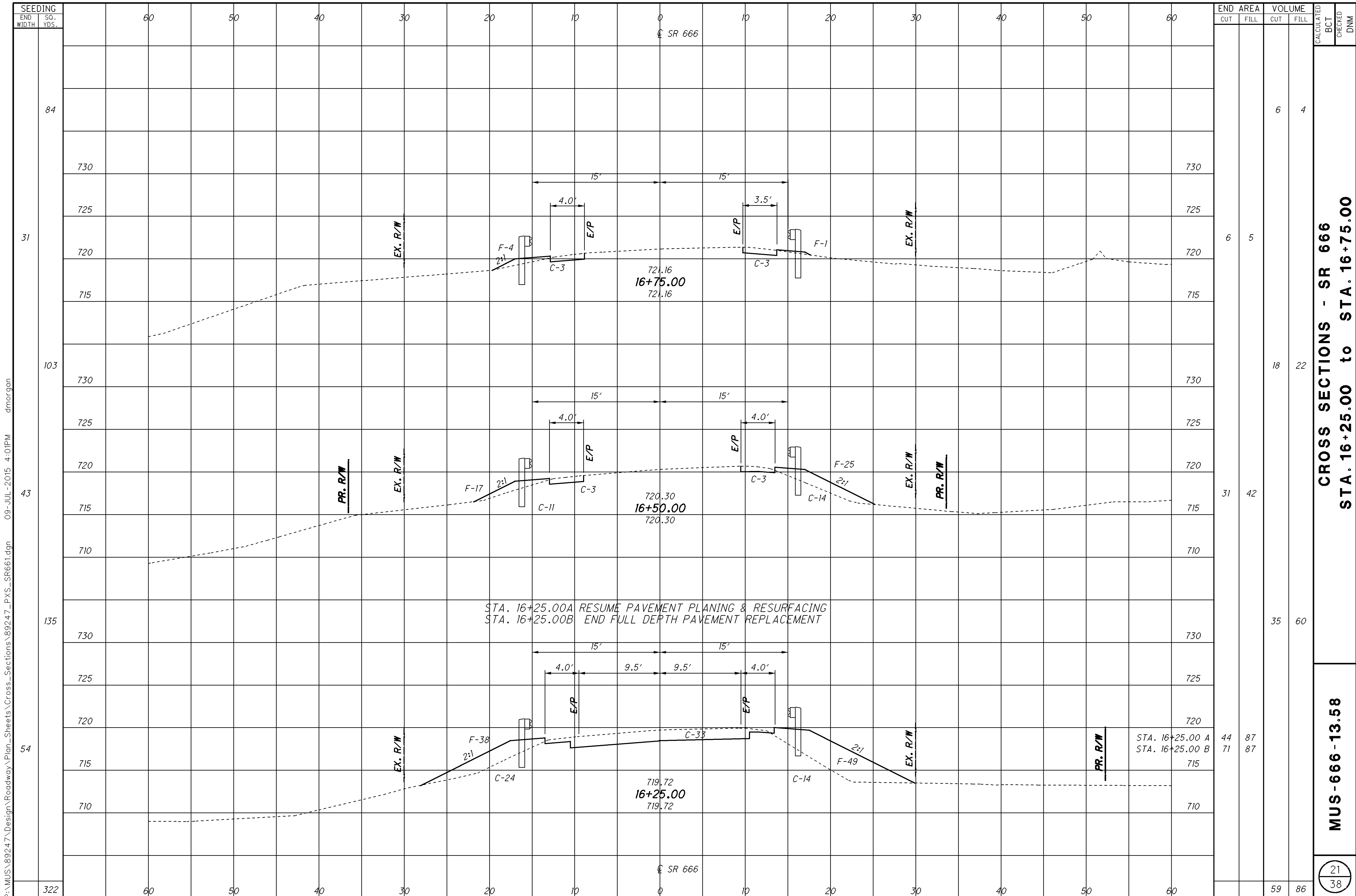


P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR666.dgn 09-JUL-2015 4:01PM dmmorgan

END STA.	AREA CUT	AREA FILL	VOLUME		CALCULATED	BCT	CHECKED	DMM
			CUT	FILL				
130			69	88				
63 38	113	149	326	362				
85			234	308				
38	305	468						
85			235	306				
38 64	329	358	116	146				
300			538	702				

**CROSS SECTIONS - SR 666  
STA. 15+65.00 to STA. 16+05.00**

**MUS-666-13.58**



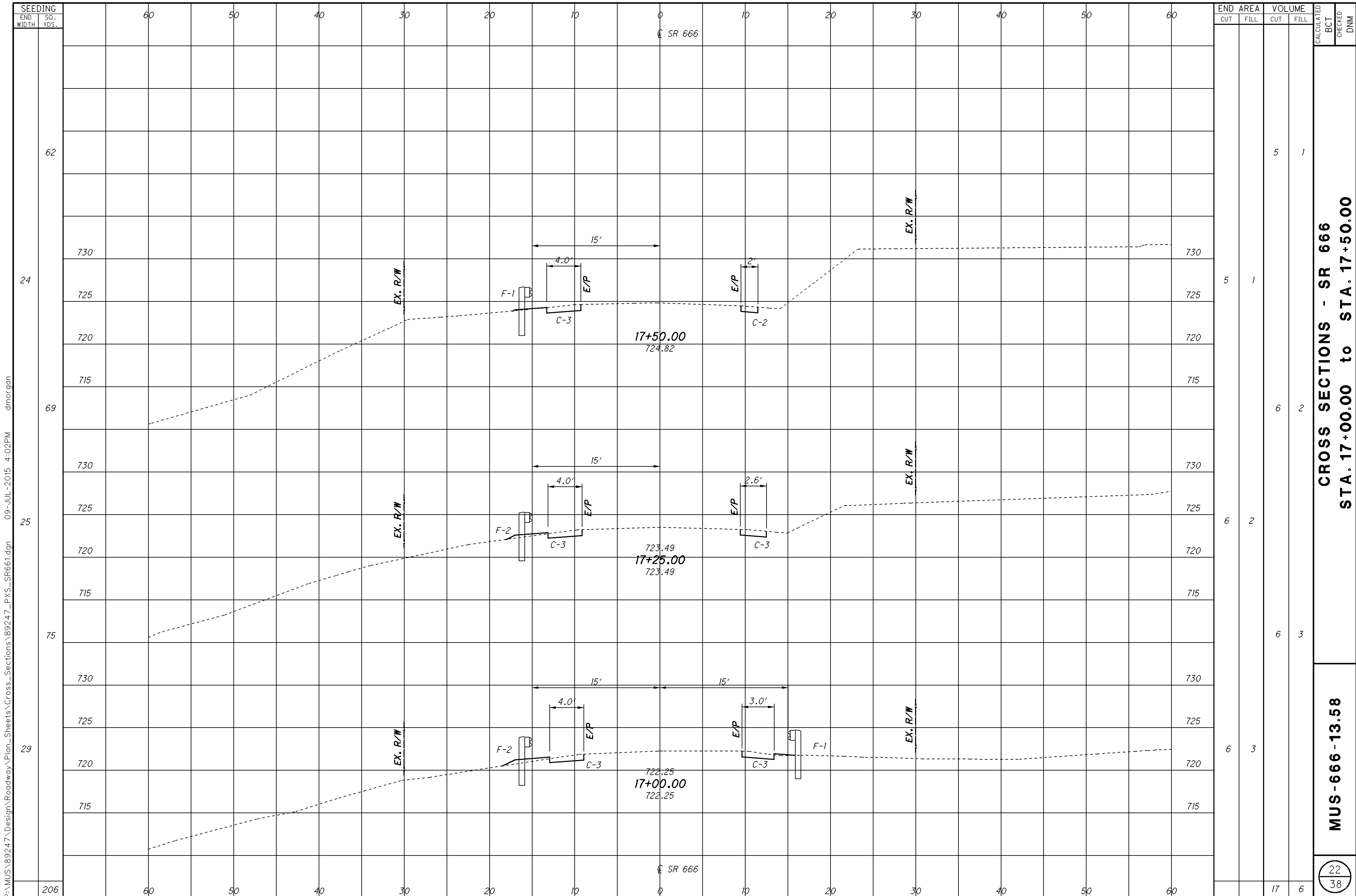
SEEDING	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
84			6	4
31	6	5	18	22
43	31	42	35	60
54	44	87	71	87
322			59	86

**CROSS SECTIONS - SR 666**  
**STA. 16+25.00 to STA. 16+75.00**

**MUS-666-13.58**

CALCULATED BCT CHECKED DNM

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 4:01PM dmorgon



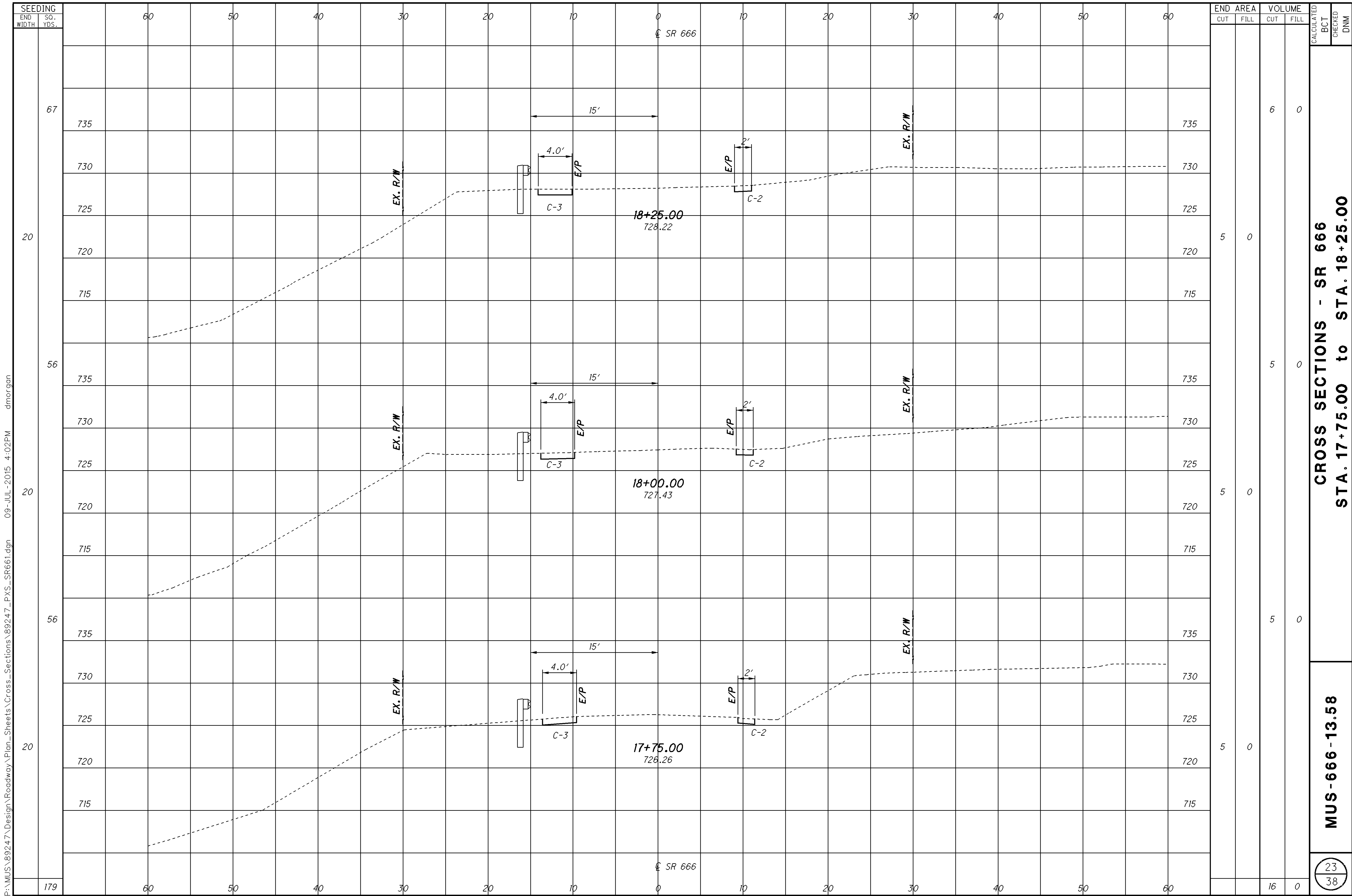
END AREA		VOLUME		CALCULATED BCT	CHECKED DMM
CUT	FILL	CUT	FILL		
		5	1		
5	1				
		6	2		
6	2				
		6	3		
6	3				
		17	6		

**CROSS SECTIONS - SR 666  
STA. 17+00.00 to STA. 17+50.00**

**MUS-666-13.58**

22  
38

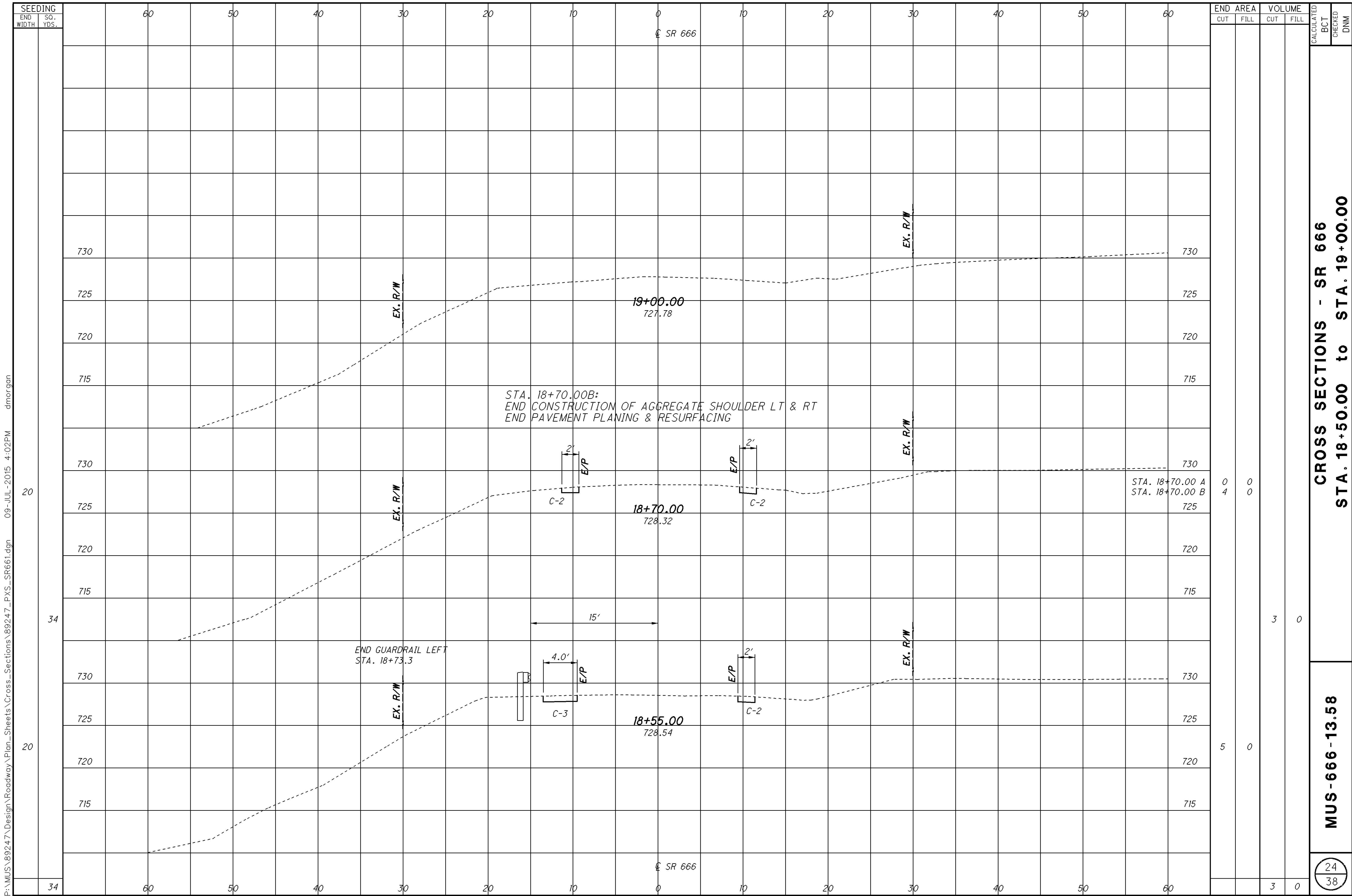
P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 4:02PM dmorgan



**CROSS SECTIONS - SR 666  
STA. 17+75.00 to STA. 18+25.00**

**MUS-666-13.58**

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 4:02PM dmorgan



**CROSS SECTIONS - SR 666  
STA. 18+50.00 to STA. 19+00.00**

**MUS-666-13.58**

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_SR661.dgn 09-JUL-2015 4:02PM dmorgan

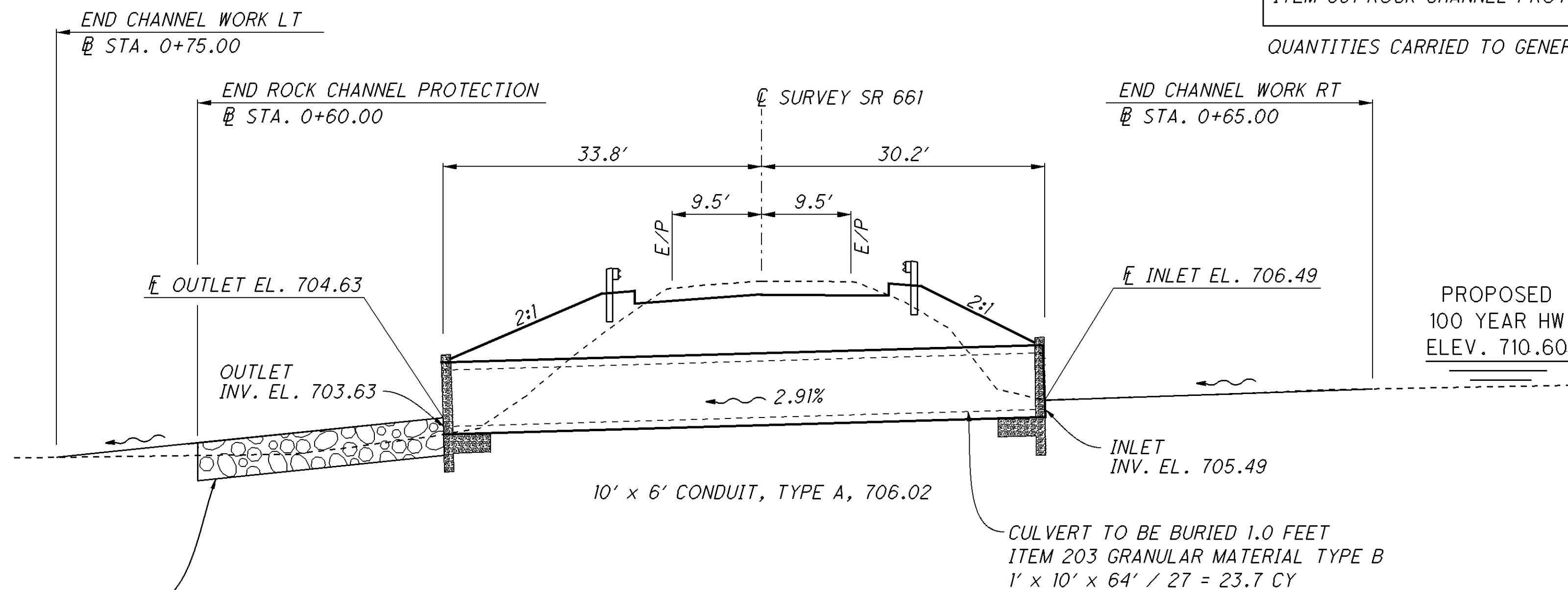
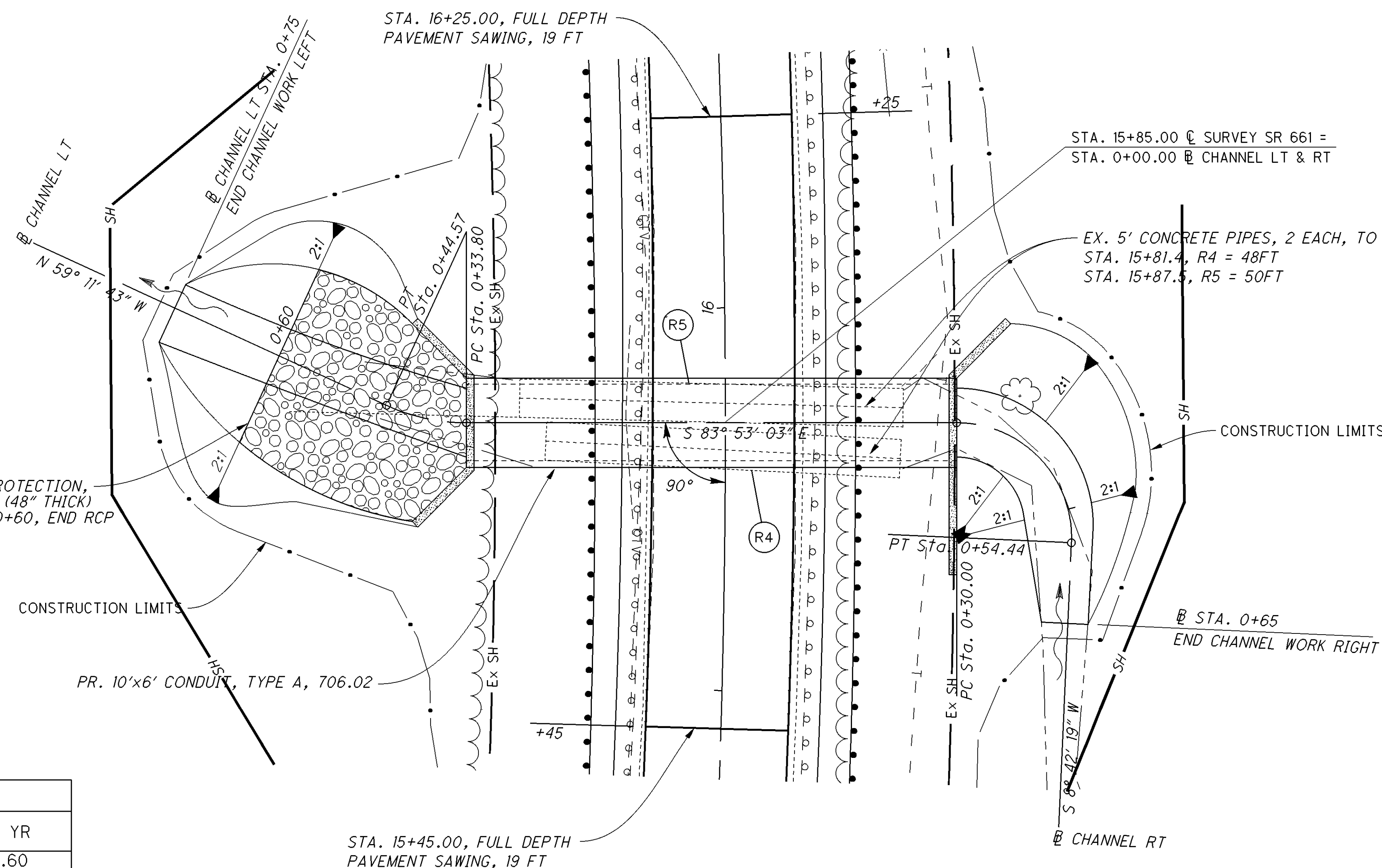
**Channel Left**  
 P.I. Sta. 0+39.27  
 $\Delta = 24^\circ 41' 20''$  (RT)  
 $D_c = 229^\circ 10' 59''$   
 $R = 25.00'$   
 $T = 5.47'$   
 $L = 10.77'$   
 $E = 0.59'$   
 $C = 10.69'$   
 C.B. = N  $71^\circ 32' 23''$  W

**Channel Right**  
 P.I. Sta. 0+45.89  
 $\Delta = 92^\circ 35' 22''$  (RT)  
 $D_c = 381^\circ 58' 19''$   
 $R = 15.00'$   
 $T = 15.69'$   
 $L = 24.24'$   
 $E = 6.71'$   
 $C = 21.69'$   
 C.B. = S  $37^\circ 35' 22''$  E

HYDRAULIC DESIGN DATA		
DRAINAGE AREA = 237 ACRES	10 YR	100 YR
HW ELEV.	708.74	710.60
Q (CFS)	176	346
V (FPS)	18.3	23.17
ORDINARY HIGH WATER MARK (OHWM) = 707.84		

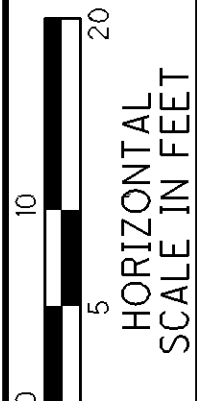
ITEM 202 PIPE REMOVED, OVER 24"	98 FT
ITEM 203 GRANULAR MATERIAL, TYPE B	24 CY
ITEM 252 FULL DEPTH PAVEMENT SAWING	38 FT
ITEM 601 ROCK CHANNEL PROTECTION, TYPE A, WITH FILTER	104 CY

QUANTITIES CARRIED TO GENERAL SUMMARY



ITEM 601 ROCK CHANNEL PROTECTION, TYPE A, WITH FILTER  
 702 SF x 4 FT / 27 = 104 CY

CALCULATED  
 BCT  
 CHECKED  
 DNM



**CULVERT DETAILS - SR 661 STA. 15+85.00**

**MUS-666-13.58**

1 / 6

25 / 38

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Drainage\89247\_DPE.dgn 10-JUL-2015 12:47PM jnelson1

GENERAL NOTES

**DESIGN SPECIFICATIONS:**  
THIS STANDARD DRAWING CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

**DESIGN DATA:**  
THE FOLLOWING DESIGN DATA IS ASSUMED:  
INTERNAL ANGLE OF FRICTION ( $\phi$ ) = 30 DEGREES  
COEFFICIENT OF FRICTION ( $\mu$ ) = 0.30  
UNIT WEIGHT OF SOIL = 120 PCF  
UNIT WEIGHT OF CONCRETE = 150 PCF  
SLOPE OF BACKFILL = 2:1  
HEIGHT OF LIVE LOAD SURCHARGE = 2 FT  
MAXIMUM FOUNDATION BEARING PRESSURE = 2000 P.S.F.

CONCRETE CLASS C - 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 SHALL BE EPOXY COATED)

**PRECAST CONCRETE:**  
AT THE OPTION OF THE CONTRACTOR, PRECAST HEADWALLS MAY BE FURNISHED PER ITEM 602.03 PRECAST STRUCTURES, PROVIDED THEY ARE SIZED TO MEET THE SOIL LOADING AND RESISTANCE PARAMETERS, AND MEET OR EXCEED THE MATERIAL STRENGTHS AND WALL LIMITS AS SHOWN AND SPECIFIED. FULL COMPENSATION FOR THE PRECAST SUBSTITUTION IS THE VOLUME OF CONCRETE AND THE WEIGHT OF THE REINFORCING STEEL FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

**FORESLOPE WALL ANCHOR DOWELS:**  
ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH OF 5". PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NONPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST AN ULTIMATE PULL-OUT STRENGTH OF 12 KIPS AND MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS MUST PROVIDE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 603.

**BACKFILL LIMITATION:**  
WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT, THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

**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 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 WEEPHOLE.**

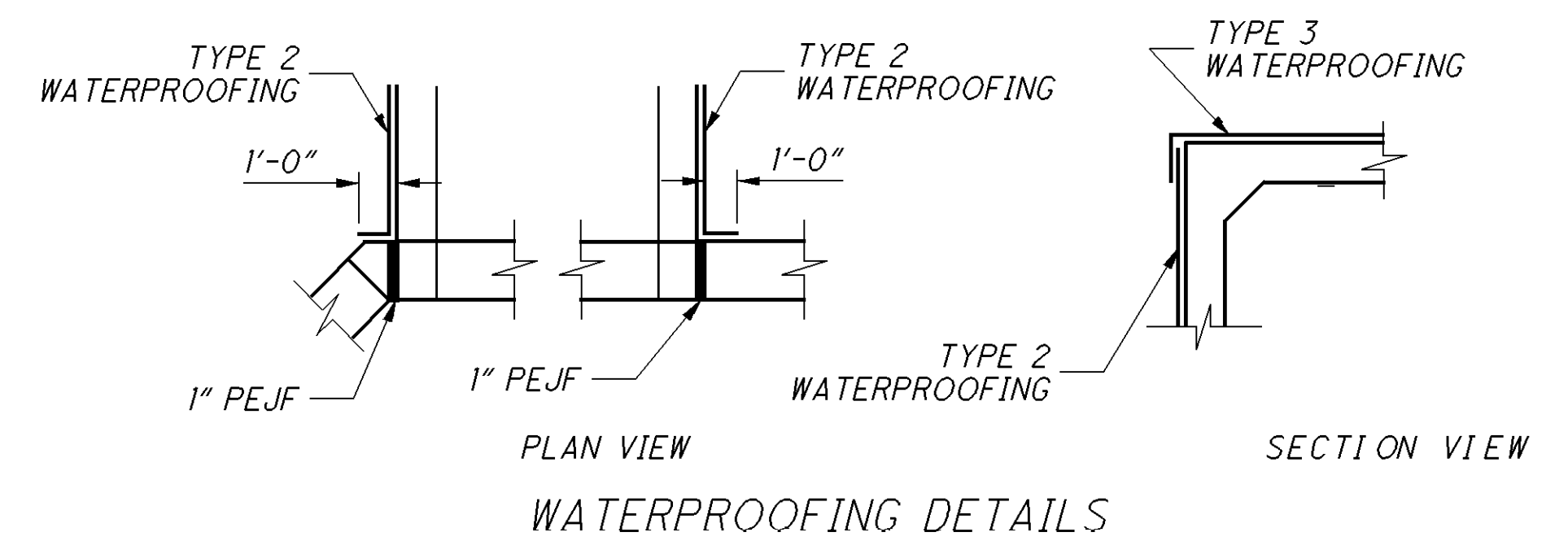
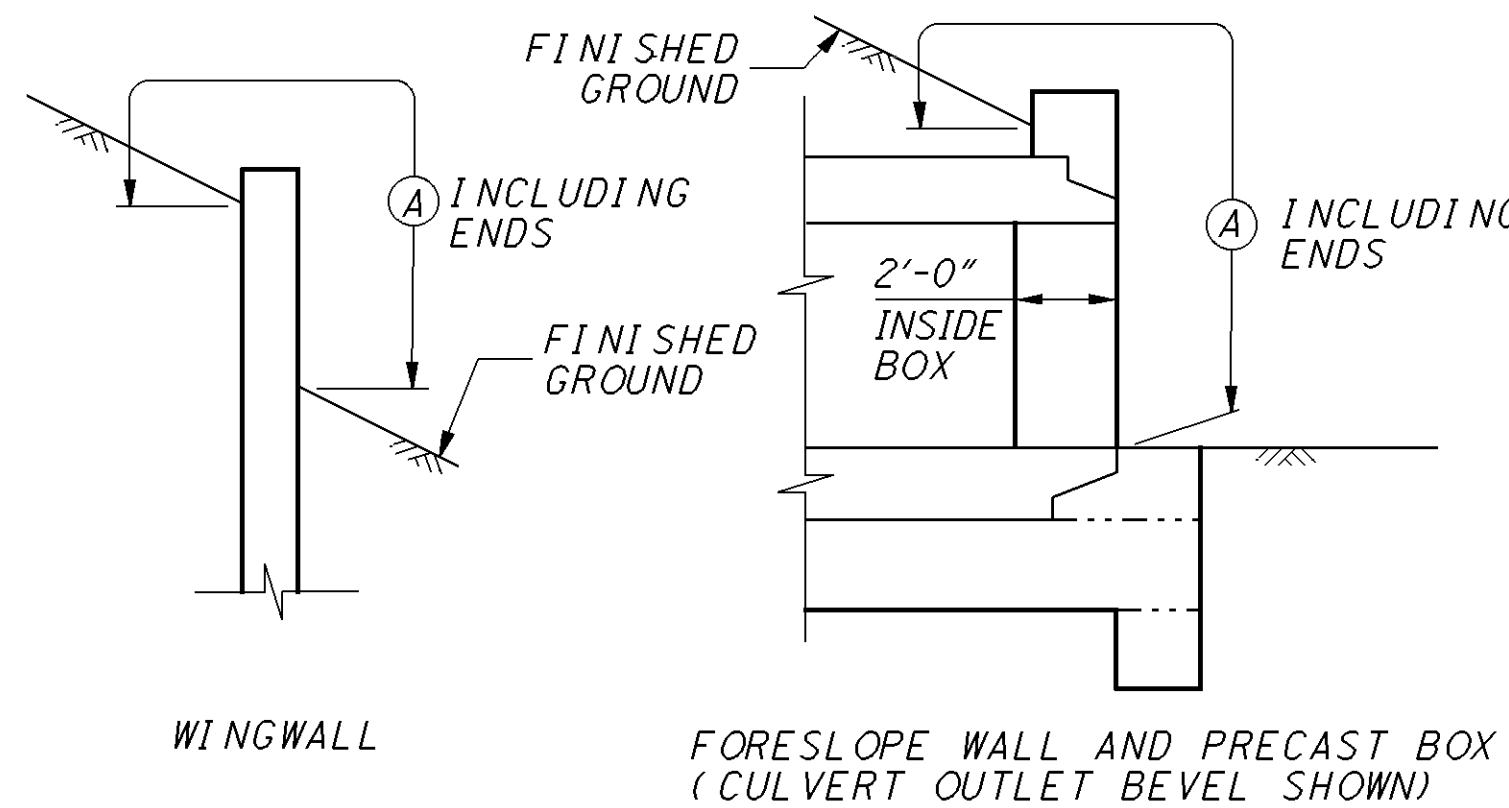
**WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.**

**PREFORMED EXPANSION JOINT FILLER:** PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

**SEALING OF FORESLOPE WALL AND WINGWALLS:** ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.

**WATERPROOFING:** TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

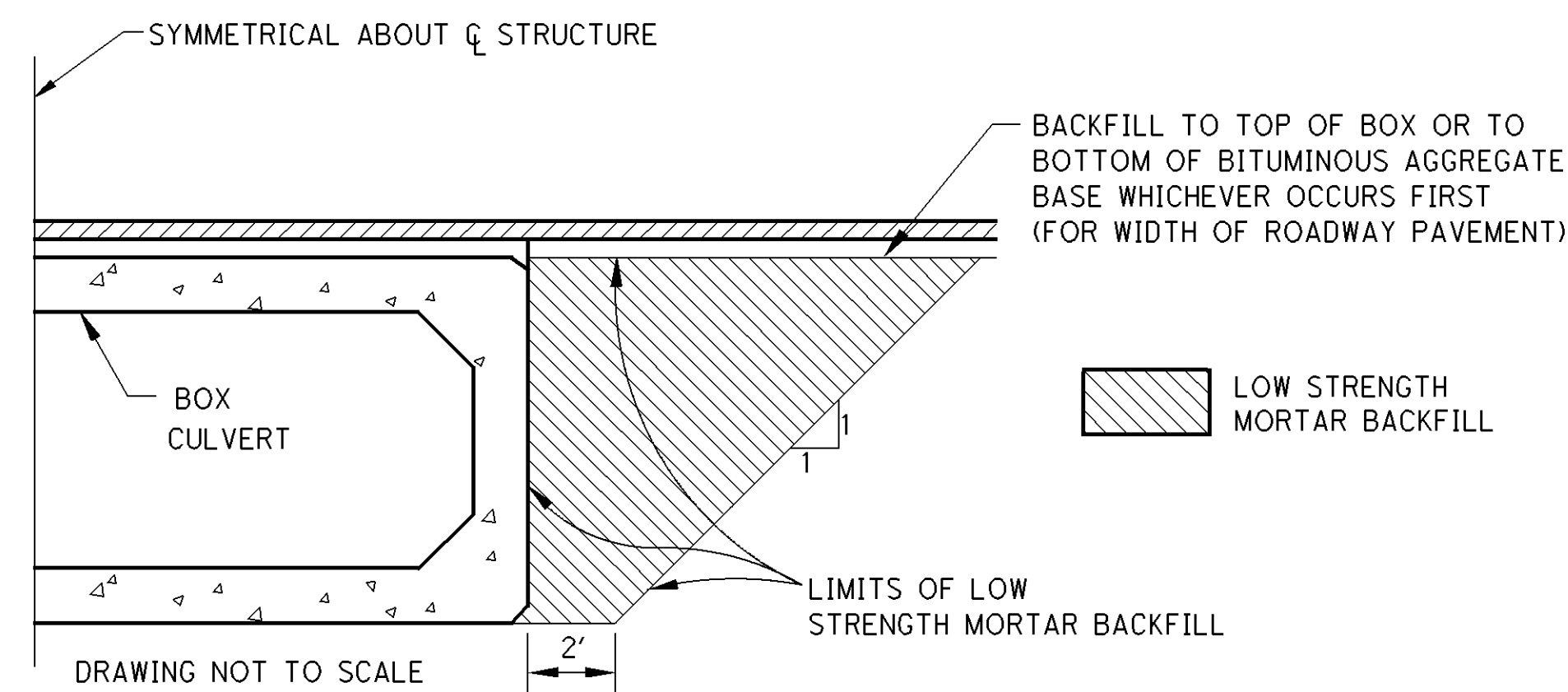
TYPE 3 WATERPROOFING, PER CMS 512.10 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.



**BASIS OF PAYMENT:** ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTING, CUTOFF WALL, WINGWALLS AND FORESLOPE WALL SHALL BE INCLUDED WITH ITEM 511 - CLASS C CONCRETE (RET-WALL/WINGWALL- INCLUDING FOOTING). PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

Ⓐ - SEAL ENTIRE CONCRETE SURFACE AREA

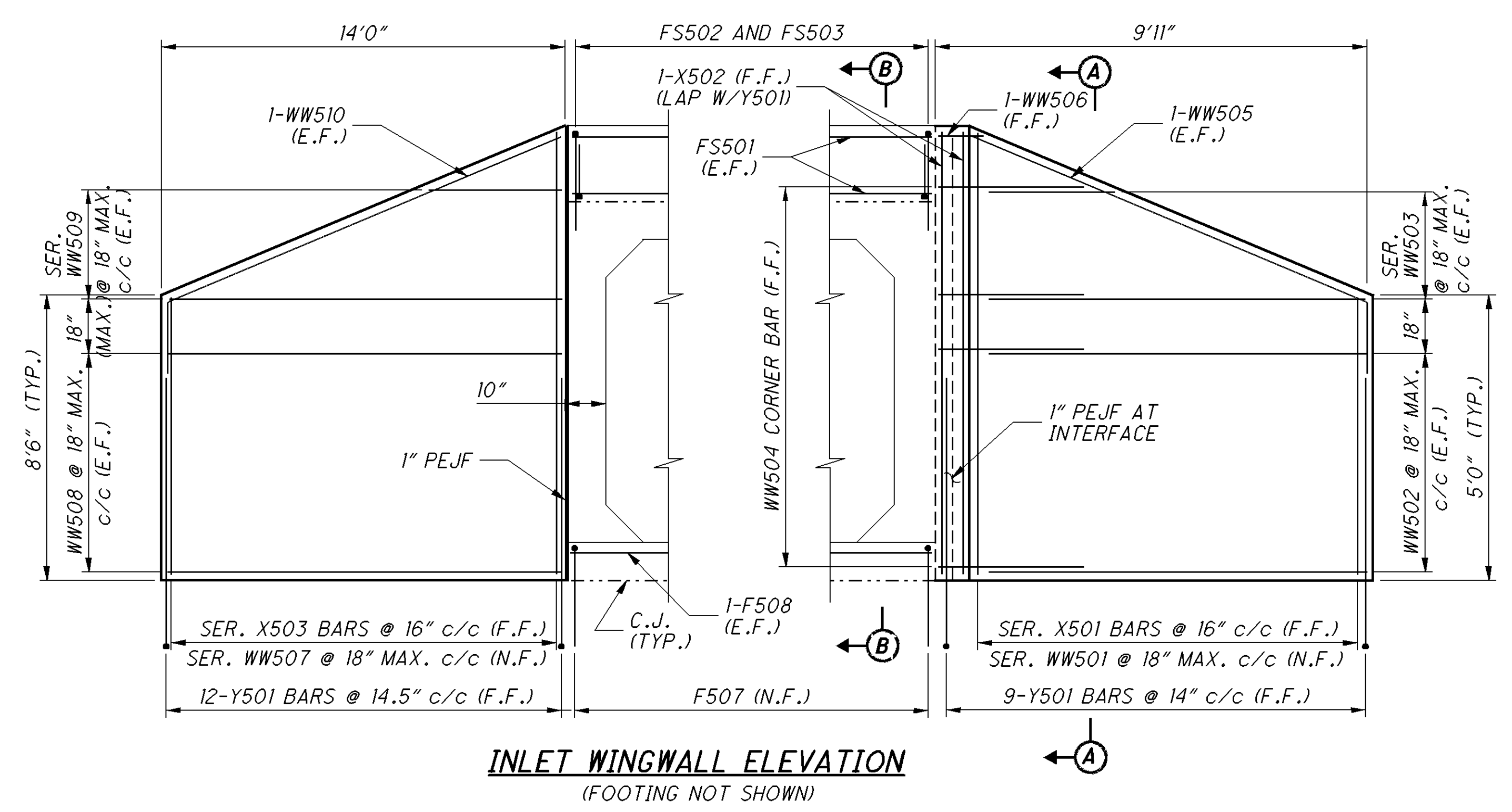


**ITEM SPECIAL - LOW STRENGTH MORTAR BACKFILL**

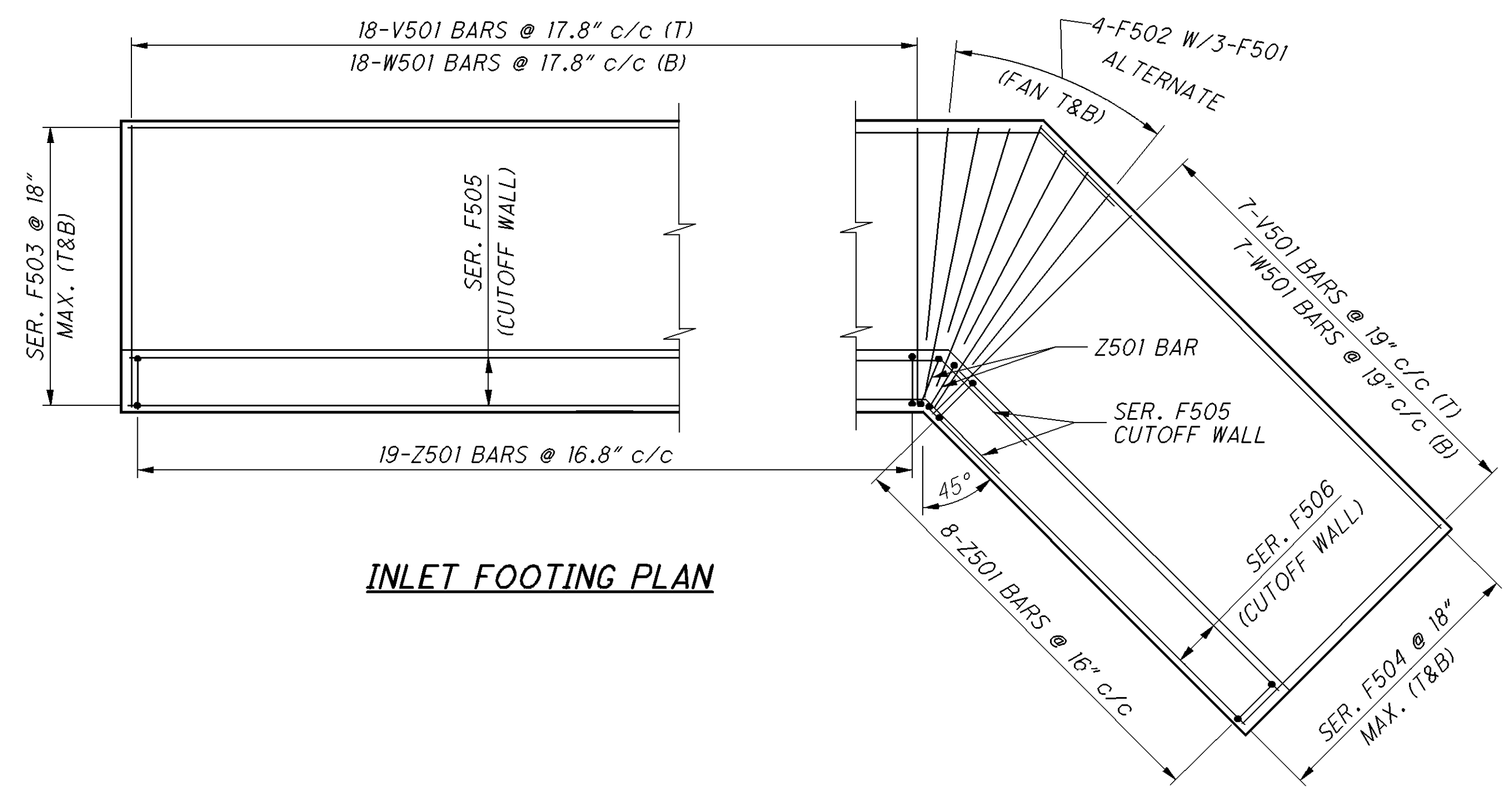
ESTIMATED QUANTITIES						
ITEM	ITEM EXT	INLET	OUTLET	TOTAL	UNIT	DESCRIPTION
503	11100				LUMP	COFFERDAMS, CRIBS, AND SHEETING
503	21300				LUMP	UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)
509	10000	2043	1959	4,002	LB.	EPOXY COATED REINFORCING STEEL
511	46000	7.1	5.3	12.4	CU. YD.	CLASS C CONCRETE, RETAINING WALL OR WINGWALL
511	46500	18.4	15.2	33.6	CU. YD.	CLASS C CONCRETE, FOOTING
511	46600	0.4	0.4	0.8	CU. YD.	CLASS C CONCRETE, HEADWALLS
512	10100	35	27	62	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000			99	SQ. YD.	TYPE 2 WATERPROOFING
512	33010			88	SQ. YD.	TYPE 3 WATERPROOFING
516	13600	17	17	34	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
518	21230				LUMP	POROUS BACKFILL WITH FILTER FABRIC
603	94900			64	FT	10' x 6' CONDUIT, TYPE A, 706.05
613	41200			114	CU. YD.	LOW STRENGTH MORTAR BACKFILL

QUANTITIES CARRIED TO GENERAL SUMMARY

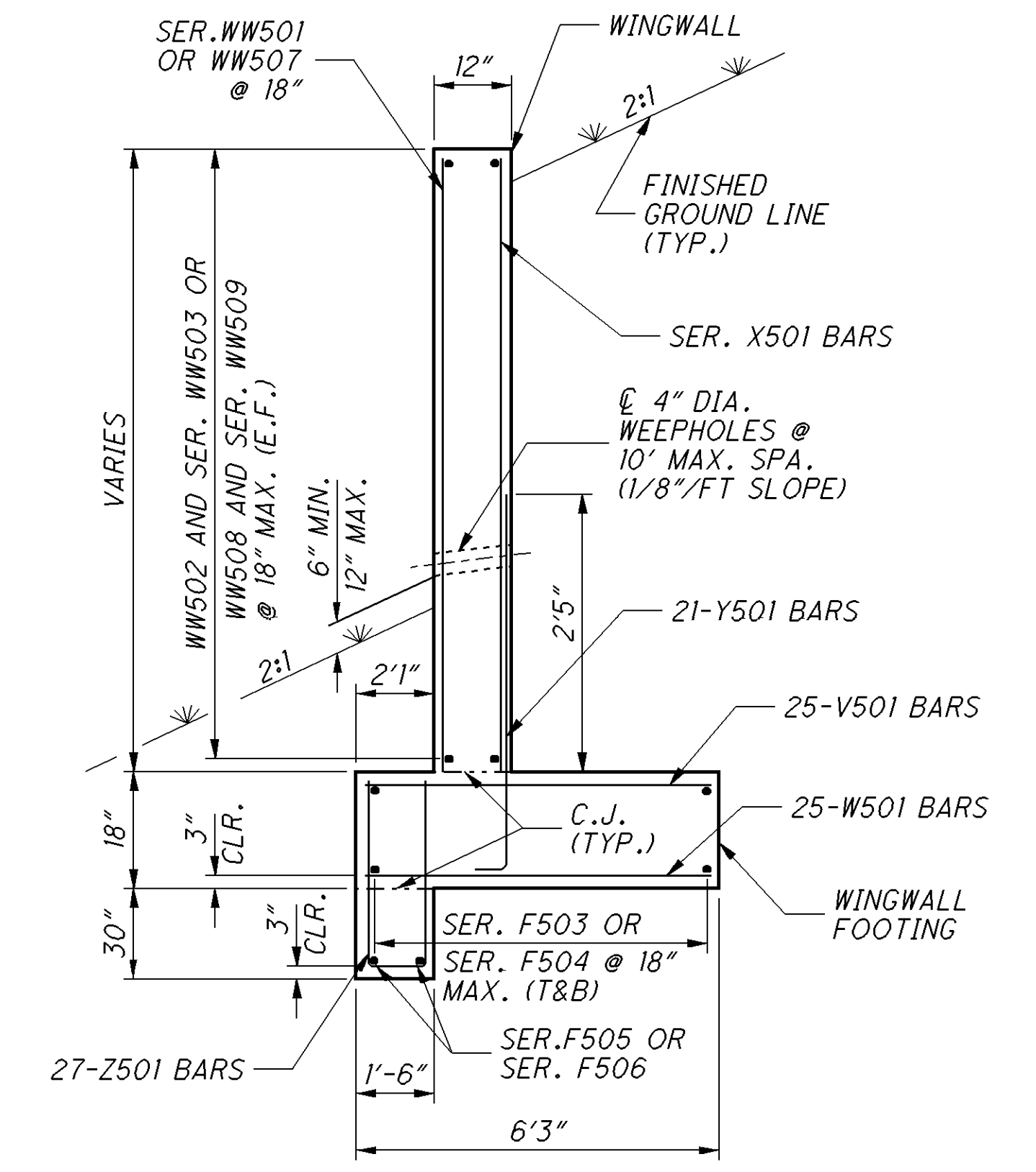
P:\MUS\89247\Design\Roadway\Plan\_Sheets\Drainage\89247\_DCD.dgn 09-JUL-2015 3:14PM dmergan



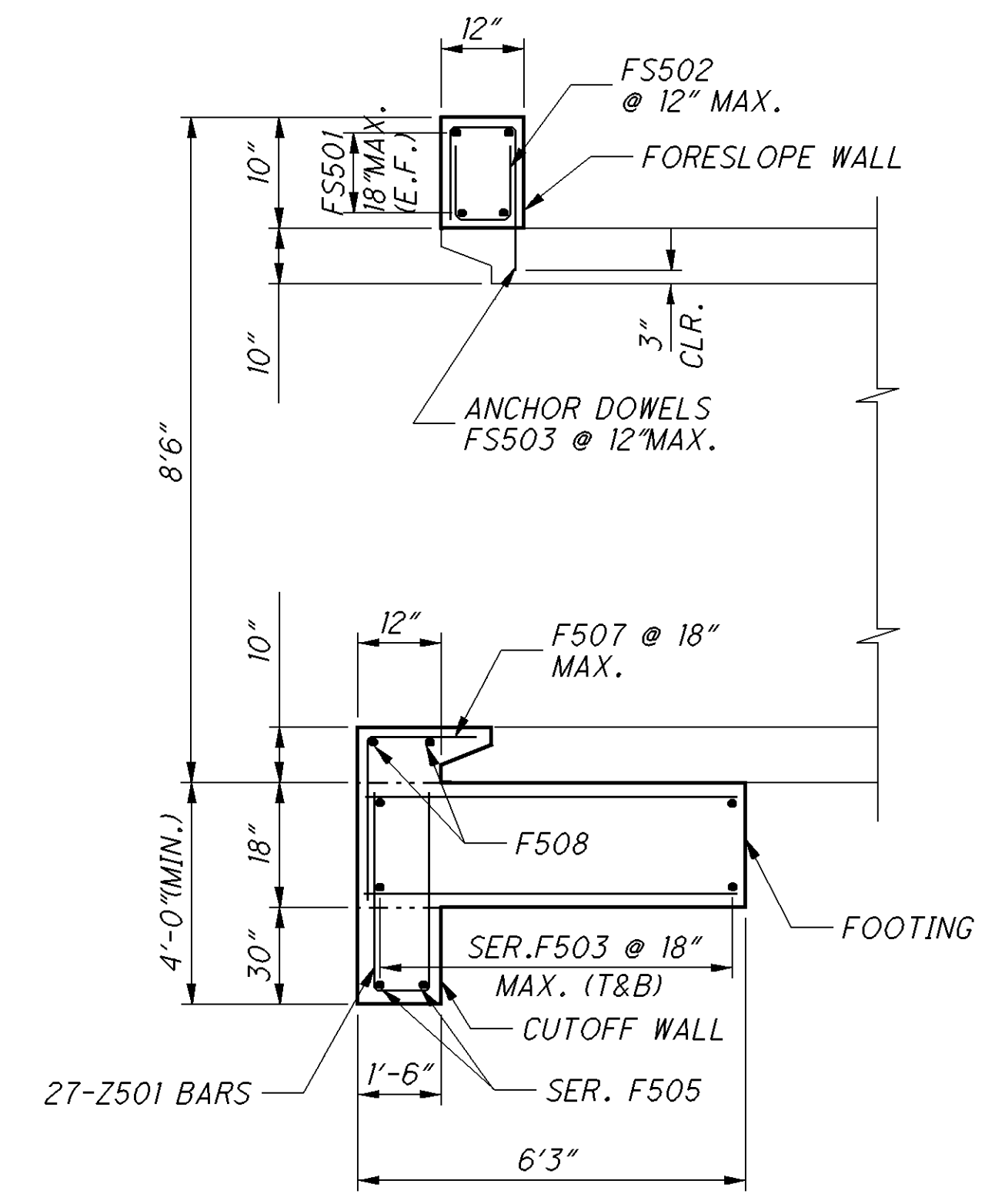
**INLET WINGWALL ELEVATION**  
(FOOTING NOT SHOWN)



**INLET FOOTING PLAN**



**SECTION A-A**  
(POROUS BACKFILL NOT SHOWN FOR CLARITY)



**SECTION B-B**  
(CULVERT INLET BEVEL SHOWN)

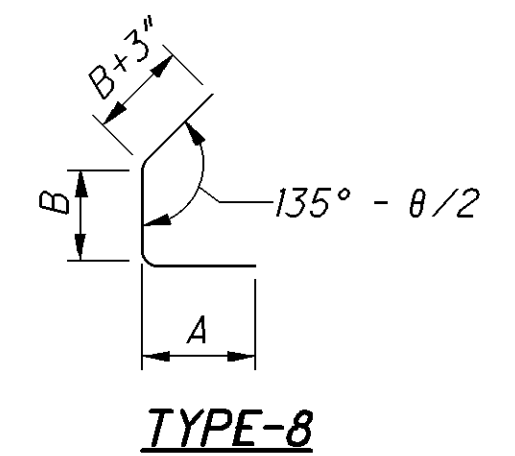
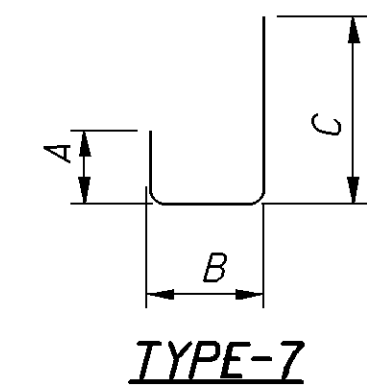
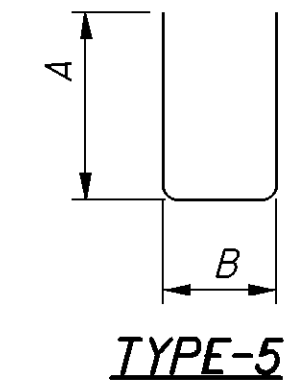
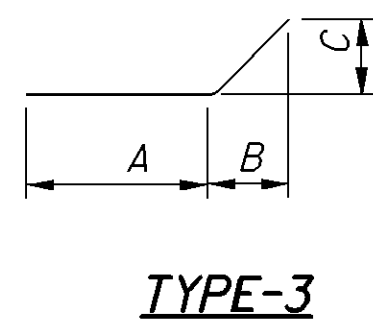
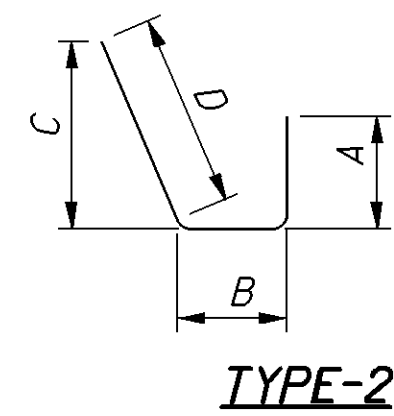
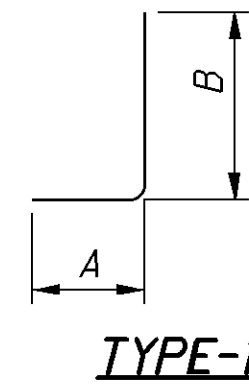
- NOTES**
- FOR CULVERT LOCATION PLAN, SEE SHEET 16.
  - FOR PRECAST BOX CULVERT DETAILS, SEE SHEET 25.
  - THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, WW501 IS A NO.5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT. ALL REINFORCING 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	PERFORMED EXPANSION JOINT FILLER	INC.	INCREMENT

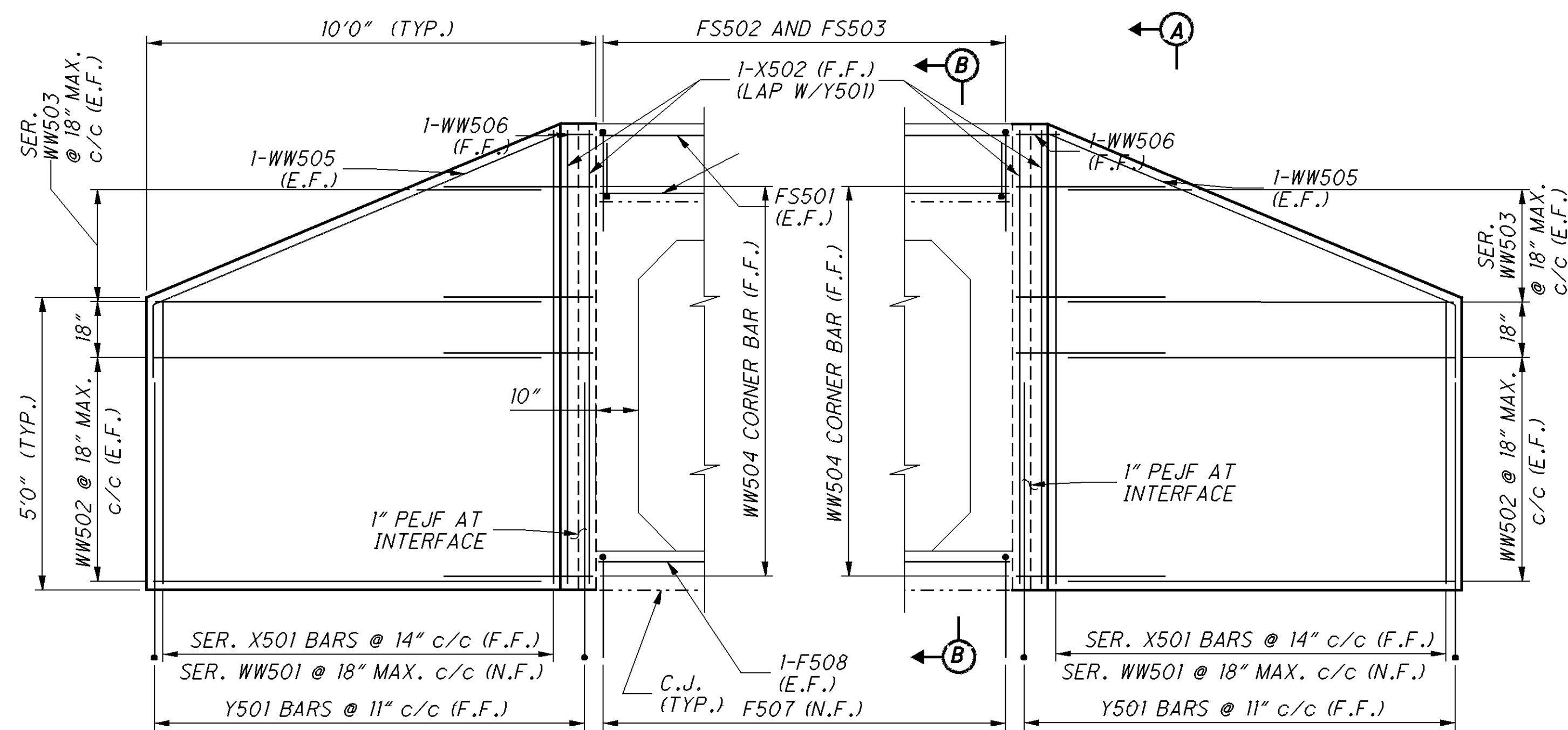
θ = ∅ CULVERT SKEW FROM LINE NORMAL TO ROADWAY (ROUNDED TO NEAREST 15° INCREMENT FROM 0° TO 45°)

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Drainage\89247\_DHD\_001.dgn 10-JUL-2015 12:50PM jnelson1

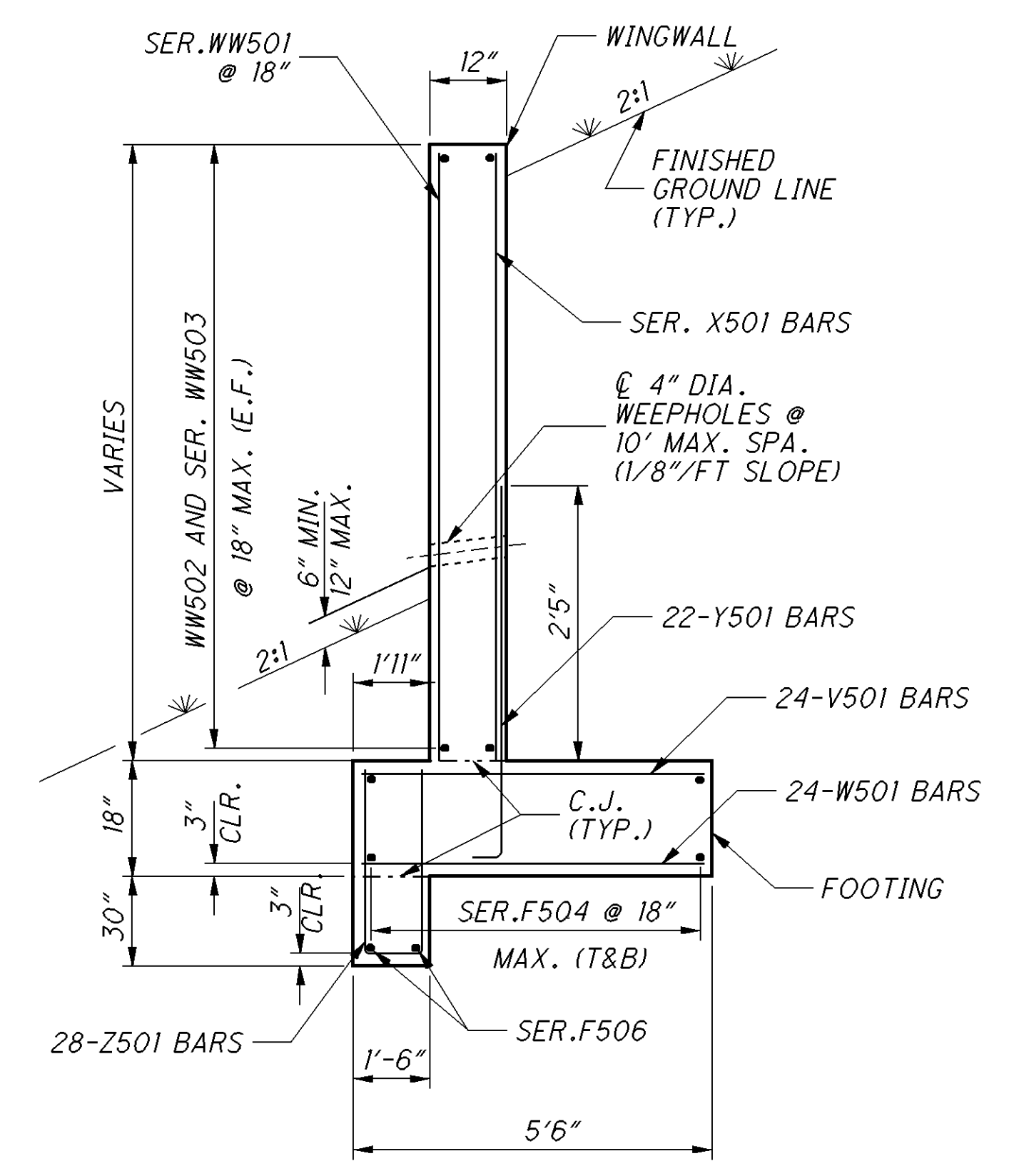


TYPE B HEADWALL REINFORCING SCHEDULE									
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS				INC.
					A	B	C	D	
WINGWALLS									
	1	4'- 10''							
X501	SERIES TO		55	STR.					0'- 6''
	of 8	8'- 4''							
X502	2	8'- 4''	18	STR.					
	1	8'- 4''							
X503	SERIES TO		96	STR.					0'- 0''
	of 11	8'- 4''							
Y501	21	4'- 5''	98	1	0'- 6''	4'- 1''			
	1	4'- 10''							
W501	SERIES TO		55	STR.					0'- 6''
	of 8	8'- 4''							
W502	8	9'- 7''	80	STR.					
	2	3'- 3''							
W503	SERIES TO		41	STR.					3'- 2 1/8''
	of 3	9'- 7''							
W504	7	3'- 6''	26	2	0'- 7''	0'- 2''	2'- 1/4''	2'- 10''	
W505	2	12'- 7''	27	3	2'- 5''	3'- 4''	9'- 7''		
W506	1	1'- 1''	2	8	0'- 7''	0'- 2''			
	1	8'- 4''							
W507	SERIES TO		96	STR.					0'- 0''
	of 11	8'- 4''							
W508	12	13'- 8''	172	STR.					
	0	0'- 0''							
W509	SERIES TO		0	STR.					0'- 0''
	of 0	0'- 0''							
W510	2	13'- 8''	29	3	13'- 8''	0'- 0''	0'- 0''		
FOOTING & CUTOFF WALL									
V501	25	5'- 11''	155	STR.					
W501	25	5'- 11''	155	STR.					
Z501	27	8'- 2''	230	5	3'- 7''	1'- 2''			
F501	6	5'- 4''	34	STR.					
F502	8	4'- 2''	35	STR.					
	2	27'- 0''			24'- 6 1/2''				
F503	SERIES TO		295	3		1'- 8 3/4''	1'- 8 3/4''		0'- 7 1/4''
	of 5	29'- 5''			27'- 0''				
	2	8'- 9''							
F504	SERIES TO		104	STR.					0'- 7 1/4''
	of 5	11'- 2''							
	1	27'- 0''			24'- 6 1/2''				
F505	SERIES TO		57	3		1'- 8 3/4''	1'- 8 3/4''		0'- 6''
	2	27'- 6''			25'- 1/4''				
	1	8'- 9''							
F506	SERIES TO		19	STR.					0'- 6''
	2	9'- 3''							
F507	9	4'- 5''	42	1	2'- 6''	2'- 0''			
F508	2	11'- 4''	24	STR.					
FORESLOPE WALL									
FS501	4	11'- 4''	48	STR.					
FS502	13	1'- 5''	20	5	0'- 6''	0'- 8''			
FS503	13	2'- 2''	30	7	0'- 6''	0'- 8''	1'- 3''		
		TOTAL	2,043						

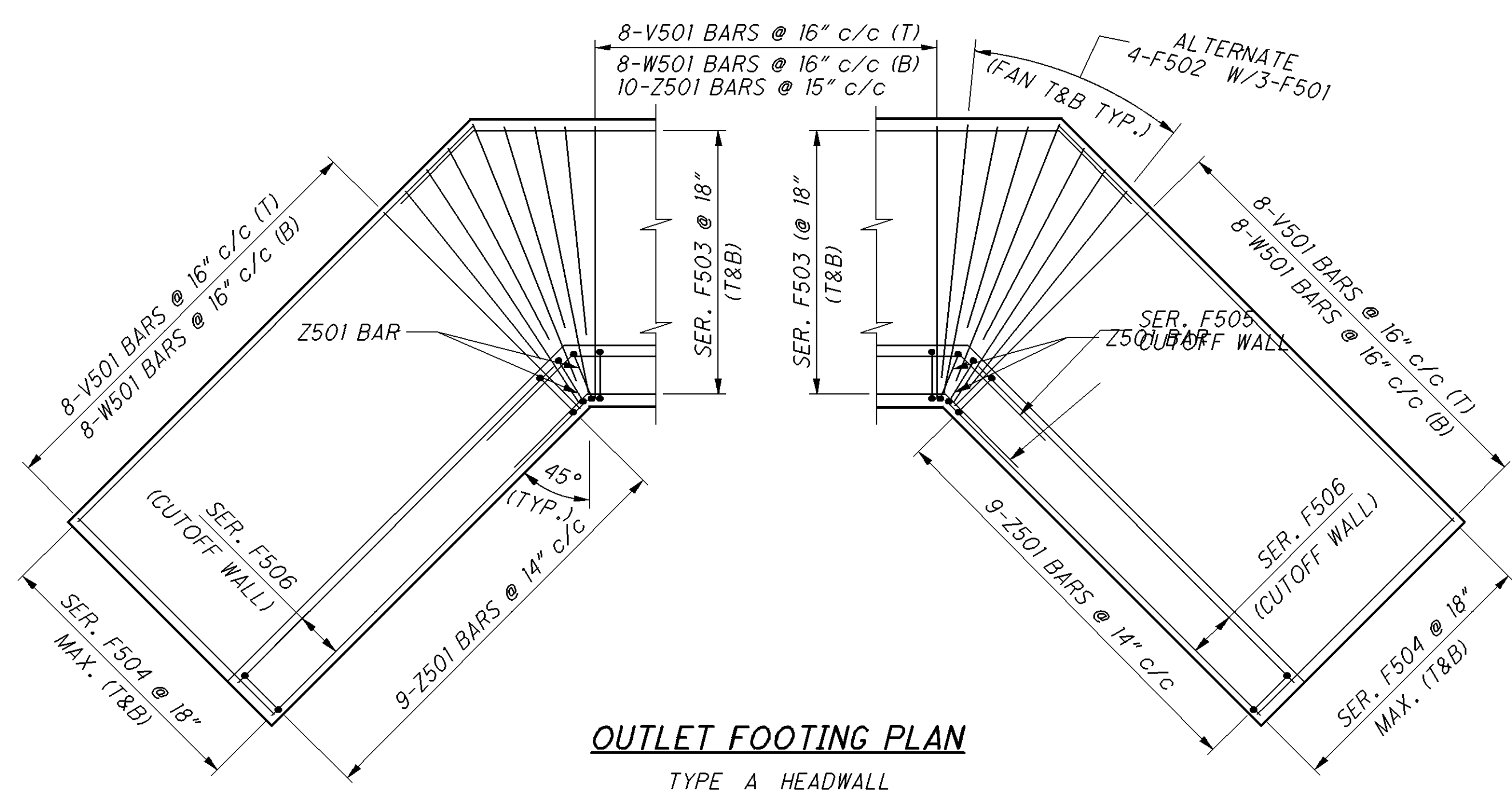
USE REINFORCING SCHEDULE FOR INLET HEADWALL



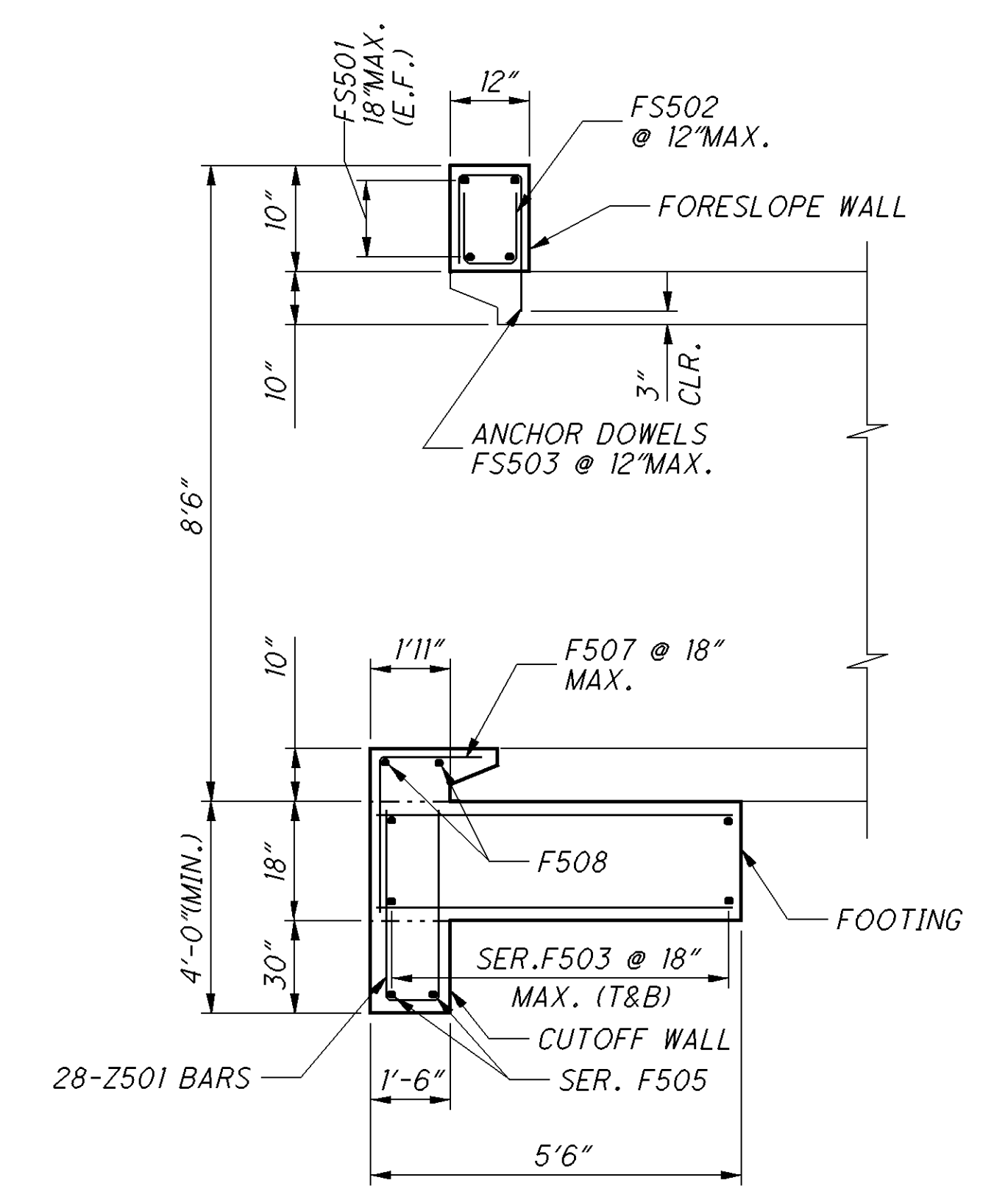
**OUTLET WINGWALL ELEVATION**  
(FOOTING NOT SHOWN)



**SECTION A-A**  
(POROUS BACKFILL NOT SHOWN FOR CLARITY)



**OUTLET FOOTING PLAN**  
TYPE A HEADWALL



**SECTION B-B**  
(CULVERT INLET BEVEL SHOWN)

**NOTES**

1. FOR CULVERT LOCATION PLAN, SEE SHEET 16.
2. FOR PRECAST BOX CULVERT DETAILS, SEE SHEET 25.
3. 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.
4. THE LAP SPLICE LENGTHS USED IN THESE DETAILS ARE AS FOLLOWS: 2'-5" FOR #5 BARS; 2'-11" FOR #6 BARS.

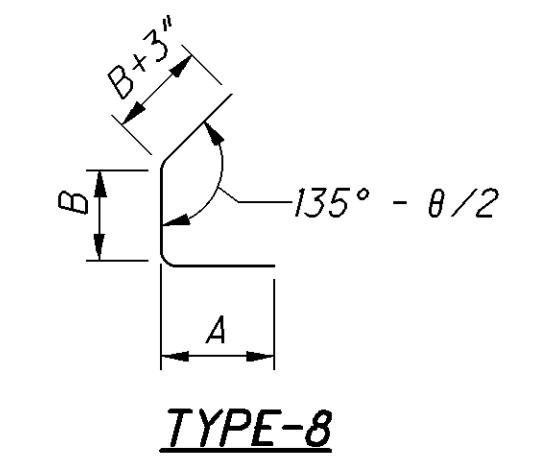
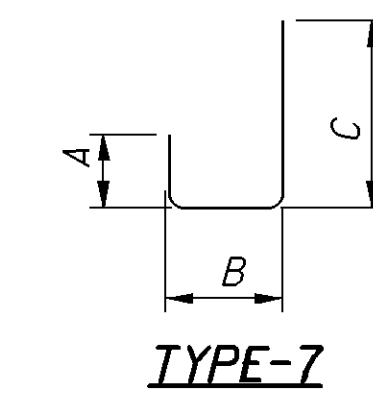
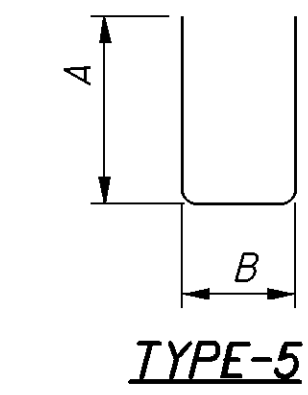
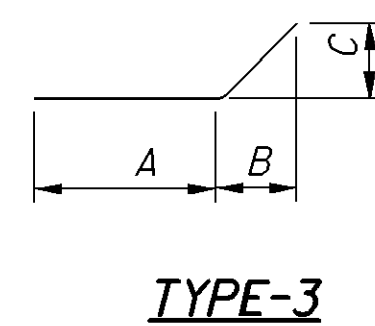
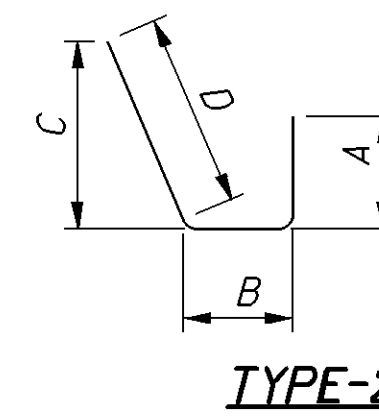
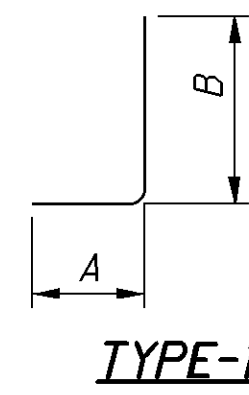
**LEGEND:**

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

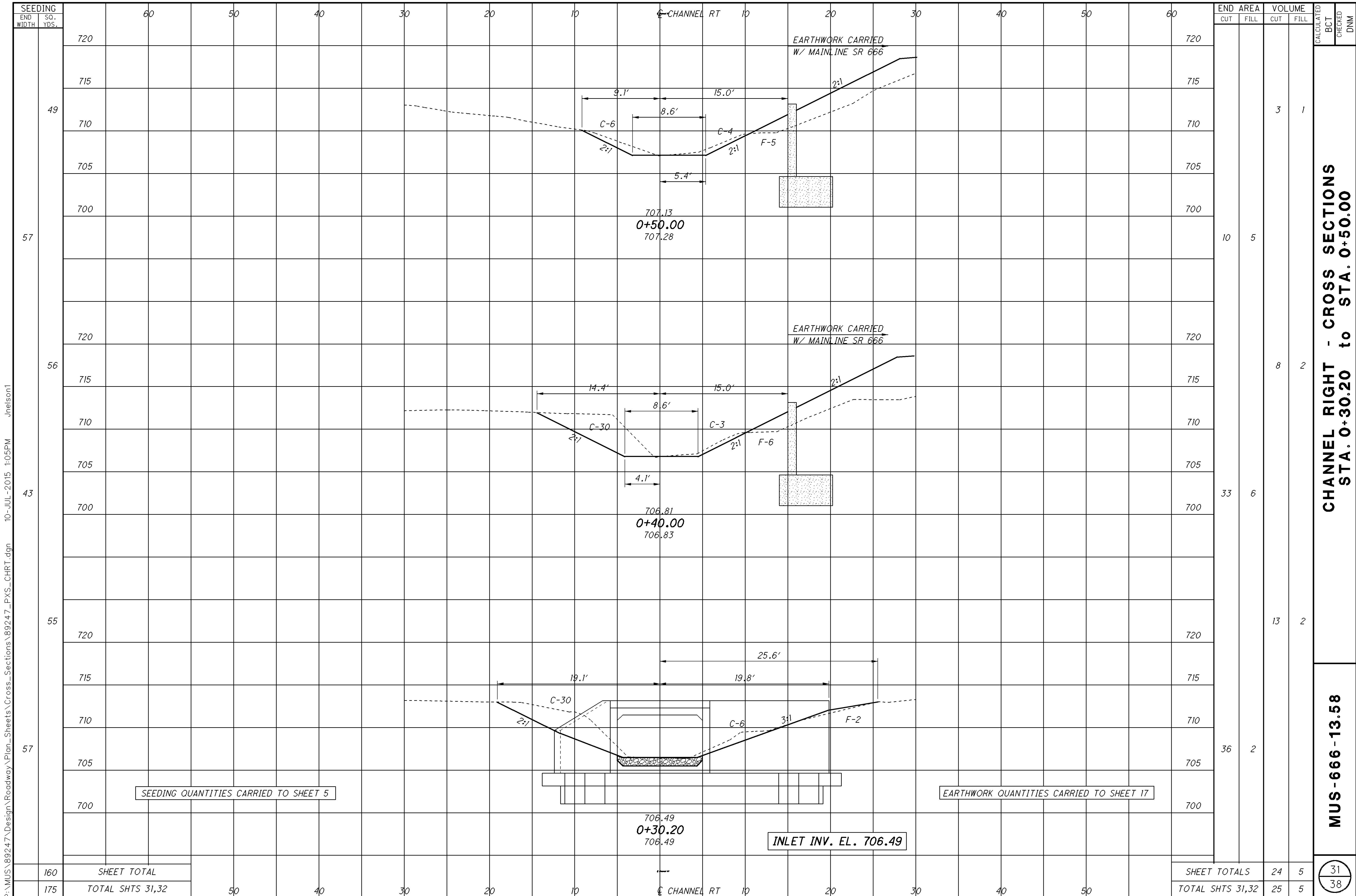
P:\MUS\89247\Design\Roadway\Plan\_Sheets\Drainage\89247\_DHD\_003.dgn 10-JUL-2015 12:51PM jnelson1

TYPE A HEADWALL REINFORCING SCHEDULE

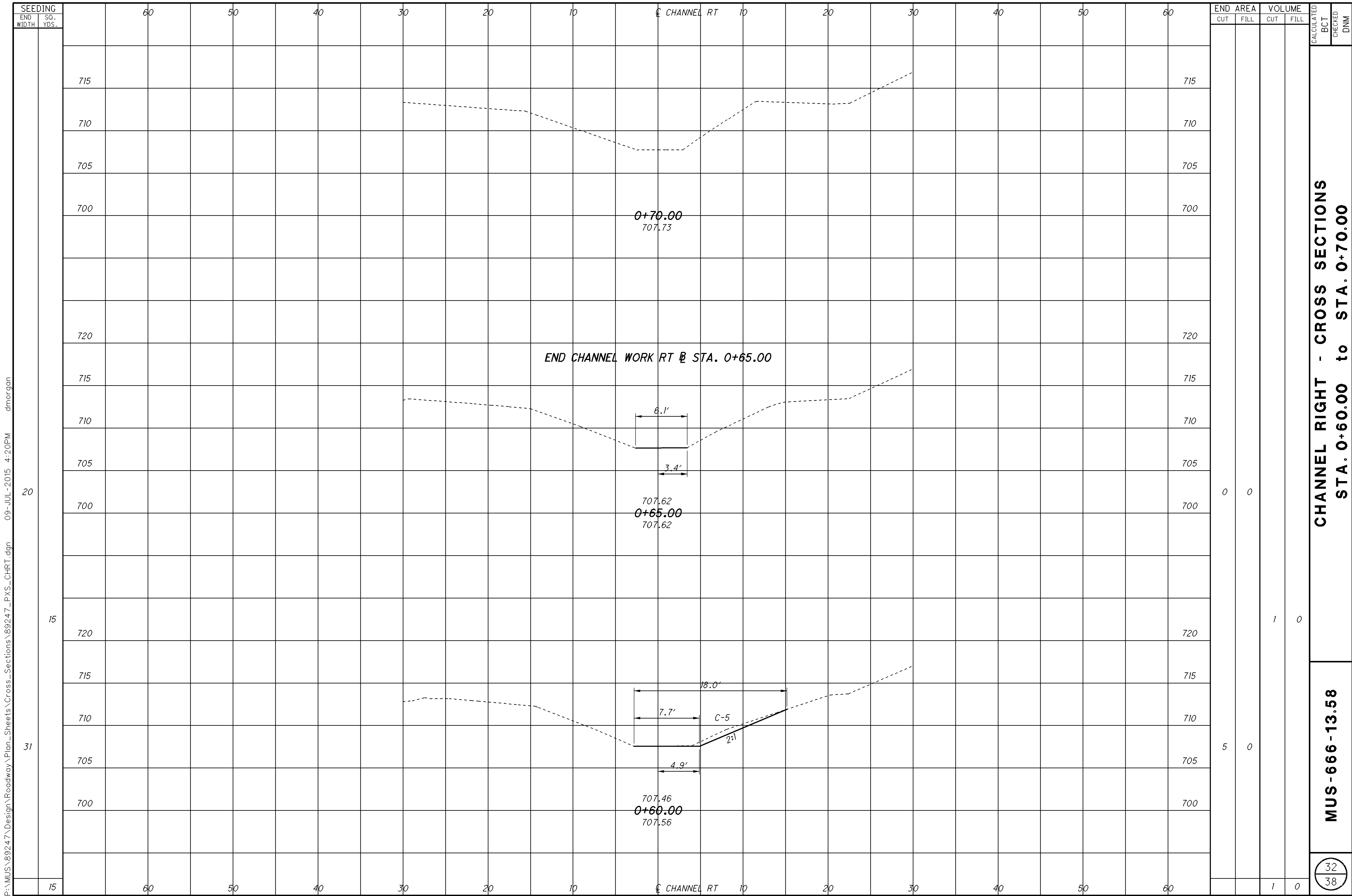
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS				INC.
					A	B	C	D	
WINGWALLS									
	2	4'- 10''							
X501	SERIES	TO	124	STR.					0'- 5 1/4''
	of 9	8'- 4''							
X502	4	8'- 4''	35	STR.					
Y501	22	4'- 1''	93	1	0'- 6''	3'- 8''			
	2	4'- 10''							
WW501	SERIES	TO	110	STR.					0'- 6 ''
	of 8	8'- 4''							
WW502	16	9'- 8''	162	STR.					
	4	3'- 3''							
WW503	SERIES	TO	81	STR.					3'- 2 1/2''
	of 3	9'- 8''							
WW504	14	3'- 6''	52	2	0'- 7''	0'- 2 ''	2'- 1/4''	2'- 10 ''	
WW505	4	12'- 8''	53	3	2'- 5''	3'- 4''	9'- 8''		
WW506	2	1'- 1''	3	4	0'- 7''	0'- 2 ''			
FOOTING & CUTOFF WALL									
V501	24	5'- 2''	130	STR.					
W501	24	5'- 2''	130	STR.					
Z501	28	8'- 2''	239	5	3'- 7''	1'- 2''			
F501	12	4'- 8''	59	STR.					
F502	16	3'- 8''	62	STR.					
	2	15'- 4''					10'- 4 3/4''		
F503	SERIES	TO	183	6	1'- 9''	1'- 9''	TO		1'- 7/8''
	of 5	19'- 7''					14'- 8 ''		
	4	9'- 1''							
F504	SERIES	TO	212	STR.					0'- 6 1/4''
	of 5	11'- 2''							
	1	15'- 4''					10'- 4 3/4''		
F505	SERIES	TO	33	6	1'- 9''	1'- 9''	TO		0'- 11 1/2''
	2	16'- 3''					11'- 4 1/4''		
	2	9'- 1''							
F506	SERIES	TO	39	STR.					0'- 5 ''
	2	9'- 6''							
F507	9	3'- 11''	37	1	2'- 0''	2'- 0''			
F508	2	11'- 4''	24	STR.					
FORESLOPE WALL									
FS501	4	11'- 4''	48	STR.					
FS502	13	1'- 5''	20	5	0'- 6''	0'- 8''			
FS503	13	2'- 2''	30	7	0'- 6''	0'- 8''	1'- 3''		
		TOTAL	1,959						



USE REINFORCING SCHEDULE FOR OUTLET HEADWALLS



P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_CHRT.dgn 10-JUL-2015 1:05PM jnelson1



P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_CHRT.dgn 09-JUL-2015 4:20PM dmmorgan

20

15

31

15

0 0

1 0

5 0

1 0

0+70.00  
707.73

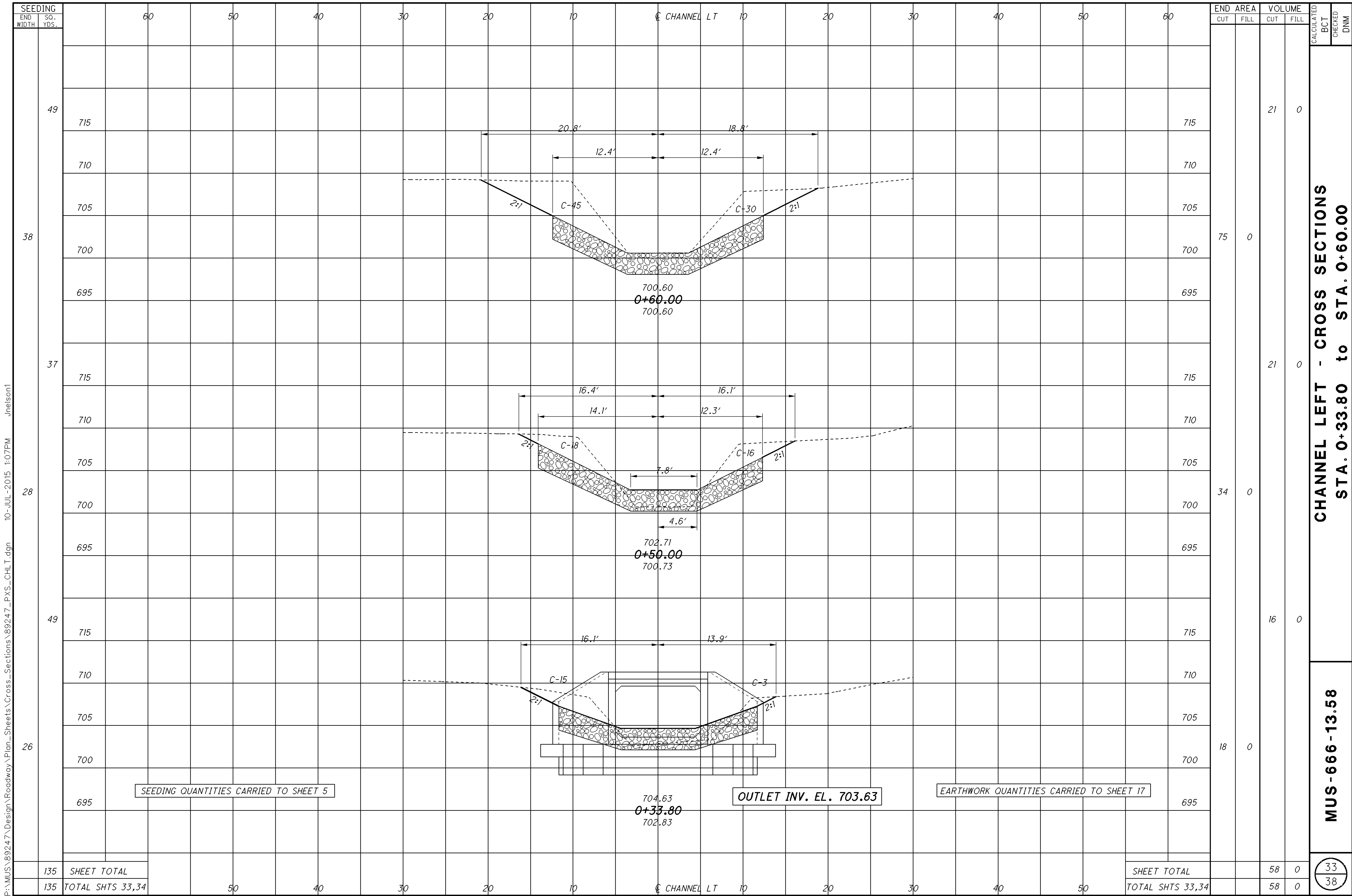
END CHANNEL WORK RT @ STA. 0+65.00

707.62  
0+65.00  
707.62

707.46  
0+60.00  
707.56

6.1'  
3.4'

18.0'  
7.7'  
4.9'  
C-5  
2:1



**CHANNEL LEFT - CROSS SECTIONS  
STA. 0+33.80 to STA. 0+60.00**

**MUS-666-13.58**

33  
38

P:\MUS\89247\Design\Roadway\Plan\_Sheets\Cross\_Sections\89247\_PXS\_CHLT.dgn 10-JUL-2015 1:07PM Jnelson1

SEEDING QUANTITIES CARRIED TO SHEET 5

OUTLET INV. EL. 703.63

EARTHWORK QUANTITIES CARRIED TO SHEET 17

135 SHEET TOTAL  
135 TOTAL SHTS 33,34

SHEET TOTAL  
TOTAL SHTS 33,34



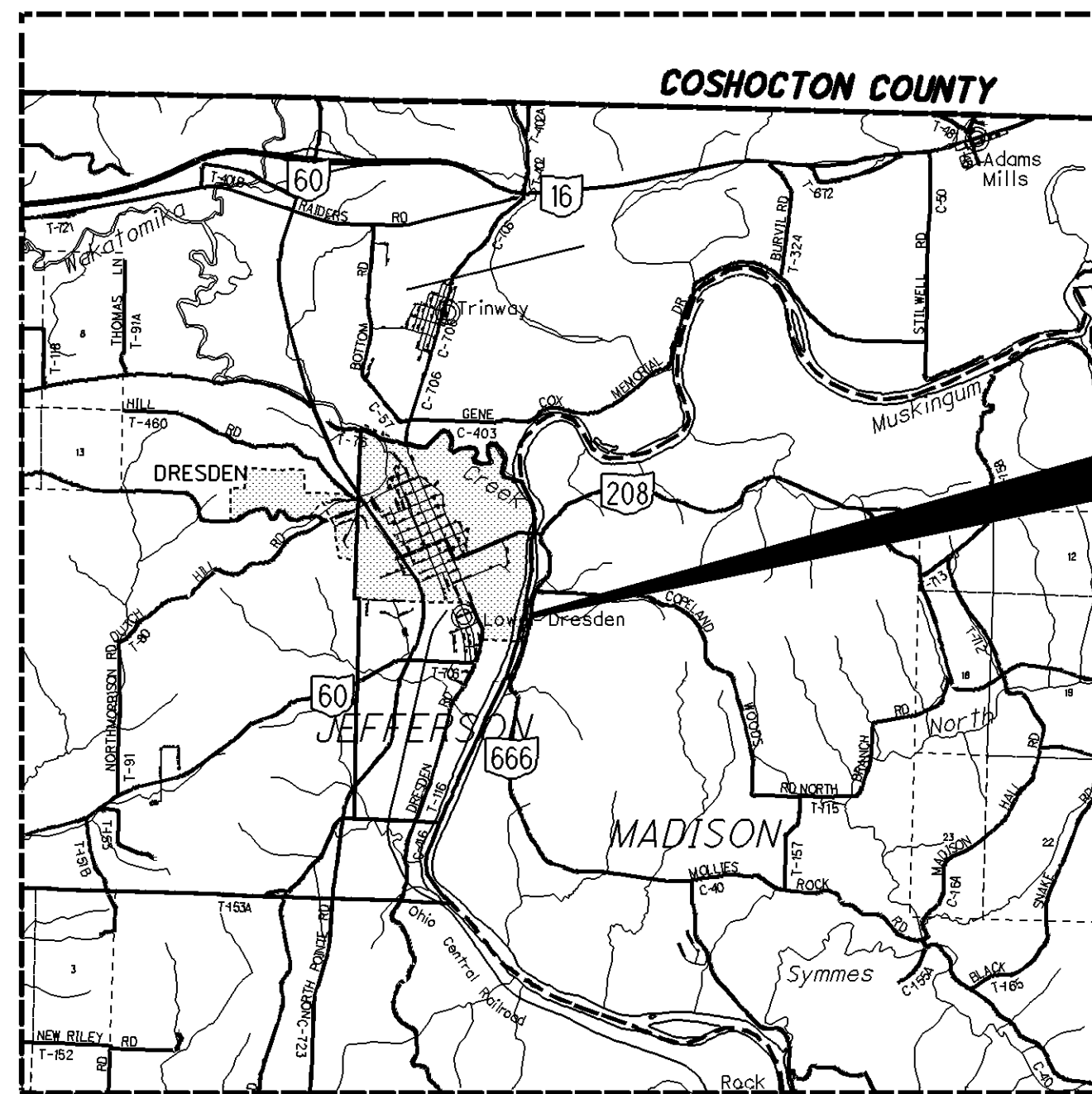
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**RIGHT OF WAY  
LEGEND SHEET**

**MUS-666-13.58  
PART 2**

**FOR PART 1 SEE MUS-666-0.00**

**QUARTER TOWNSHIP 3, T3N, R7W  
MADISON TOWNSHIP  
MUSKINGUM COUNTY**



NOTE:  
THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

INDEX OF SHEETS:

CENTERLINE PLAT . . . . . 2  
PROPERTY MAP & SUMMARY OF ADDITIONAL RIGHT OF WAY. . . 3  
DETAIL SHEETS . . . . . 4

PROJECT DESCRIPTION

REPLACE EXISTING TWIN PIPES WITH A 10' X 6' CULVERT AND PERFORM RELATED WORK.

PROJECT CONTROL

NORTH AMERICAN VERTICAL DATUM (NAVD 88) AND STATE PLANE GRID COORDINATES, SOUTH ZONE.

PLAN PREPARED BY:

FIRM NAME: ODOT, DISTRICT 5  
PLANS PREPARED BY: CANDY SHOEMAKER  
FIELD REVIEW BY: CHARLES PRICE, JR. & CANDY SHOEMAKER  
OWNERSHIP VERIFIED BY: CHARLES PRICE, JR.  
DATE COMPLETED: 03/12/14

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**

CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

I, Charles W. Price, Jr., P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in November, 2013. The results of that survey are contained herein.

Underground utility locations are shown for informational purposes only. Though they are believed to be accurate, their location is as marked on the ground by the utility company per OUPS Confirmation Number A309900080 & OGPups #102251 and those markings subsequently being surveyed as a part of this project.

The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates system, Grid Coordinates, NAVD 88, South Zone.

As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein.

As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein.

As a part of this work I have set monuments at the proposed property corners, and other points shown herein. The iron pins and caps will be 3/4" x 30" rebar with aluminum cap stamped "Odor R/W District 5". All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless so noted.

The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

Charles W. Price, Jr., Professional Land Surveyor # 7825

Date: 03/12/14

SURVEYORS SEAL

SIGNED:   
DATE: 03/12/14

**UTILITY OWNERS**  
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T OHIO 2932 SOUTH 6TH STREET IRONTON, OHIO 45638 ATTN: DAVE MALONE 740-532-9927	NATIONAL GAS & OIL 120 O'NEIL DRIVE HEBRON, OHIO 43025 ATTN: GREG WILSON 740-348-1254	TIME WARNER CABLE 3760 INTERCHANGE DRIVE COLUMBUS, OHIO 43204 ATTN: RAY MAURER 614-481-5262	AMERICAN ELECTRIC POWER CO. 850 TECH CENTER DRIVE GAHANNA, OHIO 43230 ATTN: PAUL PAXTON 614-883-6831
CITY OF ZANESVILLE WATER DEPARTMENT 1084 CENTRAL AVENUE ZANESVILLE, OHIO 43701 ATTN: JOHN SMITH 740-819-8816	GUERNSEY MUSKINGUM ELECTRIC COOPERATIVE, INC. 17 SOUTH LIBERTY STREET NEW CONCORD, OHIO 43762 ATTN: JOHN MARSHALL 740-826-7661		

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

CONVENTIONAL SYMBOLS

County Line	-----	Ditch / Creek (Ex)	-----
Township Line	-----	Ditch / Creek (Pr)	-----
Section Line	-----	Tree Line (Ex)	-----
Corporation Line	----- or -----	Ownership Hook Symbol	Example
Fence Line (Ex)	-----	Property Line Symbol	Example
Center Line	-----	Break Line Symbol	Example
Right of Way (Ex)	----- Ex R/W	Tree (Pr)	Tree (Ex), Shrub (Ex)
Right of Way (Pr)	----- R/W	Tree (Remove)	Shrub (Remove)
Standard Highway Ease.(Ex)	----- Ex SH	Evergreen (Ex)	Stump
Temporary Right of Way	----- TMP	Evergreen (Remove)	Stump (Remove)
Channel Ease. (Pr)	----- CH	Wetland (Pr)	Grass (Pr), Aerial Target
Utility Ease. (Ex)	----- Ex U	Post (Ex)	Mailbox (Ex), Mailbox (Pr)
Railroad	----- or -----	Light (Ex)	Telephone Marker (Ex) TEL
Guardrail (Ex)	----- (Pr)	Fire Hydrant (Ex)	Water Meter (Ex)
Construction Limits	-----	Water Valve (Ex)	Utility Valve Unknown (Ex.)
Edge of Pavement (Ex)	-----	Telephone Pole (Ex)	Power Pole (Ex)
Edge of Pavement (Pr)	-----	Light Pole (Ex)	
Edge of Shoulder (Ex)	-----		
Edge of Shoulder (Pr)	-----		

LEGEND:

WL = FEE SIMPLE WITH LIMITATION OF ACCESS  
WD = WARRANTY DEED  
SH = STANDARD HIGHWAY EASEMENT  
LA = LIMITED ACCESS EASEMENT  
T = TEMPORARY EASEMENT  
CH = CHANNEL EASEMENT

P:\MUS\89247\DESIGN\RIGHT\_OF\_WAY\PLAN\_SHEETS\89247\_0001\_RTS.dgn 04/15/14

FEDERAL PROJECT NO.

X

PID NO.

89247

RAILROAD INVOLVEMENT

NONE

RIGHT OF WAY  
LEGEND SHEET

MUS-666-13.58

1/4

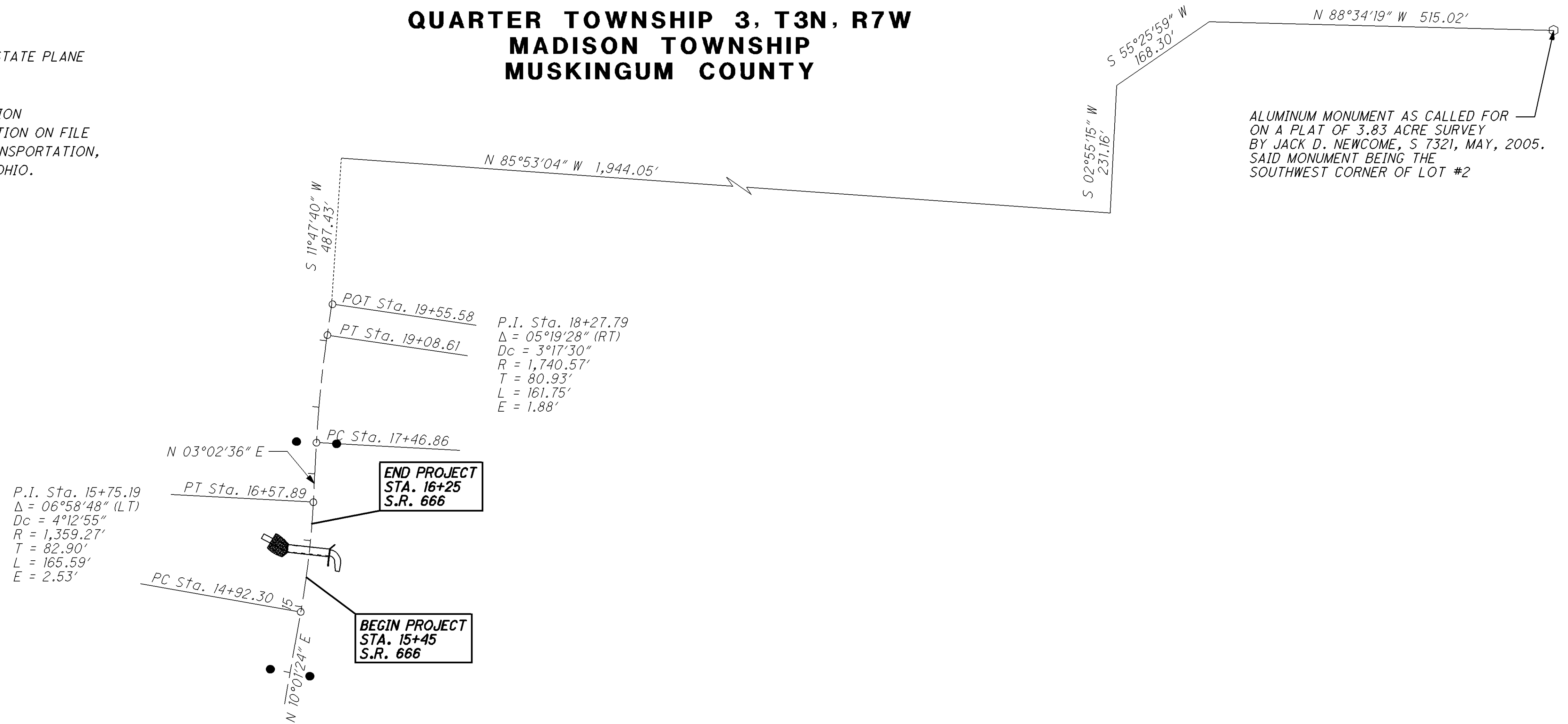
35  
38

**BASIS FOR BEARINGS:**

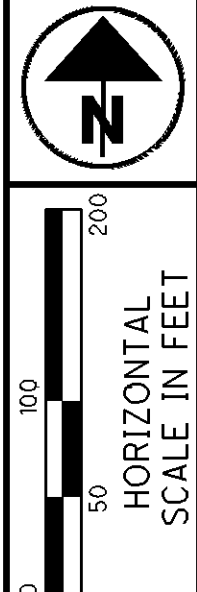
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATES SYSTEM, SOUTH ZONE.

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING DOCUMENTATION ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 OFFICE, JACKSONTOWN, OHIO.

**QUARTER TOWNSHIP 3, T3N, R7W  
MADISON TOWNSHIP  
MUSKINGUM COUNTY**



ALUMINUM MONUMENT AS CALLED FOR ON A PLAT OF 3.83 ACRE SURVEY BY JACK D. NEWCOME, S 7321, MAY, 2005. SAID MONUMENT BEING THE SOUTHWEST CORNER OF LOT #2



PID NO. **89247**  
R/W DESIGNER C.S.  
R/W REVIEWER C.P.

**CENTERLINE PLAT**

**MONUMENT TABLE**

☒ OF PROP. R/W S.R. 666		PROJECT COORDINATES SEE SURVEY CERTIFICATION		MONUMENTS TO BE SET DURING CONSTRUCTION	R/W MON. EXPECTED TO BE DISTURBED	
STATION	OFFSET	NORTHING (Y)	EASTING (X)	CENTERLINE REF. MON.	R/W MON.	DESCRIPTION
STA. 14+00	30' LT.	769,974.8161	2,108,205.9628	1		
STA. 14+00	30' RT.	769,964.3730	2,108,265.0470	1		
PC STA. 17+46.86	30' LT.	770,315.3360	2,108,245.1651	1		
PC STA. 17+46.86	30' RT.	770,312.1505	2,108,305.0804	1		
TOTAL TO GENERAL SUMMARY				4	0	

I, Charles W. Price, Jr., P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in November, 2013. The results of that survey are contained herein.

The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates system, Grid Coordinates, NAD 83, South Zone.

As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein.

As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein.

As a part of this work I have set monuments at the proposed property corners, and other points shown herein.

The iron pins and caps will be 3/4" x 30" rebar with aluminum cap stamped "Odor R/W District 5". All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless so noted.

The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

**MONUMENT LEGEND**

- ☐ EXISTING CONCRETE STONE FOUND
- ☒ EXISTING R/W MONUMENT BOX
- ☒ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⚡ RAILROAD SPIKE FOUND
- ⚡ RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- ⊙ I.P.F. IRON PIPE FOUND
- ⊙ I.P.S. IRON PIPE SET
- R.K.F. P.K. NAIL FOUND
- R.K.S. P.K. NAIL SET

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

PLACEMENT OF ALL MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE REFERENCE MONUMENTS WILL BE INSTALLED BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION.

THE IRON PIN WITH CAP (WHEN REQUIRED) ARE TO BE SET BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN ON THIS PLAT, REQUIRES PRIOR APPROVAL OF THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 OF THE OHIO DEPARTMENT OF TRANSPORTATION.

RECEIVED \_\_\_\_\_, 2014  
RECORDED \_\_\_\_\_, 2014  
INSTRUMENT NUMBER: \_\_\_\_\_  
\_\_\_\_\_  
COUNTY RECORDER

Charles W. Price, Jr., Professional Land Surveyor # 7825

Date: 03/12/14

SURVEYORS SEAL

SIGNED:   
DATE: 03/12/14

**MUS-666-13.58**  
2 / 4  
36  
38

P:\MUS\89247\DESIGN\RIGHT\_OF\_WAY\PLAN\_SHEETS\89247\_0001.RCP.dgn 04/15/14

**QUARTER TOWNSHIP 3, T3N, R7W  
MADISON TOWNSHIP  
MUSKINGUM COUNTY**

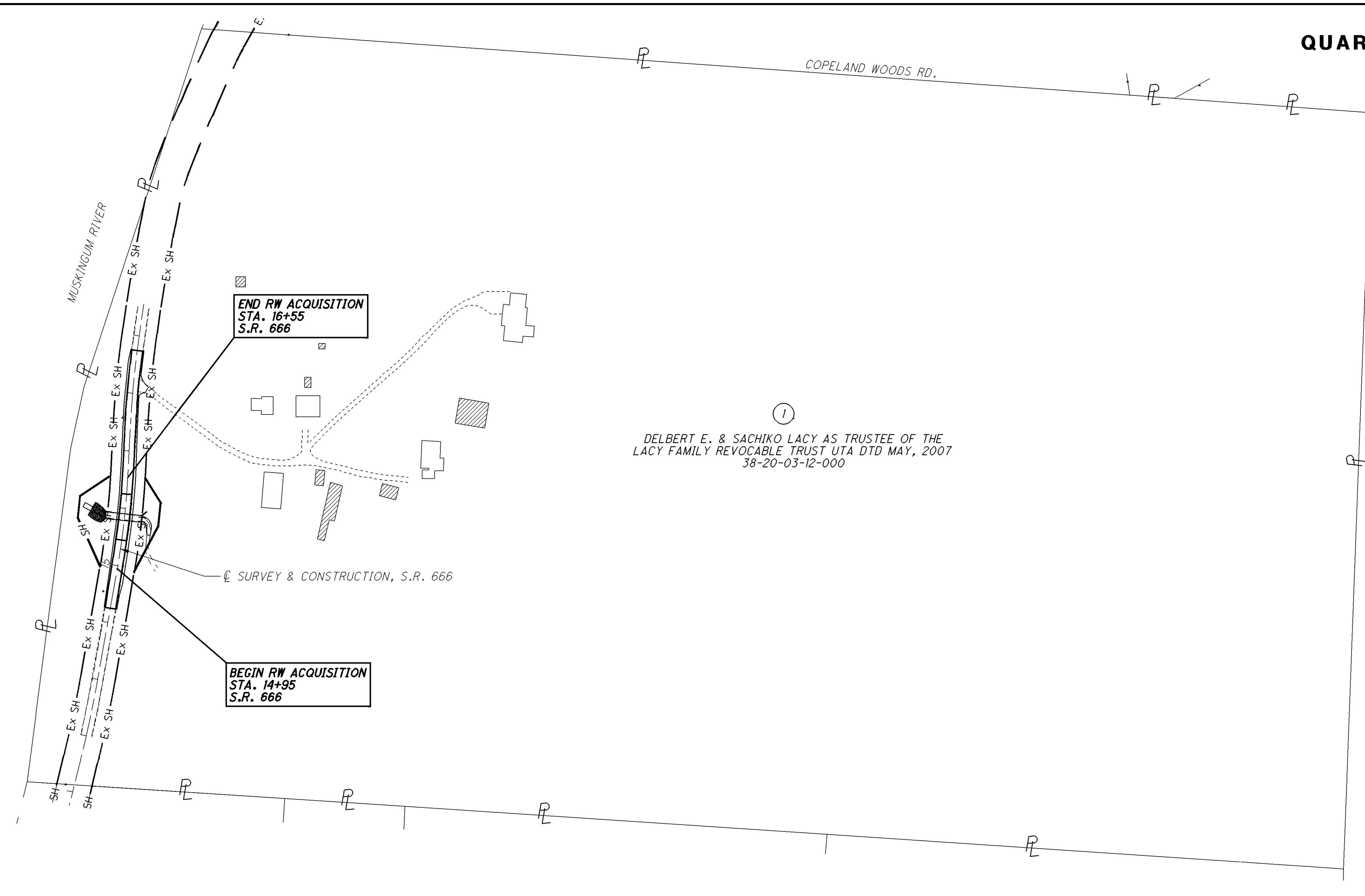
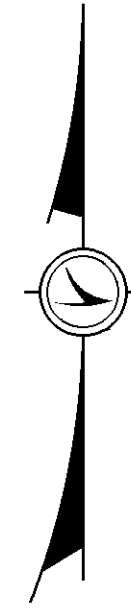


PID NO. **89247**

R/W DESIGNER: CS  
R/W REVIEWER: CP

**PROPERTY MAP**

**MUS-666-13.58**



**STRUCTURE KEY**

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: CS & CP  
OWNERSHIP VERIFIED BY: CP  
DATE COMPLETED: 03/12/14

**TOTAL NUMBER OF :**  
 1 OWNERSHIPS      0 TOTAL TAKES  
 2 PARCELS         0 OWNERSHIPS W/ STRUCTURES INVOLVED

RECORD AREA - TOTAL PRO - NET TAKE = NET RESIDUE

**GRANTEE:**  
 ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO UNLESS OTHERWISE SHOWN.  
 \* DENOTES RIGHT OF WAY ENCROACHMENT  
 \*\* SURVEYED AREA

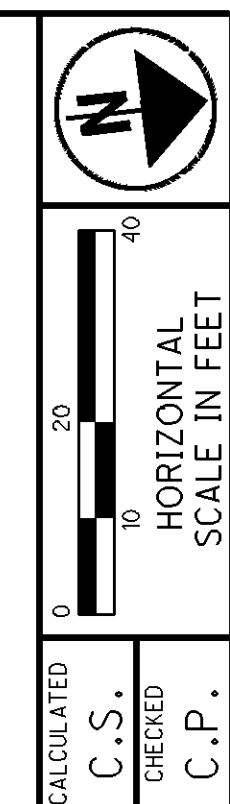
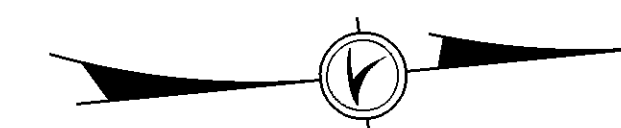
**ALL AREAS IN ACRES**

PARCEL NO.	OWNER	OWNERS RECORD DEED BOOK & PG.	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED DEED BOOK & PG.
										LEFT	RIGHT			
1-SH1	DELBERT E. & SACHIKO LACY AS TRUSTEE OF THE LACY FAMILY REVOCABLE TRUST UTA DTD MAY, 2007	DV 2102 PG. 223	38-20-03-12-000	64.63	1.846	0.112	0.000	0.112	NO	1.181		STATE		APPROPRIATION
1-SH2						0.070	0.000	0.070	NO	61.421		* ENCROACHING FENCE TO BE REMOVED	APPROPRIATION	
												STATE		

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

P:\MUS\89247\DESIGN\RIGHT\_OF\_WAY\PLAN\_SHEETS\89247\_0001\_RPM.dgn 04/15/14

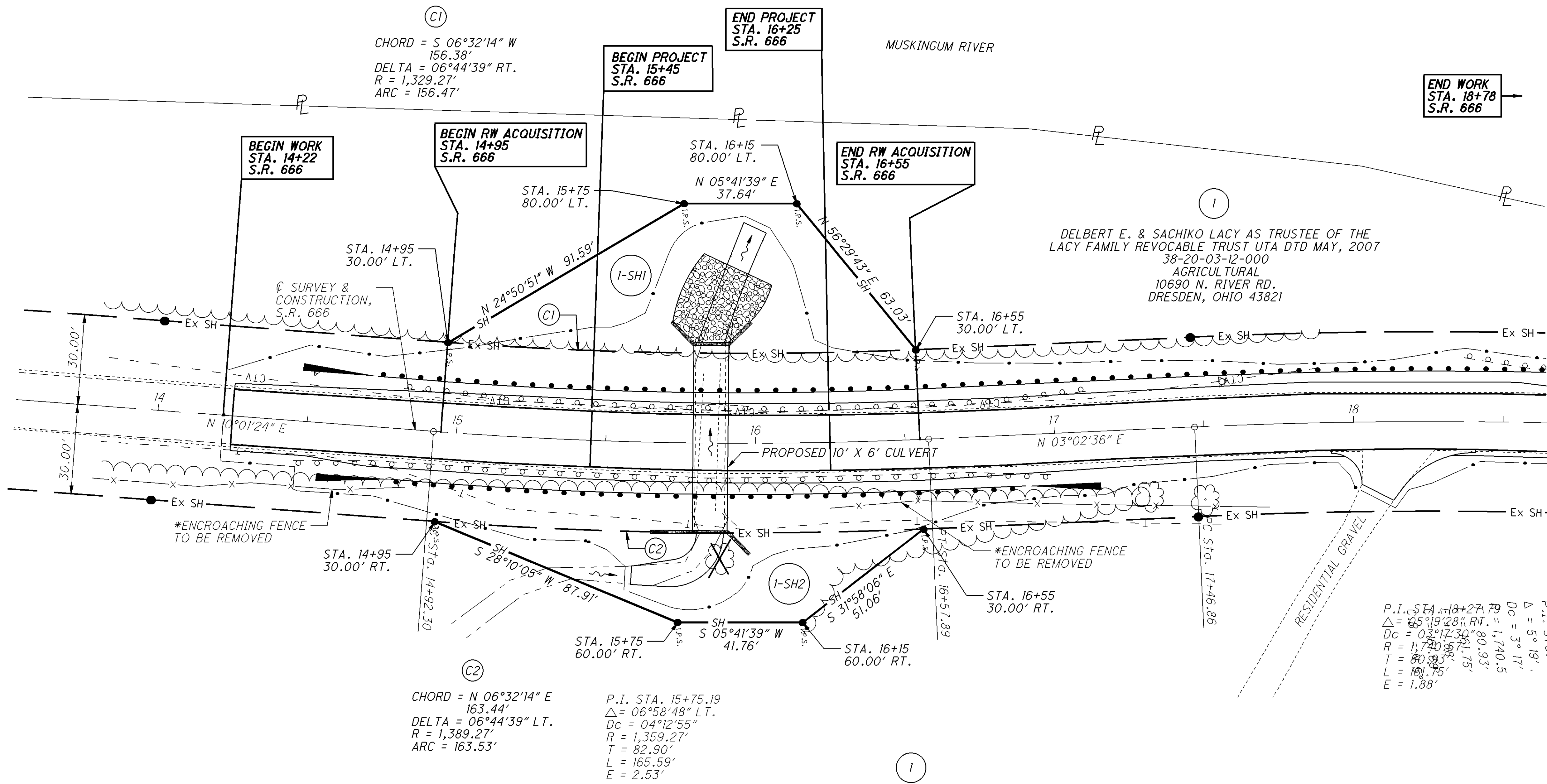
QUARTER TOWNSHIP 3, T3N, R7W  
MADISON TOWNSHIP  
MUSKINGUM COUNTY



CALCULATED C.S. CHECKED C.P.

RIGHT OF WAY DETAIL SHEET  
STA. 13+50 TO STA. 18+50

MUS-666-13.58



DELBERT E. & SACHIKO LACY AS TRUSTEE OF THE  
LACY FAMILY REVOCABLE TRUST UTA DTD MAY, 2007  
38-20-03-12-000  
AGRICULTURAL  
10690 N. RIVER RD.  
DRESDEN, OHIO 43821

DELBERT E. & SACHIKO LACY AS TRUSTEE OF THE  
LACY FAMILY REVOCABLE TRUST UTA DTD MAY, 2007  
38-20-03-12-000  
AGRICULTURAL  
10690 N. RIVER RD.  
DRESDEN, OHIO 43821

P.I. STA. 18+27.79  
Δ = 65°19'28" RT.  
Dc = 03°17'30" RT.  
R = 1,740.5  
T = 80.93'  
L = 101.75'  
E = 1.88'

CHORD = S 06°32'14" W  
156.38'  
DELTA = 06°44'39" RT.  
R = 1,329.27'  
ARC = 156.47'

CHORD = N 06°32'14" E  
163.44'  
DELTA = 06°44'39" LT.  
R = 1,389.27'  
ARC = 163.53'

P.I. STA. 15+75.19  
Δ = 06°58'48" LT.  
Dc = 04°12'55"  
R = 1,359.27'  
T = 82.90'  
L = 165.59'  
E = 2.53'

**MONUMENT LEGEND**

- ▣ EXISTING R/W MONUMENT BOX
- ▣ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⌵ RAILROAD SPIKE FOUND
- ⌵ RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- ⊙ I.P.F. IRON PIPE FOUND
- ⊙ I.P.S. IRON PIPE SET
- ⊙ P.K.F. P.K. NAIL FOUND
- ⊙ P.K.S. P.K. NAIL SET

NOTES:  
ALL EXISTING FENCE LOCATED INSIDE OF PROPOSED RIGHT OF WAY IS TO BE REMOVED.

THE DISPOSITION OF EXISTING CONSTRUCTION ITEMS WITHIN WORK LIMITS ARE SHOWN ON THE CONSTRUCTION PLANS.

NOTE:  
ALL STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF SURVEY AND CONSTRUCTION, S.R. 666 UNLESS OTHERWISE STATED.

NOTE:  
THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED USING DOCUMENTATION ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 OFFICE, JACKSONTOWN, OHIO.

CO. RD. AND TWP RD. RIGHT OF WAY DETERMINED FROM THE MUSKINGUM COUNTY ENGINEERS OFFICE MUSKINGUM COUNTY, OHIO

REV	DATE	DESCRIPTION
COMPLETION DATE: 03/12/14		

P:\MUS\89247\DESIGN\RIGHT\_OF\_WAY\PLAN\_SHEETS\89247\_0001\_RDS.dgn 04/15/14