CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER 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.

IT IS 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 CONDIT 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 611 CONDUIT ITEM.

CLEAN WATER CONNECTIONS TO SANITARY SEWERS

ROOF DRAINS, FOUNDATION DRAINS, DRAIN TILES, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.

PONDING

THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO ALL AREAS THAT HOLD WATER AFTER CONSTRUCTION OF THE CURB RAMPS. THESE AREAS INCLUDE ANY AND ALL AREAS WITHIN THE PEDESTRIAN RIGHT-OF-WAY APPROACHING AND LEAVING THE NEWLY CONSTRUCTED CURB RAMP. AREAS OF PONDING CANNOT BE IDENTIFIED UNTIL AFTER ADEQUATE RAINFALL HAS OCCURRED AND REPAIR TO THESE AREAS WILL NOT OCCUR UNTIL AFTER SUCH TIME.

TYING INTO EXISTING DRAINAGE STRUCTURES

WHEN A PROPOSED CONDUIT IS BEING TIED INTO AN EXISTING DRAINAGE STRUCTURE, THE HOLE BEING MADE IN THE EXISTING STRUCTURE TO RECEIVE THE PROPOSED CONDUIT SHALL BE A CORED HOLE. FOR CONDUITS OVER 24", THE HOLE CAN BE NEATLY SAWED INSTEAD OF CORED.

THE COST OF TYING INTO AN EXISTING DRAINAGE STRUCTURE SHALL BE INCLUDED IN THE COST OF INSTALLING ITEM 611 CONDUIT.

CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN

145+41.31: ADJUST CATCH BASIN TO PROPOSED GRADE AND REMOVE GRATE AND REPLACE WITH A SQUARE SOLID TRAFFIC BEARING BOLTED LID AND FRAME PER 711.14.

151+40.68: ADD WINDOW OPENING TO WEST SIDE OF CATCH BASIN.

ITEM 601 - PAVED GUTTER, TYPE 3, AS PER PLAN

PAVED GUTTER SHALL BE AS PER DM-2.1, EXCEPT NO BAFFLES ARE REQUIRED.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	8 SQ. YD.
611, 4" CONDUIT, TYPE F	200 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	4 EACH
605, 6" UNCLASSIFIED PIPE UNDERDRAINS	200 FT.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

ITEM 202 - REMOVAL MISC.: PRIVATE FLAG POLE

THIS ITEM CONSISTS OF A SINGLE STEEL POST, FLAG, AND FOUNDATION. THE FLAG POLE IS LOCATED ON PARCEL 711, JUST NORTH OF RAMP F NEAR STA 147+06.96, IN AN EXISTING LANDSCAPE AREA AT THE SOUTHWEST CORNER OF APPLEBEES, JUST EAST OF GLEN ESTE WITHAMSVILLE AS SHOWN ON SHEET 84 . THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL MATERIAL ASSOCIATED WITH THE POLE AND FOUNDATION. APPROXIMATE DIMENSIONS OF POLE IS 25' TALL. ANY REMAINING HOLE FROM THE REMOVAL OF THE FLAG POLE SHALL BE FILLED.

ITEM SPECIAL: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS 455.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S) AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

ITEM SPECIAL: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION (CONTINUED)

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT 20%
PROGRESSIVE EQUIVALENT PAYMENTS 50%
UPON SUBMISSION OF FINAL REPORT 30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

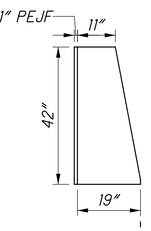
ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN A & CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN

THESE ITEMS SHALL FOLLOW ALL DETAILS ON RM-4.5 WITH THE EXCEPTION OF THE FOLLOWING:

THE TOP WIDTH SHALL BE REDUCED BY 1" FOR A TOTAL WIDTH OF 11"

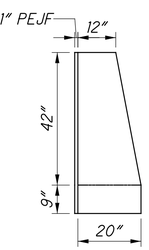
THE TOTAL WIDTH SHALL BE REDUCED BY 1" FOR A TOTAL WIDTH OF 19"

1" OF PEJF SHALL BE INCLUDED IN THE PRICE OF THE BARRIER.



ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN B

THIS ITEM SHALL FOLLOW ALL DETAILS ON RM-4.5 EXCEPT THAT THE BASE SHALL EXTEND 9" BELOW THE PAVEMENT SURFACE AS SHOWN. THE 1" PEJF SHALL EXTEND FOR THE FULL HEIGHT OF THE BARRIER. THE COST OF THE PEJF SHALL BE INCLUDED IN THE UNIT PRICE OF THE BARRIER.



CALCULATED MSW CHECKED MJT

GENERAL NOTES

CLE-32-2.33 (PHASE 8)

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
9	10	10A	67	68	69	71	72	73	77				01/NHS/04						
																		ROADWAY	
LS													LS	201	11000	LS		CLEARING AND GRUBBING	
			2										2	202	20010	2	EACH	HEADWALL REMOVED	
			7,084			524							7,608	202	23000	7,608	SY	PAVEMENT REMOVED	
						842							842	202	23500	842	SY	WEARING COURSE REMOVED	
			145										145	202	30000	145	SF	WALK REMOVED	
			970										970	202	32000	970	FT	CURB REMOVED	
			404										404	202	35100	404	FT	PIPE REMOVED, 24" AND UNDER	
			43										43	202	35200	43	FT	PIPE REMOVED, OVER 24"	
			580										580	202	38000	580	FT	GUARDRAIL REMOVED	
			3										3	202	58100	3	EACH	CATCH BASIN REMOVED	
			2,970										2,970	202	75000	2,970	FT	FENCE REMOVED	
			1										1	202	98100	1	EACH	REMOVAL MISC.: PRIVATE SIGN AND FOUNDATION	9
	1												1	202	98100	1	EACH	REMOVAL MISC.: PRIVATE FLAG POLE	10
		2											2	202	98100	2	EACH	REMOVAL MISC.: INSPECTION WELL	10A
		20											20	202	98200	20	FT	REMOVAL MISC.: CONDUIT	10A
							7,077						7,077	203	10000	7,077	CY	EXCAVATION	
							5,016						5,016	203	20000	5,016	CY	EMBANKMENT	
		50											50	203	20001	50	CY	EMBANKMENT, AS PER PLAN	10A
						1,946							1,946	204	10000	1,946	SY	SUBGRADE COMPACTION	
11													11	204	45000	11	HOUR	PROOF ROLLING	
						19,350							19,350	206	10010	19,350	SY	LIME STABILIZED SUBGRADE, 12 INCHES DEEP	
						501							501	206	10300	501	TON	LIME	
						19,350							19,350	206	11000	19,350	SY	CURING COAT	
LS													LS	206	30001	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS PER PLAN	9
				262.5									262.5	606	15050	262.5	FT	GUARDRAIL, TYPE MGS	
				625									625	606	15100	625	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
				3									3	606	26150	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
				1									1	606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				3									3	606	35002	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
					1								1	606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				1									1	606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) [60 MPH/24 IN]	
				2,349									2,349	607	23000	2,349	FT	FENCE, TYPE CLT	
				2,349									2,349	607	70000	2,349	FT	FENCELINE SEEDING AND MULCHING	
					1,847								1,847	622	10060	1,847	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B	
					1,488								1,488	622	10120	1,488	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
					825								825	622	10160	825	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
					171								171	622	10161	171	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN A	10
					879								879	622	10161	879	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN B	10
					1								1	622	24840	1	EACH	CONCRETE BARRIER END SECTION, TYPE B	
					5								5	622	25000	5	EACH	CONCRETE BARRIER END SECTION, TYPE D	
					10								10	622	25004	10	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B	
					10								10	622	25008	10	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	
					7								7	622	25050	7	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
					2								2	622	25051	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	10
	LS												LS	SPECIAL	69098400	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	10
													LS	878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																		EROSION CONTROL	
	8												8	601	21050	8	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
								150					150	601	38501	150	FT	PAVED GUTTER, TYPE 3, AS PER PLAN	10
2													2	659	00100	2	EACH	SOIL ANALYSIS TEST	
1,060													1,060	659	00300	1,060	CY	TOPSOIL	
9,546													9,546	659	10000	9,546	SY	SEEDING AND MULCHING	
477													477	659	14000	477	SY	REPAIR SEEDING AND MULCHING	
477													477	659	15000	477	SY	INTER-SEEDING	
1.33													1.33	659	20000	1.33	TON	COMMERCIAL FERTILIZER	
1.97													1.97	659	31000	1.97	ACRE	LIME	
53													53	659	35000	53	MGAL	WATER	
21													21	659	40000	21	MSF	MOWING	
									LS				LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
									LS				LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
									LS				LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
									69,692				69,692	832	30000	69,692	EACH	EROSION CONTROL	

CALCULATED MSW
CHECKED MHT

GENERAL SUMMARY

CLE-32-2.33
(PHASE 8)

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
194													01/NHS/04						
																		RETAINING WALLS (004)	
31,440													31,440	509	10000	31,440	LB	EPOXY COATED REINFORCING STEEL	
200													200	511	53012	200	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB	205
792													792	512	10100	792	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
802													802	516	13900	802	SF	2" PREFORMED EXPANSION JOINT FILLER	
5,861													5,861	840	20000	5,861	SF	MECHANICALLY STABILIZED EARTH WALL	
571													571	840	21000	571	CY	WALL EXCAVATION	
773													773	840	22000	773	SY	FOUNDATION PREPARATION	
3,262													3,262	840	23000	3,262	CY	SELECT GRANULAR BACKFILL	
551													551	840	25010	551	FT	6" DRAINAGE PIPE, PERFORATED	
27													27	840	25020	27	FT	6" DRAINAGE PIPE, NON-PERFORATED	
401													401	840	26000	401	FT	CONCRETE COPING	
2													2	840	27000	2	DAY	ON-SITE ASSISTANCE	
LS													LS	840	28000	LS		SGB INSPECTION AND COMPACTION TESTING	
LS													LS	867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	
																		RETAINING WALLS (009)	
274													274	203	20001	274	CY	EMBANKMENT, AS PER PLAN	193
LS													LS	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	193
52,650													52,650	509	10000	52,650	LB	EPOXY COATED REINFORCING STEEL	
333													333	511	53012	333	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB	205
1,312													1,312	512	10100	1,312	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
1,212													1,212	516	13900	1,212	SF	2" PREFORMED EXPANSION JOINT FILLER	
LS													LS	SPECIAL	53000200	LS		STRUCTURES MISC.: VIBRATION MONITORING	193
LS													LS	SPECIAL	53000200	LS		STRUCTURES MISC.: PRECONSTRUCTION CONDITION SURVEY	193
11,972													11,972	840	20000	11,972	SF	MECHANICALLY STABILIZED EARTH WALL	
3,955													3,955	840	21000	3,955	CY	WALL EXCAVATION	
1,275													1,275	840	22000	1,275	SY	FOUNDATION PREPARATION	
342													342	840	22001	342	SY	FOUNDATION PREPARATION, AS PER PLAN	193
7,166													7,166	840	23000	7,166	CY	SELECT GRANULAR BACKFILL	
77													77	840	23050	77	CY	NATURAL SOIL	
1,486													1,486	840	25010	1,486	FT	6" DRAINAGE PIPE, PERFORATED	
78													78	840	25020	78	FT	6" DRAINAGE PIPE, NON-PERFORATED	
879													879	840	26000	879	FT	CONCRETE COPING	
3													3	840	27000	3	DAY	ON-SITE ASSISTANCE	
LS													LS	840	28000	LS		SGB INSPECTION AND COMPACTION TESTING	
LS													LS	867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	

CALCULATED MSW
CHECKED MHT

GENERAL SUMMARY

CLE-32-2.33
(PHASE 8)

SHEET NO.	REFERENCE NO.	ALIGNMENT	STATION FROM	STATION TO	SIDE		606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH		622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D AS PER PLAN A FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D AS PER PLAN B FT	622 CONCRETE BARRIER END SECTION, TYPE B EACH	622 CONCRETE BARRIER END SECTION, TYPE D EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN EACH			
79	B1	RAMP F	121+80.00	124+40.00	RT					177.6							5					
	B2		NOT USED																			
80	B3	RAMP F	124+60.00	128+75.00	RT					385.0							2					
80	B4	RAMP F	128+95.00	133+65.00	RT					440.0							2					
81	B5	RAMP F	133+85.00	134+75.00	RT					74.9							1					
	B6		NOT USED																			
82	B7	RAMP F	134+75.00	138+00.00	RT				325.5													
82	B8	RAMP F	138+00.00	138+90.00	RT					90.2												
82	B9	RAMP F	138+90.00	141+50.00	RT				190.3							4						
83	B10	RAMP F	141+50.00	142+50.00	RT					100.1												
83	B11	RAMP F	142+50.00	150+25.00	RT				725.7							2						
85	B12	RAMP F	150+25.00	151+75.00	RT					150.0												
85	B13	RAMP F	151+75.00	154+60.00	RT				215.0							4						
	B14		NOT USED																			
86	B15	RAMP F	154+60.00	158+50.00	RT				390.0													
86	B16	RAMP F	158+50.00	159+50.27	RT					70.3				1								
86	B17	RAMP F	158+42.33	159+50.27	LT						93.0											
	B18		NOT USED																			
87	B19	RAMP F	159+50.27	161+00.00	LT						136.1				1							
	B20		NOT USED																			
	B21		NOT USED																			
88	B22	SR 32	165+47.89	167+50.28	LT						188.9				1							
	B23		NOT USED																			
89	B24	RAMP R	144+74.85	147+40.44	RT								236.2					2				
89	B25	RAMP R	144+32.62	150+78.88	LT								619.3					2				
90	B26	RAMP R	151+49.88	153+50.08	LT							171.2							2			
90	B27	RAMP R	153+70.08	158+42.33	LT						406.7							3				
90	B28	RAMP R	148+75.58	148+89.63	RT										1							
	B29		NOT USED																			
92	B30	SR 32	190+83.61	191+34.79	LT		1						23.2		2							
TOTALS CARRIED TO GENERAL SUMMARY							1		1,847	1,488	825	171	879	1	5	10	10	7	2			

CALCULATED MSW CHECKED MHT

ROADWAY QUANTITIES

CLE-32-2.33 (PHASE 8)

69
262

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GENERAL NOTES - MSE WALLS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING:

SBR-1-13 DATED 7/20/18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 1/20/23
840 DATED 4/15/22
867 DATED 4/15/22
878 DATED 1/21/22

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (CONCRETE COPING)

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB AND PARAPET)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI.

MSE WALL FOUNDATION BEARING RESISTANCE:

THE FACTORED BEARING RESISTANCE FOR EACH WALL IS LISTED IN THE TABLE BELOW.

FOUNDATION BEARING RESISTANCE

WALL NUMBER	WALL LIMITS		FACTORED BEARING RESISTANCE (KSF)
	FROM STA.	TO STA.	
4	10+30.00	14+31.00	5.1
9	11+51.00	20+26.97	5.2

MINIMUM SOIL REINFORCEMENT LENGTHS:

BASED ON THE EXTERNAL STABILITY ANALYSIS OF THE MECHANICALLY STABILIZED EARTH WALLS, THE FOLLOWING MINIMUM LENGTHS ARE AS FOLLOWS:

WALL NO. 4: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.90H FROM WALL NO. 4 STA. 10+30.00 TO WALL NO. 4 STA. 11+75.00

WALL NO. 4: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.80H FROM WALL NO. 4 STA. 11+75.00 TO WALL NO. 4 STA. 14+31.00

WALL NO. 9: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.70H FROM WALL NO. 9 STA. 11+51.00 TO WALL NO. 9 STA. 16+25.00

WALL NO. 9: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.80H FROM WALL NO. 9 STA. 16+25.00 TO WALL NO. 9 STA. 18+50.00

WALL NO. 9: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 1.00H FROM WALL NO. 9 STA. 18+50.00 TO WALL NO. 9 STA. 20+26.97

AT NO CASE SHALL THE MINIMUM SOIL REINFORCEMENT BE LESS THAN 8 FEET.

H = THE WALL HEIGHT AS DETERMINED ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04.

ITEM 203 - EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT ITEM 203 EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE BACKFILL IN FRONT AND BEHIND THE MSE WALLS, AND WHERE SHOWN IN THE PLANS, FOR EMBANKMENT FILL BELOW THE MSE WALLS. THE DEPARTMENT WILL MEASURE WALL EMBANKMENT FOR BACKFILL IN FRONT OF AND BEHIND MSE WALLS ACCORDING TO THE PAYMENT LIMITS SHOWN ON THE MSE WALL SECTION SHEETS. PAYMENT WILL BE BOUNDED ABOVE BY THE PROPOSED OR EXISTING GRADE, WHICHEVER IS LOWER. PAYMENT WILL BE BOUNDED BELOW BY THE WALL FOUNDATION PREPARATION LIMIT.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM SPECIAL - STRUCTURES MISC.: VIBRATION MONITORING

MONITOR GROUND VIBRATIONS CAUSED BY TEMPORARY SHEET PILING INSTALLATION TO MINIMIZE THE POTENTIAL FOR DAMAGE TO THE ADJACENT RESIDENTIAL STRUCTURES. THE RESIDENTIAL STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO:

1. EXISTING BUILDING, AUDITOR'S PARCEL NUMBER 414109C040, POSITIONED AT APPROXIMATELY ℄ CONST RAMP R STA. 152+00, 50' LT., NEAR WALL NO. 9.

2. EXISTING BUILDING, AUDITOR'S PARCEL NUMBER 414109C039, POSITIONED AT APPROXIMATELY ℄ CONST RAMP R STA. 153+00, 40' LT., NEAR WALL NO. 9.

RETAIN AN EXPERIENCED VIBRATION SPECIALIST TO ESTABLISH THE ACCEPTABLE VIBRATION LIMITS AND TO PERFORM THE VIBRATION MONITORING. USE A VIBRATION SPECIALIST THAT IS AN EXPERT IN THE INTERPRETATION OF VIBRATION DATA, AND WHO MEETS ONE OF THE FOLLOWING CRITERIA: 1) IS A REGISTERED ENGINEER WITH AT LEAST TWO YEARS OF PROVEN EXPERIENCE IN MONITORING VIBRATIONS ON SIMILAR CONSTRUCTION PROJECTS, OR 2) HAS AT LEAST FIVE YEARS OF PROVEN EXPERIENCE IN MONITORING VIBRATIONS ON SIMILAR CONSTRUCTION PROJECTS. DO NOT USE A VIBRATION SPECIALIST THAT IS AN EMPLOYEE OF THE CONTRACTOR.

SUBMIT A RESUME OF THE CREDENTIALS OF THE PROPOSED VIBRATION SPECIALIST AT OR BEFORE THE PRECONSTRUCTION MEETING. INCLUDE IN THE RESUME A LIST OF CONSTRUCTION PROJECTS ON WHICH THE VIBRATION SPECIALIST WAS RESPONSIBLY IN CHARGE OF MONITORING THE VIBRATIONS. LIST A DESCRIPTION OF THE PROJECTS, WITH DETAILS OF THE VIBRATION INTERPRETATIONS MADE ON THE PROJECT. LIST THE NAMES AND TELEPHONE NUMBERS OF PROJECT OWNERS WITH SUFFICIENT KNOWLEDGE OF THE PROJECTS TO VERIFY THE SUBMITTED INFORMATION. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE VIBRATION SPECIALIST BEFORE BEGINNING ANY TEMPORARY SHEET PILING INSTALLATION WORK. ALLOW 30 DAYS FOR THE REVIEW OF THIS DOCUMENTATION.

USE SEISMOGRAPHS CAPABLE OF CONTINUOUSLY RECORDING THE PEAK PARTICLE VELOCITY FOR THREE MUTUALLY PERPENDICULAR COMPONENTS OF VIBRATION, AND OF PROVIDING A PERMANENT RECORD OF THE ENTIRE VIBRATION EVENT. USE A SUFFICIENT NUMBER OF SEISMOGRAPHS TO PROVIDE REDUNDANCY IN CASE ONE DEVICE SHOULD FAIL. SUBMIT A PLAN OF THE PROPOSED SEISMOGRAPH LOCATIONS TO THE ENGINEER FOR REVIEW.

THE VIBRATION SPECIALIST SHALL PERFORM THE FOLLOWING:

1. MEASURE THE AMBIENT GROUND VIBRATIONS NEAR EXISTING STRUCTURES BEFORE TEMPORARY SHEET PILING INSTALLATION BEGINS.

2. ESTABLISH VIBRATION LIMITS TO MINIMIZE POTENTIAL DAMAGE TO EXISTING STRUCTURES AND EXPLAIN WHY THEY ARE BEING USED TO THE ENGINEER BEFORE INSTALLING TEMPORARY SHEET PILING NEAR EXISTING STRUCTURES.

3. MONITOR GROUND VIBRATIONS DURING TEMPORARY SHEET PILING INSTALLATION.

4. IMMEDIATELY INFORM THE CONTRACTOR AND ENGINEER IF THE VIBRATION LIMITS ARE REACHED OR EXCEEDED.

5. FURNISH THE DATA RECORDED AND INCLUDE THE FOLLOWING:
   A. IDENTIFICATION OF SEISMOGRAPH.
   B. DISTANCE AND DIRECTION OF SEISMOGRAPH FROM TEMPORARY SHEET PILING INSTALLATION.
   C. START TIME AND DURATION OF TEMPORARY SHEET PILING INSTALLATION.
   D. DETAILS OF TEMPORARY SHEET PILING INSTALLED DURING EACH MONITORING INTERVAL.

ITEM SPECIAL - STRUCTURES MISC.: VIBRATION MONITORING (CONTINUED).

IMMEDIATELY SUSPEND ALL TEMPORARY SHEET PILING INSTALLATION IF THE VIBRATION LIMITS ARE REACHED OR EXCEEDED. EVALUATE ALTERNATIVE CONSTRUCTION PROCEDURES TO REDUCE THE VIBRATIONS.

SUBMIT THREE COPIES OF THE FINAL REPORT WHICH CONTAINS ALL MEASUREMENTS, INTERPRETATIONS, AND RECOMMENDATIONS TO THE ENGINEER.

THE DEPARTMENT WILL PAY FOR THIS ITEM AT THE CONTRACT LUMP SUM PRICE FOR ITEM SPECIAL STRUCTURES MISC.: VIBRATION MONITORING. THE DEPARTMENT WILL PAY THE FINAL TWENTY PERCENT AFTER THE ENGINEER RECEIVES THE FINAL REPORT.

THE DEPARTMENT WILL PAY ACCORDING TO C&MS 109.05 FOR ALTERNATIVE CONSTRUCTION PROCEDURES THAT THE ENGINEER DETERMINES ARE NECESSARY TO REDUCE VIBRATIONS.

ITEM SPECIAL - STRUCTURES MISC.: PRECONSTRUCTION CONDITION SURVEY

BEFORE TEMPORARY SHEET PILING INSTALLATION BEGINS, CONDUCT A CONDITION SURVEY OF ALL EXISTING BUILDINGS, STRUCTURES, AND UTILITIES WITHIN 200-FT OF THE TEMPORARY SHEET PILING INSTALLATION WORK. THE PURPOSE OF THE SURVEY IS TO DOCUMENT THE CONDITION OF THE BUILDINGS, STRUCTURES, OR UTILITIES PRIOR TO TEMPORARY SHEET PILING INSTALLATION, SO THAT CLAIMS OF DAMAGE CAUSED BY THE TEMPORARY SHEET PILING INSTALLATION CAN BE VERIFIED.

RETAIN AN EXPERIENCED VIBRATION SPECIALIST TO PERFORM OR SUPERVISE THE CONDITION SURVEY. USE A VIBRATION SPECIALIST THAT MEETS THE QUALIFICATION REQUIREMENTS FOR VIBRATION MONITORING.

RECORD THE CONDITION OF EXISTING STRUCTURES AND BUILDING MATERIALS, USING WRITTEN TEXT, PHOTOGRAPHS, AND VIDEO RECORDINGS. INSPECT INTERIOR WALLS, CEILINGS, AND FLOORS THAT ARE ACCESSIBLE. INSPECT THE EXTERIOR OF THE BUILDING THAT IS VISIBLE FROM GROUND LEVEL. ALSO RECORD THE LOCATION, SIZE, AND TYPE OF ALL CRACKS AND OTHER STRUCTURAL DEFICIENCIES.

IF OWNERS OR OCCUPANTS FAIL TO ALLOW ACCESS TO THE PROPERTY FOR THE PRECONSTRUCTION CONDITION SURVEY, SEND A CERTIFIED LETTER TO THE OWNER OR OCCUPANT. DOCUMENT THE NOTIFICATION EFFORT AND THE CERTIFIED LETTER IN THE REPORT.

SUBMIT THREE COPIES OF A REPORT TO THE ENGINEER THAT SUMMARIZES THE PRECONSTRUCTION CONDITION OF THE BUILDINGS, STRUCTURES, AND UTILITIES, AND THAT IDENTIFIES AREAS OF CONCERN.

THE DEPARTMENT WILL PAY FOR THIS ITEM AT THE CONTRACT LUMP SUM PRICE FOR ITEM SPECIAL - STRUCTURES MISC.: PRECONSTRUCTION CONDITION SURVEY.

ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN:

WALL NO. 9 REQUIRES 4 FEET OF UNDERCUT BENEATH THE BOTTOM OF LEVELING PAD ELEVATION FROM WALL NO. 9 STA. 19+25.00 TO WALL NO. 9 STA. 20+26.97. THE EXISTING SOILS WITHIN THIS 4 FEET OF UNDERCUT SHALL BE REPLACED WITH ITEM 304 - AGGREGATE BASE AND THE UNDERCUT AND ITEM 304 MATERIAL SHALL BE PAID FOR UNDER ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.

ABBREVIATIONS

BTM.	BOTTOM	JT.	JOINT
BRG.	BEARING	LT.	LEFT
℄	CENTERLINE	MAX.	MAXIMUM
C.J.	CONSTRUCTION JOINT	MIN.	MINIMUM
CLR.	CLEAR	MISC.	MISCELLANEOUS
CMS	CONSTRUCTION AND MATERIAL SPECIFICATIONS	NO.	NUMBER
		P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
CONC.	CONCRETE		
CONST.	CONSTRUCTION	PROP.	PROPOSED
C.P.P.	CORRUGATED PLASTIC PIPE	R	RADIUS
		REINF.	REINFORCEMENT
CU YD	CUBIC YARD	RT.	RIGHT
DIA.	DIAMETER	SER.	SERIES
DWG.	DRAWING	SQ FT	SQUARE FEET
EL.	ELEVATION	SQ YD	SQUARE YARD
EST.	ESTIMATED	STA.	STATION
EX.	EXISTING	STD.	STANDARD
FT.	FOOT/FEET	STR.	STRAIGHT
IN.	INCHES	TEMP.	TEMPORARY
INV.	INVERT	TYP.	TYPICAL
INC.	INCREMENT	U.N.O.	UNLESS NOTED OTHERWISE

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED GJZ
DRAWN GJZ
CHECKED ZTW
REVIEWED MSL
DATE 10/28/20
REVISED
STRUCTURE FILE NUMBER N/A

GENERAL NOTES
MSE WALLS NO. 4 AND 9

CLE-32-2.33
(PHASE 8)
PID No. 103957

MADE BY: GJZ DATE: 5/21/2019
CHECKED BY: ZTW DATE: 5/22/2019

ESTIMATED QUANTITIES - MSE WALLS

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WALL NO. 4	WALL NO. 9	REFERENCE SHEET NUMBER
203	20001	274	CY	EMBANKMENT, AS PER PLAN	-	274	1 / 14
503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	-	LS	1 / 14
509	10000	84090	LB	EPOXY COATED REINFORCING STEEL	31440	52650	
511	53012	533	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB	200	333	13 / 14
512	10100	2104	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	792	1312	
516	13900	2014	SF	2" PREFORMED EXPANSION JOINT FILLER	802	1212	
SPECIAL	53000200	LS		STRUCTURES MISC.: VIBRATION MONITORING	-	LS	1 / 14
SPECIAL	53000200	LS		STRUCTURES MISC.: PRECONSTRUCTION CONDITION SURVEY	-	LS	1 / 14
840	20000	17833	SF	MECHANICALLY STABILIZED EARTH WALL	5861	11972	
840	21000	4526	CY	WALL EXCAVATION	571	3955	
840	22000	2048	SY	FOUNDATION PREPARATION	773	1275	
840	22001	342	SY	FOUNDATION PREPARATION, AS PER PLAN	-	342	1 / 14
840	23000	10428	CY	SELECT GRANULAR BACKFILL	3262	7166	
840	23050	77	CY	NATURAL SOIL	-	77	
840	25010	2037	FT	6" DRAINAGE PIPE, PERFORATED	551	1486	
840	25020	105	FT	6" DRAINAGE PIPE, NON-PERFORATED	27	78	
840	26000	1280	FT	CONCRETE COPING	401	879	
840	27000	5	DAY	ON-SITE ASSISTANCE	2	3	
840	28000	LS		SGB INSPECTION AND COMPACTION TESTING	LS	LS	
867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	LS	LS	

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED GJZ | CHECKED ZTW
DRAWN GJZ | REVISED
REVIEWED MSL | DATE 10/28/20
STRUCTURE FILE NUMBER N/A

ESTIMATED QUANTITIES
MSE WALLS NO. 4 AND 9

CLE-32-2.33
(PHASE 8)
PID No. 103957

2 / 14

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262

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