ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE 10-FOOT LANE OF TRAFFIC ON SR-18 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND TEMPORARY TRAFFIC SIGNALS. ~~ONLY ONE INDIVIDUAL LOCATION MAY BE REDUCED TO ONE LANE AT A TIME.~~

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.

REDUCING TRAFFIC TO ONE LANE AT ALL THREE PROJECT LOCATIONS CONCURRENTLY WILL NOT BE ALLOWED. CONCURRENT LANE CLOSURES WILL BE PERMITTED FOR MED-18-2.41, AND EITHER MED-18-1.71 OR MED-18-1.92. CONCURRENT LANE CLOSURES FOR MED-18-1.71 AND MED-18-1.92 WILL NOT BE ALLOWED.

ALL LANES OF TRAFFIC MUST BE OPEN TO TRAFFIC FROM NOVEMBER 15TH THROUGH MARCH 15TH.

THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC SHALL INCLUDE THE COST OF REMOVING EXISTING PAVEMENT MARKINGS.

THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC SHALL INCLUDE THE COST OF REMOVING ALL CONFLICTING RAISED PAVEMENT MARKING REFLECTORS.

THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC SHALL INCLUDE THE COST OF FURNISHING, MAINTAINING IN AN ACCEPTABLE CONDITION, AND REMOVING TEMPORARY SIGNS, SUPPORTS, WARNING LIGHTS, BARRICADES, DRUMS, COMPLETE WORK ZONE PORTABLE TRAFFIC SIGNAL ASSEMBLIES, TRAFFIC DETECTORS, AND WORK ZONE IMPACT ATTENUATORS. TEMPORARY DRIVES AND PAVEMENT SHALL BE PAID FOR SEPARATELY.

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.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (Hauling.Permits@dot.ohio.gov) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

LANE CLOSURES AND RESTRICTIONS	> 2 WEEKS	14 DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES		14 DAYS PRIOR TO IMPLEMENTATION

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS 12-17/104 AND SCDS MT-96.11, 96.20 AND 96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE INITIAL CONTROLLER TIMING FOR EACH LOCATION/PHASE SHALL BE SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	61	EACH
ITEM 614, OBJECT MARKER, TWO-WAY	24	EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING EACH OF THE ABOVE ITEMS.

CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 3 M. GAL

ITEM 615, ROADS FOR MAINTAINING TRAFFIC

THE LUMP SUM PRICE BID FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING SIDEWALK WITHIN THE CONSTRUCTION LIMITS OF THE TEMPORARY DRIVE AS SHOWN ON SHEET 45/114.

THE LUMP SUM PRICE FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC SHALL INCLUDE THE INSTALLATION AND REMOVAL OF ALL TEMPORARY DRAINAGE SHOWN ON SHEET 46/114.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC	15 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	970 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	56	EACH
ITEM 614, OBJECT MARKER, TWO-WAY	12	EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING EACH OF THE ABOVE ITEMS.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONTINUED)

* DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
* DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).
* FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	24 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

REV. BY	DATE	DESCRIPTION
BSM	7-12-23	REVISED LANE CLOSURES FOR MOT

DATE COMPLETED 07-12-23

CALCULATED BSM CHECKED JBD

MAINTENANCE OF TRAFFIC NOTES

MED-18-(1.71)(1.92)(2.41)

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	7	9	11	21	22	23	62	74	86	99	100	01/NHS/BR						
																		ROADWAY	
			LS										LS	201	11000	LS		CLEARING AND GRUBBING	
					1,483								1,483	202	23000	1,483	SY	PAVEMENT REMOVED	
					117								117	202	35100	117	FT	PIPE REMOVED, 24" AND UNDER	
						2,272							2,272	202	38000	2,272	FT	GUARDRAIL REMOVED	
						70							70	202	75000	70	FT	FENCE REMOVED	
					718								718	203	10000	718	CY	EXCAVATION	
					82								82	203	20000	82	CY	EMBANKMENT	
					1,911								1,911	204	10000	1,911	SY	SUBGRADE COMPACTION	
						1,356							1,356	606	15050	1,356	FT	GUARDRAIL, TYPE MGS	
						9							9	606	26150	9	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
						1							1	606	26551	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN	10
						10							10	606	34600	10	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE TST-2	
						2							2	606	34601	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE TST-2, AS PER PLAN	10
											3		3	623	38500	3	EACH	MONUMENT ASSEMBLY, TYPE C	
												1	1	623	40520	1	EACH	RIGHT-OF-WAY MONUMENT, TYPE B	
						1							1	SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	10
																		EROSION CONTROL	
			230										230	659	00300	230	CY	TOPSOIL	
			2,069										2,069	659	10000	2,069	SY	SEEDING AND MULCHING	
			103										103	659	14000	103	SY	REPAIR SEEDING AND MULCHING	
			103										103	659	15000	103	SY	INTER-SEEDING	
			0.28										0.28	659	20000	0.28	TON	COMMERCIAL FERTILIZER	
			0.43										0.43	659	31000	0.43	ACRE	LIME	
			12										12	659	35000	12	MGAL	WATER	
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
													LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
													LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
													5,000	832	30000	5,000	EACH	EROSION CONTROL	
																		DRAINAGE	
					229								229	601	32100	229	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
					0.6								0.6	602	20000	0.6	CY	CONCRETE MASONRY	
23	25	71											119	605	31100	119	FT	AGGREGATE DRAINS	
					100								100	611	06100	100	FT	15" CONDUIT, TYPE C	
					13								13	611	07600	13	FT	18" CONDUIT, TYPE C	
																		PAVEMENT	
					210								210	255	20000	210	FT	FULL DEPTH PAVEMENT SAWING	
					~~408~~ 445								~~408~~ 445	301	56000	~~408~~ 445	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
					346								346	304	20000	346	CY	AGGREGATE BASE	
					203								203	407	10000	203	GAL	TACK COAT	
					147								147	441	70000	147	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
																		TRAFFIC CONTROL	
						39							39	626	00110	39	EACH	BARRIER REFLECTOR, TYPE 2	
						3							3	630	85100	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
						3							3	630	86010	3	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION	
						0.76							0.76	642	00104	0.76	MILE	EDGE LINE, 6", TYPE 1	
						0.38							0.38	642	00300	0.38	MILE	CENTER LINE, TYPE 1	
																		STRUCTURE OVER 20 FOOT SPAN (MED-18-0172/0193/0242)	
								LS	LS	LS			LS	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	
								80	80	80			240	202	22900	240	SY	APPROACH SLAB REMOVED	
								80	259	259			598	202	23500	598	SY	WEARING COURSE REMOVED	
								LS	LS	LS			LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
								374	286	184			844	503	21100	844	CY	UNCLASSIFIED EXCAVATION	
								152	182	135			469	503	31120	469	CY	SHALE EXCAVATION	
								33,835	29,209	26,841			89,885	509	10000	89,885	LB	EPOXY COATED STEEL REINFORCEMENT	
								90	81	84			255	511	34410	255	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
								333	285	189			807	511	43512	807	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	
BSM	7-12-23	REVISED ITEM 301 QUANTITY						202	187	138			527	512	10100	527	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
REV. BY	DATE	DESCRIPTION																	
DATE COMPLETED		07-12-2023																	

CALCULATED BSM CHECKED JBD

GENERAL SUMMARY

MED-18-(1.71)(1.92)(2.41)

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	7	9	11	21	22	23	62	74	86	99	100	01/NHS/BR						
																		STRUCTURE OVER 20 FOOT SPAN (MED-18-0172/0193/0242)(CONT.)	
								44	41	41			126	516	13600	126	SF	1" PREFORMED EXPANSION JOINT FILLER	
								102	102	102			306	516	14020	306	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
								12	10	10			32	516	43200	32	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE)	
								78	70	72			220	517	70100	220	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)	
								200	198	142			540	518	21200	540	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
								50	41	44			135	SPECIAL	51822300	135	FT	STEEL DRIP STRIP	70,82,94
								202	201	172			575	518	40000	575	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
								40	40	40			120	518	40012	120	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	
									126	98			224	524	94704	224	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK	
								140					140	524	94804	140	FT	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK	
								293	293	293			879	526	30000	879	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")	
								88	88	88			264	526	90010	264	FT	TYPE A INSTALLATION	
								60	30	30			120	613	41200	120	CY	LOW STRENGTH MORTAR BACKFILL	
																		MAINTENANCE OF TRAFFIC	
							111						111	410	10000	111	CY	TRAFFIC COMPACTED SURFACE, TYPE A	
				24									24	614	11110	24	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
							12						12	614	12380	12	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
				61									61	614	13310	61	EACH	BARRIER REFLECTOR, TYPE 1	
				56									56	614	13312	56	EACH	BARRIER REFLECTOR, TYPE 2	
				36									36	614	13360	36	EACH	OBJECT MARKER, TWO WAY	
							0.57						0.57	614	21550	0.57	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
							0.96						0.96	614	22350	0.96	MILE	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
							82						82	614	26000	82	FT	WORK ZONE STOP LINE, CLASS I	
							LS						LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
							1,167						1,167	615	20000	1,167	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
				3									3	616	10000	3	MGAL	WATER	
							1,989						1,989	622	41100	1,989	FT	PORTABLE BARRIER, UNANCHORED	
							158						158	622	41110	158	FT	PORTABLE BARRIER, ANCHORED	
																		INCIDENTALS	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													9	619	16010	9	MNTH	FIELD OFFICE, TYPE B	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

REV. BY	DATE	DESCRIPTION
BSM	7-12-23	REVISED DRILLED SHAFT QUANTITIES
DATE COMPLETED		07-12-2023

CALCULATED BSM
CHECKED JBD

GENERAL SUMMARY

MED-18-(1.71)(1.92)(2.41)

PAVEMENT CALCULATIONS AND SUB-SUMMARIES

CALCULATED BSM
CHECKED JBD

PAVEMENT QUANTITIES TABLE

REFERENCE NO.	CARRIED FROM SHEET	STATION FROM/AT	STATION TO	LENGTH (L)	AVERAGE WIDTH (W)	SURFACE AREA (A = L X W)	202 PAVEMENT REMOVED	204 SUBGRADE COMPACTION	255 FULL DEPTH PAVEMENT SAWING	301 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE	407 TACK COAT	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
		FROM/AT	TO	FT	FT	SF	SY	SY	FT	CY	CY	GAL	CY
P1	28	117+35.00	117+55.13	20.13	40.00	805.17	192.36	93.19	36.50	22.74	15.28	10.29	7.46
P2	28	118+43.87	118+60.00	16.13	40.00	645.17	184.91	74.67	37.00	18.22	12.25	8.24	5.97
P3	29	128+15.00	128+47.63	32.63	40.00	1305.20	238.48	151.06	34.33	36.86	24.77	16.68	12.09
P4	29	129+32.37	129+75.00	42.63	40.00	1705.20	281.11	197.36	36.57	48.16	32.37	21.79	15.79
P5	30	154+00.00	154+54.13	54.13	38.69	2094.25	342.29	242.72	34.20	59.18	39.78	26.76	19.39
P6	30	155+39.87	155+75.00	35.13	39.68	1394.04	243.90	161.40	31.75	39.37	26.47	17.81	12.91
AS1	28	117+55.13	117+85.13	30	44.00	1320.00		150.00		36.67	25.00	16.87	12.22
AS2	28	118+13.87	118+43.87	30	44.00	1320.00		150.00		36.67	25.00	16.87	12.22
AS3	29	128+47.63	128+77.63	30	44.00	1320.00		150.00		36.67	25.00	16.87	12.22
AS4	29	129+02.37	129+32.37	30	44.00	1320.00		150.00		36.67	25.00	16.87	12.22
AS5	30	154+54.13	154+84.13	30	44.00	1320.00		150.00		36.67	25.00	16.87	12.22
AS6	30	155+9.87	155+39.87	30	44.00	1320.00		150.00		36.67	25.00	16.87	12.22
DR1	30	154+51.88	154+80.92	29.04	8.87	257.56		28.62			14.31		
DR2	30	155+22.44	155+33.75	11.31	26.81	303.21		33.69			16.85		
DR3	30	155+92.83	156+14.51	21.68	11.59	251.23		27.91			13.96		
TOTALS CARRIED TO THE GENERAL SUMMARY							1483	1911	210	~~408~~ 445	346	203	147

EROSION CONTROL TABLE

REFERENCE NO.	CARRIED FROM SHEET	STATION FROM/AT	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER	601 ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER	602 CONCRETE MASONRY	611 15" CONDUIT, TYPE C	611 18" CONDUIT, TYPE C
		FROM/AT	TO		FT	CY	CY	FT	FT
D1	30	155+25.00	156+28.12	LT	104.07				
D2	30	155+31.86	156+28.12	LT			0.27	100	
D3	30	154+84.56	155+51.90	RT	13		0.33		13
RC1	28	117+53.66	118+21.28	LT/RT		46.22			
RC2	28	117+77.44	118+46.04	LT/RT		47.90			
RC3	29	128+47.53	129+09.98	LT/RT		35.35			
RC4	29	128+73.40	129+33.06	LT/RT		34.56			
RC5	30	154+56.32	155+15.35	LT/RT		34.75			
RC6	30	154+79.67	155+32.92	LT/RT		30.17			
TOTALS CARRIED TO THE GENERAL SUMMARY					117	229	0.60	100	13

EARTHWORK QUANTITIES TABLE

CARRIED FROM SHEET	STATION FROM/AT	STATION TO	203 EXCAVATION	203 EMBANKMENT	659 TOPSOIL	659 SEEDING AND MULCHING	659 REPAIR SEEDING AND MULCHING	659 INTER-SEEDING	659 COMMERCIAL FERTILIZER	659 LIME	659 WATER
	FROM/AT	TO	CY	CY	CY	SY	SY	SY	TON	ACRE	MGAL
	ROADWAY										
32	116+30.00	117+00.00	23	1	2.89	26	1.30	1.30	0.00	0.01	0.15
33	117+35.00	118+60.00	52	7	7.22	65	3.25	3.25	0.01	0.01	0.37
34	118+60.00	119+75.00	91	6	10.66	96	4.80	4.80	0.01	0.02	0.54
36	127+30.00	127+70.00	18	1	2.00	18	0.90	0.90	0.00	0.00	0.10
37	127+70.00	129+02.37	68	11	15.21	137	6.85	6.85	0.02	0.03	0.78
38	129+02.37	130+00.00	68	32	16.76	151	7.55	7.55	0.02	0.03	0.86
39	130+00.00	130+50.00	29	1	2.89	26	1.30	1.30	0.00	0.01	0.15
40	151+50.00	152+75.00	0	0	28.19	254	12.70	12.70	0.03	0.05	1.44
41	152+75.00	154+00.00	52	3	63.16	569	28.45	28.45	0.08	0.12	3.23
42	154+00.00	155+39.87	67	11	35.30	318	15.90	15.90	0.04	0.07	1.80
43	155+39.87	156+25.00	88	5	36.52	329	16.45	16.45	0.04	0.07	1.87
44	156+25.00	157+00.00	0	0	8.88	80	4.00	4.00	0.01	0.02	0.45
	CHANNEL										
49	12+30.00	12+50.00	3	0							
50	12+60.00	13+60.00	47	4							
51	13+70.00	13+90.00	5	0							
52	54+10.00	54+30.00	3	0							
53	54+40.00	55+25.00	46	0							
54	55+35.00	55+55.00	5	0							
55	5+75.00	5+95.00	5	0							
56	6+05.00	6+80.00	43	0							
57	6+90.00	7+10.00	5	0							
TOTALS CARRIED TO THE GENERAL SUMMARY			718	82	230*	2069*	103*	103*	0.28*	0.43*	12*

* DENOTES QUANTITIES CARRIED TO GENERAL NOTES

REV. BY	DATE	DESCRIPTION
BSM	7-12-23	REVISED ITEM 301 QUANTITY
DATE COMPLETED	07-12-2023	

MED-18-(1.71)(1.92)(2.41)

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

AS-1-15 REVISED 7/17/2015
AS-2-15 REVISED 1/18/2019
DS-1-92 REVISED 7/15/2022
PCB-91 REVISED 07/17/2020
SB-1-08 REVISED 1/15/2021
TST-2-21 DATED 7/16/2021

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

LOAD MODIFIER FOR OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING

HL-93 WITH FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.0 KSI (DRILLED SHAFT)
EPOXY COATED REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

DRILLED SHAFTS

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 157 KIPS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 0 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 5 FEET OF THE BEDROCK SOCKET. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 157 KIPS.

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GEN	ABUT	PIER	SUPER	SEE SHEET NO.
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					10/114
202	22900	80	SY	APPROACH SLAB REMOVED	80				
202	23500	259	SY	WEARING COURSE REMOVED	259				
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
503	21100	184	CY	UNCLASSIFIED EXCAVATION		184			
503	31120	135	CY	SHALE EXCAVATION		135			
509	10000	26841	LB	EPOXY COATED REINFORCING STEEL		10993		15848	
511	33412	84	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE				84	
511	43512	189	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING		189			
512	10100	138	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		128		10	
516	13600	41	SF	1" PREFORMED EXPANSION JOINT FILLER				41	
516	14020	102	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				102	
516	43200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE)(11 3/4" X 11 3/4" X 2")				10	
517	70100	72	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)				72	
518	21200	142	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		142			
SPECIAL	51822300	44	FT	STEEL DRIP STRIP				44	10/12
518	40000	172	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		172			
518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE		40			
524	94704	~~84~~ 98	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK		~~84~~ 98			
526	30000	293	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")	293				
526	90010	88	FT	TYPE A INSTALLATION	88				
613	41200	30	CY	LOW STRENGTH MORTAR BACKFILL		30			

ABBREVIATIONS

STA.	-	STATION
F.A.	-	FORWARD ABUTMENT
R.A.	-	REAR ABUTMENT
EL.	-	ELEVATION
SPA.	-	SPACED
PEJF	-	PREFORMED EXPANSION JOINT FILLER
F	-	FRONT
B	-	BACK
TYP.	-	TYPICAL
NPCPP	-	NON-PERFORATED CORRUGATED PLASTIC PIPE
PCPP	-	PERFORATED CORRUGATED PLASTIC PIPE
PROP.	-	PROPOSED
CONST.	-	CONSTRUCTION
EX.	-	EXISTING
JT.	-	JOINT
C.J.	-	CONSTRUCTION JOINT
EF	-	EACH FACE
STD. DWG.	-	STANDARD DRAWING
CLR.	-	CLEAR
T	-	TOP
B	-	BOTTOM
LT.	-	LEFT
RT.	-	RIGHT
N.F.	-	NEAR FACE
F.F.	-	FAR FACE
BRG.	-	BEARING

REV. BY	DATE	DESCRIPTION
BSM	7-12-23	REVISED DRILLED SHAFT QUANTITY
DATE COMPLETED		07-12-2023

DESIGN AGENCY
FISHBECK
28366 KENSINGTON LANE, SUITE 3
PERRYSBURG, OHIO 43551
PHONE:(419) 841-4704 FAX:(419) 841-2979

DESIGNED BSM | CHECKED JBD
DRAWN BSM | REVISED
REVIEWED EEC | DATE 1-20-23
STRUCTURE FILE NUMBER 5200548

ESTIMATED QUANTITIES
BRIDGE NO. MED-18-0242
SR 18 OVER CENTER CREEK

MED-18-(1.71)(1.92)
(2.41)
PID No. 88876

2 / 12

86
114