

INCIDENTALS

ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN

ALL REQUIREMENTS OF C&MS 619 SHALL APPLY EXCEPT AS MODIFIED HEREIN:

THE FIELD OFFICE SHALL BE A SUITE TYPE OFFICE (NO TRAILER OR MODULAR OFFICE) WITH A MINIMUM OF 4,000 SQUARE FEET AT GROUND LEVEL WITH A MINIMUM CEILING HEIGHT OF EIGHT (8) FEET. PROVIDE TWO (2) OUTSIDE DOORS, LOCKABLE VANDAL-PROOF CYLINDER-TYPE DEADBOLTS, AND LOCKABLE WINDOWS. THE FLOOR SPACE WILL BE DIVIDED INTO TWO (2) RESTROOMS, ONE (1) GENERAL OFFICE AREA (MINIMUM 400 SQUARE FEET), NOT LESS THAN SEVEN (7) INDIVIDUAL OFFICES (MINIMUM 300 SQUARE FEET EACH) AS SEPARATE ENCLOSED ROOMS (NO CUBICLE DIVIDERS WILL BE ACCEPTED), ONE (1) KITCHEN SPACE INCLUDING SINK, REFRIGERATOR, AND MICROWAVE, AND ONE (1) CONFERENCE ROOM (MINIMUM 1000 SQUARE FEET).

FURNISH NEAT, SANITARY, ENCLOSED TOILET ACCOMMODATIONS CONNECTED TO AN EXISTING SANITARY SEWER LINE FOR THE USE OF THE OCCUPANTS OF THE FIELD OFFICE, MEETING APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. FURNISH ASSOCIATED LAVATORY AND SANITARY SUPPLIES. POTABLE HOT AND COLD RUNNING WATER WILL BE PROVIDED IN THE RESTROOM FOR SANITARY PURPOSES.

FURNISH TRASH COLLECTION SERVICE/DUMPSTER.

FURNISH A PROFESSIONAL, BONDED, AND INSURED JANITORIAL SERVICE WITH A WEEKLY CLEANING OF THE ENTIRE OFFICE TO INCLUDE THE RESTROOM FACILITIES FOR THE DURATION OF THE PROJECT.

FURNISH BOTTLED DRINKING WATER SERVICES WITH A HOT AND COLD DISPENSER AND ASSOCIATED SUPPLIES.

FURNISH A BOX FOR STORING A NUCLEAR DENSITY GAUGE WITH REQUIREMENTS AS SET FORTH IN C&MS 619.02.

FURNISH AND MAINTAIN A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS OF 1.0 GB/S. PROVIDE A WIRELESS ROUTER THAT SUPPORTS WI-FI STANDARD 802.11AX (WIFI 6) AND A MINIMUM WIRELESS DATA TRANSFER RATE OF 4000 MB/S. PROVIDE PRE-WIRED ETHERNET ACCESS FOR ALL INDIVIDUAL OFFICES AND THE CONFERENCE ROOM.

FURNISH TEN (10) DESK AND CHAIR SETS, THIRTY (30) STACKABLE CHAIRS, TWENTY (20) WORK TABLES (30" X 72") AND TWELVE (12) 24-QUART WASTE BASKETS WITH APPROPRIATELY SIZED TRASH BAGS.

FURNISH AND INSTALL TWO (2) WALL-MOUNTED 8' X 4' GLASS, MAGNETIC DRY ERASE BOARDS.

FURNISH ONE (1) NEW TELEVISION WITH THE FOLLOWING SPECIFICATIONS:

- A) DIAGONAL SCREEN SIZE: 70" MINIMUM
- B) NATIVE RESOLUTION: 4K
- C) HDMI PORTS: 3
- D) ALL ACCESSORIES NECESSARY TO OPERATE
- E) ALL HARDWARE AND INSTALLATION NECESSARY TO HANG THE TELEVISION ON THE WALL IN THE CONFERENCE ROOM.

THE FIELD OFFICE WILL BE APPROVED IN ADVANCE BY THE ENGINEER AND FULLY OPERATIONAL WITHIN THIRTY (30) DAYS AFTER THE SIGNING AND EXECUTION OF THE PROJECT OR PRIOR TO THE START OF ANY CONSTRUCTION WORK, WHICHEVER COMES FIRST.

THE DEPARTMENT WILL MEASURE FIELD OFFICE, TYPE C, AS PER PLAN BY THE NUMBER OF MONTHS THE OFFICE IS MAINTAINED. A PARTIAL MONTH AT THE END OF THE PROJECT WILL BE PAID AS A FULL MONTH. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE PER MONTH OF ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK:

ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN

84 MNTH 

STRUCTURES ADJUSTED TO GRADE, RECONSTRUCTED TO GRADE OR REPLACED, AS PER PLAN

ALL ADJUSTMENT, RECONSTRUCTION OR REPLACED WORK, EXCEPT FOR THOSE STRUCTURES OWNED BY PRIVATE COMPANIES, SHALL BE PERFORMED BY THE CONTRACTOR, WHERE APPLICABLE. THE TIME BETWEEN RESETTING THE CASTINGS AND RESURFACING SHALL BE KEPT TO AN ABSOLUTE MINIMUM.

ALL EXISTING CASTINGS FOR STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED TO GRADE SHALL BE FIELD CHECKED AT THE TIME OF CONSTRUCTION AND MARKED SUITABLE FOR SALVAGE AND REUSE OR REPLACED AS DIRECTED BY THE ENGINEER. UNLESS OTHERWISE INDICATED ON THE PLAN. REPLACEMENT CASTINGS ARE PAID UNDER ITEM SPECIAL - MISCELLANEOUS METAL.

ADDITIONALLY, WHILE ADJUSTING OR RECONSTRUCTING DRAINAGE MANHOLES TO GRADE THE CONTRACTOR SHALL ROTATE ALL CASTING AWAY FROM CONFLICTS WITH THE PROPOSED CURBS.

ANY SUCH WORK MADE NECESSARY DUE TO THE CONTRACTOR'S NEGLIGENT OPERATIONS, AS DETERMINED BY THE ENGINEER, SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

SPECIAL - MANHOLE ADJUSTED TO GRADE (BY OTHERS)

PRIVATE UTILITY MANHOLES TO BE ADJUSTED BY OTHERS. CONTRACTOR SHALL PROVIDE UTILITIES A MINIMUM 30-DAY NOTICE FOR STRUCTURE ADJUSTED TO GRADE UNLESS OTHERWISE NOTED IN THE PLANS OR CONTRACT DOCUMENTS. ATG LOCATIONS ARE INCLUDED IN THE PLANS FOR REFERENCE.

NO PAYMENT IS ASSOCIATED WITH THIS ITEM.



DESIGN AGENCY

Michael Baker
INTERNATIONAL

DESIGNER

JTH

REVIEWER

KGJ 05/10/24

PROJECT ID

82382

SHEET TOTAL

80A | 2696

MAINTENANCE OF TRAFFIC GENERAL NOTES (CONTINUED)

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 OMTUCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTUCD, 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:

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).

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

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).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

- ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY;
- AND,
- AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION;
- AND,
- AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER;
 - OR
 - THE ACTIVE WORK AREA Laterally CLOSE TO THE OPEN TRAVELED LANE;
 - OR
 - OTHER LOCATION AS APPROVED BY THE ENGINEER.
- THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

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.

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

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 5000 HOUR

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 A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, MAINTAINING TRAFFIC, MISC.: PARTIAL TEMPORARY TRAFFIC SIGNAL

THE CONTRACTOR SHALL MODIFY THE EXISTING TRAFFIC SIGNALS AT THE INTERSECTIONS OF CARNEGIE AVENUE AND E. 14TH STREET AS DETAILED ON SHEET 293, CARNEGIE AVENUE AND E. 18TH STREET AS DETAILED ON SHEET 293, AND CARNEGIE AVENUE AND E. 21ST STREET AS DETAILED ON SHEET 345. THESE PARTIAL TEMPORARY TRAFFIC SIGNALS SHALL MAINTAIN THE CURRENT SIGNAL OPERATION UTILIZING THE EXISTING CONTROLLER CABINET, EXCEPT WHEN NOTED OTHERWISE IN THE TEMPORARY SIGNALS NOTES ON SHEET 345. NO CHANGES TO THE SIGNAL PHASING OR TIMINGS SHALL BE MADE WITHOUT THE APPROVAL OF THE PROJECT ENGINEER AND THE CITY OF CLEVELAND TRAFFIC ENGINEER.

ALL TEMPORARY SIGNAL POLE CALCULATIONS SHALL BE PERFORMED BY THE CONTRACTOR IN ORDER TO DETERMINE THE FINAL LOCATION, TYPE OF WOOD POLE TO BE USED, AND TO DETERMINE IF ADDITIONAL WOOD POLES AND SIGNAL SPANS ARE NECESSARY INSTEAD OF REUSING EXISTING SIGNAL SUPPORT POLES. THE NUMBER, LOCATION, VISIBILITY AND HEIGHT OF ALL TRAFFIC SIGNAL HEADS AND SIGNS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD). THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN CROSSINGS THROUGHOUT CONSTRUCTION WHERE SHOWN IN THE MAINTENANCE OF TRAFFIC PLANS INCLUDING ANY TEMPORARY POLES OR PEDESTRIAN SIGNAL HEADS WHERE NEEDED.

ALL LABOR AND MATERIALS FOR THE TEMPORARY MAINTENANCE OF EXISTING TRAFFIC SIGNALS AND THE IMPLEMENTATION OF THE TEMPORARY SIGNAL PLAN AND NOTES, INCLUDING BUT NOT LIMITED TO THE TEMPORARY SUPPORT POLES, TEMPORARY VEHICULAR AND PEDESTRIAN SIGNAL HEADS, TEMPORARY WIRING, TEMPORARY MESSENGER WIRE, CABINET MODIFICATIONS, AND CONTROLLER PROGRAMMING ADJUSTMENTS, ETC. SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EACH ITEM 614, MAINTAINING TRAFFIC, MISC.: PARTIAL TEMPORARY TRAFFIC SIGNAL. A QUANTITY OF 3 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM OF WORK AT THE INTERSECTIONS NOTED ABOVE.

ITEM SPECIAL - SURCHARGE FOR CLASS MS CONCRETE

AT VARIOUS LOCATIONS ALONG THE CORRIDOR AND TIMES DURING CONSTRUCTION CIRCUMSTANCES MAY REQUIRE THE USE OF CLASS MS CONCRETE. THE USE OF MS CONCRETE SHALL BE AT THE DISCRETION AND DIRECTION OF THE ENGINEER AND THE SPECIFICATIONS OUTLINED IN THESE NOTES. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL - SURCHARGE FOR CLASS MS CONCRETE 280 CY

RESURFACING OF WORK ZONES

THE CONTRACTOR SHALL RESURFACE THE ROADWAY PAVEMENT LISTED IN THE TABLE BELOW. THIS WORK SHALL OCCUR ONCE EACH LOCATION IS NO LONGER PART OF A WORK ZONE AND BEFORE FINAL PAVEMENT MARKINGS ARE PLACED ON THE ROADWAY. ADDITIONAL CONTINGENCY QUANTITIES FOR RESURFACING HAVE BEEN INCLUDED BELOW, TO BE USED AS DIRECTED BY THE ENGINEER.

SINGLE LANE CLOSURES SHALL BE IMPLEMENTED DURING OFF PEAK HOURS (SEE NOTE FOR DETAILS) AND HOLIDAY/SPECIAL EVENT RESTRICTIONS APPLY TO THE CLOSURES. ALL LANE CLOSURES SHOULD BE DONE IN ACCORDANCE WITH OHIO DEPARTMENT OF TRANSPORTATION STANDARDS AS DESCRIBED IN BOTH THE CMS AND STANDARD CONSTRUCTION DRAWINGS. AT THE END OF WORKDAY, TRAFFIC GRADE STEEL PLATES SHALL BE PLACED OVER ANY PORTION OF THE TRENCH NOT RESTORED BACK TO GRADE OR NOT RESTORED BACK TO A MANNER SUITABLE FOR TRAFFIC AND ALL LANES SHALL BE OPENED.

ROADWAY	ALIGNMENT	BEGIN STATION	END STATION	AREA (SF)	BUILD-UP	APP A	APP B	APP C
I.R. 77 NB	EX. I.R. 77	55+30	73+65	92,630	ODOT	515	515	
I.R. 77 SB	EX. I.R. 77	73+00	73+65	3,470	ODOT	19	19	
I.R. 90	EX. I.R. 90	98+48	110+50	152,170	ODOT	845	845	
RAMP E-17	EX. RAMP E-17	50+64	68+23	48,490	ODOT	269	269	
RAMP IJ3	RAMP IJ3	91+41	101+89	27,350	ODOT	152	152	
CARNEGIE AVE.	CONST. CARNEGIE AVE.	35+50	48+00	93,990	CITY			1043
CARNEGIE AVE.	CONST. CARNEGIE AVE.	69+25	70+00	4,185	CITY			47
E. 14TH ST. NB	E. 14TH ST.	15+33	18+27	6,930	CITY			77
E. 14TH ST. SB	E. 14TH ST.	15+33	21+29	16,180	CITY			180
E. 14TH ST.	EX. R/W E. 14TH ST.	16+92	18+35	8,575	CITY			95
E. 18TH ST.	EX. R/W E. 18TH ST.	4+00	5+00	5,160	CITY			57
E. 19TH ST.	EX. R/W E. 19TH ST.	3+87	4+95	4,620	CITY			51
E. 21ST ST.	CONST. E. 21ST ST.	100+90	102+68	5,880	CITY			65
E. 22ND ST.	CONST. E. 22ND ST.	22+25	29+47	49,390	CITY			548
E. 22ND ST.	EX. R/W E. 22ND ST.	28+50	29+56	4,150	CITY			46
COMMUNITY COLLEGE AVE.	COMMUNITY COLLEGE AVE.	60+39	62+09	10,710	CITY			119
CENTRAL AVE.	EX. R/W CENTRAL AVE.	26+07	26+83	3,030	CITY			34
CEDAR AVE.	EX. R/W CEDAR AVE.	23+98	27+50	14,050	CITY			156
CONTINGENCY RESURFACING	AS DIRECTED BY ENGINEER			180,000	ODOT	1,000	1,000	
				120,000	CITY			1,332
TOTAL				504,110	ODOT	2,800	2,800	
				346,850	CITY			3,850

RESURFACING BUILD-UP - ODOT

- ITEM 442 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M
- ITEM 407 - NON-TRACKING TACK COAT
- ITEM 442 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
- ITEM 407 - NON-TRACKING TACK COAT
- ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) (5")
- ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3.25")
- ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A
- ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B

RESURFACING BUILD-UP - CITY

- ITEM 441 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
- ITEM 407 - NON-TRACKING TACK COAT
- ITEM 441 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- ITEM 407 - NON-TRACKING TACK COAT
- ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN (5")
- ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3")
- ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN C

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER TO RESURFACE AND REPAIR PAVEMENT THAT HAS BEEN USED FOR MAINTENANCE OF TRAFFIC:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)	300 CY
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN	400 CY
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3")	38,540 SY
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3.25")	56,010 SY
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A	2,800 SY
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B	2,800 SY
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN C	3,850 SY
ITEM 407 - NON-TRACKING TACK COAT	14,180 GAL
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M	1,340 CY
ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	1,870 CY
ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M	2,330 CY
ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	2,720 CY

9 ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

ASPHALT CONCRETE MAY BE REQUIRED AT RESURFACING OR PHASE LIMITS TO MAINTAIN TRAFFIC. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER TO CONSTRUCT PAVEMENT WEDGES TO TRANSITION VARIABLE HEIGHT PAVEMENTS AT RESURFACING OR PHASE LIMITS TO MAINTAIN TRAFFIC:

11 ODOT MAINTAINED ROADWAYS
ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 50 CY

CITY OF CLEVELAND MAINTAINED ROADWAYS
ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 50 CY

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1 (SY)

APP A	APP B	APP C
2,800	2,800	3,850

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER

GSH

REVIEWER

DJJ 05/22/24

PROJECT ID

82382

SHEET

TOTAL

87 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
427	470	471A	489A	1399									01/IMS /04	02/IMS /10	03/IMS /08							
													LS				201	11000	LS	CLEARING AND GRUBBING		
			133744										133744				202	23000	133744	SY	PAVEMENT REMOVED	
			101667										101667				202	30000	101667	SF	WALK REMOVED	
			509										509				202	30600	509	SY	CONCRETE MEDIAN REMOVED	
			4595										6105				202	30700	6105	FT	CONCRETE BARRIER REMOVED	
																	202	30800	11 79	SY	TRAFFIC ISLAND REMOVED	
			23863										23863				202	32000	23863	FT	CURB REMOVED	
			7268										7468				202	35100	4 7468	8 FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
			609										609				202	35200	609	FT	PIPE REMOVED, OVER 24" DIAMETER	
			6379										6379				202	38000	6379	FT	GUARDRAIL REMOVED	
			1										1				202	42000	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
			2										2				202	42010	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
			7										7				202	42040	7	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
			2										2				202	42050	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE B	
			6										6				202	47000	6	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
			1										1				202	47001	1	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN	74
			2										2				202	47800	2	EACH	IMPACT ATTENUATOR REMOVED	
			16										16				202	58000	8 16	EACH	MANHOLE REMOVED	78
			63										63				202	58100	63	EACH	CATCH BASIN REMOVED	78
			21										21				202	58200	21	EACH	INLET REMOVED	78
			11										11				202	58400	11	EACH	INLET ABANDONED	78
			21										21				202	58500	21	EACH	CATCH BASIN ABANDONED	78
			9										9				202	58700	9	EACH	MANHOLE ABANDONED	78
			2317										2317				SPECIAL	202E70000	2317	FT	FILL AND PLUG EXISTING CONDUIT (12" AND UNDER)	78
			1186										1186				SPECIAL	202E70000	1186	FT	FILL AND PLUG EXISTING CONDUIT (15")	78
			510										510				SPECIAL	202E70000	510	FT	FILL AND PLUG EXISTING CONDUIT (18")	78
			51										51				SPECIAL	202E70000	51	FT	FILL AND PLUG EXISTING CONDUIT (21")	78
			255										255				SPECIAL	202E70000	255	FT	FILL AND PLUG EXISTING CONDUIT (24")	78
			48										48				SPECIAL	202E70000	48	FT	FILL AND PLUG EXISTING CONDUIT (30")	78
			695										695				SPECIAL	202E70000	695	FT	FILL AND PLUG EXISTING CONDUIT (36")	78
			475										475				SPECIAL	202E70000	475	FT	FILL AND PLUG EXISTING CONDUIT (66")	78
			349										349				SPECIAL	202E70000	349	FT	FILL AND PLUG EXISTING CONDUIT (NO. 8 BR)	78
			10915										10915				202	75000	10915	FT	FENCE REMOVED	
			13										13				202	75250	13	EACH	GATE REMOVED	
			2										2				202	98100	2	EACH	REMOVAL MISC.: BILLBOARD	74
			26										26				202	98100	26	EACH	REMOVAL MISC.: BOLLARD	74
			2										2				202	98100	2	EACH	REMOVAL MISC.: CONCRETE STRUCTURES	74
			6										6				202	98100	6	EACH	REMOVAL MISC.: ELECTRIC VAULT	1779A
			1										1				202	98100	1	EACH	REMOVAL MISC.: PAY BOX	74
			1										1				202	98100	1	EACH	REMOVAL MISC.: UTILITY POLE	74
			1000										1000				202	98200	1000	FT	REMOVAL MISC.: BURIED TRACK	74
			683										683				202	98200	683	FT	REMOVAL MISC.: CONCRETE ENCASED ELECTRIC DUCT BANK	1779A
			266										266				202	98200	266	FT	REMOVAL MISC.: DELINEATOR CURB	74
			264										264				202	98200	264	FT	REMOVAL MISC.: PORTABLE BARRIER	74
			345447										345447				203	10000	345447	CY	EXCAVATION	
			35973										35973				203	10001	8 35973	CY	EXCAVATION, AS PER PLAN	75
			85879										85879				203	20000	85879	CY	EMBANKMENT	
			27322										27322				203	20001	27322	CY	EMBANKMENT, AS PER PLAN	75
			99839										99839				203	98000	99839	CY	ROADWAY, MISC.: EPS GEOFOAM FILL	75
			110										194				203	98100	194	SY	ROADWAY, MISC.: REINFORCED TURF	75
			70757										70757				204	10000	4 70757	SY	SUBGRADE COMPACTION	74
			272										3372				204	13000	3372	CY	EXCAVATION OF SUBGRADE	
			272										3372				204	30010	3372	CY	GRANULAR MATERIAL, TYPE B	
			80										80				204	45000	80	hour	PROOF ROLLING	74
			556										9856				204	50000	4 9856	SY	GEOTEXTILE FABRIC	
			1855										1855				206	10500	1855	TON	CEMENT	
			75578										75578				206	11000	75578	SY	CURING COAT	
			75866										75866				206	15010	75866	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	74
													LS				206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	

DESIGN AGENCY	
DESIGNER	Michael Baker International
REVIEWER	KJM
PROJECT ID	KGJ 05/22/24
SHEET	82382
TOTAL	403 2696

SHEET NUMBER										PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
120	427	428	429	435	459	470	1806	1839		01/IMS /04	02/IMS /10	03/IMS /08							
				8772.2						8772.2				606	15050	8772.2	FT	ROADWAY (CONT.)	
				5						5				606	26050	5	EACH	ANCHOR ASSEMBLY, MGS TYPE B (MASH 2016)	76
				10						10				606	26150	10	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	76
				15						15				606	26550	15	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				13						13				606	35002	13	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
				9						9				606	35102	9	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				1						1				606	35103	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	76
				1						1				606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) (MASH 2016) (50 MPH, 69" WIDE)	76
				3						3				606	60022	3	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) (MASH 2016) (50 MPH, 90" WIDE)	76
				4477						4477				607	23000	4477	FT	FENCE, TYPE CLT	
				415						415				607	35000	415	FT	FENCE REMOVED AND REBUILT	
				2						2				607	61200	2	EACH	GATE, TYPE CLT	
2994	4500							6097		92757				608	13001	92757	SF	6" CONCRETE WALK, AS PER PLAN	76
										2994				608	21200	2994	SF	TEMPORARY ASPHALT CONCRETE WALK	
	475									9102				608	52001	9102	SF	CURB RAMP, AS PER PLAN	76
										935				608	52001	935	SF	CURB RAMP, AS PER PLAN 2	76
		500								2095				622	10100	2095	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
										311				622	10120	311	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
										108				622	10121	108	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	76
										2752				622	10140	2752	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
										31				622	10141	31	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	39
		1010								2827				622	10160	2827	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
										2				622	10200	2	EACH	BARRIER TRANSITION	
										1				622	24841	1	EACH	CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN	1434
										2				622	25000	2	EACH	CONCRETE BARRIER END SECTION, TYPE D	
										17				622	25006	17	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
										5				622	25008	5	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	
										1				622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN	1435
										34				622	25014	34	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
										30				622	25050	30	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
										2				622	25051	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	1436
										1				622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 2	76
		45								45				623	12010	45	EACH	PRIMARY PROJECT CONTROL MONUMENT, TYPE B	
		60								60				623	40900	60	EACH	MONUMENT, MISC.: CLEVELAND MONUMENT ASSEMBLY	76
										900000				SPECIAL	690E98000	900000	EACH	PERMITS	77
										40				SPECIAL	690E98000	40	EACH	UTILITY TEST HOLE	77
										321				SPECIAL	690E98700	321	CY	LOW DENSITY CELLULAR CONCRETE FILL, CLASS II	76
																		EROSION CONTROL	
										14				601	21050	14	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
										234				601	21060	234	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
										642				601	32200	642	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
										4563				601	32301	4563	CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER, AS PER PLAN	1798
										104				601	37501	104	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	1163
										10				659	00100	10	EACH	SOIL ANALYSIS TEST	
										13216				659	00300	13216	CY	TOPSOIL	
										2181				659	00301	2181	CY	TOPSOIL, AS PER PLAN	1804
										37445				659	00501	37445	SY	SEEDING AND MULCHING, CLASS 1, AS PER PLAN	1797
										62571				659	00511	62571	SY	SEEDING AND MULCHING, CLASS 2, AS PER PLAN	1797
										38510				659	00581	38510	SY	SEEDING AND MULCHING, CLASS 5B, AS PER PLAN	1797
										6926				659	14000	6926	SY	REPAIR SEEDING AND MULCHING	
										6926				659	15000	6926	SY	INTER-SEEDING	
										19.32				659	20000	19.32	TON	COMMERCIAL FERTILIZER	
										28.62				659	31000	28.62	ACRE	LIME	
										767				659	35000	767	MGAL	WATER	
										750				659	40000	750	MSF	MOWING	
										19901				670	00500	19901	SY	SLOPE EROSION PROTECTION	
										1262				670	00720	1262	SY	DITCH EROSION PROTECTION MAT, TYPE B	
										LS				832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	

DESIGN AGENCY
Michael Baker INTERNATIONAL

DESIGNER
 KJM

REVIEWER
 KGJ 05/22/24

PROJECT ID
 82382

SHEET TOTAL
 404 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
120	1455	1468	1642									01/IMS /04	02/IMS /10	03/IMS /08								
										TRAFFIC CONTROL (CONT.)												
	11											11			644	01360	11	EACH	WRONG WAY ARROW			
		2										2			644	01370	2	EACH	TWO WAY LEFT TURN ARROW			
257		3053										3310			644	01500	3310	FT	DOTTED LINE, 4"			
2449	2420											4869			644	01510	4869	FT	DOTTED LINE, 6"			
		1448										1448			644	01514	1448	FT	DOTTED LINE, 8"			
	1365											1365			644	01520	1365	FT	DOTTED LINE, 12"			
		6										6			644	01630	6	EACH	BIKE LANE SYMBOL MARKING			
		4										4			644	19000	4	EACH	SHARED LANE MARKING			
		38										38			644	50300	38	FT	PAVEMENT MARKING, MISC.: BIKE LANE CROSSWALK	1449		
		1034										1034			644	60000	1034	SF	GREEN COLORED PAVEMENT FOR BIKE LANES			
		0.14										0.14			646	10000	0.14	MILE	EDGE LINE, 4"			
	1.90											1.90			646	10010	1.90	MILE	EDGE LINE, 6"			
		0.42										0.42			646	10100	0.42	MILE	LANE LINE, 4"			
	1.48											1.48			646	10110	1.48	MILE	LANE LINE, 6"			
		0.35										0.35			646	10200	0.35	MILE	CENTER LINE			
		241										241			646	10300	241	FT	CHANNELIZING LINE, 8"			
3018												3018			646	10310	3018	FT	CHANNELIZING LINE, 12"			
		33										33			646	10400	33	FT	STOP LINE			
	6	1312									6	1312			646	10510	6	FT	CROSSWALK LINE, 12"			
	310	188										498			646	10600	498	FT	TRANSVERSE/DIAGONAL LINE			
	222											222			646	10620	222	FT	CHEVRON MARKING			
		5										5			646	20300	5	EACH	LANE ARROW			
	2687											2687			646	20504	2687	FT	DOTTED LINE, 6"			
		4										4			646	20600	4	EACH	BIKE LANE SYMBOL MARKING			
		2										2			646	20650	2	EACH	SHARED LANE MARKING			
		876										876			646	60100	876	SF	GREEN COLORED PAVEMENT FOR BIKE LANES			
										TRAFFIC SIGNALS												
		4										4			625	00480	4	EACH	CONNECTION, UNFUSED PERMANENT			
		448										448			625	25408	448	FT	CONDUIT, 2", 725.051			
		152										152			625	25504	152	FT	CONDUIT, 3", 725.051			
		4133										4133			625	25604	4133	FT	CONDUIT, 4", 725.051			
		675										675			625	25802	675	FT	CONDUIT, CONCRETE ENCASED, 4", 725.051			
		2899										2899			625	25910	2899	FT	CONDUIT CLEANED AND CABLES REMOVED			
		439										439			625	29000	439	FT	TRENCH			
		13										13			625	29400	13	FT	TRENCH IN PAVED AREA			
		28										28			625	30510	28	EACH	PULL BOX, 725.06, SIZE 4			
		65										65			625	30530	65	EACH	PULL BOX, 725.06, SIZE 18			
		3338										3338			625	32000	3338	EACH	GROUND ROD			
		58										58			625	36011	58	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	1638		
		4										4			630	79101	4	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	1638		
		254.0										254.0			630	79500	254.0	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED			
															630	80100		SF	SIGN, FLAT SHEET			
		30										30			630	80511	30	EACH	SIGN, STREET NAME, AS PER PLAN	1638		
		4										4			632	04000	4	EACH	VEHICULAR SIGNAL HEAD, MISC.: (LED), 3-SECTION, 8" LENS, 1-WAY, POLYCARBONATE, YELLOW (BICYCLE)	1640		
		87										87			632	05006	87	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, YELLOW			
		12										12			632	05086	12	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, YELLOW			
		56										56			632	20731	56	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	1640		
		62										62			632	20750	62	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON			
		103										103			632	25000	103	EACH	COVERING OF VEHICULAR SIGNAL HEAD			
		56										56			632	25010	56	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD			
		8775										8775			632	40300	8775	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG			
		8775										8775			632	40500	8775	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG			
		10250										10250			632	40700	10250	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG			
		30										30			632	64010	30	EACH	SIGNAL SUPPORT FOUNDATION			
		28										28			632	64020	28	EACH	PEDESTAL FOUNDATION			
		8										8			632	64950	8	EACH	TEST HOLE PERFORMED			
		600										600			632	68200	600	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG			
		450										450			632	69200	450	FT	POWER CABLE, 2 CONDUCTOR, NO. 4 AWG			

DESIGN AGENCY
Michael Baker INTERNATIONAL
 DESIGNER
 KJM
 REVIEWER
 KGJ 05/22/24
 PROJECT ID
 82382
 SHEET TOTAL
 412 2696

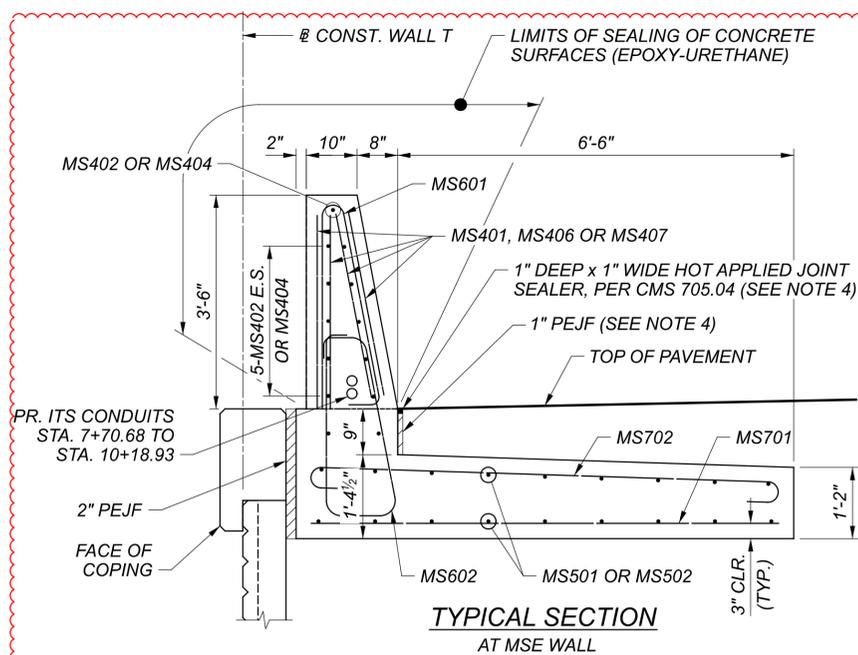
SHEET NO.	201	202	202	202	204	204	204	251	251	254	254	254	255	255	255	255	407	441	441	442	442	442	452	605	605	608	608	609	611	611	611	611	611	611	611	614	614	614	614											
	LS	FT	FT	LS	FT	CY	CY	SY	CY	CY	SY	SY	SY	SY	SY	SY	GAL	CY	CY	CY	CY	CY	SY	FT	FT	SF	SF	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	LB	HOUR	FT	EACH	EACH									
73	LS																																																	
74				LS	1000																																													
76						3100	3100	9300																																										
77																																																		
78																																																		
79			200																																															
80								180																																										
80A																																																		
83		1510																																																
84										63255																																								
85									1531																																									
87						300	400		38540	56010		2800	2800	3850	14180	1340	1870	2330	2720	64																														
1371																																																		
1779A																																																		
1798																																																		
1804																																																		
1825																																																		
1826																																																		
1829																																																		
1831																																																		
1833																																																		
TOTALS CARRIED TO GENERAL SUMMARY	LS	1510	200	LS	1000	3100	3100	9300	480	400	64786	38540	56010	2800	2800	3850	14303	1340	1870	2330	2720	64	775	3700	5200	4500	475	750	400	2400	200	4	4	4	10000	5000	10555	62	26											

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	427
TOTAL	2696

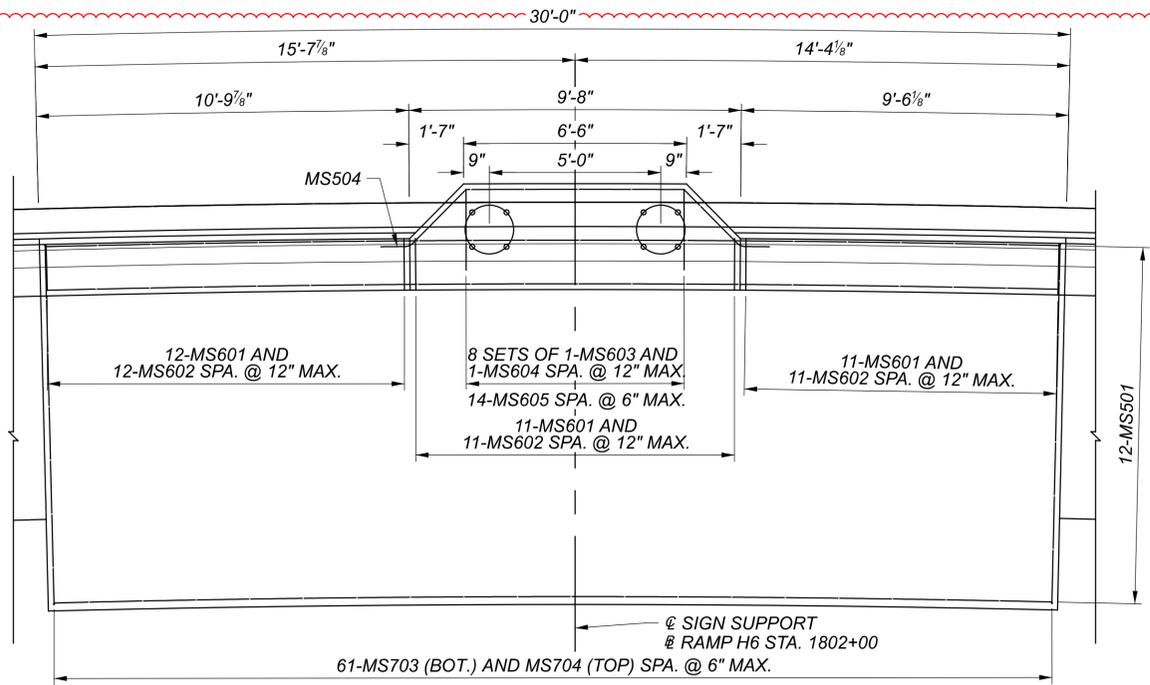
SHEET NO.	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	616	616	618	619	622	622	623	623	625	638	659	659	659	659	659	659						
	WORK ZONE CROSSOVER LIGHTING SYSTEM	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	BARRIER REFLECTOR, TYPE 1 (ONE WAY)	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	MAINTAINING TRAFFIC, MISC.: PARTIAL TEMPORARY TRAFFIC SIGNAL	MAINTAINING TRAFFIC, MISC.: TEMPORARY TRAFFIC SIGNAL	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	WORK ZONE LANE LINE, CLASS I, 4"	WORK ZONE LANE LINE, CLASS I, 6"	WORK ZONE CENTER LINE, CLASS I	WORK ZONE EDGE LINE, CLASS I, 4"	WORK ZONE EDGE LINE, CLASS I, 6"	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	WORK ZONE CHANNELIZING LINE, CLASS I, 12"	WORK ZONE DOTTED LINE, CLASS I	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I	WORK ZONE STOP LINE, CLASS I	WORK ZONE CROSSWALK LINE, CLASS I, 12"	WORK ZONE ARROW, CLASS I	WORK ZONE WORD ON PAVEMENT, 72", CLASS I	WORK ZONE PAVEMENT MARKING, MISC.: SHARED LANE MARKING	WATER	CALCIUM CHLORIDE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	FIELD OFFICE, TYPE C, AS PER PLAN	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	PRIMARY PROJECT CONTROL MONUMENT, TYPE B	MONUMENT, MISC.: CLEVELAND MONUMENT ASSEMBLY	LIGHTING, MISC.: DISTRIBUTION SYSTEMS REMOVED	WATER WORK, MISC.: CLEVELAND WATER DEPARTMENT CHARGES	SOIL ANALYSIS TEST	REPAIR SEEDING AND MULCHING	INTER-SEEDING	COMMERCIAL FERTILIZER	LIME	WATER			
	EACH	EACH	CY	EACH	EACH	EACH	EACH	SNMT	MILE	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	MGAL	TON	MILE	MNTH	FT	FT	EACH	EACH	LS	EACH	EACH	SY	SY	TON	ACRE	MGAL			
73																																										
74																																										
76																									0.23																	
77																																										
78																																										
79																																										
80																																										
80A																																										
83								200																																		
84		3895																						2285	150																	
85	6			1256	1113	42		1	0.50	2.50	0.50	1.00	4.50	650	8750	3650	150	175	175	25	1	1																				
87		11	100				3																																			
1371																																										
1779A																																										
1798																																										
1804																																										
1825																																										
1826																																										
1829																																										
1831																																										
1833																																										
TOTALS CARRIED TO GENERAL SUMMARY	6	3895	100	1256	1113	42	3	1	200	0.50	2.50	0.50	1.00	4.50	650	8750	3650	150	175	175	25	1	1	2285	150	1.28	84	500	1010	45	60	LS	300000	10	6926	6926	19.32	28.62	767			

GENERAL NOTES SUBSUMMARY - 2

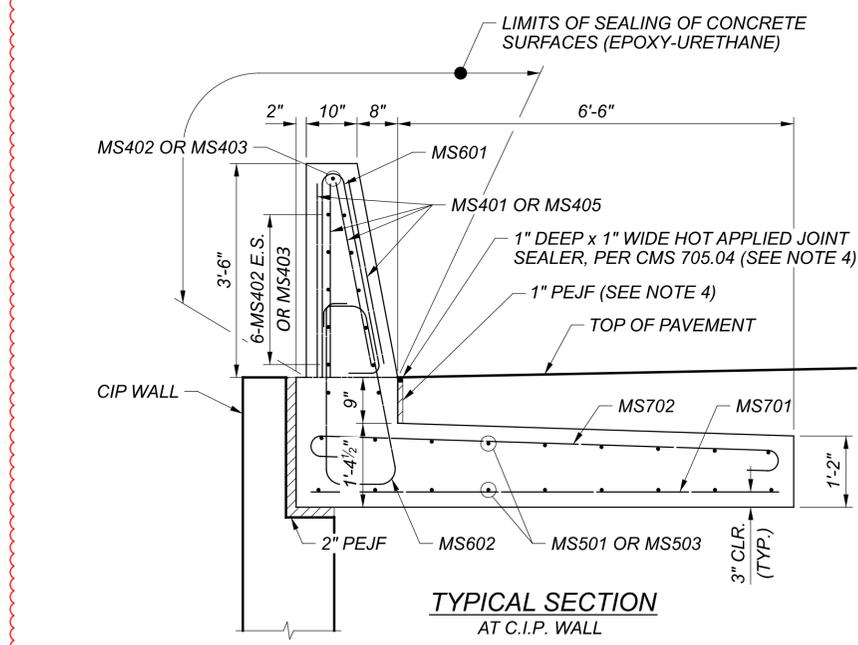
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	428
TOTAL	2696



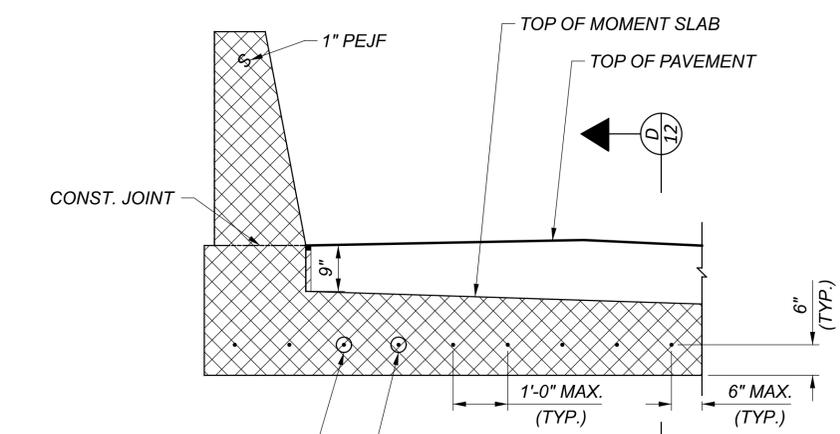
TYPICAL SECTION AT MSE WALL



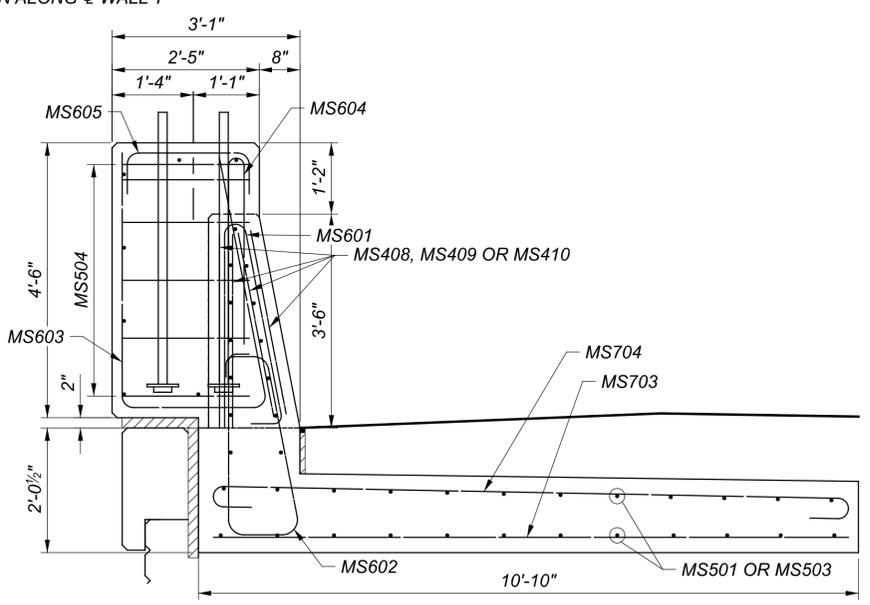
SIGN SUPPORT PLAN
 LENGTHS GIVEN ALONG WALL T



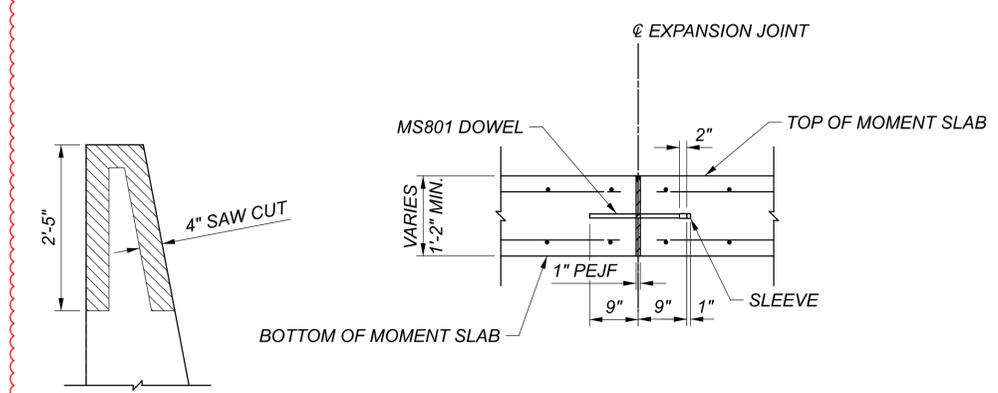
TYPICAL SECTION AT C.I.P. WALL



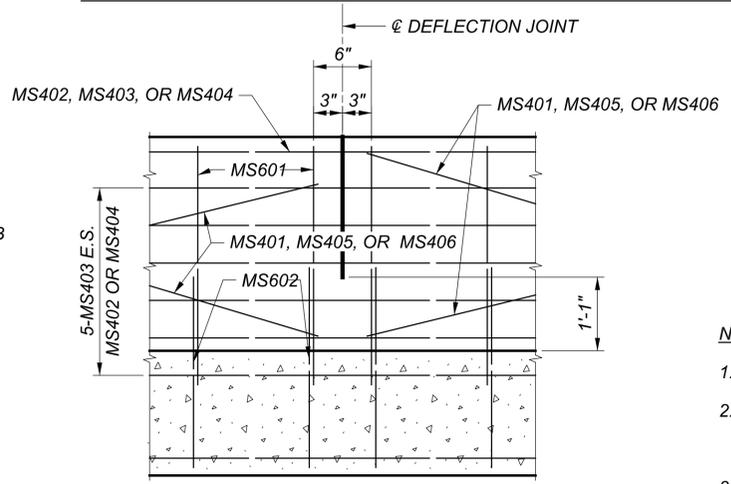
TYPICAL MOMENT SLAB SECTION AT EXPANSION JOINT



MOMENT SLAB SECTION AT SIGN SUPPORT



DETAIL A SECTION THROUGH SAWCUT



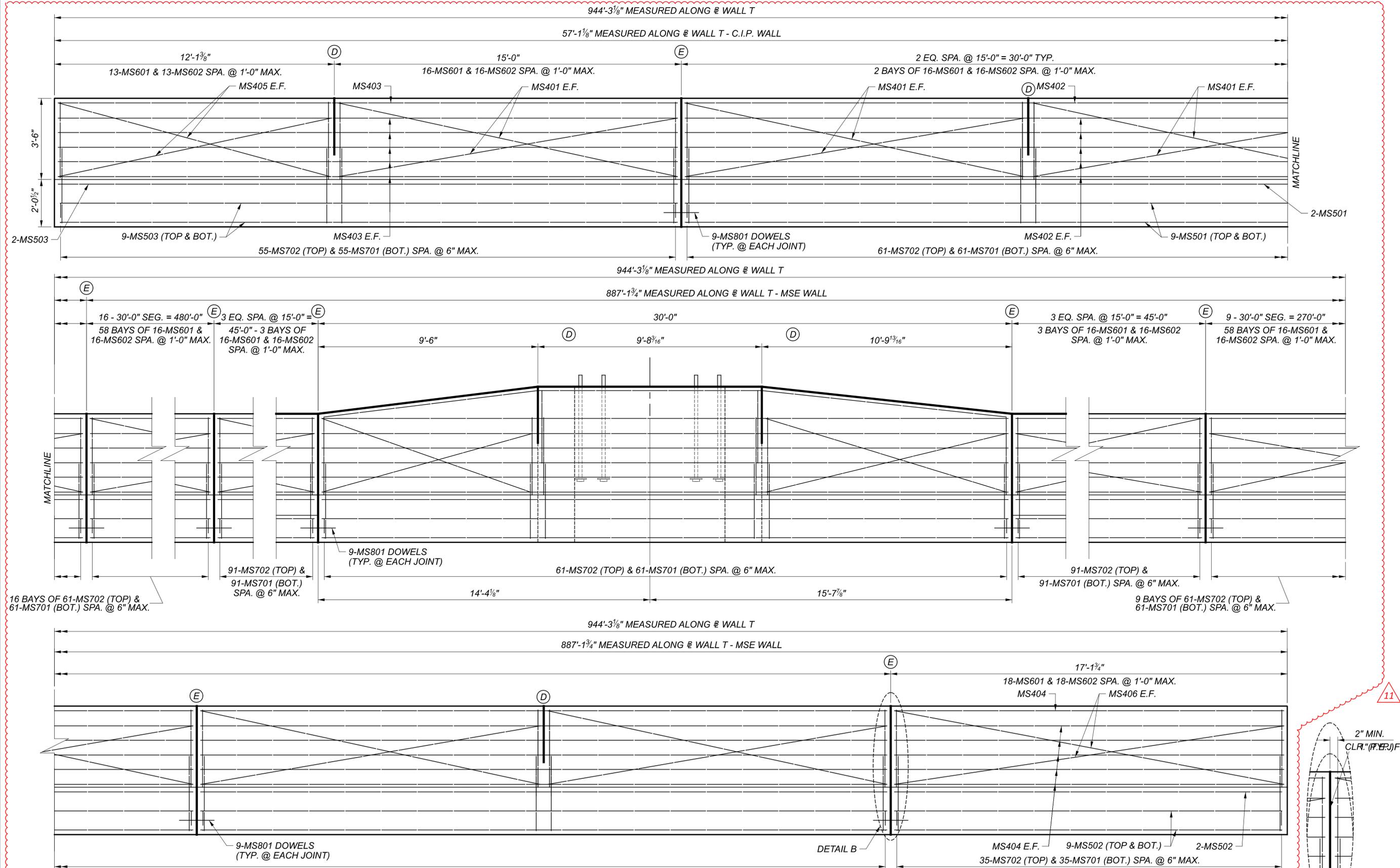
DEFLECTION JOINT ELEVATION DETAIL

- NOTES:
- SEE ODOT STANDARD DRAINING SBR-1-20 FOR ADDITIONAL DETAILS.
 - EXPANSION JOINTS SHALL BE PLACED EVERY 30 FEET UNLESS NOTED OTHERWISE. 1" PEJF SHALL BE PLACED BETWEEN MOMENT SLABS AT EACH EXPANSION JOINT. REINFORCING STEEL SHALL NOT EXTEND THROUGH THE EXPANSION JOINT.
 - THE MINIMUM LENGTH OF THE MOMENT SLAB IS 30 FEET UNLESS NOTED OTHERWISE.
 - HOT APPLIED JOINT SEALER AND 1" PEJF TO BE PAID FOR WITH ITEM 511 - CLASS QC2 CONCRETE MISC.: CONCRETE MOMENT SLAB AND BARRIER WITH QC/QA.

MOMENT SLAB DETAILS (1 OF 2)
 WALL T
 BETWEEN RAMP IH4 AND RAMP IH5

SFN	N/A
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	SSW
CHECKER	MKB
REVIEWER	LPC
PROJECT ID	82382
SUBSET	12
TOTAL	14
SHEET	1307
TOTAL	2696





MOMENT SLAB ELEVATION

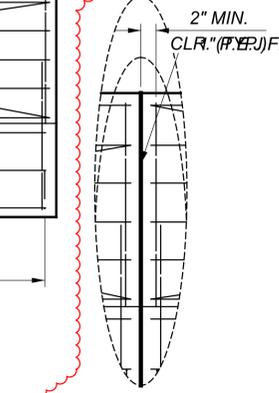
NOTES:

- SEE ODOT STANDARD DRAWING SBR-1-20 FOR ADDITIONAL DETAILS.
- PROVIDE MINIMUM 2" CONCRETE COVER, UNLESS SHOWN OTHERWISE. IF REQUIRED, INCREASE COVER THICKNESS FOR ARCHITECTURAL FEATURES OR FINISHES.

- EXPANSION JOINTS SHALL BE PLACED EVERY 30 FEET UNLESS NOTED OTHERWISE. 1" PEJF SHALL BE PLACED BETWEEN MOMENT SLABS AT EACH EXPANSION JOINT. REINFORCING STEEL SHALL NOT EXTEND THROUGH THE EXPANSION JOINT.
- THE MINIMUM LENGTH OF THE MOMENT SLAB IS 30 FEET UNLESS NOTED OTHERWISE.

LEGEND

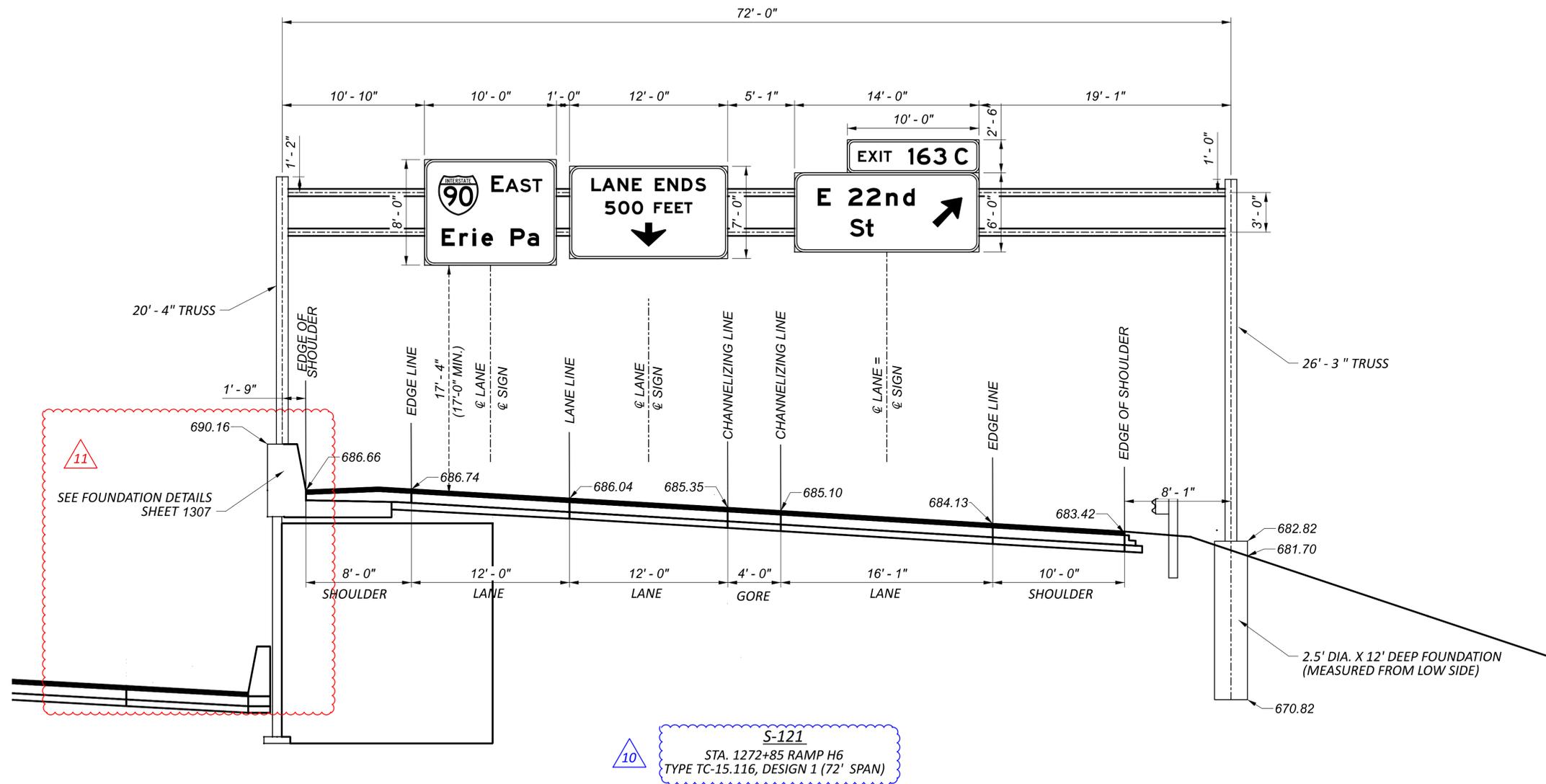
- (E) DESIGNATES EXPANSION JOINT
- (D) DESIGNATES DEFLECTION JOINT



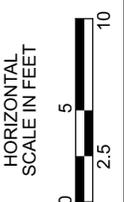
DETAIL B
TYPICAL AT EXPANSION JOINTS

MOMENT SLAB DETAILS (2 OF 2)
WALL T
BETWEEN RAMP IH4 AND RAMP IH5

SFN	N/A
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	SSW
CHECKER	MKB
REVIEWER	LPC
PROJECT ID	82382
SUBSET	13
TOTAL	14
SHEET	1308
TOTAL	2696



OVERHEAD SIGN ELEVATION DETAILS



DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	
AJS	
REVIEWER	
KEH 05/01/24	
PROJECT ID	
82382	
SHEET	TOTAL
1606	2696

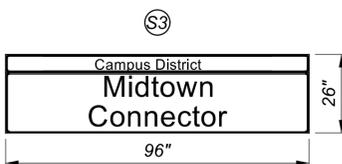
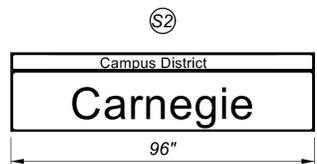
PROPOSED SIGNS



R10-3e-9
 2 - LEFT ARROW (PS-1, SP-3)
 2 - RIGHT ARROW (SP-2, PS-2)

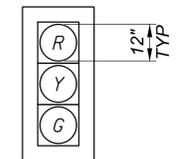


R3-5L-30

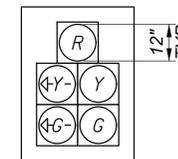


PROPOSED SIGNALS

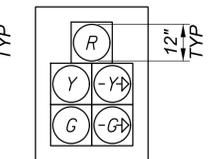
VEHICULAR SIGNALS HEADS (12" LENS, LED, YELLOW, W/ REFLECTIVE BACKPLATES)



2A, 2B, 2C, 6A, 6B, 6C, 8A



1A

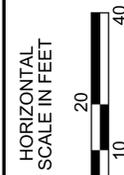


8B, 8C



PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)

(1)-3" CONDUIT WITH (2)-7/C, (1)-5/C, (1)-3/C, AND (1)-RC, IN TRENCH = 11'



TRAFFIC SIGNAL PLAN
 CARNEGIE AVE. & MIDTOWN CONNECTOR

SP-1, TYPE TC-81.22, DESIGN 12 WITH 45' MAST ARM AND (1) STOP LINE RADAR DETECTOR "R-1" STA. 64+67.0, 41.5' LT

(1)-3" CONDUIT WITH (1)-7/C AND (1)-RC, IN TRENCH = 3'

PB-1

(2)-4" CONDUIT WITH (1)-7/C AND (1)-RC, IN TRENCH = 89'

PB-2

(2)-4" CONDUIT WITH (5)-7/C, (4)-5/C, (4)-3/C, AND (2)-RC, IN TRENCH = 21'

PROPOSED POWER SOURCE TIE INTO CPP SECONDARY POWER WITH (1)-1" CONDUIT RISER STA. 64+05.0, 37.0' RT



(1)-2" CONDUIT WITH (1)-POWER IN TRENCH = 18'

PB-5

(1)-2" CONDUIT WITH (1)-POWER IN TRENCH = 50'

CONTROLLER CABINET STA. 64+58.5, 66.4' RT

(1)-2" CONDUIT WITH (1)-5/C AND (1)-3/C IN TRENCH = 20'

PS-1, 8' PEDESTAL WITH (1) PEDESTRIAN PUSH BUTTON "PB2A" AND (1) PEDESTRIAN SIGNAL HEAD "PH2A" STA. 64+70.4, 59.2' RT

SP-2, TYPE TC-81.22, DESIGN 14 WITH 70' MAST ARM, SUPPLEMENTAL DAMPING DEVICE, (1) PEDESTRIAN PUSH BUTTON "PB8B", (1) PEDESTRIAN SIGNAL HEAD "PH8B", (1) SIDE-MOUNTED VEHICULAR SIGNAL HEAD, AND (1) STOP LINE RADAR DETECTOR "R-2" STA. 65+81.7, 37.1' LT

(2)-4" CONDUIT WITH (2)-7/C, (1)-5/C, (1)-3/C, AND (1)-RC, IN TRENCH = 89'

CONST. CARNEGIE AVE.

SP-3, TYPE TC-81.22, DESIGN 4 WITH 38' MAST ARM, (1) PEDESTRIAN PUSH BUTTON "PB8A", (1) PEDESTRIAN SIGNAL HEAD "PH8A", AND (1) SIDE-MOUNTED VEHICULAR SIGNAL HEAD STA. 65+82.8, 42.1' RT

(1)-3" CONDUIT WITH (1)-7/C, (1)-5/C, AND (1)-3/C, IN TRENCH = 27'

(1)-2" CONDUIT WITH (1)-7/C, (1)-5/C, AND (1)-3/C IN TRENCH = 20'

(2)-4" CONDUIT WITH (4)-7/C, (3)-5/C, (3)-3/C, AND (1)-RC, IN TRENCH = 101'

PS-2, 15' PEDESTAL WITH (1) PEDESTRIAN PUSH BUTTON "PB2B", (1) PEDESTRIAN SIGNAL HEAD "PH2B", AND (1) FRONT-MOUNTED VEHICULAR SIGNAL HEAD STA. 65+47.5, 63.2' RT

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	67+70.0	LT	41.5	24 x 36
PB-2	64+56.2	RT	45.9	24 x 36
PB-3	65+71.4	LT	40.9	24 x 36
PB-4	65+57.1	RT	46.8	24 x 36
PB-5	64+22.9	RT	40.5	13 x 24

NOTE:
 1. RADAR DETECTION LOCATION IS FOR REFERENCE ONLY. ACTUAL PLACEMENT WILL BE RECOMMENDED BY MANUFACTURER.

TRAFFIC SIGNAL LEGEND

- TRAFFIC SIGNAL, 3 UNIT HEAD, 12"
- TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS
- TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"
- CONTROLLER CABINET
- CONTROLLER CABINET WITH WORKPAD
- SIGNAL SUPPORT POLE
- PEDESTRIAN SIGNAL
- PEDESTRIAN PUSH BUTTON
- PEDESTAL SUPPORT
- TRAFFIC PULL BOX
- SIGNAL CONDUIT
- RADAR DETECTION ZONE
- RADAR DETECTOR

CONTACT OHIO UTILITIES PROTECTION SERVICE, TWO WORKING DAYS PRIOR TO START OF CONSTRUCTION. IN OHIO, CALL TOLL FREE 1-800-362-2764. IT'S THE LAW.

UTILITIES SHOWN ARE FROM BEST AVAILABLE RECORDS AND FIELD INVESTIGATION, AND ARE NOT NECESSARILY COMPLETE OR EXACT. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THIS PLAN OR NOT.

ALL POWER CONDUIT RUNS ARE TO BE CONSTRUCTED BY USING 2", 4", 5", OR 6" PVC TYPE EB CONDUITS, AS DEPICTED ON THE PLANS, ENCASED WITH A 3" CONCRETE ENVELOPE AND 2" SPACING BETWEEN CONDUITS, UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS. THE CONCRETE USED SHALL CONFORM TO ODOT CLASS QC 1 PER C&MS 499.

A RUGGED POLYETHYLENE MATERIAL WARNING TAPE CAPABLE OF RESISTING HIGH OR LOW PH CONDITIONS MUST BE PLACED ABOVE THE ELECTRICAL CONDUIT BANK. THIS WARNING TAPE IS TO BE SIX INCHES WIDE, RED IN COLOR, AND IMPRINTED WITH THE WORDS, "DANGER - BURIED HIGH VOLTAGE CABLES BELOW". THIS TAPE IS TO BE PLACED 6" ABOVE THE NEWLY INSTALLED DUCT BANK. THIS SHALL CONFORM WITH THE STANDARDS AS SET BY OHIO UTILITIES PROTECTION SERVICE. WARNING TAPE PAYMENT INCLUDED IN APPROPRIATE CONDUIT, PAY ITEM.

AS AN OPTION, CONTRACTOR MAY ELECT TO ENCASE CPP'S CONDUITS IN RED CONCRETE. BOTH METHODS ARE APPROVED BY CLEVELAND PUBLIC POWER AND ARE RECOMMENDED BY OHIO UTILITIES PROTECTION SERVICE. PAYMENT FOR TINTED DUCT CONCRETE, OR TINTED CONCRETE PROTECTIVE SLABS INCLUDED IN APPROPRIATE CONDUIT PAY ITEM.

THE TOP OF THE CONCRETE ENCASED CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 3'-0" BELOW THE EXISTING AND/OR PROPOSED GRADES. THE TOTAL TRENCH DEPTH WILL BE BASED UPON THE CONDUIT FORMATION. SEE DRAWINGS ISSUED BY CLEVELAND PUBLIC POWER FOR DETAILS.

VERTICAL AND HORIZONTAL CURVES SHALL HAVE A MINIMUM RADIUS OF NO LESS THAN 30 FEET. THESE CURVES ARE TO BE CONDUITS AS NOTED CONSTRUCTED BY USING THE APPROPRIATE 5" COUPLINGS, AND ASSOCIATED CHORD LENGTHS AS SHOWN ON THE CONDUIT CURVE CONSTRUCTION CHART. ANY OTHER CURVE DESIGN, FIELD CHANGES, OR THE USE OF PREFORMED RADIUS BENDS MUST BE APPROVED BY THE ENGINEERING DEPARTMENT OF CLEVELAND PUBLIC POWER.

ALL MANHOLES OUTSIDE WALLS AND CONDUIT RUNS ARE TO HAVE A MINIMUM CLEARANCE OF 5' (FACE TO FACE), HORIZONTALLY FROM ALL WATER LINES. VERTICAL CLEARANCE SHALL BE AT A MINIMUM OF 1'-6". CLEARANCE BETWEEN OTHER UTILITIES SHALL BE 1 FOOT, UNLESS NOTED OTHERWISE. CPP'S DUCT BANK SHALL CROSS OVER OR UNDER OTHER UTILITIES AT AN ANGLE OF NO MORE THAN 45°.

ANY CONDUIT RUNS THAT ARE CROSSING ANY STEAM LINES SHALL HAVE A MINIMUM CLEARANCE OF 5', OR BE INSTALLED PER THE CPP ENGINEERING DEPARTMENT. IN THE EVENT THAT THIS CAN'T BE ACCOMPLISHED, NOTIFY THE ENGINEERING DEPARTMENT OF CLEVELAND PUBLIC POWER PRIOR TO THE INSTALLATION OF CONDUITS.

EACH NEWLY CONSTRUCTED MANHOLE SHALL BE FREE OF ALL FOREIGN OBJECTS AND DEBRIS. THE CONTRACTOR SHALL ALSO PROVIDE A PULLING LINE IN EACH OF THE NEW CONDUITS. ALL MANHOLE COVERS SHOULD BE INSCRIBED WITH THE CLEVELAND PUBLIC POWER LOGO "CPP".

THE CONTRACTOR SHALL PROVIDE CLEVELAND PUBLIC POWER WITH AS-BUILT PLANS OF THE NEWLY INSTALLED CONDUIT SYSTEM, SHOWING BOTH VERTICAL AND HORIZONTAL LOCATIONS. THESE LOCATIONS SHALL BE AT 50' INTERVALS. ALL ELEVATIONS ARE TO BE BASED ON HORIZONTAL AND VERTICAL STATE PLANE COORDINATES. PAYMENT INCLUDED IN APPROPRIATE CONDUIT PAY ITEM. IN ADDITION, THE CONTRACTOR SHALL PROVIDE AS-BUILTS OF THE MANHOLES, INCLUDING AS-BUILTS PHOTOGRAPHS OF ALL INTERIOR SURFACES (WALLS, FLOOR, CEILING).

BACKFILL MATERIAL AND BACKFILLING PROCEDURES

FOR ALL BACKFILL UNDER ROADWAY PAVEMENT, REFER TO FLOWABLE FILL SPECIFICATIONS IN THIS SHEET. FOR ALL OTHER LOCATIONS, THE BACKFILL MATERIAL USED SHALL BE CRUSHED LIMESTONE OR GRAVEL AS PER ODOT ITEM 304-AGGREGATE BASE. CRUSHED AIR-COOLED SLAG MEETING #304 GRADATION MAY BE USED WITH PRIOR WRITTEN APPROVAL OF THE ENGINEER. THE USE OF SAND OR #57 AGGREGATE AS A PREMIUM BACKFILL IS PROHIBITED. SAND MAY ONLY BE USED AS INDICATED ON THE PLAN DETAILS FOR ITEMS SUCH AS CONDUIT COVER. THE SAND MATERIAL SHALL BE NATURAL RIVER OR BANK SAND; FREE OF SILT, CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATTER. THE BACKFILL SHALL BE INSTALLED IN 4 INCH (4") LIFTS AND COMPACTED USING MECHANICAL MEANS ONLY. COMPACT TO WITHIN 12" OF SUBGRADE

AND EACH LAYER OF BACKFILL TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR TEST (ASTM D698). THE USE OF WATER FOR COMPACTION IS PROHIBITED, E.G. FLOODING OR PUDDLING. SAND USED AS EMBANKMENT CONSTRUCTION AND AS BACKFILL AROUND STRUCTURES SHALL BE ODOT ITEM 203- EMBANKMENT OR MEETING THE REQUIREMENTS OF 703 - SPECIAL BACKFILL MATERIAL OF THE SECTION.

EMPLOY A PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE CONDUIT ENCASEMENT.

DO NOT BACKFILL OVER WET, FROZEN OR UNSTABLE SUBGRADE SURFACES.

FLOWABLE FILL SPECIFICATION FOR UTILITY TRENCHES

PART I CERTIFICATE OF COMPLIANCE

MATERIAL MUST COME FROM A PLANT WITH A CURRENT CERTIFICATE OF COMPLIANCE DEMONSTRATING THE ABILITY OF THE MIX DESIGN TO MEET THE SPECIFIED REQUIREMENTS. CERTIFICATES IN EXCESS OF ONE YEAR WILL NOT BE ACCEPTED. CERTIFICATES MUST CONTAIN THE NAME OF SUPPLIER, DATE, CONTRACT NUMBER AND MIX DESIGN DATA ON EACH DELIVERY TICKET.

PART II MATERIALS

ALL MATERIALS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS STATED HERIN.

1. CEMENT SHALL BE ASTM C-150 TYPE I.
2. THE USE OF FLY ASH IS STRICTLY PROHIBITED.
3. FINE AGGREGATE SHALL CONFORM TO ODOT SPECIFICATION 703.03. FINE AGGREGATE FOR MORTAR OR GROUT. (ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS MOST CURRENT EDITION). THE USE OF SPENT FOUNDRY SAND OR CORE SAND IS STRICTLY PROHIBITED.

PART III PERFORMANCE ENHANCING ADMIXTURE

AN AIR-ENHANCING ADMIXTURE SHALL BE INCORPORATED IN THE MIX THAT WILL HAVE THE EFFECT OF LOWERING THE WATER/CEMENT RATIO TO BETWEEN 95 AND 105 LBS/CUBIC FOOT. THE AIR ENTRAINED CONTENT FOR THE MIX SHALL BE 30% TO ELIMINATE/MINIMIZE THE EXCESSIVE WATER AND SEGREGATION. COMPRESSIVE STRENGTHS SHALL HAVE A RANGE OF 50 PSI TO 80 PSI AT 28 DAYS WILL BE REQUIRED IF ADDITIONAL EXCAVATION BY MACHINE OR HAND IS REQUIRED.

SPECIFICATIONS

ALL WORK IN THIS CONTRACT SHALL CONFORM TO THE LATEST STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIALS SPECIFICATIONS, NATIONAL ELECTRIC SAFETY CODE FOR INSTALLATION BEFORE METER, NATIONAL ELECTRIC CODE FOR INSTALLATION AFTER METER AND OSHA REQUIREMENTS, EXCEPT WHERE LOCAL REGULATIONS ARE MORE STRINGENT, IN WHICH CASE LOCAL REGULATIONS SHALL GOVERN.

SCOPE OF WORK

- A. THE CONTRACTOR SHALL RELOCATE OR REMOVE ALL CLEVELAND PUBLIC POWER (CPP) FACILITIES AS INDICATED ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PROPERLY COMPLETED, INCLUDING INCIDENTALS, AS SHOWN ON THE DRAWINGS AND HEREINAFTER SPECIFIED.
- B. THE MAJOR ITEMS OF WORK TO BE FURNISHED AND INSTALLED BY THE CONTACTOR SHALL BE AS FOLLOWS.

WORK BY CONTRACTOR (E. 22ND ST.)

THE CONTRACTOR SHALL PROVIDE TEMPORARY PRIMARY ELECTRIC FACILITIES TO RE-ROUTE POWER OFF THE 22ND STREET BRIDGE DURING THE DEMOLITION AND REPLACEMENT OF THE BRIDGE. FOLLOWING CONSTRUCTION OF THE NEW BRIDGE, PERMANENT UNDERGROUND FACILITIES WILL BE PLACED ON THE BRIDGE, THE TEMPORARY FACILITIES WILL BE REMOVED AND PERMANENT CONNECTIONS MADE. THIS WORK INCLUDES:

- FURNISHING AND INSTALLING CONCRETE ENCASED PVC AND FRE DUCT BANKS OF VARIOUS ARRANGEMENTS.
- INSTALLING TEMPORARY WOODEN POWER POLES AND OVERHEAD ELECTRICAL CABLE SPANS OVER INTERSTATE 90.
- INSTALLING ELECTRICAL CABLES IN DUCTS AND INSTALLING CABLE ID TAGS
- INSTALLING DUCT BANK SYSTEM ACROSS BRIDGE INCLUDING BEAM SUPPORT SYSTEM
- TESTING ELECTRICAL SYSTEM
- FURNISHING AND INSTALLING ELECTRICAL VAULT/MANHOLE RACKING SYSTEMS WITHIN VAULTS OR MANHOLES.
- FURNISHING AND INSTALLING ELECTRICAL SPLICES, TRAINING AND BONDING WITHIN VAULTS OR MANHOLES.
- COORDINATING WITH CPP AND ITS CONTRACTORS
- REMOVAL OF EXISTING ELECTRICAL CABLES.

WORK BY CONTRACTOR (CARNEGIE AVE.)

THE CONTRACTOR SHALL PROVIDE TEMPORARY PRIMARY ELECTRIC FACILITIES TO RE-ROUTE POWER OFF THE CARNEGIE AVENUE BRIDGE DURING THE DEMOLITION AND REPLACEMENT OF THE BRIDGE. FOLLOWING CONSTRUCTION OF THE NEW BRIDGE, PERMANENT UNDERGROUND FACILITIES WILL BE PLACED ON THE BRIDGE, THE TEMPORARY FACILITIES WILL BE REMOVED AND PERMANENT CONNECTIONS MADE. THIS WORK INCLUDES:

- FURNISHING AND INSTALLING CONCRETE ENCASED PVC AND FRE DUCT BANKS OF VARIOUS ARRANGEMENTS.
- FURNISHING AND INSTALLING TEMPORARY WOODEN POWER POLES AND OVERHEAD ELECTRICAL CABLE SPANS OVER INTERSTATE 90.
- FURNISHING AND INSTALLING ELECTRICAL CABLES IN DUCTS AND INSTALLING CABLE ID TAGS
- FURNISHING AND INSTALLING DUCT BANK SYSTEM ACROSS BRIDGE INCLUDING BEAM SUPPORT SYSTEM
- TESTING ELECTRICAL SYSTEM
- FURNISHING AND INSTALLING ELECTRICAL VAULT/MANHOLE RACKING SYSTEMS WITHIN VAULTS OR MANHOLES.
- FURNISHING AND INSTALLING ELECTRICAL SPLICES, TRAINING AND BONDING WITHIN VAULTS OR MANHOLES.
- COORDINATING WITH CPP AND ITS CONTRACTORS
- REMOVAL OF EXISTING ELECTRICAL CABLES.

WORK BY CPP

- ENERGIZING ELECTRICAL SYSTEM
- DE-ENERGIZING OF EXISTING ELECTRICAL CABLES WITHIN DUCTS

ALONG PORTIONS OF THE CORRIDOR THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE EXISTING UNDERGROUND ELECTRICAL SERVICE UNTIL COMPLETION AND ACTIVATION OF THE PROPOSED UNDERGROUND POWER SYSTEM. THE CONTRACTOR SHALL COORDINATE THE DETAILS OF THIS WORK WITH CPP.

CABLE MARKING

FEEDER CABLE LOCATION IN CONDUIT BANK SHALL BE ASSIGNED BY CPP. EACH CABLE UPON ENTERING AND LEAVING MANHOLES SHALL BE MARKED WITH TAGS, INDICATING THE FEEDER NUMBER AND CABLE SIZE. THE LETTER SIZE SHALL BE A MINIMUM OF 1/2 IN., 1 IN. HIGH IS PREFERRED.

SUBMITTALS

IN ADDITION TO THE REQUIREMENTS OF CMS105 THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIAL FURNISHED AND REQUIRED TO PERFORM THE WORK.

DEFINITIONS

WHENEVER IN THESE SPECIFICATIONS OR IN ANY DOCUMENT OR INSTRUCTIONS ON CONSTRUCTION WHERE THESE SPECIFICATIONS GOVERN, THE FOLLOWING TERMS (OR PRONOUNS IN PLACE OF THEM) ARE USED, THE INTENT AND MEANING SHALL BE INTERPRETED AS FOLLOWS:

THE CITY OR THE CITY OF CLEVELAND, IS THE DIRECTOR OF THE CITY OF CLEVELAND DEPARTMENT OF PUBLIC UTILITIES.

STATUS OF CITY INSPECTOR

INSPECTORS AS DESIGNATED BY THE CITY OF CLEVELAND SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND MATERIALS FURNISHED. SUCH INSPECTING MAY EXTEND TO ALL OR ANY PART OF THE WORK, AND TO THE PREPARATION OR MANUFACTURE OF THE MATERIALS TO BE USED IN THE WORK. THE CITY INSPECTOR AS DESIGNATED BY THE DIRECTOR OF PUBLIC UTILITIES SHALL GIVE WORK INSTRUCTIONS THROUGH THE PROJECT ENGINEER.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (#-5" EB-20 PVC) ITEM 625 - CONDUIT, AS PER PLAN, 5" FRE

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AND CONNECT TO MANHOLES, AS SHOWN ON THE PLANS OR AS DIRECTED, ALL NON-REINFORCED AND REINFORCED CONCRETE-ENCASED EB-20 PVC CONDUIT AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. ALL CONDUITS SHALL BE ENCASED IN CONCRETE UNLESS NOTED OTHERWISE.

B. CONDUIT AND FITTINGS

1. POLYVINYL CHLORIDE (PVC) EB 20 CONDUIT SHALL CONFORM TO THE UL651 STANDARDS, 5 INCH INSIDE DIAMETER WITH CONCRETE ENCASEMENT AS DETAILED ON PLANS, COUPLINGS SHALL BE SOCKET TYPE, END BELLS AT MANHOLE ENTRANCE, 5 DEGREE SWEEPS, 11-1/4 DEGREE TO 90 DEGREES INCLUDING FILED DEGREES ANGLE COUPLINGS, STANDARD COUPLINGS, VARIOUS BENDS AND PLUGS OR CAPS TO CLOSE UNUSED CONDUITS, SHALL BE MADE OF THE SAME MATERIAL AS THE

1. CONDUIT. CONDUIT SPACERS SHALL BE AS SHOWN IN THE PLAN DETAILS. CONCRETE BLOCK SPACERS WILL NOT BE ACCEPTED. CONTRACTOR SHALL CONTACT CPP BEFORE CONCRETE ENCASEMENT ANY BENDS IN CONDUITS

2. FIBERGLASS REINFORCED EPOXY CONDUIT SHALL CONFORM TO UL 1684 AND UL1684A. FIBERGLASS CONDUIT SHALL HAVE A MINIMUM WALL THICKNESS OF 0.095". FIBERGLASS CONDUIT SHALL HAVE 5 INCH INSIDE DIAMETER EITHER CONCRETE ENCASED OR RACK MOUNTED AS INDICATED ON THE DRAWINGS. COUPLINGS SHALL HAVE BELL ON ONE END AND A SPIGOT ON THE OTHER END. ALL COUPLINGS SHALL BE MADE OF THE SAME MATERIAL. EXPANSION FITTINGS SHALL BE PROVIDED ON ALL EXPOSED CONDUIT RUNS.

C. CONCRETE

CONCRETE USED FOR ENCASEMENT OF CONDUITS SHALL CONFORM TO ODOT CLASS QC 1 PER C&MS 499.

D. INSTALLATION

CONDUIT SHALL BE INSTALLED BY THE BUILT-UP METHOD WITH JOINTS IN ADJACENT DUCTS STAGGERED. NECESSARY SPACERS SHALL BE PLACED NO GREATER THAN 8-FEET INTERVALS TO HOLD DUCTS IN THE DESIRED CONFIGURATION, WITH THE DUCT BANK BRACED SECURELY TO KEEP IT FROM SHIFTING AND FLOATING WHILE CONCRETE IS POURED. SEALER COMPOUND FURNISHED BY THE CONDUIT AND EACH SECTION SHALL BE TAPPED SECURELY INTO PLACE IN THE PREVIOUS COUPLING TO OBTAIN JOINTS THAT ARE TIGHT AND LEAK-PROOF.

1. CONCRETE SHALL BE WORKED INTO THE SPACES BETWEEN DUCTS SO THAT THE CONDUIT BANK IS EFFECTIVELY ENCASED IN CONCRETE WITHOUT VOIDS OR EMPTY SPACES. REINFORCING RODS SHALL BE INSTALLED AS REQUIRED AND WHERE SHOWN ON THE PLANS.

2. CONDUIT WHICH IS CUT TO FIT SHORT SECTIONS SHALL BE DEBURRED ON THE DUCT END AND THE END OF THE BELL SHALL BE REAMED IN THE INSIDE DIAMETER FOR EACH ENTRY OF THE DUCT INTO COUPLING TO PRODUCE THE SAME JOINTING CONDITIONS AS PROVIDED BY FACTORY-MADE CONDUIT SECTIONS.

3. THE END BELLS SHALL BE GROUTED IN PLACE.

E. BACKFILLING

REFER TO NOTES "BACKFILL MATERIAL AND BACKFILLING PROCEDURES" AND "FLOWABLE FILL SPECIFICATION FOR UTILITY TRENCHES".

F. MEASUREMENT

THE NUMBER OF FEET OF CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET FURNISHED AND PLACED AND ACCEPTED IN ACCORDANCE WITH THESE SPECIFICATIONS, AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE, INCLUDING FITTINGS.

G. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE AID FOR AT THE CONTRACTOR PRICE BID PER FOOT UNDER ITEM 625 AS DESCRIBED BELOW, CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR EXCAVATING AND FOR FURNISHING, HAULING, PLACING THE CONDUIT, FITTINGS, CAPPING, SPACERS, CONCRETE, REINFORCING STEEL, SHEETING AND BRACING, BACKFILL, PLASTIC CAUTION TAPE (OR RED TINTED CONCRETE), INCIDENTAL CONCRETE, REMOVAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIAL, BREAKING AND RESTORATION OF EXISTING MANHOLE WALLS AND ALL LABOR EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED.

THESE ITEMS AS MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
625	FT	CONDUIT, CONCRETE ENCASED, AS PER PLAN, (#-5" EB-20 PVC)
625	FT	CONDUIT, AS PER PLAN, 5" FRE

DESIGN AGENCY



DESIGNER
JCS

REVIEWER
WH 05/17/24

PROJECT ID
82382

SHEET TOTAL
1777 2696

ITEM 625 - LIGHTING MISC.: 24" SPACER CABLE TANGENT BRACKET

24" SPACER CABLE TANGENT BRACKETS SHALL CONFORM TO THE FOLLOWING:

- A. 24" SPACER CABLE TANGENT BRACKET SHALL BE SUPPLIED WITH MESSENGER CLAMP FOR 1/2 INCH TO 9/16 INCH MESSENGER. HENDRIX BM-24 OR APPROVED EQUAL.
- B. GROUND WIRE - THE GROUND WIRE SHALL BE #6 SOLD SOFT DRAWN BARE COPPER.
- C. CONNECTORS - COPPER COMPRESSION TYPE.
- D. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.

INSTALLATION:

- A. THE 24" BRACKET SHALL BE USED ON TANGENT POLES AND LINE ANGLES UP TO AND INCLUDING FIVE (5) DEGREES, TO ATTACH THE MESSENGER WIRE TO THE POLE. CABLE SPACERS SHALL BE USED TO SUPPORT THE SPACER CABLE FROM THE MESSENGER.
- B. THE BRACKET SHALL BE ATTACHED TO THE POLE USING 5/8" DIAMETER MACHINE BOLTS WITH 2-1/4"x2-1/4"x3/16" SQ. CURVED WASHERS, SPRING LOCK DOUBLE COIL WASHERS. ALL STEEL HARDWARE SHALL BE GALVANIZED.
- C. A #6 AWG COPPER GROUND WIRE SHALL CONNECT THE MESSENGER WIRE AND POLE GROUND.

THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE 24" SPACER CABLE TANGENT BRACKET IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: PRIMARY CONDUIT RISER

PRIMARY CONDUIT RISER SHALL CONSIST OF UNDERGROUND CONDUIT TURNED UP AND SECURED TO A POWER POLE, INCLUDED STANDOFF BRACKETS, CUTOOTS, LIGHTNING ARRESTERS AND CABLE TERMINATION EQUIPMENT. MATERIAL SHALL BE AS FOLLOWS:

- A. CONDUIT SHALL BE 5" SCHEDULE 40 PVC IN CONFORMANCE WITH CONDUIT SPECIFICATIONS AS DETAILED IN THESE SPECIFICATIONS.
- B. CONDUIT STAND-OFF BRACKET SHALL BE ALUMAFORM # CSO-6 OR -9 WITH #STS-5 STRAPS OR ENGINEER APPROVED EQUAL.
- C. CUTOOTS SHALL BE 600A SOLID BLADE CUTOOT SWITCHES.
- D. LIGHTNING ARRESTERS SHALL BE RISER POLE TYPE, 12KV RATED VOLTAGE, 10.2KV MCOV, 35.5IR-KV 0.5USEC 10KA MAXIMUM, 23.6 IRKV 500A SWITCHING SURGE MAXIMUM. ARRESTERS SHALL BE CONNECTED TO POLE GROUND USING #6 SOFT DRAWN SOLID BARE COPPER WIRE.
- E. RISER TERMINATION POTHEADS SHALL BE 15KV AND RATED FOR MINIMUM 600A.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL PRIMARY CONDUIT RISER IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: SPACER CABLE DEADEND ASSEMBLY

SPACER CABLE DEADEND ASSEMBLY SHALL INCLUDE A DOUBLE CROSSARM, PRIMARY CONDUCTOR DEADEND HARDWARE, MESSENGER HARDWARE, AND ALL ASSOCIATED INCIDENTAL HARDWARE REQUIRED TO CONSTRUCT THE DEADEND ASSEMBLY. MATERIAL SHALL INCLUDE:

- A. TWO WOOD CROSSARMS, DOUGLAS FIR, 3-3/4" x 10'-0", WITH ALUMAFORM RA6018 CROSSARM BRACES. CROSSARMS SHALL CONFORM TO ANSI 05.1, AWWA C-1-89, AWWA P-8-89, AWWA-C-9-87, REA 1728H-701, AND SHALL BE CURED AND TREATED WITH PENTACHLOROPHENAL IN ACCORDANCE WITH THE AWWA BOOK OF STANDARDS. TREATMENT SHALL HAVE A MINIMUM RETENSION OF 0.40, AND AN ASSAY ZONE OF 0.25-1.0.
- B. GROUND WIRE SHALL BE #6 SOLID SOFT DRAWN BARE COPPER
- C. CONNECTORS SHALL BE COPPER COMPRESSION TYPE
- D. PRESHAPED TYPE GRIP FOR MESSENGER SHALL BE PREFORMED LINE PRODUCTS #AWDE-4128.
- E. PRESHAPED TYPE GRIP FOR 556 MCM SPACER CABLE SHALL BE PREFORMED LINE PRODUCTS #ND-0123.
- F. 15KV POLYMER DEADEND INSULATOR SHALL BE 5/8" DIAMETER ROD DEADEND INSULATOR, 16" LEAKAGE DISTANCE, OHIO BRASS #401015-0215
- G. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE SPACER CABLE DEADEND ASSEMBLY IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: SPACER CABLE TO SPACER CABLE DOUBLE DEADEND ASSEMBLY

SPACER CABLE TO SPACER CABLE DOUBLE DEADEND ASSEMBLY SHALL INCLUDE A DOUBLE CROSSARM, PRIMARY CONDUCTOR DEADEND HARDWARE ON EACH SIDE OF THE CROSSARM ASSEMBLY, MESSENGER HARDWARE, AND ALL ASSOCIATED INCIDENTAL HARDWARE REQUIRED TO CONSTRUCT THE DEADEND ASSEMBLY. MATERIAL SHALL INCLUDE:

- A. TWO WOOD CROSSARMS, DOUGLAS FIR, 3-3/4" x 10'-0", WITH ALUMAFORM RA6018 CROSSARM BRACES. CROSSARMS SHALL CONFORM TO ANSI 05.1, AWWA C-1-89, AWWA P-8-89, AWWA-C-9-87, REA 1728H-701, AND SHALL BE CURED AND TREATED WITH PENTACHLOROPHENAL IN ACCORDANCE WITH THE AWWA BOOK OF STANDARDS. TREATMENT SHALL HAVE A MINIMUM RETENSION OF 0.40, AND AN ASSAY ZONE OF 0.25-1.0.
- B. GROUND WIRE SHALL BE #6 SOLID SOFT DRAWN BARE COPPER
- C. CONNECTORS SHALL BE COPPER COMPRESSION TYPE
- D. PRESHAPED TYPE GRIP FOR MESSENGER SHALL BE PREFORMED LINE PRODUCTS #AWDE-4128.
- E. PRESHAPED TYPE GRIP FOR 556 MCM SPACER CABLE SHALL BE PREFORMED LINE PRODUCTS #ND-0123.
- F. 15KV POLYMER DEADEND INSULATOR SHALL BE 5/8" DIAMETER ROD DEADEND INSULATOR, 16" LEAKAGE DISTANCE, OHIO BRASS #401015-0215
- G. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE SPACER CABLE TO SPACER CABLE DOUBLE DEADEND ASSEMBLY IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: DEADEND ASSEMBLY.

DEADEND ASSEMBLY SHALL INCLUDE A DOUBLE CROSSARM, PRIMARY CONDUCTOR DEADEND HARDWARE AND ALL ASSOCIATED INCIDENTAL HARDWARE REQUIRED TO CONSTRUCT THE DEADEND ASSEMBLY. MATERIAL SHALL INCLUDE:

- A. TWO WOOD CROSSARMS, DOUGLAS FIR, 3-3/4" x 10'-0", WITH ALUMAFORM RA6018 CROSSARM BRACES. CROSSARMS SHALL CONFORM TO ANSI 05.1, AWWA C-1-89, AWWA P-8-89, AWWA-C-9-87, REA 1728H-701, AND SHALL BE CURED AND TREATED WITH PENTACHLOROPHENAL IN ACCORDANCE WITH THE AWWA BOOK OF STANDARDS. TREATMENT SHALL HAVE A MINIMUM RETENSION OF 0.40, AND AN ASSAY ZONE OF 0.25-1.0.
- B. GROUND WIRE SHALL BE #6 SOLID SOFT DRAWN BARE COPPER
- C. CONNECTORS SHALL BE COPPER COMPRESSION TYPE
- D. CLAMP, STRAIN, CLEVIS AS REQUIRED, STRAIGHT LINE DEADEND SIZED FOR THE CONDUCTOR AND MATERIAL AS SHOWN ON THE DRAWINGS.
- E. 15KV GREAD DEADEND INSULATORS
- G. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE DEADEND ASSEMBLY IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: DOUBLE DEADEND ASSEMBLY.

DEADEND ASSEMBLY SHALL INCLUDE A DOUBLE CROSSARM, PRIMARY CONDUCTOR DEADEND HARDWARE ON EACH SIDE OF THE CROSSARM ASSEMBLY AND ALL ASSOCIATED INCIDENTAL HARDWARE REQUIRED TO CONSTRUCT THE DOUBLE DEADEND ASSEMBLY. MATERIAL SHALL INCLUDE:

- A. TWO WOOD CROSSARMS, DOUGLAS FIR, 3-3/4" x 10'-0", WITH ALUMAFORM RA6018 CROSSARM BRACES. CROSSARMS SHALL CONFORM TO ANSI 05.1, AWWA C-1-89, AWWA P-8-89, AWWA-C-9-87, REA 1728H-701, AND SHALL BE CURED AND TREATED WITH PENTACHLOROPHENAL IN ACCORDANCE WITH THE AWWA BOOK OF STANDARDS. TREATMENT SHALL HAVE A MINIMUM RETENSION OF 0.40, AND AN ASSAY ZONE OF 0.25-1.0.
- B. GROUND WIRE SHALL BE #6 SOLID SOFT DRAWN BARE COPPER
- C. CONNECTORS SHALL BE COPPER COMPRESSION TYPE
- D. CLAMP, STRAIN, CLEVIS AS REQUIRED, STRAIGHT LINE DEADEND SIZED FOR THE CONDUCTOR AND MATERIAL AS SHOWN ON THE DRAWINGS.
- E. 15KV GREAD DEADEND INSULATORS
- G. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE DOUBLE DEADEND ASSEMBLY IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: JOINT-USE CONDUIT RISER

JOINT CONDUIT RISER SHALL CONSIST OF UNDERGROUND CONDUIT TURNED UP AND SECURED TO A POWER POLE, INCLUDED STANDOFF BRACKETS AND WEATHERHEAD. MATERIAL SHALL BE AS FOLLOWS:

- A. CONDUIT SHALL BE 4" SCHEDULE 40 PVC IN CONFORMANCE WITH CONDUIT SPECIFICATIONS AS DETAILED IN THESE SPECIFICATIONS.
- B. CONDUIT STAND-OFF BRACKET SHALL BE ALUMAFORM # CSO-6 OR -9 WITH #STS-5 STRAPS OR ENGINEER APPROVED EQUAL.
- C. WEATHERHEAD FOR 4" PVC CONDUIT.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE JOINT-USE CONDUIT RISER IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: JOINT-USE MESSENGER ASSEMBLY

JOINT USE MESSENGER ASSEMBLIES SHALL CONSIST OF A DEADEND OR SPOOL/CLEVIS ASSEMBLY FOR SUPPORTING JOINT-USE MESSENGER WIRES. MATERIAL SHALL BE COORDINATED WITH EACH JOINT USER AND FURNISHED ACCORDING TO THEIR REQUIREMENTS.

THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE JOINT-USE MESSENGER ASSEMBLY IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING MISC.: TWO-WAY BUCK

EAACH TWO WAY BUCK SHALL INCLUDE TWO DEADEND ASSEMBLIES, WITH PIN INSULATORS AND COPPER CONDUCTOR TIES BETWEEN BRANCHES OF THE PRIMARY CIRCUIT.

- A. DEADEND ASSEMBLY, PER ITEM 625: LIGHTING MISC.: DEADEND ASSEMBLY.
- B. 15 KV PIN INSULATORS
- C. CONNECTORS SHALL BE COPPER COMPRESSION TYPE
- D. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE TWO-WAY BUCK IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 625 - GROUND ROD, AS PER PLAN

GROUND ROD AS PER PLAN SHALL CONSIST OF UTILITY POLE GROUNDING, INCLUDING GROUNDING WIRE, ATTACHMENT STAPLES, A GROUND ROD AND WOOD MOLDING FOR CONNECTION OF GROUNDED EQUIPMENT ON A WOOD UTILITY POLE.

- A. GROUNDING WIRE SHALL BE #4 AWG SOFT DRAWN COPPER. GROUND WIRE JUMPERS FROM SOFT DRAWN POLE GROUND TO FIXED APPARATES SHALL BE #4 SOT DRAWN COPPER. THE GROUND WIRE JUMPERS FROM POLE GROUND TO VIBRATING CONDUCTORS SHALL BE #4 STRANDED SOFT DRAWN.
- B. GROUND ROD SHALL BE 1/2" DIAMETER X 10' LONG COPPERWELD. ERICO, JOSLYN, CHANCE OR APPROVED EQUAL.
- C. GROUND ROD CONNECTORS SHALL BE ERICO #CC12F COMPRESSION COUPLING OR APPROVED EQUAL FOR CONNECTION BETWEEN GROUND RODS AND SHALL BE TYPE GR EXOTHERMIC WELDING FOR CONNECTION BETWEEN GROUND WIRE AND GROUND ROD.
- D. GROUND WIRE MOLDING SHALL BE TREATED WOOD, 8' LONG, 1" WIDE, JOSLYN #EE-1/2 OR APPROVED EQUAL.
- E. STAPLES SHALL BE ROLLED DIAMOND POINT COPPER COATED.

INSTALLATION:

- A. INSTALLATION SHALL BE AS SHOWN ON POLE DETAIL SHEETS.
- B. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE POLE GROUNDING IN A COMPLETE AND WORKMANLIKE MANNER.

ITEM 632 - DOWN GUY, AS PER PLAN

DOWN GUY, AS PER PLAN SHALL INCLUDE ALL HARDWARE FOR POLE ATTACHMENT, THE STRANDED GUY WIRE, SCREW ANCHOR, INSULATORS, ANCHOR EXTENSIONS AND ALL OTHER HARDWARE REQUIRED TO COMPLETE THE INSTALLATION OF THE DOWN GUY. MATERIAL IS AS FOLLOWS:

- A. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED.
- B. GUY PLATE - 6" BOLT HOLE SPACING FOR 3/4" TO 7/8" BOLT, FOR USE WITH GUY STRAIN INSULATOR, 7/8" PIN, MATERIAL DUCTILE IRON, GALVANIZED. MACLEAN #EPR-66S-7 OR APPROVED EQUAL.
- C. GUY WIRE - EHS GALVANIZED STEEL, 5/8" O.D. 1x7 STRANDED, 42400 LB STRENGTH.
- D. SCREW ANCHOR - 1-1/2" SQUARE SHAFT, 5" LENGTH WITH 1-10" AND 1-12" HELIX, GALVANIZED STEEL, 24,000 LB PULLOUT. CHANCE #PO12642-EJ, JOSLYN #J23382ACA OR APPROVED EQUAL.
- E. ANCHOR EXTENSION - 1-1/2" SQ. SHAFT X 7' LENGTH, GALVANIZED STEEL, CHANCE #12655, JOSLYN #J23378.3 OR APPROVED EQUAL.
- F. ANCHOR EXTENSION - 1-1/2" SQ. SHAFT X 3-1/2' LENGTH, GALVANIZED STEEL, CHANCE #12655, JOSLYN #J23378.3 OR APPROVED EQUAL.
- G. ADAPTER - DOUBLE EYE FOR 1-1/2" SQUARE SHAFT, GALVANIZED STEEL, CHANCE #C102-0024, JOSLYN #J23365 OR APPROVED EQUAL.

- H. GUY GUARD - PLASTIC, 1-1/2" X 2" X 8', YELLOW, FOR USE ON 5/8" GUY WIRE.
- J. PREFORMED GRIP - FOR 5/8" 1x7 EHS GALVANIZED STEEL GUY WIRE.
- K. INSULATOR - INSULATOR STRAIN, FIBERGLASS, 7/8" X 96", MIN STRENGTH 30,000 LBS, CLEVIS-CLEVIS END FITTINGS, ONE SHEAVE WHEEL, JOSLYN # 300-96, ANDERSON #APF396R OR APPROVED EQUAL.

INSTALLATION:

- A. THE ANCHOR MUST PENETRATE INTO SOIL STIFF ENOUGH FOR THE REQUIRED HOLDING STRENGTH. ADDITIONAL ANCHOR EXTENSIONS SHALL BE INSTALLED AS NECESSARY TO REACH SUFFICIENTLY STIFF SOILS.
- B. THE DIGGER OPERATOR SHALL MAINTAIN CONSTANT DOWNWARD PRESSURE ON THE ANCHOR AS IT IS INSTALLED SUCH THAT FOR EACH REVOLUTION OF THE ANCHOR DURING INSTALLATION THE ANCHOR ADVANCES AT A RATE EQUAL TO THE PITCH OF THE ANCHOR'S HELIX.
- C. UNIFORM ADVANCEMENT OF THE ANCHOR IS NECESSARY TO SCREW THE ANCOR INTO THE SOIL. TURNING THE ANCHOR WITHOUT ADVANCEMENT WILL HAVE A NEGATIVE IMPACT ON THE ANCHOR'S HOLDING CAPABILITIES.
- D. ANCHORS AND EXTENSIONS SHALL BE INSTALLED IN LINE WITH GUY WIRE. THE DIFFERENCE BETWEEN THE ANGLE OF ANCHOR INSTALLATION AND GUY ANGLE SHALL NOT EXCEED +/- 5 DEGREES.
- E. ANCHORS MUST BE INSTALLED A MINIMUM OF 6 FEET AS MEASURED ALONG THE ANCHOR EXTENSION.
- F. ANCHOR EXTENSION RODS SHOULD BE INSTALLED SO THAT THE ANCHOR EYE IS 6 TO 12 INCHES ABOVE GRADE.
- G. MULTIPLE ANCHOR INSTALLATIONS SHOULD BE SEPARATED BY A MINIMUM FO 5 FEET.
- H. THE ANCHOR SHALL BE INSTALLED APPROXIMATELY 25 FEET FROM THE POLE, OR AS INDICATED ON THE DRAWINGS. WHEN AN ANCHOR MUST BE MOVED DUE TO AN OBSTRUCTION, EVERY EFFORT SHOULD BE MADE TO MOVE IT FURTHER FROM THE POLE THAN SPECIFIED.
- I. THE GUY PLATE SHALL BE INSTALLED ON THE POLE AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. THE GUY PLATE SHALL BE BOLTED TO THE POLE USING PRE-DRILLED HOLES. WHEN NEW HOLES MUST BE DRILLED INT HE POLE, THE NEW HOLES SHALL BE TREATED TO PREVENT DECAY OF THE WOOD POLE.
- J. THE FIBERGLASS GUY INSULATOR SHALL ATTACH TO THE GUY PLATE WITH A 3/4" CLEVIS PIN WHICH IS SECURED WITH A COTTER PIN.
- K. ADDITIONAL FIBERGLASS GUY INSULATORS MAY BE REQUIRED FOR ADEQUATE CLEARANCE. WHEN CONNECTING THE INSULATORS BACK TO BACK USE A 90 DEGREE FIGURE 8 LINK.
- L. GUY WIRES MUST BE INSTALLED BEFORE LINE CONDUCTORS ARE INSTALLED. GUY WIRES SHALL BE PULLED TAUT BY MEANS OF A HOIST UNTIL THE POLE IS PULLED OVER SLIGHTLY TOWARD THE GUY.
- M. PREFORMED GUY GRIPS SHALL BE USED TO TERMINATE THE GUY STRAND TO THE FIBERGLASS GUY INSULATOR AND ANCHOR ADAPTER. THE ENDS OF THE GRIPS ARE WRAPPED AROUND THE GUY STRAND AND SNAPPED INTO POSITION COMPLETING THE INSTALLATION.
- N. THE GUY GUARD SHALL BE INSTALLED OVER THE GROUND WIRE FROM A POINT NEAR THE GROUND.
- O. THIS ITEM SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE POLE GROUNDING IN A COMPLETE AND WORKMANLIKE MANNER.

CLEVELAND PUBLIC POWER
GENERAL NOTES - 3

DESIGN AGENCY
AFC ADVANCED ENGINEERING CONSULTANTS
DESIGNER
JCS
REVIEWER
WH 05/17/24
PROJECT ID
82382
SHEET
1779
TOTAL
2696

9 ITEM SPECIAL - PRECAST ELECTRIC MANHOLE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING COMPLETE IN PLACE PRECAST REINFORCED CONCRETE MANHOLE (VAULT) STRUCTURES IN ACCORDANCE WITH CLEVELAND PUBLIC POWER (CPP) REQUIREMENTS AND DESIGNED TO MEET OR EXCEED THE LATEST ASTM STANDARDS FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES (ASTM C858-10E1) AND MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST UTILITY STRUCTURES (ASTM 857-14) HS25 LOADING. THE FOLLOWING CPP DEVELOPED PLAN DETAILS HAVE BEEN INCLUDED IN THE PLAN SET FOR THIS WORK:

- SAMPLE INDIVIDUAL MANHOLE DETAILS INCLUDING WINDOW OPENING DETAILS AND LIST OF MANHOLE REQUIREMENTS
- TYPICAL INSTALLATION DETAILS
- SAMPLE PRECAST NECK RING SCHEDULE
- GENERAL UNDERGROUND CONSTRUCTION NOTES
- BACKFILL MATERIAL AND BACKFILLING PROCEDURES

IT IS NOTED THAT NUMEROUS UNDERGROUND UTILITIES ARE PRESENT ALONG THE CORRIDOR THAT COULD NECESSITATE CHANGES TO MANHOLE DEPTHS AND WINDOW DIMENSIONS. THE CONTRACTOR SHALL PERFORM UTILITY TEST HOLES AT ALL VAULT LOCATIONS PRIOR TO DEVELOPING SHOP DRAWINGS FOR ELECTRIC MANHOLES. IN ADDITION, THE CONTRACTOR WILL BE SUPPLYING AND INSTALLING ELECTRICAL RACK AND BOND SYSTEMS WITHIN THE MANHOLES. CABLE RACKING ASSEMBLIES SHALL CONSIST OF STEEL, HOT-DIP GALVANIZED STANCHIONS AND ARMS, AND PORCELAIN INSULATORS MANUFACTURED BY HUBBELL POWER SYSTEMS, INC OR APPROVED EQUIVALENT.

1. STANCHIONS: NOB-LOC; 1-3/4 INCH NOMINAL SIZE; DUJB SERIES FOR CABLE-ARM ATTACHMENT.
2. ARMS: 1.97 INCHES WIDE, LENGTHS RANGING FROM 3-7/8 INCHES WITH 400 LB MINIMUM CAPACITY TO 14-7/8 INCHES WITH 200 LB MINIMUM CAPACITY. ARMS SHALL BE ARRANGED FOR SECURE MOUNTING IN HORIZONTAL POSITION AT ANY VERTICAL LOCATION ON STANCHIONS.
3. INSULATORS: HIGH-GLAZE, DRY-PROCESS PORCELAIN ARRANGED FOR MOUNTING ON CABLE ARMS. THE CONTRACTOR SHALL COORDINATE MANHOLE WORK WITH CPP TO ENSURE COMPATIBILITY AND TIMELY COMPLETION OF RELATED WORK ELEMENTS.

SEALING DUCT ENDS IN MANHOLES: USE SEALING COMPOUND IN DUCT ENDS CONTAINING CABLES AND PLUGS IN SPARE DUCTS TO WITHSTAND AT LEAST 15 PSIG HYDROSTATIC PRESSURE. DUCT SEALING COMPOUND SHALL BE NON-HARDENING, SAFE FOR CONTACT WITH HUMAN SKIN, NOT DELETERIOUS TO CABLE INSULATION AND WORKABLE AT TEMPERATURES AS LOW AS 35 DEG F. CAPABLE OF WITHSTANDING TEMPERATURE OF 300 DEG F WITHOUT SLUMP, AND ADHERING TO CLEAN SURFACES OF PLASTIC DUCTS, METALLIC CONDUITS, CONDUIT COATINGS, CONCRETE, MASONRY, LEAD, CABLE SHEATHS, CABLE JACKETS, INSULATION MATERIALS AND COMMON METALS.

THE MANHOLES TO BE PAID WILL BE THE ACTUAL NUMBER COMPLETED AND ACCEPTED, INCLUDING CONCRETE LEVELING PAD, GROUND ROD (5/8 INCH X LENGTH, PER CPP DETAILS), CLAMP, GROUND WIRE, BONDING, RACK SYSTEM, NECK RINGS, CAP RINGS, PULLING IRONS, AND CASTINGS.

10 THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IF THE VAULTS SPECIFIED IN THE PLANS ARE TOO LARGE FOR SITE CONDITIONS. DO NOT ORDER MATERIALS UNLESS DIRECTED BY THE ENGINEER. USING A DIFFERENT SIZE VAULT THAN SPECIFIED IN THE PLANS REQUIRES CPP APPROVAL.

ITEM SPECIAL - PRECAST ELECTRIC MANHOLE
 (6' X 8' X 7' HR) 1 EACH

10 ITEM 202 - REMOVAL, MISC.: CONCRETE ENCASED ELECTRIC DUCT BANK

THIS ITEM SHALL BE IN ACCORDANCE WITH ITEM 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS AND INCLUDE REMOVAL OF UNDERGROUND CONCRETE ENCASED ELECTRIC DUCT BANK AS INDICATED ON THE PLANS. BACKFILL CAVITY CREATED BY ITEM REMOVAL ACCORDING TO 202.02. REMOVE CABLE, IF ANY, ACCORDING TO ITEM 625.

ITEM 202 - REMOVAL, MISC.: ELECTRIC VAULT

THIS ITEM SHALL BE IN ACCORDANCE WITH ITEM 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS AND INCLUDE REMOVAL OF UNDERGROUND ELECTRIC VAULTS AS INDICATED ON THE PLANS. BACKFILL CAVITY CREATED BY ITEM REMOVAL ACCORDING TO 202.02. REMOVE CABLE, IF ANY, ACCORDING TO ITEM 625.

ITEM 625 - LIGHTING MISC.: DISTRIBUTION SYSTEM REMOVED

9 DISTRIBUTION SYSTEM REMOVED CONSISTS OF ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO PERFORM DISTRIBUTION SYSTEM REMOVALS, AS DIRECTED BY THE PLAN SHEETS. **11** THIS ITEM INCLUDES REMOVAL OF THE TEMPORARY AERIAL AND UNDERGROUND RELOCATION INSTALLATIONS FOR E. 22ND ST., CEDAR AVE., AND CARNEGIE AVE. BRIDGES AFTER SERVICE IS RETURNED TO THE NEW BRIDGE DUCTS.

THESE INCLUDE, BUT ARE NOT LIMITED TO:

- A. WIRE AND CABLE
- B. WOOD UTILITY POLES
(TEMPORARY INSTALLATION ONLY) **11**
- C. INSULATORS
- D. CROSSARMS AND HARDWARE
- E. GUYS, ANCHORS AND RODS
- F. TRANSFORMERS AND ASSOCIATED HARDWARE
- G. MISCELLANEOUS HARDWARE AND EQUIPMENT
- H. UNDERGROUND DUCTS AND DUCTBANKS
(TEMPORARY INSTALLATION ONLY) **11**
- I. VAULTS, MANHOLES AND PULL BOXES
(TEMPORARY INSTALLATION ONLY) **11**

CABLE SHALL BE COLLECTED ON COLLAPSIBLE REELS AND SECURED INTO COILS AND STACKED ON PALLETS FOR RETURN TO CPP. CABLE SHALL BE SEPARATED BY TYPE AND SIZE. WHEN STRUCTURES ARE REMOVED, REMOVAL METHODS SHALL BE USED WHICH ENSURE THAT OTHER EXISTING INSTALLATIONS SUCH AS ADJACENT PAVEMENTS, ETC, WHICH ARE TO REMAIN IN PLACE WILL NOT BE DAMAGED. HOLES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH ODOT SPECIFICATIONS. DAMAGE THAT OCCURS TO A PAVED AREA DUE TO REMOVAL SHALL BE RESTORED WITH SIMILAR MATERIALS.

11 REMOVAL OF EXISTING UNDERGROUND DUCTS AND DUCT BANKS, WOOD UTILITY POLES, AND MANHOLES AND VAULTS (EXCEPT FOR TEMPORARY INSTALLATION) IS QUANTIFIED FOR REMOVAL ON SHEET 489A UNDER THE FOLLOWING ITEMS:

- ITEM 202 - REMOVAL MISC.: ELECTRIC VAULT
- ITEM 202 - REMOVAL MISC.: CONCRETE ENCASED ELECTRIC DUCT BANK
- ITEM 202 - REMOVAL MISC.: UTILITY POLE

11 THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPEMENT, TOOLS, SUPERVISION AND SAFETY REQUIREMENTS REQUIRED FOR A COMPLETE REMOVAL OPERATION WITH SITE LEFT IN A SAFE AND SECURED CONDITION. PAYMENT FOR THIS WORK SHALL BE MADE AT THE BID PRICE OF LUMP SUM.

DESIGN AGENCY



DESIGNER

JCS

REVIEWER

WH 05/17/24

PROJECT ID

82382

SHEET TOTAL

1779A 2696

ESTIMATED QUANTITIES

CALCULATED BY: NJH/JML DATE: May-2024
 CHECKED BY: DGJ DATE: May-2024

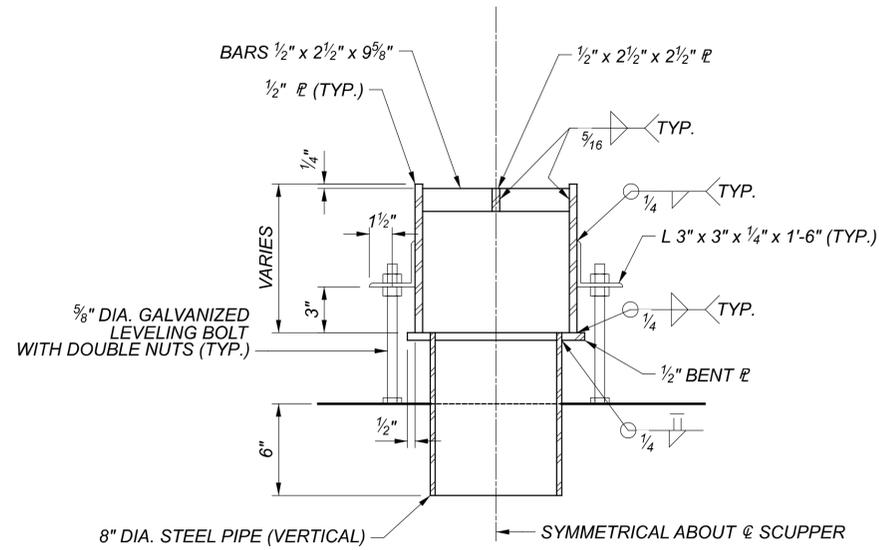
PARTICIPATION	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
03/IMS/08	203	20001	756	CY	EMBANKMENT, AS PER PLAN	756				12 / 167
03/IMS/08	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	14 / 167
03/IMS/08	503	21100	5173	CY	UNCLASSIFIED EXCAVATION	225	4948			
03/IMS/08	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
03/IMS/08	507	00500	6435	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	6435				
03/IMS/08	507	00550	6735	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	6735				
03/IMS/08	507	00600	13760	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		13760			
03/IMS/08	507	00650	14760	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		14760			
03/IMS/08	507	00700	16690	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		16690			
03/IMS/08	507	00750	17760	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		17760			
03/IMS/08	507	92201	446	FT	PREBORED HOLES, AS PER PLAN	446				13 / 167
03/IMS/08	509	10000	2309681	LB	EPOXY COATED STEEL REINFORCEMENT	68448	930999	1310234		
03/IMS/08	509	30020	63147	FT	NO. 4 GFRP DEFORMED BARS			63147		
03/IMS/08	511	34446	3826	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			3826		
03/IMS/08	511	34450	626	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			626		
03/IMS/08	511	41012	342	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		342			
03/IMS/08	511	44112	437	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	437				
03/IMS/08	511	45602	1908	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA (4 KSI)		1908			
03/IMS/08	511	45602	187	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA (6 KSI)		187			
03/IMS/08	511	46512	1460	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	179	1281			
03/IMS/08	512	10001	622	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	51	571			15 / 167
03/IMS/08	512	10100	8194	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	432	3426	4336		
03/IMS/08	512	33000	56	SY	TYPE 2 WATERPROOFING	56				
03/IMS/08	513	10301	7945900	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN			7945900		
03/IMS/08	513	20000	32600	EACH	WELDED STUD SHEAR CONNECTORS			32600		
03/IMS/08	514	00060	391000	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			391000		
03/IMS/08	514	00066	391000	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			391000		
03/IMS/08	516	10010	149	FT	ARMORLESS PREFORMED JOINT SEAL				149	
03/IMS/08	516	13900	168	SF	2" PREFORMED EXPANSION JOINT FILLER	146		22		
03/IMS/08	SPECIAL	51612400	209	FT	MODULAR EXPANSION JOINT			209		14 / 167
03/IMS/08	518	12301	16	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			16		120 / 167
03/IMS/08	518	21200	81	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	81				
03/IMS/08	518	40000	214	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	214				
03/IMS/08	518	51101	277	FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN	170	107			120 / 167
03/IMS/08	518	51201	183	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (10" DIA. PIPE)	56	127			120 / 167 AND 123 / 167
03/IMS/08	523	20001	10	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	8			13 / 167
03/IMS/08	523	20501	10	EACH	RESTRICKE, AS PER PLAN	2	8			13 / 167
03/IMS/08	524	94946	471	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK		471			
03/IMS/08	524	94989	440	FT	DRILLED SHAFTS, 90" DIAMETER, ABOVE BEDROCK, AS PER PLAN		440			12 / 167
03/IMS/08	524	95100	1	EACH	DRILLED SHAFTS, MISC.: 90" DIAMETER DEMONSTRATION DRILLED SHAFT		1			12 / 167
03/IMS/08	524	95100	6	EACH	DRILLED SHAFTS, MISC.: CSL TESTING, 90" DIA. SHAFT		6			12 / 167 AND 13 / 167
03/IMS/08	524	95100	12	EACH	DRILLED SHAFTS, MISC.: HIGH-STRAIN DYNAMIC TESTING OF DRILLED SHAFTS		12			12 / 167 AND 13 / 167
03/IMS/08	524	95100	1	EACH	DRILLED SHAFTS, MISC.: BI-DIRECTIONAL TESTING OF DRILLED SHAFTS		1			13 / 167
03/IMS/08	526	30010	483	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				483	
03/IMS/08	526	90030	149	FT	TYPE C INSTALLATION				149	
03/IMS/08	SPECIAL	53000200	LS		SPECIAL - STRUCTURES MISC.: VIBRATION MONITORING				LS	13 / 167
03/IMS/08	SPECIAL	53000200	LS		SPECIAL - STRUCTURES MISC.: PRECONSTRUCTION CONDITION SURVEY				LS	13 / 167
03/IMS/08	601	21001	18	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	18				35 / 167
03/IMS/08	855	00010	12136	LB	POST-TENSIONING STRAND TENDON		12136			
03/IMS/08	869	00101	100	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN			100		68 / 167 TO 70 / 167
03/IMS/08	894	10000	12	EACH	THERMAL INTEGRITY PROFILING (TIP) TEST		12			12 / 167 AND 13 / 167

CUY-90-16.28 (CCG3A)
 MODEL: Sheet PAPER/DATE: 3/4/22 (in.) DATE: 11/10/2025 TIME: 2:29:37 PM USER: JWROTE
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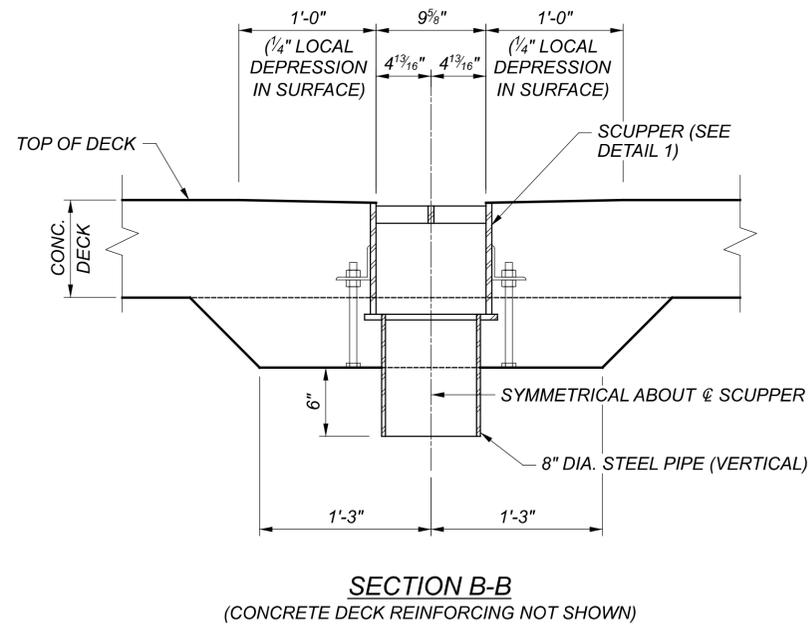
ESTIMATED QUANTITIES
 CUY-77-1587 (BRIDGE 9)
 I.R. 77 SB OVER I.R. 90 AND CR-721 (E. 14TH ST.)

SFN 1806910
 DESIGN AGENCY

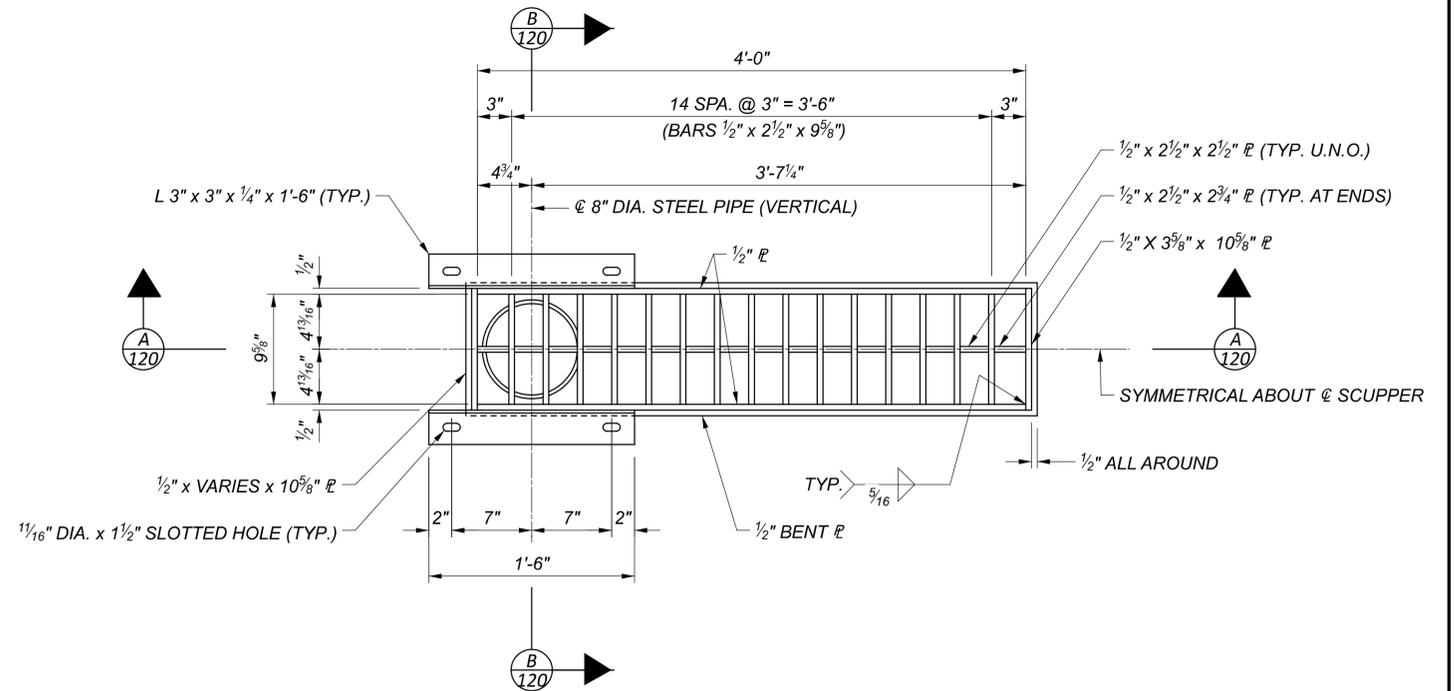
 DESIGNER CHECKER
 BTA JS
 REVIEWER
 DWW 01/11/24
 PROJECT ID
 82382
 SUBSET TOTAL
 16 167
 SHEET TOTAL
 1884 2696



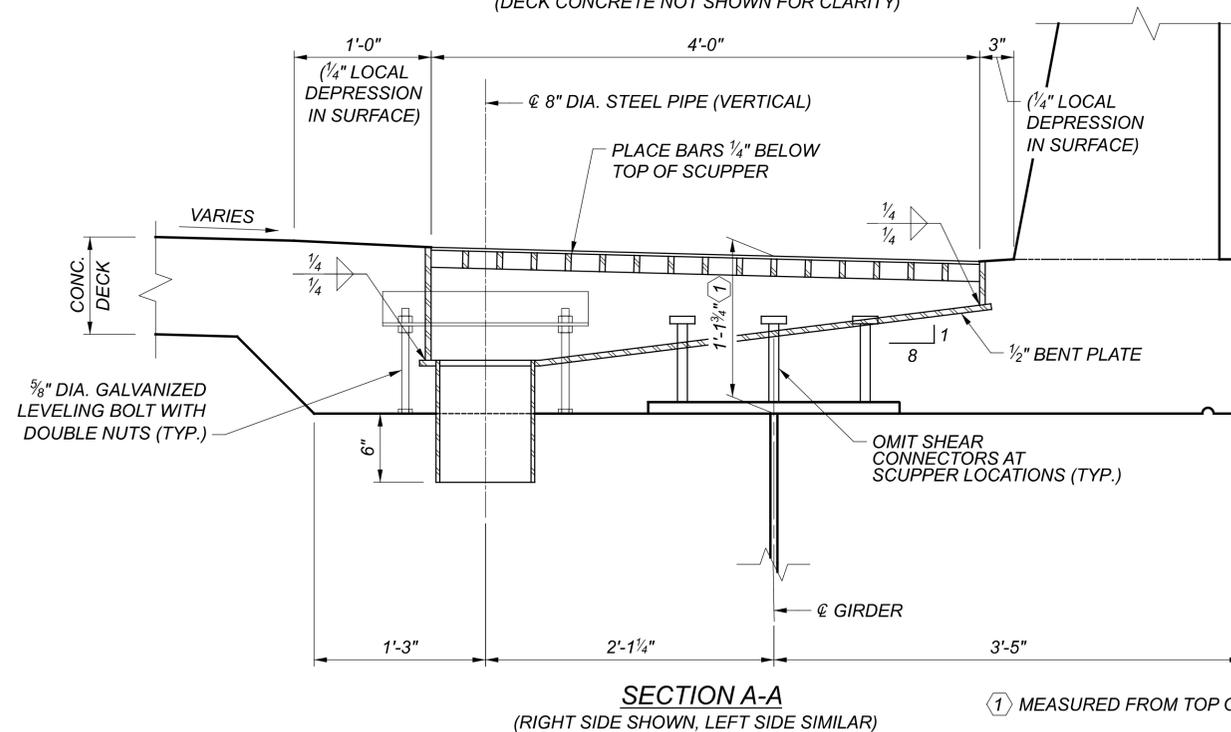
DETAIL 1



SECTION B-B
(CONCRETE DECK REINFORCING NOT SHOWN)



SCUPPER PLAN
(DECK CONCRETE NOT SHOWN FOR CLARITY)



SECTION A-A
(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)

① MEASURED FROM TOP OF WEB TO TOP OF BAR.

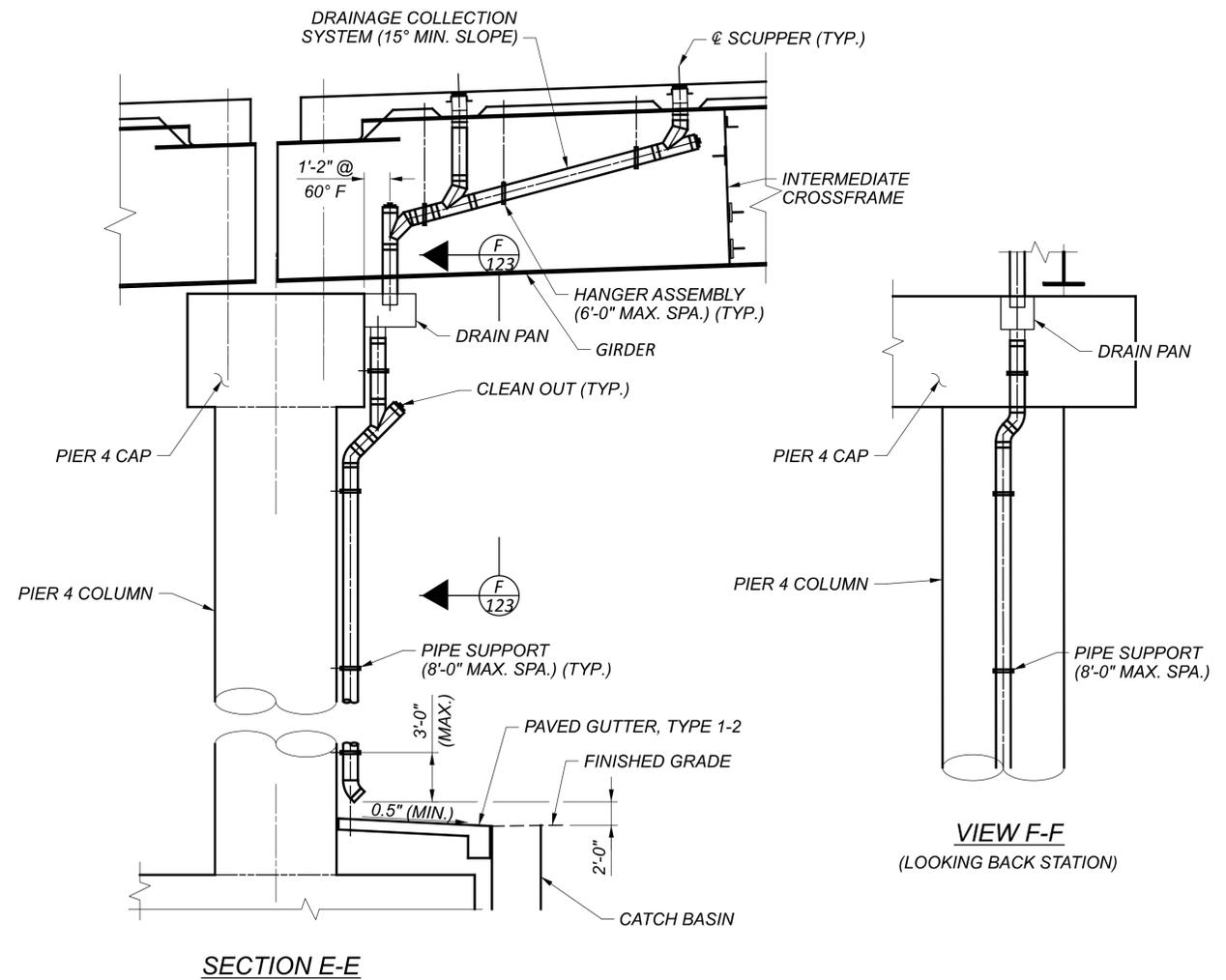
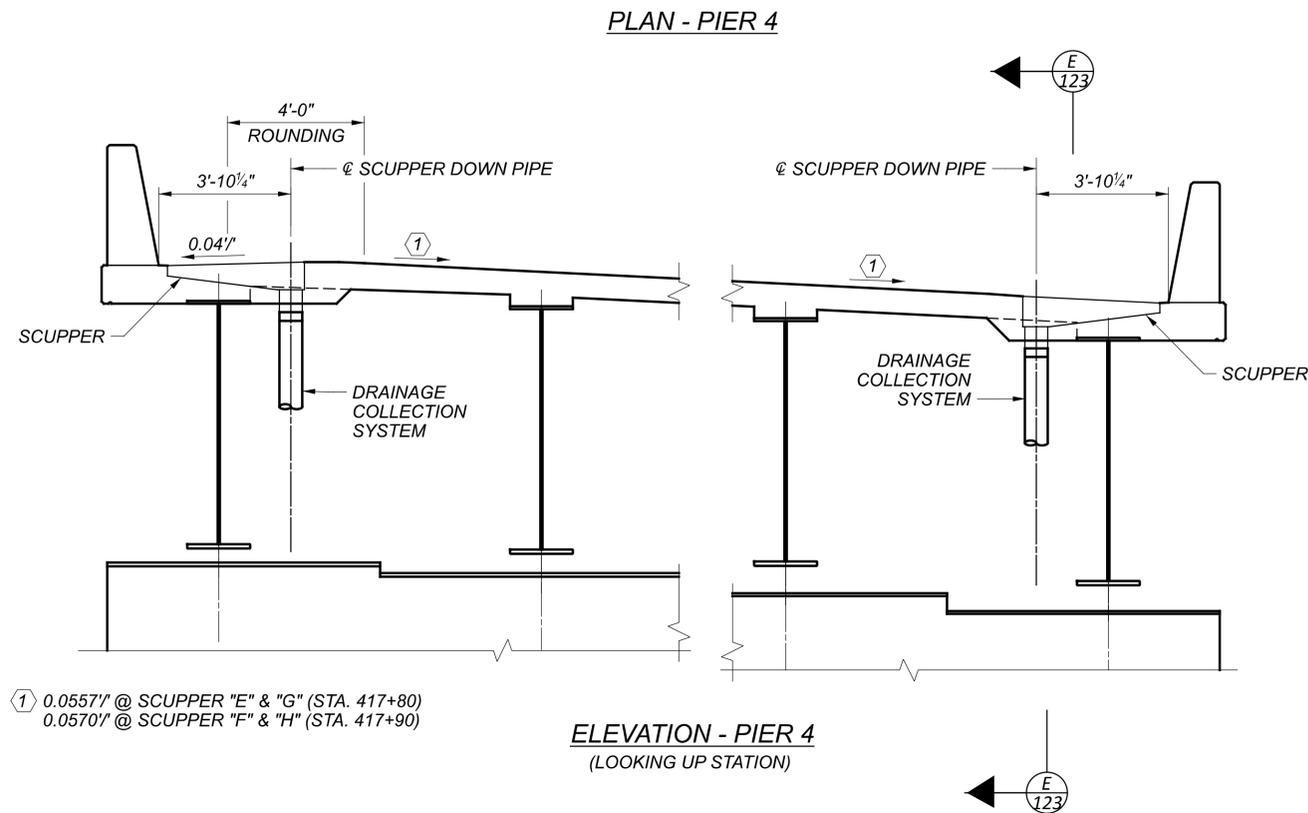
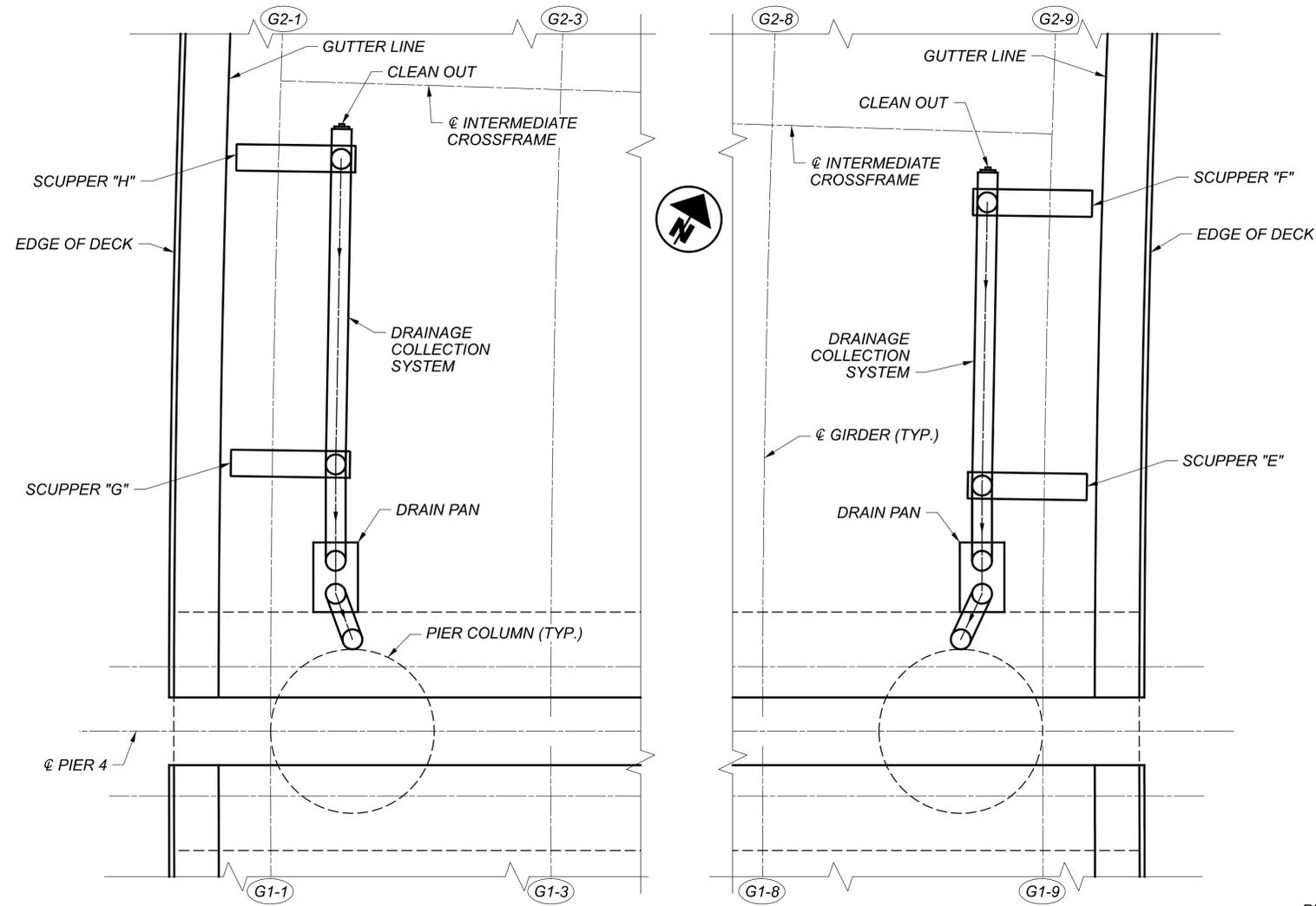
NOTES:

- FOR SCUPPER LOCATIONS, SEE SHEET [121 / 167].
- ALL STRUCTURAL STEEL FOR SCUPPERS SHALL BE ASTM A709, GRADE 36, EXCEPT AS NOTED.
- SCUPPER PIPE SHALL BE ASTM A53, SCHEDULE 40.
- SCUPPERS SHALL BE GALVANIZED IN ACCORANCE WITH CMS 711.02.
- FOR DOWNSPOUT PIPE DETAILS, SEE SHEETS [122 / 167] THRU [126 / 167].
- SCUPPERS SHALL CONFORM TO CMS 518, EXCEPT AS NOTED.
- FOR DETAILS OF ADDITIONAL DECK REINFORCING AT SCUPPERS, SEE SHEET [105 / 167].

11

7

8. 8" DRAINAGE PIPE, HANGER ASSEMBLIES, AND ALL INCIDENTALS TO FURNISH AND INSTALL THE SUPERSTRUCTURE DRAINAGE COLLECTION SYSTEM SHALL BE INCLUDED WITH PAYMENT FOR ITEM 518 - 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN. 10" DRAINAGE PIPE, DRAIN PANS, SUPPORT BRACKETS, AND ALL INCIDENTALS TO FURNISH AND INSTALL THE SUBSTRUCTURE DRAINAGE COLLECTION SYSTEM SHALL BE INCLUDED WITH PAYMENT FOR ITEM 518 - PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (10" DIA. PIPE).



NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 120 / 167
2. FOR ADDITIONAL NOTES AND DETAILS ON PAVED GUTTER, SEE ODOT SCD DM-2.1. INCLUDE WITH PAYMENT FOR ITEM 518 - PIPE DOWNPOUT, INCLUDING SPECIALS, AS PER PLAN (10" DIA. PIPE).



SFN	1806910
DESIGN AGENCY	
DESIGNER	RBK
CHECKER	BTA
REVIEWER	DWW
DATE	01/11/24
PROJECT ID	82382
SUBSET	123
TOTAL	167
SHEET	1991
TOTAL	2696

ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 03/20/24
 CHECKED BY: DAF DATE: 04/12/24

PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
02/IMS/10	518	12200	8	EACH	SCUPPERS, INCLUDING SUPPORTS				8	
02/IMS/10	518	21200	1,035	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	1,035				
02/IMS/10	518	40000	697	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	697				
02/IMS/10	518	40011	33	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	33				85
02/IMS/10	518	43301	304	FT	6" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN	66	130	108		85 & 88
02/IMS/10	518	62100	53	FT	STRUCTURE DRAINAGE, MISC.: 4" NON-PERFORATED PVC PIPE, INCLUDING SPECIALS			53		85
02/IMS/10	518	62100	406	FT	STRUCTURE DRAINAGE, MISC.: 4" PERFORATED PVC PIPE			406		85
02/IMS/10	518	62100	390	FT	STRUCTURE DRAINAGE, MISC.: 6" NON-PERFORATED PVC DRAIN PIPE, INCLUDING SPECIALS			390		85
02/IMS/10	523	20001	4	EACH	DYNAMIC LOAD TESTING, AS PER PLAN				4	3
02/IMS/10	523	20501	4	EACH	RESTRIKE, AS PER PLAN				4	3
02/IMS/10	526	30001	394	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN				394	5
02/IMS/10	526	30010	394	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				394	
02/IMS/10	526	90010	244	FT	TYPE A INSTALLATION				244	
02/IMS/10	SPECIAL	530E00200	LS		STRUCTURES: PRECONSTRUCTION CONDITION SURVEY				LS	3
02/IMS/10	SPECIAL	530E00400	280	EACH	STRUCTURES: BOLLARD ANCHORAGE				280	86
02/IMS/10	SPECIAL	530E14000	LS		STRUCTURAL SURVEY AND MONITORING OF VIBRATION				LS	3
02/IMS/10	601	21000	1,092	SY	CONCRETE SLOPE PROTECTION				1,092	
02/IMS/10	607	39911	319	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC, AS PER PLAN				319	5
02/IMS/10	625	10615	28	EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE, AS PER PLAN				28	5
02/IMS/10	625	25920	2,144	FT	CONDUIT, MISC.: AT&T 4" CONDUIT INSTALLATION				2,144	5
02/IMS/10	625	25920	3,216	FT	CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION				3,216	5
02/IMS/10	625	98000	24	EACH	LIGHTING, MISC.: PEDESTRIAN POLE ANCHORAGE			24		5
02/IMS/10	SPECIAL	690E50600	70	EACH	BOLLARD				70	1826
02/IMS/10	SPECIAL	690E98000	29	EACH	ROLLER SUPPORTS (GAS LINE)			29		5
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (AT&T DUCTS)			29		5
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CEI DUCTS)			29		5
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CPP DUCTS)			29		5
02/IMS/10	SPECIAL	690E98000	27	EACH	UTILITY SUPPORTS (WATER LINE)			27		5

ESTIMATED QUANTITIES (2 OF 2)
 CUY-90-1678 (BRIDGE 13)
 CR-710 (E. 22ND ST.) OVER I.R. 90

SFN	1807839
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	KAG
REVIEWER	
CDC	05/10/24
PROJECT ID	82382
SUBSET	TOTAL
8	99
SHEET	TOTAL
2189	2696

12" GAS LINE INSTALLATION

ENBRIDGE GAS OHIO WILL FURNISH AND INSTALL GAS PIPELINE ON BRIDGE AND WILL INSTALL LINK SEALS, SPACERS AND BOOT SEAL WHEN INSTALLING THE PIPELINE.

ITEM 625 - CONDUIT, MISC.: AT&T 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES PAYMENT FOR INSTALLATION OF THE AT&T CONDUIT ON THE STRUCTURE, AS SHOWN IN THE PLANS. MATERIALS WILL BE SUPPLIED TO THE GENERAL CONTRACTOR FOR INSTALLATION. AT&T WILL PROVIDE CONDUIT RACKS, FIBERGLASS CONDUITS TO ENDS OF APPROACH SLAB, FITTINGS AND EXPANSION JOINTS. CONTRACTOR TO INSTALL ALL MATERIALS ON BRIDGE. AT&T WILL INSTALL CONDUITS OUTSIDE OF APPROACH SLABS TO MANHOLES. AT&T WILL COMPLETE THE CABLE WORK.

ITEM 625 - CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES INSTALLATION OF THE CONDUIT ON THE STRUCTURE. CEI WILL PROVIDE ALL MATERIALS. CEI PULLS ALL CABLES. CEI CONTRACTOR WILL COMPLETE WORK UP TO THE OUTSIDE EDGE OF THE APPROACH SLABS (ALL CONDUIT OFF THE BRIDGE). CONTRACTOR WILL INSTALL THE CONDUIT BETWEEN THE OUTSIDE EDGES OF APPROACH SLABS (ALL CONDUIT UNDER APPROACH SLABS, ON THE BRIDGE AND THROUGH THE ABUTMENTS).

ITEM 625 - CONDUIT, MISC.: CPP 5" CONDUIT INSTALLATION

PAYMENT FOR THE CONTRACTOR TO FURNISH AND INSTALL THE CPP CONDUIT ON THE STRUCTURE, AS SHOWN IN THE PLANS, SHALL BE PER THE CONTRACT UNIT PRICE BID FOR ITEM 625 - CONDUIT, AS PER PLAN, 5" FRE. SEE SHEET 1782.

CONTRACTOR SHALL PULL CABLE AND PERFORM INTERMEDIATE (DEAD) SPLICING WITH CPP INSPECTION. CPP WILL REQUIRE NOTIFICATION OF SCHEDULE FOR THE PULLING OF CABLE. SEE SHEETS 1777-1778 FOR ADDITIONAL CABLE INSTALLATION AND CPP INSPECTION REQUIREMENTS. PAYMENT FOR THE CONTRACTOR TO FURNISH AND INSTALL THE CPP CABLE ON THE STRUCTURE, AS SHOWN IN THE PLANS, SHALL BE PER THE CONTRACT UNIT PRICE BID FOR ITEM 625 - DISTRIBUTION CABLE, MISC.: 500KCMIL 15KV CU WITH CONCENTRIC NEUTRAL. SEE SHEET 1782.

ITEM 690 - ROLLER SUPPORTS (GAS LINE)

THIS ITEM INCLUDES FURNISHING AND INSTALLING STEEL ANGLE SUPPORT, ROLLERS AND HANGER ASSEMBLIES OF ALL GAS LINE SUPPORTS ON THE BRIDGE, AS SHOWN IN THE PLANS.

ITEM 690 - UTILITY SUPPORTS (AT&T DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL AT&T DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. AT&T WILL PROVIDE CONDUIT RACKS, FIBERGLASS CONDUITS TO ENDS OF APPROACH SLAB, FITTINGS AND EXPANSION JOINTS. CONTRACTOR TO INSTALL ALL MATERIALS ON BRIDGE.

ITEM 690 - UTILITY SUPPORTS (CEI DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL CEI DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. MATERIAL PROVIDED BY CEI FOR THIS WORK INCLUDES UTILITY HANGERS, CONDUIT RACKS, EXPANSION JOINTS AND SLEEVES. STEEL ANGLE SUPPORTS PROVIDED BY CONTRACTOR. CONTRACTOR TO INSTALL HANGERS AND CONDUIT RACKS. CONTRACTOR TO WORK WITH CEI TO GUARANTEE THAT THERE IS A PROPER ARRANGEMENT FOR THE DELIVERY OF MATERIALS.

ITEM 690 - UTILITY SUPPORTS (CPP DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL CPP DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS.

ITEM 690 - UTILITY SUPPORTS (WATER LINE)

THIS ITEM INCLUDES INSTALLATION OF ALL WATER LINE SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND ELEMENTS SHOWN IN THE PLANS FOR THE WATER LINE.

- ITEM 511 - CLASS QC1 CONCRETE, MISC.: CONCRETE FACING
- ITEM 511 - CONCRETE, MISC.: ARCHITECTURAL TREATMENT, ABUTMENT
- ITEM 511 - CONCRETE, MISC.: ARCHITECTURAL TREATMENT, PIER
- ITEM 511 - CONCRETE, MISC.: ARCHITECTURAL TREATMENT, RAILING

FORMLINER FIELD PATTERN ON SHEET 1867

ABBREVIATIONS

- BOT. = BOTTOM
- BRGS. = BEARINGS
- C.J. = CONSTRUCTION JOINT
- CLR. = CLEAR
- CONST. = CONSTRUCTION
- DIA. = DIAMETER
- E.F. = EACH FACE
- ELEV. = ELEVATION
- EX. = EXISTING
- F.A. = FORWARD ABUTMENT
- F.F. = FAR FACE
- HORIZ. = HORIZONTAL
- I.R. = INTERSTATE ROUTE
- L.T. = LEFT
- MAX. = MAXIMUM
- MIN. = MINIMUM
- N.F. = NEAR FACE
- PR. = PROPOSED
- R.A. = REAR ABUTMENT
- RT = RIGHT
- SER. = SERIES
- S.O. = SERIES OF
- SPA. = SPACED / SPACING / SPACES
- S.R. = STATE ROUTE
- TYP. = TYPICAL
- VERT. = VERTICAL
- W.P. = WORK POINT
- W.W. = WING WALL

SECTION / DETAIL / VIEW CALLOUTS



(SEE SECTION A ON SHEET 10)



(SECTION A CUT FROM SHEET 9)

SFN	
1807898	
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	MKB
REVIEWER	
KAG 12/26/23	
PROJECT ID	
82382	
SUBSET	TOTAL
9	90
SHEET	TOTAL
2289	2696

ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 03/20/24
 CHECKED BY: DAF DATE: 05/15/24

PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
02/IMS/10	518	20000	888	SY	PREFABRICATED GEOCOMPOSITE DRAIN				888	
4	02/IMS/10	518	21101	232	CY	POROUS BACKFILL, AS PER PLAN	5		232	30
4	02/IMS/10	518	21200	686	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC			686	
	02/IMS/10	518	40000	683	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	10		683	
	02/IMS/10	518	40010	147	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	10		147	
	02/IMS/10	518	43300	185	FT	6" PIPE DOWNSPOUT, INCLUDING SPECIALS		84		
	02/IMS/10	523	20001	4	EACH	DYNAMIC LOAD TESTING, AS PER PLAN			4	4
	02/IMS/10	523	20501	2	EACH	RESTRIKE, AS PER PLAN			2	4
	02/IMS/10	524	94803	238	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN			238	8
8	02/IMS/10	524	94901	5,375	FT	DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN			5,375	5
	02/IMS/10	524	95100	1	EACH	DRILLED SHAFTS, MISC.: BI DIRECTIONAL TESTING OF DRILLED SHAFTS			1	7
	02/IMS/10	524	95100	1	EACH	DRILLED SHAFTS, MISC.: CSL TESTING, 48" DIA. SHAFT			1	7
	02/IMS/10	524	95100	1	EACH	DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT			1	7
	02/IMS/10	524	95100	3	EACH	DRILLED SHAFTS, MISC.: HIGH STRAIN DYNAMIC TESTING OF DRILLED SHAFTS			3	7
4	02/IMS/10	526	30011	592	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN			592	8
	02/IMS/10	526	90010	321	FT	TYPE A INSTALLATION			321	
	02/IMS/10	SPECIAL	530E00200	LS		STRUCTURES: PRECONSTRUCTION/POST CONSTRUCTION CONDITION SURVEY			LS	4-5
	02/IMS/10	SPECIAL	530E00200	LS		STRUCTURES: VIBRATION MONITORING			LS	4
	02/IMS/10	SPECIAL	530E00600	1,349	SF	STRUCTURES: PERMANENT SHORING PRECAST CONCRETE LAGGING			1,349	6
	02/IMS/10	SPECIAL	530E00600	1,516	SF	STRUCTURES: PERMANENT SHORING TIMBER LAGGING			1,516	7-8
10	02/IMS/10	607	39910	1,180	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC			1,180	
4	02/IMS/10	613	41200	76	CY	LOW STRENGTH MORTAR BACKFILL			76	
11	02/IMS/10	625	25920	2,863	FT	CONDUIT, MISC.: AT&T 4" CONDUIT INSTALLATION			2,863	9
	02/IMS/10	625	25920	5,726	FT	CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION			5,726	9
	02/IMS/10	SPECIAL	690E98000	36	EACH	ROLLER SUPPORTS (GAS LINE)			36	9
	02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (AT&T DUCTS)			29	9
	02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CEI DUCTS)			29	9
	02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CPP DUCTS)			29	9
4	02/IMS/10	SPECIAL	690E98000	31	EACH	UTILITY SUPPORTS (WATER LINE)			31	9
	02/IMS/10	846	00110	134	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			134	
	02/IMS/10	866	00101	14	EACH	GROUND ANCHOR, AS PER PLAN, 159 KIP MAX LOAD TEST (SOLIDER PILE AND LAGGING WALL)			14	10
	02/IMS/10	866	00101	100	EACH	GROUND ANCHOR, AS PER PLAN, 159 KIP MAX LOAD TEST (TANGENT WALL)			100	10
	02/IMS/10	866	00400	6	EACH	PERFORMANCE TEST			6	
	02/IMS/10	866	00500	6	EACH	EXTENDED CREEP TEST			6	
	02/IMS/10	869	00100	30	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS			30	

CUY-90-16.28 (CCG3A)

MODEL: Sheet PAPER/DATE: 3/4/22 (in.) DATE: 11/10/2025 TIME: 11:28:28 AM USER: Joseph.Hogan
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ESTIMATED QUANTITIES (2 OF 2)
 CUY-90-1696 (BRIDGE 14)
 CR-722 (CARNEGIE AVE.) OVER I.R. 90

SFN	1807898
DESIGN AGENCY	
Michael Baker	INTERNATIONAL
DESIGNER	CHECKER
DBW	MKB
REVIEWER	KAG 12/26/23
PROJECT ID	82382
SUBSET	TOTAL
12	90
SHEET	TOTAL
2292	2696