GENERAL

UTILITIES

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

AKRON SEWER MAINTENANCE
ATTN: ROB SCARLATELLI/
SCOTT DAVENPORT
2460 AKRON PENINSULA RD.
AKRON, OH 44313
(330) 375-2666

CITY OF AKRON TRAFFIC
1420 TRIPLETT BLVD, BUILDING 2
AKRON, OH 44306
(330) 375-2851
traffic@akronohio.gov

AKRON WATER DISTRIBUTION
ATTN: TONY PUGLIA
1460 TRIPLETT BLVD.
AKRON, OH 44306
(330) 375-2420
tpuglia@akronohio.gov

AT&T OHIO
ATTN: LUCIE HINSHAW
50 WEST BOWERY STREET, 6TH FLOOR
AKRON, OH 44308
(330) 384-3048
lb2785@att.com

CHARTER COMMUNICATION
(SPECTRUM/TIME WARNER)
ATTN: JIM LONG
1200 BROWNSTONE AVE.
AKRON, OH 44310
(330) 622-4106

CROWN CASTLE (LIGHTOWER)
ATTN: ED DALY/BILL DARDEN
15565 NEO PARKWAY
GARFIELD HEIGHTS, OH 44128
(585) 397-5988
Ed.Daly@crowncastle.com
Bill.Darden@crowncastle.com

EVERFLOW EASTERN PARTNERS LP
ATTN: GEORGE STRAWN II
29093 S.R. 62
SALEM, OH 44460
(330) 537-3863
gstrawn59@gmail.com

DOMINION EAST OHIO
ATTN: 2nd Floor Relocation Design
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OH 44333
(330) 664-2409
Relocation@dominionenergy.com

EVERSTREAM
ATTN: ROB WOOD
1228 EUCLID AVE., SUITE 250
CLEVELAND, OH 44115
(216) 923-2209 (OFFICE)
(440) 728-0542 (CELL)
rwood@everstream.net

FIRST ENERGY (OHIO EDISON)
ATTN: AMANDA TURNER
1910 WEST MARKET STREET, BLDG. 1
AKRON, OH 44313
(330) 436-4093
turnera@firstenergycorp.com

ODOT ITS
(NON-OUPS MEMBER)
(614) 387-4113
FAX: (614) 887-4134
cen.its.lab@dot.ohio.gov
NOTE: CONTRACTOR SHALL CONTACT IF MARKING OF ITS INFRASTRUCTURE IS NEEDED. CONTRACTOR SHALL THEN MARK THROUGHOUT PROJECT DURATION IN ACCORDANCE WITH SS 809.

ODOT DISTRICT 4
ATTN: DAVID KONEVAL
2088 SOUTH ARLINGTON ROAD
AKRON, OH 44306
(330) 786-3146
dave.koneval@dot.ohio.gov

OHIO EDISON (TRANSMISSION)
ATTN: MARY WALTON
76 SOUTH MAIN STREET
AKRON, OH 44308-1890
(330) 384-4928
(321) 626-1079 (CELL)
mwalton@firstenergycorp.com

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY [SUE]. IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT MATTHEW STEELE OF ODOT DISTRICT 4, PROJECT UTILITY COORDINATOR 330-786-4832, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

WORK AROUND DOMINION ENERGY FACILITIES

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION ENERGY'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUSER (330-478-3757).

ROUNDING

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

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 1283 .

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED:

ITEM 623 - MONUMENT ASSEMBLY	12 EACH
ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE	2 EACH

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

WORK LIMITS

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEETS 27 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: GPS
MONUMENT TYPE: TYPE A & TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2012B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99989474882
ORIGIN OF COORDINATE
SYSTEM: EASTING (X): 0, NORTHING (Y): 0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 100 FT OR LESS FOR STRUCTURES AND 100-88 FT FOR LIGHT TOWERS, HEIGHT OF TEMPORARY EQUIPMENT USED TO INSTALL LIGHT TOWERS IS NOT TO EXCEED THE ERECTED PLAN SPECIFIED HEIGHT OF THE LIGHT TOWER. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NUMBERS VARYING FROM 2021-AGL-1137 TO 2021-AGL-5443-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
OBSTRUCTION EVALUATION GROUP
10101 HILLWOOD PARKWAY
FORT WORTH, TX 76177
FAX: (817) 222-5920
http://ceaaa.faa.gov

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235

FAA COORDINATION

CRANES FOR ERECTION OF LIGHT TOWER WORK:

NOTIFY THE AKRON FULTON INTERNATIONAL AIRPORT MANAGER AT (330) 733-4760 AT LEAST 3 BUSINESS DAYS PRIOR TO ERECTION OF CRANE(S) AND AGAIN WHEN CRANE(S) IS NO LONGER ON SITE.

CRANES FOR ERECTION OF LIGHT TOWER WORK:

CRANES ARE TO BE MARKED/LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 70/7460-1 M, OBSTRUCTION MARKING AND LIGHTING, FLAGS/RED LIGHTS-CHAPTERS 3 (MARKED) 4, 5 (RED), 14 (TEMPORARY), AND 15.

CRANES FOR STRUCTURE WORK:

NOTIFY THE AKRON FULTON INTERNATIONAL AIRPORT MANAGER AT (330) 733-4760 AT LEAST 3 BUSINESS DAYS PRIOR TO ERECTION OF CRANE(S) AND AGAIN WHEN CRANE(S) IS NO LONGER ON SITE. NOTIFY THE AKRON FULTON INTERNATIONAL AIR TRAFFIC CONTROL TOWER AT (330) 492-3801 AT LEAST 3 BUSINESS DAYS PRIOR TO ERECTION OF CRANE(S) AND AGAIN WHEN CRANE(S) IS NO LONGER ON SITE. IN THE CASE AIR TRAFFIC CONTROL OF THE AKRON FULTON INTERNATIONAL AIRPORT WOULD REQUEST THE IMMEDIATE LOWERING OF CRANE, PROVIDE AIR TRAFFIC CONTROL TOWER THE CONTACT INFORMATION FOR ONSITE OPERATOR.

CRANES FOR STRUCTURE WORK:

CRANES ARE TO BE MARKED/LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 70/7460-1 M, OBSTRUCTION MARKING AND LIGHTING, FLAGS/RED LIGHTS-CHAPTERS 3 (MARKED) 4, 5 (RED), 14 (TEMPORARY), AND 15.

LIGHTING:

FAA ADVISORY CIRCULAR 70/7460-1 M OBSTRUCTION LIGHTING REPORT ANY FAILURE OR MALFUNCTION THAT LASTS MORE THAN THIRTY MINUTES AND AFFECTS THE TOP LIGHT OR FLASHING OBSTRUCTION LIGHT TO (877) 487-6867 AND WHEN RESTORED NOTIFY THE SAME NUMBER.

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 73

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/28/21	FAA COORDINATION NOTE ADDED & AIRWAY CLEARANCE NOTE REVISED

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77/277/224
VARIOUS

PAVEMENT (CONTINUED)

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

PAVING IN THE VICINITY OF SUM-77-0887

CONTRACTOR WILL NEED TO VARY THE THICKNESS OF THE ITEM 304 - AGGREGATE BASE, AS PER PLAN LAYER IN THE VICINITY OF THE EXISTING FOOTER FOR THE EXISTING SUM-77-0887 BRIDGE PIER IN THE MEDIAN OF I.R. 77.

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 609 - CURB, TYPE 4-C, AS PER PLAN

THE REQUIREMENTS OF CMS 609 AND SCD BP-5.1 WILL APPLY WITH THE EXCEPTION THAT JOINT SEALER WILL BE REQUIRED WHEN ADJACENT TO FLEXIBLE PAVEMENT.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2 "	100
3/4 "	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

DRAINAGE

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

EXISTING SUBSURFACE DRAINAGE

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

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE WORK NOTED ABOVE:

601,	TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT	8 SQ. YD.
611,	6" CONDUIT, TYPE F	40 FT.
611,	PRECAST REINFORCED CONCRETE OUTLET	4 EACH
605,	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	40 FT.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY.

PROPOSED MEDIAN STORM SEWER

STORM SEWERS NOTED AS "OFFSET" SHALL BE LOCATED WITHIN THE PROPOSED INLETS TO AVOID CONFLICT WITH ANY LIGHT POLE FOUNDATIONS OR SIGN TRUSS FOUNDATIONS.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 15", 18", 24", AND 30" DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM 611 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 10 FEET TO THE EDGE OF PAVEMENT. PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06. JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER OR MACHINED INTERLOCKING JOINTS ARE PERMITTED. THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN

INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 AND ACCORDING TO STANDARD CONSTRUCTION DRAWING I-2.2, EXCEPT THAT SECTION C-C OF THE AFOREMENTIONED STANDARD DRAWING THE MINIMUM DEPTH IS 24" VERSUS 32".

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 EXCEPT THAT A NEW MANHOLE CASTING SHALL BE PROVIDED.

ITEM 611 - CONDUIT, MISC.: 18" TYPE B, 748.06, OPEN CUT

748.06 CONDUIT TO BE INSTALLED WITH AN OPEN CUT ON EITHER SIDE OF ITEM 611 - 18" CONDUIT, TYPE B, 748.06, BORED OR JACKED. STORM SEWER PIPE P-54.

ITEM 611 - CONDUIT, MISC.: 30" TYPE A, 748.06, OPEN CUT

748.06 CONDUIT TO BE INSTALLED WITH AN OPEN CUT ON EITHER SIDE OF ITEM 611 - 30" CONDUIT, TYPE A, 748.06, BORED OR JACKED. CULVERTS RAMP B STA. 211+13.00 AND RAMP C-2 STA. 784+60.00

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	200 FT.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 10,000 POUNDS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 73

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	DELETED PRESSURE RELIEF JOINT NOTE

SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	OFFICE CALCS				409				01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR						
																			PAVEMENT	
567									510	57					254	01000	567	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1 1/4"	
3914	60048								57566	6396					302	46000	63962	CY	ASPHALT CONCRETE BASE, PG64-22	
4911	45836								45672	5075					304	20000	50747	CY	AGGREGATE BASE	
2956	44384								42606	4734					407	20000	47340	GAL	NON-TRACKING TACK COAT	
1792									1613	179					408	10001	1792	GAL	PRIME COAT, AS PER PLAN	70
61									55	6					441	50000	61	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
61									55	6					441	50300	61	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
1156									1040	116					441	50701	1156	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	67
1041	16399								15696	1744					442	00100	17440	CY	ANTI-SEGREGATION EQUIPMENT	
813	12964								12399	1378					442	10101	13777	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN	69
690	10972								10496	1166					442	10301	11662	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	70
212	537								674	75					609	24511	749	FT	CURB, TYPE 4-C, AS PER PLAN	70
250									225	25					617	10101	250	CY	COMPACTED AGGREGATE, AS PER PLAN	70
4479									4031	448					617	20000	4479	SY	SHOULDER PREPARATION	
13									12	1					617	25000	13	MGAL	WATER	
1	12								12	1					618	40600	13	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
~~45835~~									~~41252~~	~~4583~~					~~304~~	~~20000~~	~~45835~~	~~CY~~	~~PAVEMENT (RIGID PAVEMENT OPTION)~~ ~~AGGREGATE BASE~~	
~~266109~~									~~239498~~	~~26611~~					~~452~~	~~15020~~	~~266109~~	~~SY~~	~~12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA~~	
~~537~~									~~483~~	~~54~~					~~609~~	~~24511~~	~~537~~	~~FT~~	~~CURB, TYPE 4-C, AS PER PLAN~~	~~70~~
~~12~~									~~11~~	~~1~~					~~618~~	~~40700~~	~~12~~	~~MILE~~	~~RUMBLE STRIPS, SHOULDER (CONCRETE)~~	
																			SANITARY SEWER	
					126				113	13					611	12100	126	FT	27" CONDUIT, TYPE C, 707.48 (SANITARY)	
					1				1						611	99574	1	EACH	MANHOLE, NO. 3 (SANITARY)	
					2				2						611	99575	2	EACH	MANHOLE, NO. 3, AS PER PLAN (SANITARY)	72
					2				2						611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)	72

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	DELETED PRESSURE RELIEF JOINT ITEM

CALCULATED LRK
CHECKED PJF

GENERAL SUMMARY

SUM-77 / 277 / 224
VARIOUS

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE, TOLL-FREE, 800-362-2764. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY. SEE SHEET 66 FOR ADDITIONAL UTILITY INFORMATION.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIAL OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

EXISTING LIGHTING ITEMS, DUCT CABLE AND CONDUIT

THE LOCATION OF EXISTING LIGHTING ITEMS, CONDUIT AND DUCT CABLE SHOWN ON THE PLANS HAVE BEEN OBTAINED BY SEARCHES OF AVAILABLE RECORDS AND FIELD CHECKS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, HOWEVER, THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. FIELD VERIFY ALL CIRCUITS.

EXISTING PLANS AND CONSTRUCTION PROJECT NO.

SUM-277/224-0.00/6.31-10.22

EXISTING ODOT CONTROL CENTERS

THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 4 TO OBTAIN KEYS TO THE EXTERNAL DISCONNECT HANDLES OF EXISTING CONTROL CENTER ENCLOSURES. THE AFFECTED EXISTING CONTROL CENTERS AND THEIR LOCATIONS ARE AS FOLLOWS:

- CONTROL CENTER 'CH' (CKTS '1' & '2') STA. 895+35± RAMP D, RT.
- CONTROL CENTER 'WO' (CKTS '1', '2' & '3') STA. 104+70± RAMP A, LT.

CIRCUITS SHALL BE TURNED "OFF" AS NECESSARY TO SAFELY WORK ON THE AFFECTED CIRCUITS. THE ENCLOSURES SHALL REMAIN LOCKED. ALL REMAINING CIRCUITS SHALL REMAIN "ON" UNLESS OTHERWISE APPROVED BY THE ENGINEER. UPON COMPLETION OF A PARTICULAR CIRCUIT'S WORK, THE CONTRACTOR SHALL RESTORE POWER TO THAT CIRCUIT, UNLESS THE CIRCUIT HAS BEEN DEACTIVATED.

EXISTING CABLE AND CONDUIT

EXISTING CIRCUIT CABLES IN TRENCH WHICH HAVE BEEN REPLACED AS INDICATED IN THE PLANS (INCLUDING CONDUIT, DISTRIBUTION CABLE, AND DUCT CABLE) MAY BE ABANDONED IN PLACE OR REMOVED. THE REMOVAL OR ABANDONMENT OF THESE ITEMS WHICH ARE NOT ITEMIZED SEPARATELY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS LIGHTING ITEMS IN THE PROJECT.

EXISTING CIRCUIT CABLE IN BARRIER WHICH HAVE BEEN REPLACED AS INDICATED IN THE PLANS SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. THE REMOVAL OF THESE ITEMS WHICH ARE NOT ITEMIZED SEPARATELY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS LIGHTING ITEMS IN THE PROJECT.

REMOVAL OF CIRCUITS IN EXISTING UNDERGROUND OR BARRIER CONDUITS TO BE REUSED: WORK IS INCLUDED UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED".

ITEM 625 TRENCH

TRENCH SHALL BE AS PER 625.13. IN ADDITION, ALL TRENCHING IN PAVED AREAS AND AREAS TO BE PAVED SHALL BE PERFORMED PRIOR TO THE PLACEMENT OF PAVEMENT.

ITEM 625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY: FIRST ENERGY CORP. (OHIO EDISON CO.)
ADDRESS: 1910 W. MARKET ST. BLDG 3, AKRON, OH 44313
PHONE #: (330) 436-4055
CONTACT NAME: MR. DAVID MILLER

POWER SERVICE: 480 VOLT, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL. THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF 5% VOLTAGE DROP WITH A MAXIMUM UNIFORMITY RATIO OF 4.0 TO 1.0 FOR CONVENTIONAL UNITS AND 3.0 TO 1.0 FOR HIGH MAST UNITS.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. A NON-FUSED DISCONNECT SHALL BE INSTALLED ON THE POWER SIDE OF THE METER BASE. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS.

THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF $100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 625 SERVICE TO UNDERPASS LIGHTING

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES AND STRUCTURE GROUNDING FOR AN UNDERPASS LIGHTING SYSTEM ON THE VARIOUS UNDERPASSES SHOWN IN THE PLANS.

THE INSTALLATION WORK SHALL INCLUDE DISCONNECT SWITCH WITH ENCLOSURE, CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, JUNCTION BOXES, CABLES, AND ALL INCIDENTALS NECESSARY TO COMPLETE READY FOR USE, THE SERVICE AS SHOWN IN THE LIGHTING PLANS. ALL CONDUITS AND FITTINGS SHALL BE SCH-80 PVC. CABLE FOR UNDERPASS LIGHTING SHALL BE #10 AWG (MINIMUM).

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM 625, "SERVICE TO UNDERPASS LIGHTING" AND SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED. COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

ITEM 625 - CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED" PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - PULL BOX CLEANED

THIS ITEM OF WORK SHALL CONSIST OF CLEANING AN EXISTING PULL BOX BY REMOVING ANY EXISTING CABLES NOT BEING RECONNECTED, AND DEBRIS SO THAT NEW CABLES CAN BE INSTALLED. ANY UNUSED OPENINGS SHALL BE CLOSED. DISTURBED AREAS NEAR THE PULL BOX SHALL BE CLEARED OF WEEDS OR DEBRIS AND SHALL BE FULLY RESTORED. MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF OF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "PULL BOX CLEANED" FOR EACH PULL BOX CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, INSTALLATION ONLY, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LUMINAIRE REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT.

THE CONTRACTOR SHALL EXERCISE CARE WHEN INSTALLING THE LUMINAIRE TO ENSURE THAT THE PROPER LUMINAIRE (SYMMETRIC OR ASYMMETRIC) IS INSTALLED AS INDICATED IN THE PLANS.

THE LUMINAIRE SHALL BE CLEANED, REPAIRS TO ENSURE THAT IT IS IN GOOD SERVICEABLE CONDITION MADE, ADJUSTMENTS TO THE OPTICAL COMPONENTS TO ENSURE THAT THE SPECIFIED DISTRIBUTION IS BEING PRODUCED MADE, AND A NEW LAMP INSTALLED IF THE LIGHT SOURCE IS A LAMP.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, "LUMINAIRE, INSTALLATION ONLY, AS PER PLAN" FOR EACH LUMINAIRE INSTALLED AND SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A WORKMANLIKE MANNER.

ITEM - 625 ARC FLASH CALCULATIONS AND LABEL, (BY LOCATION)

THE CONTRACTOR SHALL SATISFY THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 825 FOR EACH OF THE NEW LIGHTING CONTROL CENTERS INDICATED IN THE PLANS.

THE CONTRACTOR MAY BE ABLE TO OBTAIN LABELS FOR ODOT MAINTAINED INSTALLATIONS FROM THE ODOT SIGN SHOP, 1606 WEST BROAD STREET, COLUMBUS, OH 43223. FOR NON-ODOT MAINTAINED INSTALLATIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE LABEL, MADE FROM "ENGINEER GRADE" SIGN SHEETING OR AN EQUIVALENT COMMERCIAL LABEL MATERIAL.

THE ODOT OFFICE OF ROADWAY ENGINEERING HAS AN EXCEL SPREADSHEET, AVAILABLE UPON REQUEST, TO ASSIST WITH MAKING AND DOCUMENTING THE REQUIRED CALCULATIONS.

METHOD OF MEASUREMENT SHALL BE PER 825.06.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ARC FLASH CALCULATIONS AND LABEL (CC-'WO')	1 EACH
ARC FLASH CALCULATIONS AND LABEL (CC-'CH')	1 EACH
ARC FLASH CALCULATIONS AND LABEL (CC-'FAA')	1 EACH

ITEM 625 - 1-½" DUCT CABLE WITH THREE NO. (BY SIZE) AWG 2400 VOLT CABLES

PROVIDE (#2 OR #4) AWG 725.02 WIRE, 2400 VOLT, ASSURING THE GROUNDING CABLE INSULATION IS GREEN OR BLACK WITH A GREEN STRIPE.

ITEM 625 - PORTABLE WINCH DRIVE POWER UNIT

THE CONTRACTOR SHALL SUPPLY A PORTABLE WINCH DRIVE POWER UNIT AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. A QUANTITY OF "1 EACH" OF ITEM 625, "PORTABLE WINCH DRIVE POWER UNIT", IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

CALCULATED DRB CHECKED KWR

LIGHTING GENERAL NOTES

SUM-77 / 277 / 224
VARIOUS

1037
1288

ITEM 625 - LUMINAIRE, HIGH MAST, SOLID STATE (LED), IES-V, LED, 45,200-47,100 LUMENS, AS PER PLAN

IN ADDITON TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 813 AND 913, LUMINAIRES FOR HIGH MAST LIGHTING SHALL BE AS FOLLOWS:

LUMINAIRES SHALL BE COOPER LIGHTING CELESTEON SERIES, 325W, (CST-8-4-8-T5R-AP-7030-AP), GE EVOLVE, 365W, (ERHM-02-5-50-VW-30), OR EQUAL APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625 "LUMINAIRE, HIGH MAST, SOLID STATE (LED), IES-V, LED, 45,200-47,100 LUMENS, AS PER PLAN" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, UNDERPASS, SOLID STATE (LED), IES-III, LED, 3,100-4,100 LUMENS, AS PER PLAN

IN ADDITON TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 813 AND 913, LUMINAIRES FOR UNDERPASS LIGHTING SHALL BE AS FOLLOWS:

LUMINAIRES SHALL BE HOLOPHANE WALLPACK, 39W, (W4GLED-10C1000-30K-T3M), COOPER LIGHTING, GALLEON SERIES, 34W, (GWC-AF-01-LED-E1-T4FT-7030-600), OR EQUAL APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625 "LUMINAIRE, UNDERPASS, SOLID STATE (LED), IES-III, LED, 3,100-4,100 LUMENS, AS PER PLAN" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE REMOVED FOR REUSE

THE CONTRACTOR WILL BE REMOVING 82 LED HIGH MAST LUMINAIRES (54 SYMMETRIC AND 28 ASYMMETRIC) AS PART OF THIS PROJECT. ALL LUMINAIRES ARE RATED 45,000 - 55,000 LUMENS. ALL 54 SYMMETRIC LUMINAIRES AND 20 OF THE 28 ASYMMETRIC LUMINAIRES WILL BE REUSED WITHIN THIS PROJECT. THE REMAINING EIGHT (8) ASYMMETRIC LUMINAIRES WILL BE REMOVED FOR REUSE BUT NOT WITHIN THIS PROJECT AND THUS SHALL BE CAREFULLY STORED ON THE PROJECT SITE FOR PICK UP BY ODOT DISTRICT 4 PERSONNEL (SEE NOTE ENTITLED 'LUMINAIRE REMOVED FOR STORAGE').

THE CONTRACTOR SHALL CLEARLY NOTE WHICH LUMINAIRES ARE SYMMETRIC AND WHICH ARE ASYMMETRIC SO THAT THEIR SUBSEQUENT INSTALLATION IS AS INDICATED IN THE PLANS.

ITEM 625 - LUMINAIRE REMOVED FOR STORAGE

THIS ITEM OF WORK SHALL BE PER C&MS 625.21(A). THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 4 [MICHELLE CHANEY (330)-786-2267] 72 HOURS ADVANCE NOTICE OF WHEN THE LUMINAIRES WILL BE AVAILABLE FOR PICK UP AND THEIR LOCATION ON THE PROJECT SITE.

ITEM 625 - POWER SERVICE, AS PER PLAN (120V)

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY. THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY: FIRST ENERGY CORP (OHIO EDISON CO)
ADDRESS: 1910 W. MARKET ST. BLDG 3, AKRON, OH 44313
PHONE #: (330) 436-4055
CONTACT NAME: MR. DAVID MILLER

POWER SERVICE: 120 VOLT, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. A NON-FUSED DISCONNECT SHALL BE INSTALLED ON THE POWER SIDE OF THE METER BASE. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS

THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF $100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN [120V]" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHT POLE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL BE PER C&MS 625.21(B) AND SHALL INCLUDE CUTTING THE ANCHOR BOLTS AND EXPOSED CONDUIT ELL(S) FLUSH WITH THE TOP OF THE MEDIAN BARRIER. THE CONTRACTOR SHALL ALSO FILL THE TOP 6 INCHES (MIN.) OF THE OPEN ELL(S) WITH CONCRETE MORTAR AND FINISH FLUSH WITH THE TOP OF THE MEDIAN BARRIER.

ITEM 625 - LIGHT TOWER MAINTENANCE PLATFORM, MISC.: PLATFORM REMOVED

THIS ITEM OF WORK INCLUDES THE REMOVAL OF AN EXISTING LIGHT TOWER MAINTENANCE PLATFORM AND THE LIGHT TOWER FOUNDATION IT ENCOMPASSES. THE PLATFORM AND FOUNDATION SHALL BE REMOVED PER C&MS 625.21(C). ALL REMOVED MATERIAL SHALL BE PROPERLY DISPOSED OF OFF THE PROJECT SITE.

LOCATIONS OF LIGHT TOWER MAINTENANCE PLATFORMS TO BE REMOVED ARE SHOWN AND QUANTIFIED ON LIGHTING REMOVAL PLAN SHEETS 858 & 859.

PAYMENT WILL BE MADE AT EACH SUCH PLATFORM LOCATION AT THE UNIT PRICE BID FOR EACH C&MS ITEM 625, "LIGHT TOWER MAINTENANCE PLATFORM, MISC.: PLATFORM REMOVED" AND SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A WORKMANLIKE MANNER.

ITEM 625 - LIGHT TOWER, BBBB90, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE CMS, AND THE STANDARD CONSTRUCTION DRAWINGS, THE FOURTH ARM IS FOR THE INSTALLATION OF THE FAA OBSTRUCTION LIGHT. THE MANUFACTURER SHALL DETERMINE AND SUPPLY ANY COUNTERWEIGHTS.

ITEM 625 - UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN

UNDERGROUND WARNING/MARKING TAPE SHALL BE IN ACCORDANCE WITH CMS 725.22 EXCEPT THE TAPE SHALL NOT BE FURNISHED WITH TRACER WIRE.

ITEM 625 - LIGHTING, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED

THIS ITEM CONSISTS OF INSTALLATION AND TESTING OF FAA L-810 COMPLIANT OBSTRUCTION LIGHTING FOR MARKING OF STRUCTURES UNDER 150 FEET. THE LOCATION SHALL BE AS SHOWN IN THE LIGHTING PLANS. EACH OBSTRUCTION LAMP FIXTURE SHALL UTILIZE LIGHT EMITTING DIODES (LEDS). THE OBSTRUCTION LAMP SHALL HAVE A WRITTEN MINIMUM 5-YEAR MANUFACTURER WARRANTY. THE LAMP SHALL BE ETL VERIFIED TO FAA ADVISORY CIRCULAR AC150/5345-43F, TYPE L-810 AND SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:

1. FLIGHT LIGHT FL-810L
2. POINT LIGHTING MODEL POL-21006 DOUBLE OBSTRUCTION LIGHT

EACH OBSTRUCTION LAMP FIXTURE SHALL HAVE ITS OWN CONTROLLER, HOUSED IN ITS OWN METAL CABINET MOUNTED ON A 3' PEDESTAL, 4' FROM THE TOWER. THE CONTROLLER SHALL OPERATE AT 120VAC, 60HZ AND HAVE ITS OWN DEDICATED CIRCUIT BREAKER. THE OBSTRUCTION LAMP SHALL OPERATE IN A STEADY BURN OPERATION CONTINUOUSLY TWENTY-FOUR (24) HOURS PER DAY, WITH NO INTERVENING PHOTOCELL CONTROL.

THE CONTROLLER SHALL PROVIDE AT LEAST ONE UNUSED ALARM STATUS OUTPUT IN THE FORM OF A DRY-CONTACT OR SOLID-STATE RELAY CLOSURE THAT RESPONDS TO DEFECTIVE OR INOPERATIVE OBSTRUCTION LAMP CONDITIONS. AT LEAST ONE RELAY WITH COMPLETE CONTACTS (NORMALLY OPEN, NORMALLY CLOSED, AND COMMON) SHALL BE PROVIDED. ALARM RELAY CONTACT RATINGS SHALL BE AT LEAST 500 MA RESISTIVE AT 120VAC/30VDC. THE CONTROLLER SHALL PROVIDE AT LEAST ONE VISIBLE ALARM STATUS INDICATOR FOR LAMP FAILURE INDICATION. THIS INDICATOR SHALL BE IN THE FORM OF A PANEL MOUNTED RED DOME-TYPE LED VISIBLE FROM THE OUTSIDE OF THE ENCLOSURE.

THE CONTROLLER ENCLOSURE SHALL UTILIZE A VERTICALLY HINGED, SWING-OPEN DOOR, AND BE RATED NEMA 3R, MINIMUM. ENCLOSURE SHALL INCLUDE AT LEAST ONE COMMERCIAL GRADE NEMA 5-15 RECEPTACLE TO ACCOMMODATE WIRELESS COMMUNICATION EQUIPMENT TO BE INSTALLED LATER BY ODOT FOR ALARM STATUS MONITORING. AN INTEGRAL SHELF SHALL BE PROVIDED FOR THIS EQUIPMENT INSIDE THE ENCLOSURE, AND SHALL PROVIDE AN OPEN, ACCESSIBLE SPACE FOR EQUIPMENT MEASURING AT LEAST TWELVE (12) INCHES WIDE, EIGHT (8) INCHES DEEP, AND SIX (6) INCHES IN HEIGHT.

THE CONTRACTOR SHALL FULLY TEST THE SYSTEM AND ARRANGE FOR ACCEPTANCE INSPECTION OF THE OBSTRUCTION LIGHTING INSTALLATION BY ODOT DISTRICT SIGNAL MAINTENANCE PERSONNEL AFTER THE SYSTEM IS OPERATIONAL. DURING ACCEPTANCE INSPECTION, THE CONTRACTOR SHALL DEMONSTRATE THE PROPER OPERATION OF ALL LAMPS AND ALARMS. CONTRACTOR SHALL PROVIDE WRITTEN MANUFACTURER WARRANTY AND ALL OPERATING MANUALS FOR OBSTRUCTION LIGHTING CONTROLLER AND LAMP TO ODOT DISTRICT SIGNAL MAINTENANCE PERSONNEL AT THE TIME OF INSPECTION.

THE DEPARTMENT SHALL MEASURE FAA TYPE L-810 OBSTRUCTION LIGHTING, LED BY EACH INDIVIDUAL OBSTRUCTION LIGHT FIXTURE, COMPLETE AND INSTALLED INCLUDING ANY CONTROL DEVICES AND ALL WIRING AND CONDUITS FROM THE LIGHT TO THE CONTROLLER AND TO THE POWER SERVICE.

QUANTITIES CARRIED TO THE GENERAL SUMMARY:

625 LIGHTING, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED	1 EACH
625 TRENCH, 24"	260 FEET
625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	260 FEET
625 GROUND ROD	1 EACH
632 PEDESTAL FOUNDATION	1 EACH
632 PEDESTAL, 3'	1 EACH

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

CALCULATED DRB CHECKED KWR

LIGHTING GENERAL NOTES

SUM-77/277/224
VARIOUS

1038
1288

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1037	1038	1039	1041	1042	1043	1045					01/IMS/PV	02/IMS/PV							
																		LIGHTING	
			33	30	21						76	8		625	00480	84	EACH	CONNECTION, UNFUSED PERMANENT	
					1						1			625	12010	1	EACH	LIGHT TOWER, BBB90	
					1						1			625	13101	1	EACH	LIGHT TOWER, BBBB90, AS PER PLAN	1038
				3							3			625	13200	3	EACH	LIGHT TOWER, BBBB100	
			3	2	2						6	1		625	13400	7	EACH	LIGHT TOWER, BBBBBB100	
			5	1	1						6	1		625	13404	7	EACH	LIGHT TOWER, BBBBBB110	
				2							2			625	15000	2	EACH	LIGHT TOWER FOUNDATION, 36" X 15' DEEP	
			1	1	1						3			625	15100	3	EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP	
			7	3	4						13	1		625	15200	14	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
1											1			625	20000	1	EACH	PORTABLE WINCH DRIVE POWER UNIT	
						4					4			625	21400	4	EACH	LIGHT TOWER MAINTENANCE PLATFORM, MISC. PLATFORM REMOVED	1038
			714	1,386	1,749						3,464	385		625	23200	3,849	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
			219	321							486	54		625	23300	540	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
			1,534	3,234	2,490						6,532	726		625	24320	7,258	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
			2,938	178							2,804	312		625	24330	3,116	FT	1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES	
			271	387	161						737	82		625	25500	819	FT	CONDUIT, 3", 725.04	
					129						116	13		625	25900	129	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
					123						111	12		625	25910	123	FT	CONDUIT CLEANED AND CABLES REMOVED	
				12	18						27	3		625	26263	30	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS)	1038
			11								10	1		625	27503	11	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS)	1038
			48	18	6						65	7		625	27561	72	EACH	LUMINAIRE, INSTALLATION ONLY, AS PER PLAN	1037
	260		4,573	3,669	2,561						9,957	1,106		625	29002	11,063	FT	TRENCH, 24" DEEP	
			13	11	8						29	3		625	30700	32	EACH	PULL BOX, 725.08, 18"	
				3	1						4			625	30706	4	EACH	PULL BOX, 725.08, 24"	
				1	18						17	2		625	31510	19	EACH	PULL BOX REMOVED	
	1		16	12	10						35	4		625	32000	39	EACH	GROUND ROD	
			1								1			625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
				1	1						2			625	34001	2	EACH	POWER SERVICE, AS PER PLAN	1037
	1										1			625	34001	1	EACH	POWER SERVICE, AS PER PLAN (120V)	1038
	260		4,573	3,669	2,561						9,957	1,106		625	36011	11,063	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	1038
			4								4			625	37100	4	EACH	SERVICE TO UNDERPASS LIGHTING	
			1								1			625	39520	1	EACH	PULL BOX CLEANED	
		LS									LS			SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	1039
						16					14	2		625	75350	16	EACH	LIGHT TOWER REMOVED	
						2					2			625	75401	2	EACH	LIGHT POLE REMOVED, AS PER PLAN	1038
						10					9	1		625	75504	10	EACH	LUMINAIRE REMOVED FOR STORAGE	
						4					4			625	75506	4	EACH	LUMINAIRE REMOVED	
						72					65	7		625	75508	72	EACH	LUMINAIRE REMOVED FOR REUSE	
						2					2			625	75510	2	EACH	POWER SERVICE REMOVED	
						9					8	1		625	75540	9	EACH	LIGHT TOWER FOUNDATION REMOVED	
					595						536	59		625	75550	595	FT	DISTRIBUTION CABLE REMOVED	
1											1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (CC-'CH')	
1											1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (CC-'WO')	
1											1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (CC-'FAA')	
	1										1			625	98000	1	EACH	LIGHTING, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED	1038
	1										1			632	64020	1	EACH	PEDESTAL FOUNDATION	
	1										1			632	89500	1	EACH	PEDESTAL, 3'	

CALCULATED KWR CHECKED DRB

LIGHTING GENERAL SUMMARY

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

1040
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\Lighting\Sheets\106002_L001.dgn Sheet 4/28/2021 6:06:30 PM kryan

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

STATION

ML = MATCHLINE
'X' = RAMP X
'NB' = I-77 NB
'SB' = I-77 SB
'277' = I-277
'224' = U.S. 224

SHEET NO.	FROM STATION	TO STATION	SIDE	POLE/PULL BOX NO.	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT TOWER, BBB90 EACH	625 LIGHT TOWER, BBBB90, AS PER PLAN EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 LIGHT TOWER, BBBBBB110 EACH	625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS) EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS) EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH, 24" DEEP FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT	625 SERVICE TO UNDERPASS LIGHTING EACH	625 DISTRIBUTION CABLE REMOVED FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 PULL BOX CLEANED EACH		
	CKT 'WO-2'																																				
1047	477+88 'NB'		LT	WO-2-5					1			1		6												2										
	477+88	480+11	LT	WO-2-5 - PB-1																	240			230							230					
	480+11		LT	PB-1																																1	
	480+11	484+17	LT	PB-1 - WO-2-4																	411			401							401					
	484+17		LT	WO-2-4						1			1	6												2										
	484+17	486+00	LT	WO-2-4 - ML																	188			183							183					
1048	486+00	289+15 'B2'	LT	ML - WO-2-3																	317			312							312					
	289+15		LT	WO-2-3						1			1	6												2										
	289+15	491+38 'SB'	L/R	WO-2-3 - PB-2																	286			276							276					
	491+38		RT	PB-2																					1											
	491+38	794+14 'C2'	R/L	PB-2 - WO-2-2																	286			276							276					
	794+14		LT	WO-2-2					1				1	6												2										
	794+14	495+00 'SB'	L/R	WO-2-2 - PB-3																	113			103							103					
	495+00		RT	PB-3	3																				1											
	495+00	495+00	R/L	PB-3 - PB-4														219					63	63							63					
	495+00		LT	PB-4	3																				1											
	495+00	497+00	LT	PB-4 - ML																	205			200							200					
	790+28 'C2'		BL	PIER 1																									1							
1049	497+00	500+42	LT	ML - PB-5																	347			342							342					
	500+42		LT	PB-5	3											2									1								1			
	500+42	99+39 'A'	L/R	PB-5 - WO-2-1																	133			123							123					
	99+39		RT	WO-2-1						1			1	6												2										
	99+39	103+00	RT	WO-2-1 - ML																	412			407							407					
	CKT 'CH-1'																																				
	259+50	257+69 '277'	LT	ML - CH-1-1																189				184							184					
	257+69		LT	CH-1-1					1				1	6												2										
	257+69	700+23 'C1'	RT	CH-1-1 - PB-9																246				236							236					
	700+23		RT	PB-9	3											3									1								1			
	700+23	700+89	RT	PB-9 - PB-10																76				66							66					
	700+89		RT	PB-10	3																				1											
	700+89	500+90 'NB'	R/L	PB-10 - PB-11														279					83	83							83					
	500+90		LT	PB-11	3											4									1								1			
	500+90	501+37	LT	PB-11 - PB-12																57				47							47					
	501+37		LT	PB-12	3																				1											
	501+37	301+32 'B2'	LT	PB-12 - PB-8														216					62	62							62					
	301+32		LT	PB-8	3																				1											
	301+32	801+21 'C2'	L/R	PB-8 - PB-6																100				90							90					
	801+21		RT	PB-6	3											2									1								1			
	501+37 'NB'	504+06	LT	PB-12 - PB-13																279				269							269					
	504+06		LT	PB-13	3																				1											
	504+06	304+00 'B2'	LT	PB-13 - PB-7														219					63	63							63					
	304+00		LT	PB-7	3																				1											
	304+00	304+00	LT	PB-7 - CH-1-2																33				23							23					
	304+00		LT	CH-1-2						1			1	6												2										
	504+06 'NB'	506+72	LT	PB-13 - PB-14																277				267							267					
	506+72		LT	PB-14																					1											
	506+72	509+29	LT	PB-14 - CH-1-3																277				267							267					
	509+29		LT	CH-1-3						1			1	6												2										
TOTALS CARRIED TO LIGHTING GENERAL SUMMARY					33				3	5		1	7	48		11	714	219	1534	2938		271	4573	13			16	1		4573	4			1		

CALCULATED KWR
CHECKED DRB

LIGHTING SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

10.41
12.88

N:\03\60\06744-08\06002_SUM-76-10.95\Design\Lighting\Sheets\06002-LS001.dgn Sheet 4/28/2021 11:58:22 AM kryan

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

STATION

ML = MATCHLINE
'X' = RAMP X
'NB' = I-77 NB
'SB' = I-77 SB
'277' = I-277
'224' = U.S. 224

SHEET NO.	FROM	TO	SIDE	POLE/PULL BOX NO.	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT TOWER, BBB90 EACH	625 LIGHT TOWER, BBBB90, AS PER PLAN EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 LIGHT TOWER, BBBBBB110 EACH	625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS) EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS) EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH, 24" DEEP FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT	625 SERVICE TO UNDERPASS LIGHTING EACH	625 DISTRIBUTION CABLE REMOVED FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 PULL BOX CLEANED EACH
	CKT 'WO-1'																																		
1050	209+00 'B'	513+12 'SB'	R/L	ML - WO-1-6																451				446							446					
	513+12		LT	WO-1-6					1				1	6																						
1051	28+90 'B2'		RT	WO-1-1				1					1	4													2									
	28+90	26+34	RT	WO-1-1 - PB-15																267				257							257					
	26+34		RT	PB-15																					1											
	26+34	197+93 'B'	R/L	PB-15 - WO-1-2																266				256							256					
	197+93		LT	WO-1-2				1					1	4													2									
	197+93	198+41	LT	WO-1-2 - ML																52				47							47					
1052	198+41 'B'	200+49	LT	ML - PB-18																211				206							206					
	200+49		LT	PB-18	3																				1											
	200+49	21+07 'B2'	LT	PB-18 - PB-19														231						67	67						67					
	21+07		LT	PB-19	3																				1											
	21+07	240+27 '277'	LT	PB-19 - WO-1-3																265				255							255					
	240+27		LT	WO-1-3					1			1			6												2									
	240+27	243+56	LT	WO-1-3 - PB-23																341				331							331					
	243+56		LT	PB-23																					1											
	243+56	417+62 'B1'	L/R	PB-23 - PB-28																341				331							331					
	417+62		RT	PB-28	3																				1											
	417+62	417+62	R/L	PB-28 - PB-27														156						42	42						42					
	417+62		LT	PB-27	3																				1											
	417+62	417+11	LT	PB-27 - WO-1-4																60				50							50					
	417+11		LT	WO-1-4				1			1			4													2									
	417+11	414+33	LT	WO-1-4 - PB-26																269				259							259					
	414+33		LT	PB-26																					1											
	414+33	411+50	LT	PB-26 - WO-1-5																269				259							259					
	411+50		LT	WO-1-5						1	1				6												2									
	411+50	411+31	LT	WO-1-5 - PB-25																28				18							18					
	411+31		LT	PB-25	3																				1											
	411+31	411+31	L/R	PB-25 - PB-22														150						40	40						40					
	411+31		RT	PB-22	3																				1											
	411+31	13+08 'B2'	R/L	PB-22 - PB-21																68				58							58					
	13+08		LT	PB-21	3																				1											
	13+08	13+08	L/R	PB-21 - PB-20														192						54	54						54					
	13+08		RT	PB-20	3																				1											
	13+08	209+00 'B'	RT	PB-20 - ML																79				74							74					
	417+62 'B1'	104+69 'A'	RT	PB-28 - PB-24														336						102	102						102					
	104+69		RT	PB-24	3																					1										
	CKTS 'WO-1' & 'WO-2'																																			
	104+69	104+69	R/L	PB-24 - PB-16														195	195					55	55						55					
	104+69		LT	PB-16																						1										
	104+69	104+80	LT	PB-16 - PB-17														126	126					27	27						27					
	104+81		LT	CC 'WO'																										1						
	CKT 'WO-2'																																			
	104+69	103+00	RT	PB-19 - ML																	178			173							173					
	CKT 'CH-1'																																			
1053	259+50 '224'	262+11	LT	ML - PB-30																267				262							262					
	262+11		LT	PB-30	3																					1	1								
	TOTALS CARRIED TO LIGHTING GENERAL SUMMARY				30			3	2	1	2	1	3	18	12			1386	321	3234	178		387	3669	11	3	1	12		1	3669					

CALCULATED KWR
CHECKED DRB

LIGHTING SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

10.42
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\Lighting\Sheets\06002_LS002.dgn 4/28/2021 12:07:47 PM kryan

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

STATION

ML = MATCHLINE
'X' = RAMP X
'NB' = I-77 NB
'SB' = I-77 SB
'277' = I-277
'224' = U.S. 224

SHEET NO.	STATION FROM	STATION TO	SIDE	POLE/PULL BOX NO.	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT TOWER, BBB90 EACH	625 LIGHT TOWER, BBBB90, AS PER PLAN EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 LIGHT TOWER, BBBBBB110 EACH	625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS) EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS) EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH, 24" DEEP FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT	625 SERVICE TO UNDERPASS LIGHTING EACH	625 DISTRIBUTION CABLE REMOVED FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 PULL BOX CLEANED EACH
	CKTS 'CH-1' & 'CH-2'																																	
1053	262+11	895+25 'D'	L/R	PB-30 - PB-35													408					58	58							58				
	895+25		RT	PB-35																					1									
	895+25	895+36	RT	PB-35 - PB-34													222					22	22							22				
	895+31		RT	CC 'CH'																								1						
	CKT 'CH-2'																																	
	262+11 '224'	262+14	L/R	PB-30 - PB-29													399															123		
	262+14		RT	PB-29	3																			1		1								
	262+14	685+28 'C1'	R/L	PB-29 - CH-2-1															142				132							132				
	685+28		LT	CH-2-1					1				1		6											2								
	685+28	785+29 'C2'	RT	CH-2-1 - PB-31															436				426							426				
	785+29		RT	PB-31	3																			1										
	785+29	785+29	R/L	PB-31 - PB-32													141					37	37							37				
	785+29		LT	PB-32	3																			1										
	786+29	786+80	LT	PB-32 - CH-2-2															190				180							180				
	786+80		LT	CH-2-2						1		1			6											2								
	262+14 '224'	268+74	RT	PB-29 - PB-33															344				334							334				
	265+47		RT	PB-33																				1										
	265+47	268+74	RT	PB-33 - CH-2-3															345				335							335				
	268+74		RT	CH-2-3					1				1		6											2								
	268+74	271+00	RT	CH-2-3 - ML															239				234							234				
1054	271+00	271+20	RT	ML - PB-29															25				20							20				
	271+20		RT	PB-29	3																			1										
	271+20	600+41 'C'	RT	PB-29 - PB-30													162					44	44							44				
	600+41		RT	PB-30	3																			1										
	600+41	603+27	RT	PB-30 - CH-2-4															294				284							284				
	603+27		RT	CH-2-4		1							1	3												2								
	603+27	603+89	RT	CH-2-4 - PB-32															72				62							62				
	603+89		RT	PB-32	3																			1										
	603+89	274+72 '224'	R/L	PB-32 - PB-31													417				129														
	274+72		LT	PB-31	3																			1										
	274+72	278+63	LT	PB-31 - CH-2-5															403				393							393				
	278+63		LT	CH-2-5			1						1	3												2								
	274+50	280+45	CL	MJ-1 - EX CH-1-1																											595			
	REMOVALS																																	
1048	491+03		RT	PB-R																					1									
	491+13		LT	PB-R																					1									
	90+70 'A'		LT	PB-R																					1									
1049	97+77		LT	PB-R																					1									
	307+29 'B2'		LT	PB-R																					1									
	307+35		RT	PB-R																					1									
	798+10 'C2'		RT	PB-R																					1									
	801+42		RT	PB-R																					1									
	502+44 'NB'		LT	PB-R																					1									
	502+47		RT	PB-R																					1									
1052	417+57 'B1'		RT	PB-R																					1									
	417+59		LT	PB-R																					1									
1053	684+73 'C1'		LT	PB-R																					1									
	890+86 'D'		RT	PB-R																					1									
	895+35		RT	PB-R																					1									
	599+52 'C'		RT	PB-R																					1									
	599+53		LT	PB-R																					1									
	TOTALS CARRIED TO LIGHTING GENERAL SUMMARY				21	1	1		2	1		1	4	6	18		1749		2490		129	161	2561	8	1	18	10		1	2561		595	123		

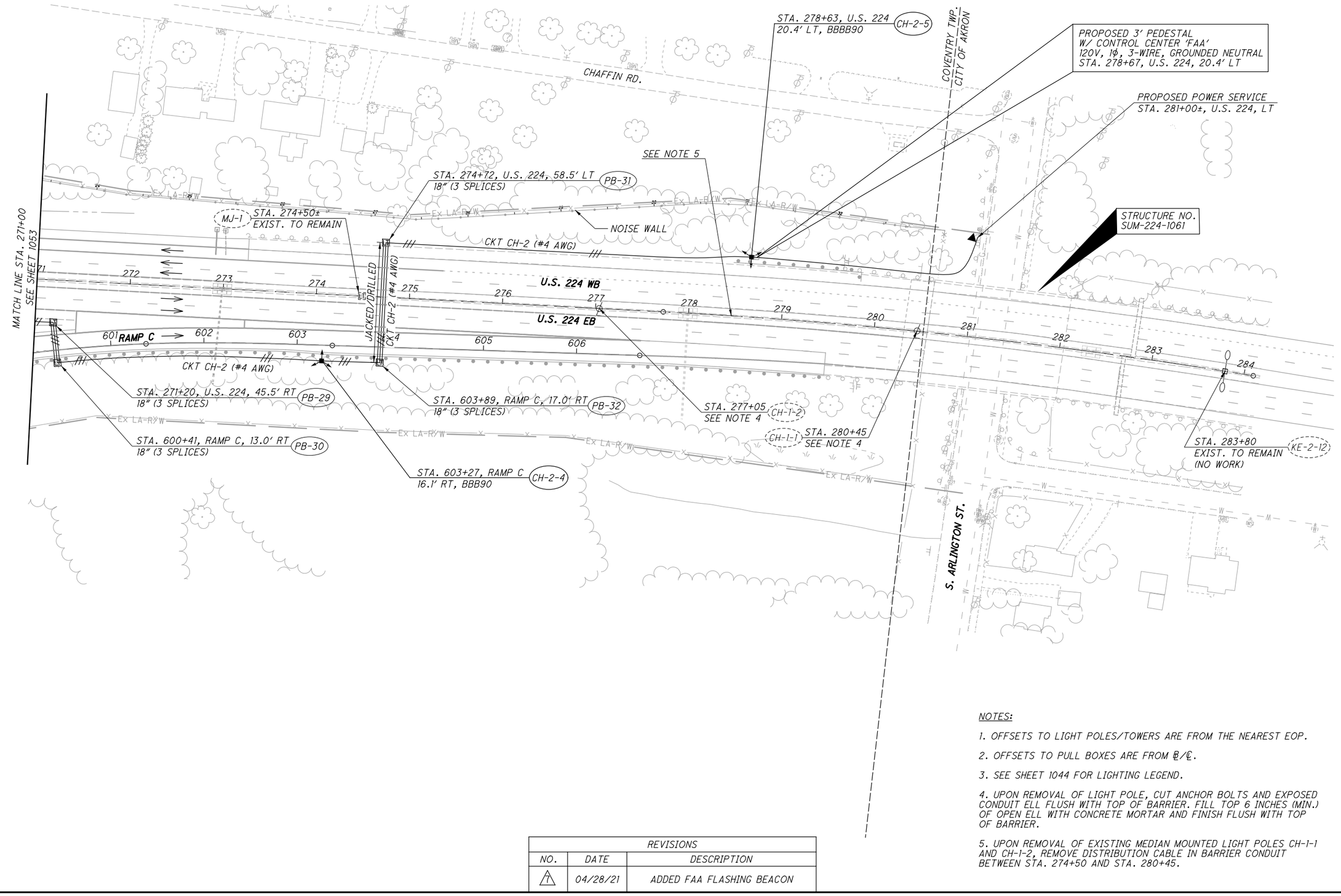
CALCULATED KWR
CHECKED DRB

LIGHTING SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

10.43
12.88

N:\03\60\06744-08\106002_SUM-76-10.95\Design\Lighting\Sheets\106002_LS003.dgn Sheet 4/28/2021 12:19:59 PM kryan



REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.
4. UPON REMOVAL OF LIGHT POLE, CUT ANCHOR BOLTS AND EXPOSED CONDUIT ELL FLUSH WITH TOP OF BARRIER. FILL TOP 6 INCHES (MIN.) OF OPEN ELL WITH CONCRETE MORTAR AND FINISH FLUSH WITH TOP OF BARRIER.
5. UPON REMOVAL OF EXISTING MEDIAN MOUNTED LIGHT POLES CH-1-1 AND CH-1-2, REMOVE DISTRIBUTION CABLE IN BARRIER CONDUIT BETWEEN STA. 274+50 AND STA. 280+45.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
U.S. 224 STA. 271+00 TO STA. 284+00
SUM-77/277/224
VARIOUS

1054
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\Lighting\Sheets\106002_LP016.dgn Sheet 4/28/2021 6:09:25 PM kryan

LIGHT TOWER SCHEDULE											
TOWER				LOCATION			ELEV. (FT) (NOTE 2)	FOUNDATION			
NO.	HEIGHT (FT.)	NO. OF LUMINAIRES		ALIGNMENT	STATION	OFFSET (NOTE 1)		DIA. (IN.)	DEPTH (FT) (NOTE 3)	REFERENCE BORING(S) (NOTE 4)	COMMENTS
		SYMMETRIC	ASYMMETRIC								
WO-1-1	100		4	RAMP B2	28+90	18.5' RT	1024.5	36	25	B-097	
WO-1-2	100		4	RAMP B	197+93	16.7' LT	1032.3	36	25	B-011-0.14	
WO-1-3	100	6		I.R. 277	240+27	64.0' LT	1037.2	36	20		
WO-1-4	100		4	RAMP B1	417+11	18.0' LT	1050.9	36	15		
WO-1-5	110	6		RAMP B1	411+50	16.5' LT	1038.0	36	15		
WO-1-6	100	6		I.R. 77 SB	513+12	35.5' LT	1041.7	36	25	B-007-1.14	
WO-2-1	110	6		RAMP A	99+39	64.0' RT	1035.4	36	25		
WO-2-2	100	6		RAMP C2	794+14	24.5' LT	1044.2	36	25		
WO-2-3	110	6		RAMP B2	289+15	33.5' LT	1033.1	36	25		MAY ENCOUNTER ROCK AT 12.5'. SEE C&MS 625.10 FOR ADDITIONAL INFORMATION.
WO-2-4	110	6		I.R. 77 NB	484+17	35.4' LT	1040.4	36	25	B-076	
WO-2-5	100	6		I.R. 77 NB	477+88	32.5' LT	1050.8	36	20		
CH-1-1	100	6		I.R. 277	257+69	40.5' LT	1061.5	36	25		MAY ENCOUNTER ROCK AT 9'. SEE C&MS 625.10 FOR ADDITIONAL INFORMATION.
CH-1-2	110	6		RAMP B2	304+00	32.0' LT	1035.2	36	25		
CH-1-3	110	6		I.R. 77 NB	509+29	53.0' LT	1035.4	36	25		
CH-2-1	100	6		RAMP C1	685+28	39.0' LT	1067.1	36	25		MAY ENCOUNTER ROCK BETWEEN 10' AND 18'. SEE C&MS 625.10 FOR ADDITIONAL INFORMATION.
CH-2-2	110	6		RAMP C2	786+80	43.0' LT	1056.0	36	20		
CH-2-3	100	6		U.S. 224	268+74	48.0' RT	1092.1	36	25		
CH-2-4	90		3	RAMP C	603+27	16.1' RT	1107.0	36	25		
CH-2-5	90		3	U.S. 224	278+63	20.4' LT	1121.0	36	25	B-129	

NOTES:

1. OFFSETS TO LIGHT TOWERS ARE FROM THE NEAREST EOP.
2. ELEVATION IS FINISHED GRADE (EXISTING OR PROPOSED) AT TOWER FOUNDATION CENTERLINE. (NOTE: TOP OF FOUNDATION IS PER HL-20.21)
3. AT LOCATIONS WHERE THE SLOPE IS 6:1 OR GREATER, THE BURIED DEPTH OF FOUNDATION SHALL APPLY TO THE LOW SIDE OF THE SLOPE.
4. UNLESS INDICATED OTHERWISE, REFERENCE BORINGS ARE FROM 1979 HISTORIC BORINGS FOR HIGH MAST LIGHT TOWERS IDENTIFIED AS PROJECT 15115 IN TIMS.

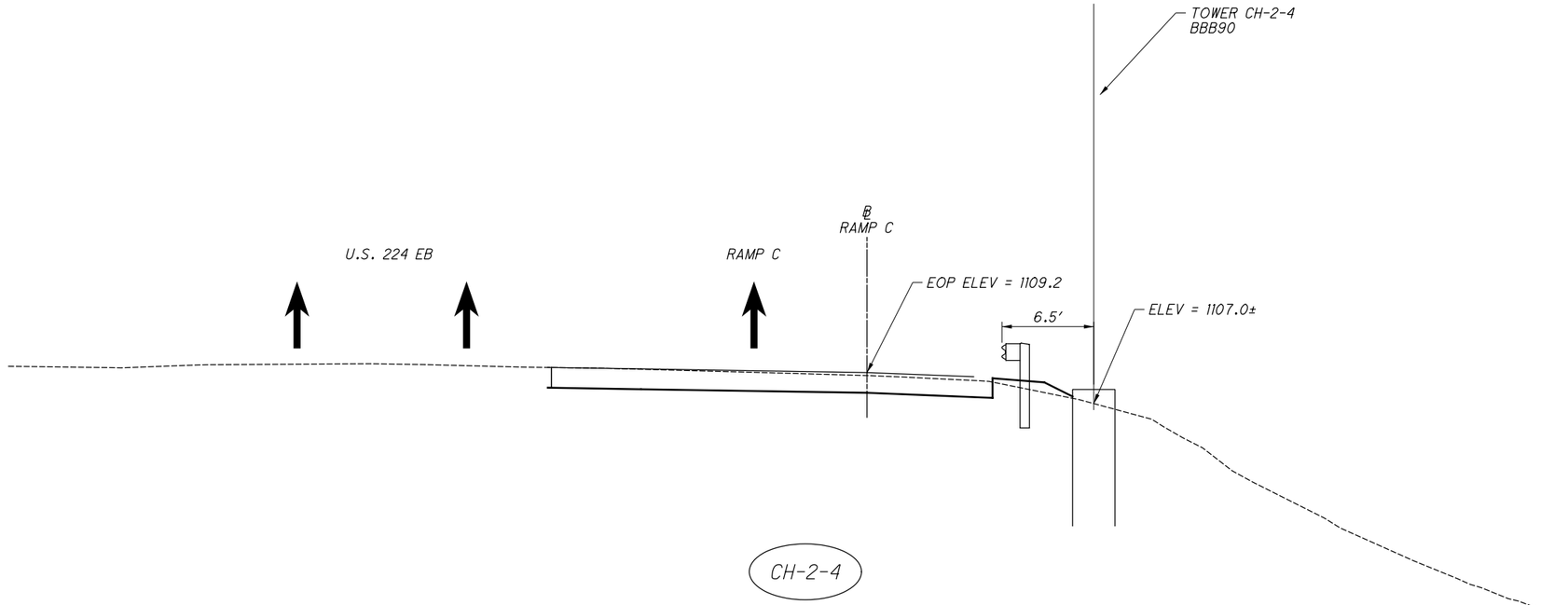
CALCULATED KWR
CHECKED DRB

LIGHT TOWER SCHEDULE

SUM-77 / 277 / 224
VARIOUS

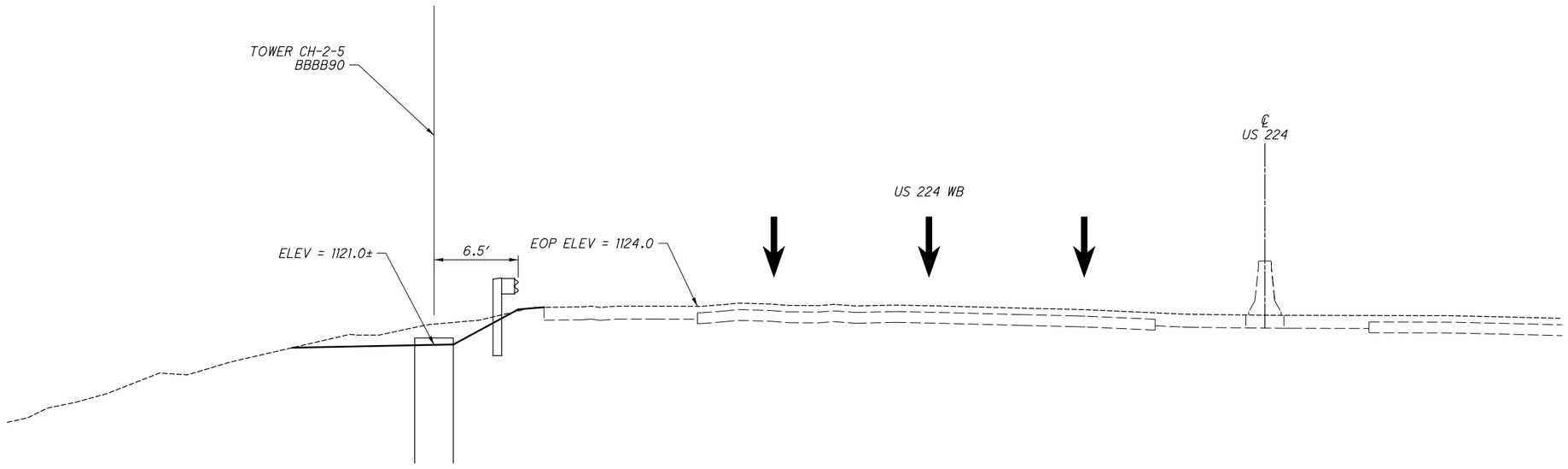
REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

10155
1288



CH-2-4

STA. 603+27 RAMP C, 16.1′ RT (E.O.P.)



CH-2-5

STA. 278+63 US 224, 20.4′ LT (E.O.P.)

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS
TOWER CH-2-4 & CH-2-5 ELEVATION

SUM-77/277/224
VARIOUS

1058
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\Lighting\Sheets\106002_LE203.dgn Sheet 4/28/2021 8:25 PM kryan

ESTIMATED QUANTITIES

CALCULATED BY: RHC DATE: 1-15-21
CHECKED BY: DGN DATE: 1-15-21

ITEM	EXT.	TOTAL	PARTICIPATION 05/IMR/BR	UNITS	DESCRIPTION	ABUTMENT	PIER	SUPER-STRUCTURE	GENERAL	REFERENCE SHEET NO.
202	11003	LS	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3
202	22900	156	156	SY	APPROACH SLAB REMOVED				156	
503	21100	502	502	CY	UNCLASSIFIED EXCAVATION	213	289			
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00100	400	400	FT	STEEL PILES HP10X42, FURNISHED	400				
507	00150	350	350	FT	STEEL PILES HP10X42, DRIVEN	350				
509	10000	223,559	223,559	LB	EPOXY COATED REINFORCING STEEL	13,190	97,512	112,857		
509	30020	12,353	12,353	FT	NO. 4 GFRP DEFORMED BARS			12,353		
511	34446	315	315	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			315		
511	34450	126	126	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			126		
511	44112	94	94	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	94				
511	45600	45	45	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE (PIER COLUMNS)		45			
511	46512	228	228	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	50	178			
511	53016	79	79	CY	CLASS QC4 CONCRETE, MISC.: INTEGRAL POST-TENSIONED PIER CAPS		79			
512	10100	1,213	1,213	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	112	198	903		
513	10301	658,400	658,400	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN			658,400		3
513	20000	5,001	5,001	EACH	WELDED STUD SHEAR CONNECTORS			5,001		
514	00060	27,500	27,500	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			27,500		
514	00066	27,500	27,500	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			27,500		
514	10000	42	42	EACH	FINAL INSPECTION REPAIR			42		
516	10010	29	29	FT	ARMORLESS PREFORMED JOINT SEAL				29	
516	11210	57	57	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				57	
518	21200	61	61	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	61				
518	40000	91	91	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	91				
518	40010	10	10	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE INCLUDING SPECIALS	10				
524	95445	18	18	FT	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK WITH QC/QA, AS PER PLAN	18				3
524	95453	34	34	FT	DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	34				3
524	95455	56	56	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK WITH QC/QA, AS PER PLAN		56			3
524	95463	218	218	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN		218			3
526	30010	194	194	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				194	
526	90010	26	26	FT	TYPE A INSTALLATION				26	
526	90030	29	29	FT	TYPE C INSTALLATION				29	
SPECIAL	53000200	LS	LS		STRUCTURES: TEMPORARY SUPPORT OF STEEL GIRDERS					3
◑ 601	20000	210	210	SY	CRUSHED AGGREGATE SLOPE PROTECTION				210	
846	00110	8	8	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				8	
855	00010	4,665	4,665	LB	POST-TENSIONING STRAND TENDON		4,665			
869	00101	8	8	EACH	HIGH LOAD MUTLI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN			8		3

◑ INCLUDED FOR PAYMENT WITH THE EROSION CONTROL QUANTITIES - SEE THE GENERAL SUMMARY.

REVISIONS

NO.	DATE	DESCRIPTION
1	04/28/21	REVISED ITEM 511 - BRIDGE DECK CONCRETE QUANTITY

DESIGN AGENCY
GPD GROUP®
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Akron, OH 44311 330.572.2100

DESIGNED RHC CHECKED DGN DRAWN JJB REVISED REVIEWED TJW DATE 1-18-21 STRUCTURE FILE NUMBER 7702648

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002