Andy Beshear
GOVERNOR

TRANSPORTATION CABINET
200 Mero Street
Frankfort, Kentucky 40601

Jim Gray
SECRETARY

October 24, 2023

CALL NO. 102
CONTRACT ID NO. 231341
ADDENDUM # 3

Subject: Fayette County, NH 2681(037)
Letting October 26, 2023

(1) Revised – Special Note – Pages 69-73 of 302
(2) Revised – Proposal Bid Items – Pages 292-302 of 302
(3) Revised Plan Sheets – T21, T77, T80, T82, T85, S006 for Item 28765 & S007 for Item 28766

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Rachel Mills,

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:mr
Enclosures

SPECIAL NOTE FOR NON-DESTRUCTIVE TESTING OF DRILLED SHAFTS

Fayette County
Item No. 7-00113.02
KY 4 Bridge over Norfolk Southern Railroad - Drawing No. 27061
KY 4 Bridge over US 421 (Leestown Road) - Drawing No. 27060

1.0 DESCRIPTION

Crosshole Sonic Logging (CSL) is a nondestructive method to test the integrity of drilled shafts. The Contractor will be responsible for supplying all equipment and materials necessary toperform this testing, and obtaining the services of a CSL Testing Firm using personnel experienced with CSL testing and approved by the Engineer to perform the testing.

1.1 The CSL tests must either be performed by or under the supervision of a responsible licensed professional engineer with:

- a minimum of three (3) years experience performing CSL tests, and
- experience performing CSL tests on a minimum of three (3) past projects with a scope and complexity similar to this project including a minimum of 60 drilled shafts in the past three (3) years.

If the responsible professional engineer does not perform the testing, then the responsible field technician who does perform the testing must meet the same experience requirements.

1.2 Preliminary Submittal - At least 21 calendar days before beginning drilled shaft construction, submit a technical proposal prepared by the CSL Testing Firm that documents the personnel's experience and addresses the testing procedures. Experience documentation should include resumes, references, certifications, project lists, experience descriptions and details, etc. Within 10 working days, the Engineer will review theproposal and report to the Contractor whether the CSL Testing Firm and personnel are approved and the proposal is acceptable.

1.3 The Contractor will be responsible for providing:

a. access tubes which will be used for CSL testing of the drilled shafts;
b. watertight shoes, watertight caps, and non-shrink grout;
c. suitable working space and access to every shaft;
d. a reliable 600 watt (minimum) generator; and
e. any other equipment or materials necessary to accomplish the testing.

Table 1 - Minimum Number of Access Tubes and CSL Logs

Shaft Diameter (inches)	Number of Tubes	Diagonal Logs	Perimeter Logs
30 to 36	3	NA	3
42 to 54	4	2	4
60 to 78	**6**	**3**	**6**
84 to 96	8	4	8

2.0 MATERIALS

2.1 Supply the number of access tubes shown in the plans or in Table 1. Provide access tubes meeting the requirements below. The Engineer will accept access tubes based on visual inspection and certification that the steel pipe meets the requirements below:

a. 2.0 inch ID schedule 40 steel pipe conforming to ASTM A 53, Grade A or B, Type E, F, or S;
b. contains round, regular internal diameters free of defects or obstructions, including any at pipe joints;
c. capable of permitting the free, unobstructed passage of ~~a~~ source andreceiver probes; and
d. watertight and free from corrosion with clean internal and external faces to ensure passage of the probes and a good bond between the concrete and the tubes.

2.2 Provide watertight shoes on the bottom and removable watertight caps on the top of the tubes.

2.3 Provide non-shrink grout to fill the access tubes and any cored holes at the completion of the CSL tests. Use grout conforming to Section 601.03.03 of the Standard Specifications.

3.0 CONSTRUCTION

3.1 Access Tube Installation

a. Install access tubes equally spaced around the perimeter of each of the drilled shafts.
b. Securely attach the tubes to the longitudinal reinforcement. Wire-tie the tubes a minimum of every 3 feet so they will stay in position during placement of rebar and concrete. Place the tubes so they will be parallel with each other and as near to vertical as possible in the finished shaft. Even moderate bending of the tubes will result in large regional variations in the data.
c. Place the tubes from 6 inches above the shaft tip to at least 3 feet above the top of shaft and at least 2 feet above ground level or top of casing. Under no circumstances may the tubes be allowed to come to rest on the bottom of the excavation.
d. Ensure that any joints in the tubes are watertight.
e. During placement of the reinforcement cage, exercise care so that the tubes will not be damaged to the extent that would prevent test probes from passing through them.
f. After placing the reinforcing cage and before beginning concrete placement, fill the tubes with clean potable water and cap or seal the tube tops to keep debris out of the tubes. Replace the watertight caps immediately after filling the tubes with water.
g. Before placing concrete, investigate at least one tube per shaft to make sure that there are no bends, crimps, obstructions or other impediments to the free passage of the testing probes.
h. During removal of the caps from the tubes, exercise care so as not to apply excess torque, hammering, or other stresses which could break the bond between the tubes and concrete.

i. After concrete placement and before the beginning of CSL testing, inspect the access tubes and report any access tubes that the test probes cannot pass through to the Engineer. The Engineer will make an evaluation to determine if the CSL testing can be successfully performed without the tube(s); the Engineer may require the contractor to, at its own expense, replace one or more tubes with 2-inch diameter holes cored through the concrete for the entire length of the shaft, excluding the bottom 6 inches. Unless directed otherwise by the Engineer, locate core holes approximately 6 inches inside the reinforcement such that it does not damage the reinforcement. For each core hole drilled, record a log with descriptions of inclusionsand voids in the cored holes and submit a copy of the log to the Engineer. Preserve the cores, identify as to location and make available for inspection by the Engineer.

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3.2 Grouting - After completion of the CSL testing and evaluation of results, and only after being directed to do so by the Engineer, remove the water from the access tubes and any cored holes, completely fill the tubes and holes with approved grout. After grouting, cut the tubes flush with the tops of the drilled shafts.

4.0 TESTING AND REPORTING

The Engineer may elect to reduce the amount of testing and will pay only for the authorized quantities.

4.1 Testing

a. Perform CSL testing according to ASTM D6760, “Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing”.
b. Provide access to the top of the shaft for testing personnel and equipment.
c. Perform CSL testing in accordance with generally accepted CSL Testing methods.
d. Obtain the minimum number of CSL logs shown in Table 1 unless otherwise directed by the Engineer.
e. Perform CSL testing on all completed shafts designated for testing by the Engineer, after the shaft concrete has cured at least 48 hours. Additional curing time may be necessary, depending on the concrete admixtures that are used.

4.2 Test Reports - Submit a test report prepared by the CSL Testing Firm and signed by the responsible professional engineer which, as a minimum, contains:

a. Pier No., Plan Shaft No., Station, Offset, and Top of Shaft Elevation;
b. Schematic showing a plan view of the access tube locations;
c. CSL logs presented for each tube pair tested with any defect zones indicated on the logs and discussed in the report as appropriate;
d. Analyses of initial pulse arrival time versus depth or velocity versus depth if requested by the Engineer; and
e. Analyses of pulse energy/amplitude versus depth.

4.3 Independent Comparison Tests - Consultants acting on behalf of the Department may perform independent comparison tests on the shafts tested by the Contractor's CSLTesting Firm.

5.0 EVALUATION OF TEST RESULTS

5.1 Allow direct communication between the CSL Testing Firm and the Department.

5.2 The Engineer will evaluate the CSL test results in the test report to determine whether or not the drilled shaft integrity is acceptable. Within 5 working days after receiving a test report, the Engineer will report to the Contractor whether the construction is acceptable or additional analyses are needed.

5.3 The Engineer will not require the Contractor to wait for CSL testing and evaluation to continue drilled shaft construction. However, if the CSL tests indicate that the integrity of any drilled shaft is questionable, the Engineer may direct the Contractor to suspend drilled shaft operations until the problem is resolved.

5.4 Continue with construction of the structure above the drilled shafts only after receiving written approval to do so, based on evaluation of the CSL test results.

5.5 If the CSL records are complex or inconclusive, the Engineer may require additional testing (such as Angled CSL, Crosshole Tomography, Singlehole Sonic Logging, orSonic Echo/Impulse Response, etc.) or concrete cores to sample the concrete in question to verify shaft conditions. If core samples are needed, obtain cores with a minimum diameter of 2 inches, unless directed otherwise by the Engineer. Unless directed otherwise by the Engineer, locate core holes approximately 6 inches inside the reinforcement such that they do not damage the reinforcement. For each core hole drilled, record a log with descriptions of inclusions and voids in the cored holes and submit a copy of the log to the Engineer. Place the cores in crates properly marked showing the shaft depth at each interval of core recovery. Transport the cores and logs to the Geotechnical Branch in Frankfort for inspection and testing. Grout the core holes in accordance with Section 3.2 above.

5.6 If the additional testing or evaluation of cores indicate that concrete for any drilled shaft on which additional testing or coring was required is acceptable, the Department will pay for the additional testing and concrete coring and grouting on a cost plus basis. If the additional testing or evaluations of cores indicate that the concrete for any drilled shaft concrete is unacceptable, the additional testing and concrete coring and grouting will be at the expense of the Contractor.

5.7 If defects are found, the original structural designer will perform structural analyses, at the expense of the Contractor, based on the design criteria established for the structure to assess the effects of the defects on the structural performance of the drilled shaft. If the results of the analyses indicate that there is conclusive evidence that the defects will result in inadequate or unsafe performance under the design loads, as defined by the design criteria for the structure, the Engineer will reject the shaft.

5.8 If any shaft is rejected, provide a plan for remedial action to the Engineer for approval. Any modifications to the foundation shafts and/or other substructure elements caused by the remedial action will require calculations and working drawings by the original structural designer, at the expense of the Contractor. Begin remediation operations only after receiving approval from the Engineer for the proposed remediation. All remedial action will be at no cost to the Department and with no extension of contract time.

6.0 METHOD OF MEASUREMENT

The Department will pay for the authorized and accepted quantities of "CSL Testing" at the contract unit price per each shaft tested (production and technique drilled shafts). This will constitute full compensation for all costs associated with providing access for testing personnel and equipment, performing the CSL Testing in a single shaft, and reporting the results to the Engineer.

Installation of CSL Access Tubing is incidental to the applicable contract unit bid price for Drilled Shaft, Common, and Drilled Shaft, Solid Rock. This will constitute all costs and delays associated with installing the CSL Access Tubing in a single shaft, including but not limited to providing and installing access tubing, providing and installing all required bracing for access tubes, providing and placing grout in access tubes.

The Department will pay using a change order for the direct cost of additional testing and concrete coring, authorized by the Engineer, required to investigate shafts with inconclusive CSL records if evaluation of the additional testing or cores indicates that concrete for that drilled shaft is acceptable. This will constitute full compensation for all costs and delays associated with performing additional tests, obtaining and delivering concrete cores to the Geotechnical Branch, and grouting core holes.

7.0 PAYMENT

The Department will pay for the completed and accepted quantities under the following:

Code	Pay Item	Unit
21321NC	CSL Testing (4 tubes)	Each

The Department will consider payment as full compensation for all work required under this Special Note.

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PROPOSAL BID ITEMS

Report Date 10/23/23

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	64,368.00	TON		$	
0020	00018		DRAINAGE BLANKET-TYPE II-ASPH	24,341.00	TON		$	
0030	00022		JPC PAVEMENT DRAINAGE BLANKET	97.00	TON		$	
0040	00100		ASPHALT SEAL AGGREGATE	156.00	TON		$	
0050	00103		ASPHALT SEAL COAT	20.00	TON		$	
0060	00190		LEVELING & WEDGING PG64-22	8,537.00	TON		$	
0070	00212		CL2 ASPH BASE 1.00D PG64-22	2,444.00	TON		$	
0080	00214		CL3 ASPH BASE 1.00D PG64-22	36,977.00	TON		$	
0090	00217		CL4 ASPH BASE 1.00D PG64-22	20,219.00	TON		$	
0100	00219		CL4 ASPH BASE 1.00D PG76-22	7,325.00	TON		$	
0110	00307		CL2 ASPH SURF 0.38B PG64-22	27.00	TON		$	
0120	00339		CL3 ASPH SURF 0.38D PG64-22	2,301.00	TON		$	
0130	00342		CL4 ASPH SURF 0.38A PG76-22	4,331.00	TON		$	
0140	00356		ASPHALT MATERIAL FOR TACK	255.00	TON		$	
0150	02069		JPC PAVEMENT-10 IN	251.00	SQYD		$	
0160	02101		CEM CONC ENT PAVEMENT-8 IN	19.00	SQYD		$	
0170	02604		FABRIC-GEOTEXTILE CLASS 1A	95,763.00	SQYD		$	
0180	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0190	02677		ASPHALT PAVE MILLING & TEXTURING	40,198.00	TON		$	
0200	08100		CONCRETE-CLASS A	177.00	CUYD		$	
0210	22906ES403		CL3 ASPH SURF 0.38A PG64-22	4,972.00	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0220	00021		DRAINAGE BLANKET-EMBANKMENT	860.00	CUYD		$	
0230	00078		CRUSHED AGGREGATE SIZE NO 2	34.00	TON		$	
0240	01000		PERFORATED PIPE-4 IN	17,732.00	LF		$	
0250	01001		PERFORATED PIPE-6 IN	1,874.00	LF		$	
0260	01010		NON-PERFORATED PIPE-4 IN	1,209.00	LF		$	
0270	01011		NON-PERFORATED PIPE-6 IN	104.00	LF		$	
0280	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS		$	
0290	01020		PERF PIPE HEADWALL TY 1-4 IN	5.00	EACH		$	
0300	01028		PERF PIPE HEADWALL TY 3-4 IN	23.00	EACH		$	
0310	01032		PERF PIPE HEADWALL TY 4-4 IN	6.00	EACH		$	
0320	01310		REMOVE PIPE	2,874.00	LF		$	
0330	01634		CAP CURB BOX INLET	7.00	EACH		$	
0340	01655		REMOVE JUNCTION BOX	1.00	EACH		$	
0350	01718		REMOVE INLET	20.00	EACH		$	
0360	01740		CORED HOLE DRAINAGE BOX CON-4 IN	106.00	EACH		$	
0370	01741		CORED HOLE DRAINAGE BOX CON-6 IN	13.00	EACH		$	
0380	01787		REMOVE MANHOLE	1.00	EACH		$	
0390	01810		STANDARD CURB AND GUTTER	12,980.00	LF		$	
0400	01825		ISLAND CURB AND GUTTER	1,285.00	LF		$	
0410	01830		STANDARD INTEGRAL CURB	684.00	LF		$	
0420	01880		BARRIER HEADER CURB	74.00	LF		$	

PROPOSAL BID ITEMS

Report Date 10/23/23

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0430	01923		STANDARD BARRIER MEDIAN TYPE 5	629.00	SQYD		$	
0440	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	43.00	EACH		$	
0450	01984		DELINEATOR FOR BARRIER - WHITE	401.00	EACH		$	
0460	01985		DELINEATOR FOR BARRIER - YELLOW	873.00	EACH		$	
0470	02001		CURB TO BARRIER WALL TRANS	4.00	EACH		$	
0480	02003		RELOCATE TEMP CONC BARRIER	31,080.00	LF		$	
0490	02006		REMOVE CONCRETE MEDIAN	188.00	LF		$	
0500	02014		BARRICADE-TYPE III	27.00	EACH		$	
0510	02159		TEMP DITCH	8,058.00	LF		$	
0520	02160		CLEAN TEMP DITCH	4,029.00	LF		$	
0530	02165		REMOVE PAVED DITCH	80.00	SQYD		$	
0540	02200		ROADWAY EXCAVATION	110,402.00	CUYD		$	
0550	02203		STRUCTURE EXCAV-UNCLASSIFIED	381.00	CUYD		$	
0560	02242		WATER	1,526.00	MGAL		$	
0570	02262		FENCE-WOVEN WIRE TYPE 1	886.00	LF		$	
0580	02265		REMOVE FENCE	3,514.00	LF		$	
0590	02274		FENCE-6 FT CHAIN LINK	354.00	LF		$	
0600	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH		$	
0610	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		$	
0620	02369		GUARDRAIL END TREATMENT TYPE 2A	3.00	EACH		$	
0630	02381		REMOVE GUARDRAIL	2,398.00	LF		$	
0640	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	2.00	EACH		$	
0650	02391		GUARDRAIL END TREATMENT TYPE 4A	4.00	EACH		$	
0660	02429		RIGHT-OF-WAY MONUMENT TYPE 1	30.00	EACH		$	
0670	02432		WITNESS POST	30.00	EACH		$	
0680	02483		CHANNEL LINING CLASS II	3,275.00	TON		$	
0690	02484		CHANNEL LINING CLASS III	378.00	TON		$	
0700	02545		CLEARING AND GRUBBING 59 ACRES	1.00	LS		$	
0710	02555		CONCRETE-CLASS B	440.00	CUYD		$	
0720	02562		TEMPORARY SIGNS	1,715.00	SQFT		$	
0730	02585		EDGE KEY	107.00	LF		$	
0740	02603		FABRIC-GEOTEXTILE CLASS 2	5,345.00	SQYD		$	
0750	02607		FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	29,736.00	SQYD	$2.00	$	$59,472.00
0760	02611		HANDRAIL-TYPE A-1	850.00	LF		$	
0770	02625		REMOVE HEADWALL	32.00	EACH		$	
0780	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0790	02671		PORTABLE CHANGEABLE MESSAGE SIGN	5.00	EACH		$	
0800	02690		SAFELOADING	98.00	CUYD		$	
0810	02696		SHOULDER RUMBLE STRIPS	27,066.00	LF		$	
0820	02701		TEMP SILT FENCE	8,058.00	LF		$	
0830	02703		SILT TRAP TYPE A	73.00	EACH		$	
0840	02704		SILT TRAP TYPE B	73.00	EACH		$	
0850	02705		SILT TRAP TYPE C	73.00	EACH		$	
0860	02706		CLEAN SILT TRAP TYPE A	73.00	EACH		$	
0870	02707		CLEAN SILT TRAP TYPE B	73.00	EACH		$	
0880	02708		CLEAN SILT TRAP TYPE C	73.00	EACH		$	
0890	02719		SIDEWALK-4 1/2 INCH CONCRETE	3,938.00	SQYD		$	

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PROPOSAL BID ITEMS

Report Date 10/23/23

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0900	02726		STAKING	1.00	LS		$	
0910	02731		REMOVE STRUCTURE - LEESTOWN ROAD DRAINAGE STRUCTURE STA 88+02	1.00	LS		$	
0920	02731		REMOVE STRUCTURE - TWIN BRIDGES OVER LEESTOWN ROAD	1.00	LS		$	
0930	02731		REMOVE STRUCTURE - TWIN BRIDGES OVER NORFOLK SOUTHERN	1.00	LS		$	
0940	02731		REMOVE STRUCTURE - LEESTOWN ROAD DRAINAGE STRUCTURE STA 110+11	1.00	LS		$	
0950	02898		RELOCATE CRASH CUSHION	8.00	EACH		$	
0960	03171		CONCRETE BARRIER WALL TYPE 9T	13,740.00	LF		$	
0970	03262		CLEAN PIPE STRUCTURE	5.00	EACH		$	
0980	04810		ELECTRICAL JUNCTION BOX	26.00	EACH		$	
0990	05950		EROSION CONTROL BLANKET	7,094.00	SQYD		$	
1000	05952		TEMP MULCH	85,765.00	SQYD		$	
1010	05953		TEMP SEEDING AND PROTECTION	64,330.00	SQYD		$	
1020	05963		INITIAL FERTILIZER	7.00	TON		$	
1030	05964		MAINTENANCE FERTILIZER	4.00	TON		$	
1040	05985		SEEDING AND PROTECTION	128,648.00	SQYD		$	
1050	05989		SPECIAL SEEDING CROWN VETCH	28,830.00	SQYD		$	
1060	05990		SODDING	2,594.00	SQYD		$	
1070	05992		AGRICULTURAL LIMESTONE	80.00	TON		$	
1080	06401		FLEXIBLE DELINEATOR POST-M/W	216.00	EACH		$	
1090	06404		FLEXIBLE DELINEATOR POST-M/Y	69.00	EACH		$	
1100	06511		PAVE STRIPING-TEMP PAINT-6 IN	260,100.00	LF		$	
1110	06610		INLAID PAVEMENT MARKER-MW	146.00	EACH		$	
1120	06612		INLAID PAVEMENT MARKER-BY	237.00	EACH		$	
1130	06613		INLAID PAVEMENT MARKER-B W/R	588.00	EACH		$	
1140	08901		CRASH CUSHION TY VI CLASS BT TL2	7.00	EACH		$	
1150	10020NS		FUEL ADJUSTMENT	221,494.00	DOLL	$1.00	$	$221,494.00
1160	10030NS		ASPHALT ADJUSTMENT	341,652.00	DOLL	$1.00	$	$341,652.00
1170	20099ES842		PAVE MARK TEMP PAINT STOP BAR	747.00	LF		$	
1180	20100ES842		PAVE MARK TEMP PAINT LINE ARROW	315.00	EACH		$	
1190	20394ES835		PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL	5,666.00	LF		$	
1200	20411ED		LAW ENFORCEMENT OFFICER	200.00	HOUR		$	
1210	20430ED		SAW CUT	12,037.00	LF		$	
1220	20432ES112		REMOVE CRASH CUSHION	2.00	EACH		$	
1230	21119ED		CONCRETE FORM LINER	343.00	SQYD		$	
1240	21288ND		CONC MEDIAN BARRIER TYPE 12C2-50 IN	762.00	LF		$	
1250	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	3,423.00	LF		$	
1260	22664EN		WATER BLASTING EXISTING STRIPE	232,050.00	LF		$	
1270	23158ES505		DETECTABLE WARNINGS	695.00	SQFT		$	
1280	23274EN11F		TURF REINFORCEMENT MAT 1	17.00	SQYD		$	
1290	23769EC		ROCK FENCE -REMOVE AND REBUILD	374.00	LF		$	
1300	23862EC		SILT TRAP TYPE B-PERM	5.00	EACH		$	
1310	24651ED		CONCRETE ISLAND	11.00	SQYD		$	
1320	24654ED		SINGLE SLOPE MEDIAN BARRIER	5,490.00	LF		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1325	24665EX		RAILROAD COORDINATION (ADDED 10-12-2023)	1.00	LS		$	
1330	24814EC		PIPELINE INSPECTION	11,828.00	LF		$	
1340	24845EC		UTILITY COORDINATION	1.00	LS		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1350	00440		ENTRANCE PIPE-15 IN	30.00	LF		$	
1360	00499		CULVERT PIPE-48 IN EQUIV	121.00	LF		$	
1370	00521		STORM SEWER PIPE-15 IN	3,197.00	LF		$	
1380	00522		STORM SEWER PIPE-18 IN	2,052.00	LF		$	
1390	00524		STORM SEWER PIPE-24 IN	2,546.00	LF		$	
1400	00526		STORM SEWER PIPE-30 IN	3,434.00	LF		$	
1410	00530		STORM SEWER PIPE-48 IN	133.00	LF		$	
1420	00981		SLOTTED DRAIN PIPE-15 IN	533.00	LF		$	
1430	01202		PIPE CULVERT HEADWALL-15 IN	2.00	EACH		$	
1440	01204		PIPE CULVERT HEADWALL-18 IN	4.00	EACH		$	
1450	01208		PIPE CULVERT HEADWALL-24 IN	1.00	EACH		$	
1460	01210		PIPE CULVERT HEADWALL-30 IN	1.00	EACH		$	
1470	01217		PIPE CULVERT HEADWALL-48 IN EQUIV	1.00	EACH		$	
1480	01374		METAL END SECTION TY 1-30 IN	1.00	EACH		$	
1490	01450		S & F BOX INLET-OUTLET-18 IN	1.00	EACH		$	
1500	01452		S & F BOX INLET-OUTLET-30 IN	1.00	EACH		$	
1510	01456		CURB BOX INLET TYPE A	60.00	EACH		$	
1520	01480		CURB BOX INLET TYPE B	4.00	EACH		$	
1530	01487		CURB BOX INLET TYPE F	1.00	EACH		$	
1540	01490		DROP BOX INLET TYPE 1	1.00	EACH		$	
1550	01496		DROP BOX INLET TYPE 3	3.00	EACH		$	
1560	01544		DROP BOX INLET TYPE 11	13.00	EACH		$	
1570	01568		DROP BOX INLET TYPE 13S	1.00	EACH		$	
1580	01580		DROP BOX INLET TYPE 15	2.00	EACH		$	
1590	01581		DROP BOX INLET TYPE 16G	2.00	EACH		$	
1600	01616		CONC MED BARR BOX INLET TY 14B1	7.00	EACH		$	
1610	01641		JUNCTION BOX-15 IN	1.00	EACH		$	
1620	01642		JUNCTION BOX-18 IN	1.00	EACH		$	
1630	01756		MANHOLE TYPE A	2.00	EACH		$	
1640	01767		MANHOLE TYPE C	1.00	EACH		$	
1650	01768		MANHOLE TYPE C MOD	1.00	EACH		$	
1660	01792		ADJUST MANHOLE	1.00	EACH		$	
1670	21800EN		BORE AND JACK PIPE-30 IN	60.00	LF		$	
1680	23126EN		BORE AND JACK PIPE-18 IN	249.00	LF		$	
1690	23332EC		BORE AND JACK PIPE-42 IN	93.00	LF		$	

Section: 0004 - BRIDGE - #27060 - NEW CIRCLE RD OVER LEESTOWN RD

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1700	01643		JUNCTION BOX-24 IN	3.00	EACH		$	
1710	02231		STRUCTURE GRANULAR BACKFILL	777.00	CUYD		$	
1720	03299		ARMORED EDGE FOR CONCRETE	249.30	LF		$	
1730	04741		POLE BASE IN MEDIAN WALL	1.00	EACH		$	
1740	04797		CONDUIT-3 IN	591.00	LF		$	
1750	08003		FOUNDATION PREPARATION	1.00	LS		$	
1760	08020		CRUSHED AGGREGATE SLOPE PROT	618.00	TON		$	
1770	08033		TEST PILES	60.00	LF		$	
1780	08039		PRE-DRILLING FOR PILES	546.70	LF		$	
1790	08046		PILES-STEEL HP12X53	583.00	LF		$	
1800	08094		PILE POINTS-12 IN	46.00	EACH		$	
1810	08100		CONCRETE-CLASS A	243.80	CUYD		$	
1820	08104		CONCRETE-CLASS AA	928.80	CUYD		$	
1830	08130		MECHANICAL REINF COUPLER #5	54.00	EACH		$	
1840	08133		MECHANICAL REINF COUPLER #8	34.00	EACH		$	
1850	08134		MECHANICAL REINF COUPLER #9	32.00	EACH		$	
1860	08137		MECHANICAL REINF COUPLER #14	86.00	EACH		$	
1870	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	28.00	EACH		$	
1880	08141		MECHANICAL REINF COUPLER #6 EPOXY COATED	790.00	EACH		$	
1890	08150		STEEL REINFORCEMENT	47,049.00	LB		$	
1900	08151		STEEL REINFORCEMENT-EPOXY COATED	277,267.00	LB		$	
1910	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
1920	20637ED		DRILLED SHAFT-ROCK 48 IN	70.00	LF		$	
1930	20743ED		DRILLED SHAFT 54 IN-SOLID ROCK	4.00	LF		$	
1940	20745ED		ROCK SOUNDINGS	39.20	LF		$	
1950	20746ED		ROCK CORINGS	157.50	LF		$	
1960	21321NC		CSL TESTING (4 TUBES)	7.00	EACH		$	
1970	22417EN		DRILLED SHAFT-54 IN-COMMON	35.70	LF		$	
1980	23378EC		CONCRETE SEALING	38,073.00	SQFT		$	
1990	23780EC		UNDERPASS LIGHTING	1.00	LS		$	
2000	23963EC		PPC I-BEAM TYPE HN 36-49	2,135.80	LF		$	
2010	24654ED		SINGLE SLOPE MEDIAN BARRIER	197.00	LF		$	
2020	25028ED		RAIL SYSTEM SINGLE SLOPE - 40 IN	394.00	LF		$	

Section: 0005 - BRIDGE - #27061 - NEW CIRCLE RD OVER NORFOLK SOUTHERN RAILR

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2030	01643		JUNCTION BOX-24 IN	4.00	EACH		$	
2040	02231		STRUCTURE GRANULAR BACKFILL	540.00	CUYD		$	
2050	02275		FENCE-8 FT CHAIN LINK	218.00	LF		$	
2060	03299		ARMORED EDGE FOR CONCRETE	259.90	LF		$	
2070	04741		POLE BASE IN MEDIAN WALL	2.00	EACH		$	
2080	04797		CONDUIT-3 IN	660.00	LF		$	
2090	08003		FOUNDATION PREPARATION	1.00	LS		$	
2100	08014		REINF CONC SLOPE WALL-4 IN	2,130.00	SQYD		$	
2110	08020		CRUSHED AGGREGATE SLOPE PROT	106.00	TON		$	
2120	08100		CONCRETE-CLASS A	371.90	CUYD		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2130	08104		CONCRETE-CLASS AA	1,011.10	CUYD		$	
2140	08130		MECHANICAL REINF COUPLER #5	40.00	EACH		$	
2150	08133		MECHANICAL REINF COUPLER #8	32.00	EACH		$	
2160	08137		MECHANICAL REINF COUPLER #14	170.00	EACH		$	
2170	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	16.00	EACH		$	
2180	08141		MECHANICAL REINF COUPLER #6 EPOXY COATED	876.00	EACH		$	
2190	08150		STEEL REINFORCEMENT	80,001.00	LB		$	
2200	08151		STEEL REINFORCEMENT-EPOXY COATED	421,346.00	LB		$	
2210	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
2220	20637ED		DRILLED SHAFT-ROCK 48 IN	55.00	LF		$	
2230	20745ED		ROCK SOUNDINGS	230.30	LF		$	
2240	20746ED		ROCK CORINGS	266.00	LF		$	
2250	21321NC		CSL TESTING (4 TUBES)	14.00	EACH		$	
2260	22585NN		MICROPILE PROOF TEST	4.00	EACH		$	
2270	23378EC		CONCRETE SEALING	44,933.00	SQFT		$	
2280	23583EC		DRILLED SHAFT-48 IN-COMMON	114.00	LF		$	
2290	23584EC		DRILLED SHAFT-42 IN-ROCK	98.00	LF		$	
2300	23963EC		PPC I-BEAM TYPE HN 36-49	2,379.70	LF		$	
2310	24006EC		MICROPILE VERIFICATION TEST	2.00	EACH		$	
2320	24405EC		MECHANICAL REINF COUPLER-#8 EPOXY COATED	4.00	EACH		$	
2330	24654ED		SINGLE SLOPE MEDIAN BARRIER	220.00	LF		$	
2340	25028ED		RAIL SYSTEM SINGLE SLOPE - 40 IN	440.00	LF		$	
2350	25034ED		MICROPILE BOND ZONE	46.00	EACH		$	
2360	26209EC		MICROPILES-9 5/8 IN-COMMON	1,158.00	LF		$	
2370	26210EC		MICROPILES-9 5/8 IN-SOLID ROCK	485.00	LF		$	

Section: 0006 - RCBC - #28763 - 5'X3' LEESTOWN RD STA 110+18.50

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2380	02403		REMOVE CONCRETE MASONRY	5.70	CUYD		$	
2390	08003		FOUNDATION PREPARATION	1.00	LS		$	
2400	08100		CONCRETE-CLASS A	11.10	CUYD		$	
2410	08150		STEEL REINFORCEMENT	1,470.00	LB		$	

Section: 0007 - BRIDGE - #28762 - LEESTOWN RD OVER LITTLE COWAN CREEK

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2420	02403		REMOVE CONCRETE MASONRY	9.90	CUYD		$	
2430	08003		FOUNDATION PREPARATION	1.00	LS		$	
2440	08100		CONCRETE-CLASS A	19.40	CUYD		$	
2450	08150		STEEL REINFORCEMENT	2,459.00	LB		$	

Section: 0008 - SOLDIER PILE RETAINING WALL - #28765 - NEW CIRCLE RD (RAMP C)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2460	02155		PAVED DITCH TYPE 1 MOD	83.00	SQYD		$	
2470	08001		STRUCTURE EXCAVATION-COMMON	604.00	CUYD		$	
2480	08018		RETAINING WALL	2,916.00	SQFT		$	
2490	08039		PRE-DRILLING FOR PILES	697.00	LF		$	
2500	21119ED		CONCRETE FORM LINER	303.00	SQYD		$	
2510	23378EC		CONCRETE SEALING	3,333.00	SQFT		$	
2520	24375EC		STRUCTURE EXCAVATION-SPECIAL SOLID ROCK	42.00	CUYD		$	
2530	26129EC		DECORATIVE HANDRAIL	240.00	LF		$	
2540	26200ED		PILES-STEEL W18 X 97	743.00	LF		$	

Section: 0009 - SOLDIER PILE RETAINING WALS - #28766 - NEW CIRCLE RD (RAMP G)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2550	02155		PAVED DITCH TYPE 1 MOD	97.00	SQYD		$	
2560	08001		STRUCTURE EXCAVATION-COMMON	626.00	CUYD		$	
2570	08018		RETAINING WALL	3,663.00	SQFT		$	
2580	08039		PRE-DRILLING FOR PILES	292.00	LF		$	
2590	08051		PILES-STEEL HP14X89	794.00	LF		$	
2600	21119ED		CONCRETE FORM LINER	364.00	SQYD		$	
2610	23378EC		CONCRETE SEALING	4,149.00	SQFT		$	
2620	24375EC		STRUCTURE EXCAVATION-SPECIAL SOLID ROCK	398.00	CUYD		$	
2630	26129EC		DECORATIVE HANDRAIL	280.00	LF		$	

Section: 0010 - SOUTH BARRIER WALLS - #28768 - NEW CIRCLE RD

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2640	08039		PRE-DRILLING FOR PILES	3,863.00	LF		$	
2650	08050		PILES-STEEL HP14X73	7,999.00	LF		$	
2660	21590EN		SOUND BARRIER WALL	63,756.00	SQFT		$	
2670	23378EC		CONCRETE SEALING	129,716.00	SQFT		$	

Section: 0011 - MSE RETAINING WALL - #28764 - NEW CIRCL RD

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2680	02203		STRUCTURE EXCAV-UNCLASSIFIED	16,438.00	CUYD		$	
2690	02223		GRANULAR EMBANKMENT	8,737.00	CUYD		$	
2700	02611		HANDRAIL-TYPE A-1	745.00	LF		$	
2710	08018		RETAINING WALL	12,851.00	SQFT		$	

Section: 0012 - UTILITY - COMMUNICATIONS FIBER OPTIC

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2720	04795		CONDUIT-2 IN	9,688.00	LF		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2730	04820		TRENCHING AND BACKFILLING	9,261.00	LF		$	
2740	17001		EC COMMUNICATIONS PULL BOX	22.00	EACH		$	
2750	21543EN		BORE AND JACK CONDUIT	427.00	LF		$	

Section: 0013 - SEWER

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2760	02690		SAFELOADING	53.40	CUYD		$	
2770	04871		POLE 35 FT WOODEN	1.00	EACH		$	
2780	04939		REMOVE POLE	1.00	EACH		$	
2790	15023		S ENCASEMENT STEEL OPEN CUT RANGE 4	155.00	LF		$	
2800	15029		S FORCE MAIN AIR RLS/VAC VLV SPCL	1.00	EACH		$	
2810	15068		S FORCE MAIN SPECIAL 30 INCH PVC	175.00	LF		$	
2820	15081		S FORCE MAIN TIE-IN SPECIAL 30 INCH	2.00	EACH		$	
2830	15092		S MANHOLE	18.00	EACH		$	
2840	15093		S MANHOLE ABANDON/REMOVE	10.00	EACH		$	
2850	15093		S MANHOLE ABANDON/REMOVE AIR VALVE VAULT	1.00	EACH		$	
2860	15094		S MANHOLE ADJUST TO GRADE AIR VALVE VAULT	1.00	EACH		$	
2870	15094		S MANHOLE ADJUST TO GRADE RAISED DURING ROADWAY CONSTRUCTION	2.00	EACH		$	
2880	15095		S MANHOLE CASTING STANDARD	21.00	EACH		$	
2890	15099		S MANHOLE TAP EXISTING	2.00	EACH		$	
2900	15101		S MANHOLE WITH DROP	2.00	EACH		$	
2910	15104		S PIPE DUCTILE IRON 08 INCH	200.00	LF		$	
2920	15112		S PIPE PVC 08 INCH	1,250.00	LF		$	
2930	15114		S PIPE PVC 12 INCH	178.00	LF		$	
2940	15593		S PIPE SPECIAL INST RECONNECT 8 INCH PVC - PARCEL 38	5.00	LF		$	

Section: 0014 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2950	04904		BARRIER MOUNTING BRACKET	2.00	EACH		$	
2960	06400		GMSS GALV STEEL TYPE A	10,747.00	LB		$	
2970	06405		SBM ALUMINUM PANEL SIGNS	2,957.75	SQFT		$	
2980	06406		SBM ALUM SHEET SIGNS .080 IN	810.56	SQFT		$	
2990	06407		SBM ALUM SHEET SIGNS .125 IN	1,398.25	SQFT		$	
3000	06410		STEEL POST TYPE 1	2,005.00	LF		$	
3010	06441		GMSS GALV STEEL TYPE C	11,397.00	LB		$	
3020	06448		SIGN BRIDGE ATTACHMENT BRACKET	2.00	EACH		$	
3030	06451		REMOVE SIGN SUPPORT BEAM	20.00	EACH		$	
3040	06490		CLASS A CONCRETE FOR SIGNS	70.00	CUYD		$	
3050	06491		STEEL REINFORCEMENT FOR SIGNS	3,528.00	LB		$	
3060	20418ED		REMOVE & RELOCATE SIGNS	3.00	EACH		$	
3070	20419ND		ROADWAY CROSS SECTION	3.00	EACH		$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3080	21373ND		REMOVE SIGN	2.00	EACH		$	
3090	21596ND		GMSS TYPE D	20.00	EACH		$	
3100	24631EC		BARCODE SIGN INVENTORY	255.00	EACH		$	

Section: 0015 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3110	04811		ELECTRICAL JUNCTION BOX TYPE B	4.00	EACH		$	
3120	04845		CABLE-NO. 14/7C	23,273.00	LF		$	
3130	04881		MAST ARM POLE	12.00	EACH		$	
3140	04886		MESSENGER-15400 LB	1,305.00	LF		$	
3150	04932		INSTALL STEEL STRAIN POLE	12.00	EACH		$	
3160	06472		INSTALL SPAN MOUNTED SIGN	30.00	EACH		$	
3170	20093NS835		INSTALL PEDESTRIAN HEAD-LED	44.00	EACH		$	
3180	20188NS835		INSTALL LED SIGNAL-3 SECTION	64.00	EACH		$	
3190	20189NS835		INSTALL LED SIGNAL-5 SECTION	1.00	EACH		$	
3200	20266ES835		INSTALL LED SIGNAL- 4 SECTION	9.00	EACH		$	
3210	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	6.00	EACH		$	
3220	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
3230	20631ND		INSTALL POLE MOUNTED SIGN	13.00	EACH		$	
3240	21743NN		INSTALL PEDESTRIAN DETECTOR	44.00	EACH		$	
3250	22631NN		INSTALL MAST ARM POLE	12.00	EACH		$	
3260	22939ND		INSTALL LUMINAIRE POLE	2.00	EACH		$	
3270	23157EN		TRAFFIC SIGNAL POLE BASE	112.07	CUYD		$	
3280	23206EC		INSTALL CONTROLLER CABINET	5.00	EACH		$	
3290	23235EC		INSTALL PEDESTAL POST	19.00	EACH		$	
3300	23982EC		INSTALL ANTENNA	5.00	EACH		$	
3310	24901EC		PVC CONDUIT-2 IN-SCHEDULE 80	1,109.00	LF		$	
3320	24902EC		PVC CONDUIT-3 IN-SCHEDULE 80	2,444.00	LF		$	
3330	24908EC		INSTALL SIGNAL CONTROLLER-TY ATC	5.00	EACH		$	
3340	24937EC		INSTALL EXTERNAL UPS SYSTEM CABINET	1.00	EACH		$	
3350	24955ED		REMOVE SIGNAL EQUIPMENT	6.00	EACH		$	
3360	26119EC		INSTALL RADAR PRESENCE DETECTOR TYPE A	32.00	EACH		$	

Section: 0016 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3370	01643		JUNCTION BOX-24 IN	34.00	EACH		$	
3380	04700		POLE 30 FT MTG HT	42.00	EACH		$	
3390	04701		POLE 40 FT MTG HT	59.00	EACH		$	
3400	04721		BRACKET 6 FT	8.00	EACH		$	
3410	04722		BRACKET 8 FT	4.00	EACH		$	
3420	04723		BRACKET 10 FT	33.00	EACH		$	
3430	04724		BRACKET 12 FT	8.00	EACH		$	
3440	04725		BRACKET 15 FT	14.00	EACH		$	
3450	04740		POLE BASE	90.00	EACH		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3460	04741		POLE BASE IN MEDIAN WALL	34.00	EACH		$	
3470	04750		TRANSFORMER BASE	67.00	EACH		$	
3480	04760		POLE W/SECONDARY CONTROL EQUIP (REVISED 10-23-23)	1.00	EACH		$	
3490	04761		LIGHTING CONTROL EQUIPMENT	2.00	EACH		$	
3500	04780		FUSED CONNECTOR KIT	140.00	EACH		$	
3510	04795		CONDUIT-2 IN	2,216.00	LF		$	
3520	04820		TRENCHING AND BACKFILLING	14,445.00	LF		$	
3530	04832		WIRE-NO. 12	16,920.00	LF		$	
3540	04833		WIRE-NO. 8	58,230.00	LF		$	
3550	04835		WIRE-NO. 4	7,830.00	LF		$	
3555	04940		REMOVE LIGHTING (ADDED 10-23-23)	1.00	LS		$	
3560	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	28.00	EACH		$	
3570	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	9.00	EACH		$	
3575	20410ED		MAINTAIN LIGHTING (ADDED 10-23-23)	1.00	LS		$	
3580	24589ED		LED LUMINAIRE	101.00	EACH		$	
3590	24900EC		PVC CONDUIT-1 1/4 IN-SCHEDULE 80	12,770.00	LF		$	

Section: 0017 - MISCELLANEOUS - MARKINGS & STRIPING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3600	06533		PAVE STRIPING REMOVAL-12 IN	1,038.00	LF		$	
3610	06542		PAVE STRIPING-THERMO-6 IN W	48,036.00	LF		$	
3620	06543		PAVE STRIPING-THERMO-6 IN Y	26,500.00	LF		$	
3630	06546		PAVE STRIPING-THERMO-12 IN W	3,757.00	LF		$	
3640	06547		PAVE STRIPING-THERMO-12 IN Y	53.00	LF		$	
3650	06566		PAVE MARKING-THERMO X-WALK-12 IN	4,260.00	LF		$	
3660	06568		PAVE MARKING-THERMO STOP BAR-24IN	1,010.00	LF		$	
3670	06573		PAVE MARKING-THERMO STR ARROW	53.00	EACH		$	
3680	06574		PAVE MARKING-THERMO CURV ARROW	78.00	EACH		$	
3690	06575		PAVE MARKING-THERMO COMB ARROW	18.00	EACH		$	
3700	06576		PAVE MARKING-THERMO ONLY	5.00	EACH		$	
3710	20782NS714		PAVE MARKING THERMO-BIKE	25.00	EACH		$	
3720	21417ES717		PAVE MARK THERMO CONE CAP-SOLID YELLOW	114.00	SQFT		$	
3730	23871EC		PAVE STRIPE-WET REF TAPE-6 IN Y	394.00	LF		$	
3740	23872EC		PAVE STRIPE-WET REF TAPE-6 IN W	591.00	LF		$	
3750	23875NC		REMOVE THERMOPLASTIC ARROWS	3.00	EACH		$	
3760	24386EC		PAVE MARKING THERMO-BIKE LANE ARROW	25.00	EACH		$	
3770	24679ED		PAVE MARK THERMO CHEVRON	1,565.00	SQFT		$	
3780	24683ED		PAVE MARKING-THERMO DOTTED LANE EXTEN	2,111.00	LF		$	
3790	24689EC		PAVE MARK THERMO-WRONG WAY ARROW	3.00	EACH		$	
3800	26192EC		PAVE MARKING-THERMO SHARED LANE MARKING	1.00	EACH		$	

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Section: 0018 - TRAFFIC LOOPS (ADDED 10-12-2023)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3801	04793		CONDUIT-1 1/4 IN	80.00	LF		$	
3802	04795		CONDUIT-2 IN	20.00	LF		$	
3803	04820		TRENCHING AND BACKFILLING	90.00	LF		$	
3804	04829		PIEZOELECTRIC SENSOR	6.00	EACH		$	
3805	04830		LOOP WIRE	2,650.00	LF		$	
3806	04895		LOOP SAW SLOT AND FILL	600.00	LF		$	
3807	20359NN		GALVANIZED STEEL CABINET	2.00	EACH		$	
3808	20360ES818		WOOD POST	4.00	EACH		$	
3809	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH		$	

Section: 0019 - TRAINEES

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3810	02742		TRAINEE PAYMENT REIMBURSEMENT GROUP 2, 3, 4 OPERATOR	1,400.00	HOUR		$	

Section: 0020 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3820	02568		MOBILIZATION	1.00	LS		$	
3830	02569		DEMOBILIZATION	1.00	LS		$	

ROADWAY LIGHTING ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
34	EACH	1643	JUNCTION BOX - 24 IN (MEDIAN JUNCTION BOX)
42	EACH	4700	POLE 30 FT MTG HT
59	EACH	4701	POLE 40 FT MTG HT
8	EACH	4721	BRACKET 6 FT
4	EACH	4722	BRACKET 8 FT
33	EACH	4723	BRACKET 10 FT
8	EACH	4724	BRACKET 12 FT
14	EACH	4725	BRACKET 15 FT
90	EACH	4740	POLE BASE
34	EACH	4741	POLE BASE IN MEDIAN WALL
67	EACH	4750	TRANSFORMER BASE
1	EACH	4760	POLE W/ SECONDARY CONTROL EQUIP
2	EACH	4761	LIGHTING CONTROL EQUIP
140	EACH	4780	FUSED CONNECTOR KIT
2216	LIN FT	4795	CONDUIT - 2 INCH
14445	LIN FT	4820	TRENCHING AND BACKFILLING
16920	LIN FT	4832	WIRE - NO. 12
58230	LIN FT	4833	WIRE - NO. 8
7830	LIN FT	4835	WIRE - NO. 4
1	L. SUM	4940	REMOVE LIGHTING
28	EACH	20391NS835	ELECTRICAL JUNCTION BOX TYPE A
9	EACH	20392NS835	ELECTRICAL JUNCTION BOX TYPE C
1	L. SUM	20410ED	MAINTAIN LIGHTING
101	EACH	24589ED	LED LUMINAIRE
12770	LIN FT	24900EC	PVC CONDUIT - 1 1/4 INCH - SCHEDULE 80

GENERAL LIGHTING NOTES

1. LIGHTING ON FUTURE CIRCUITS 1& 2 (LIGHING BETWEEN OPPORTUNITY WAY AND GREENDALE ROAD) AND ON FUTURE CIRCUITS 18, & 19 (LIGHTING BETWEEN TOWNE CENTER DRIVE AND LISLE INDUSTRIAL AVENUE) -
   KENTUCKY UTILITIES (KU) WILL INSTALL LIGHT POLES, LUMINAIRES, AND WIRE. THESE ITEMS ARE NOTED AS FUTURE ON THE LIGHTING PLAN SHEETS. THE CONTRACTOR INSTALLING POLE BASES SHALL CONFIRM THE ANCHOR BOLT PATTERN AND SIZE WITH KENTUCKY UTILITIES.

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND OTHER SPECIAL NOTES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 716 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPIRAL REINFORCEMENT SPLICING

THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE PROJECT SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS. SUBMISSIONS OF A BID WILL BE CONSIDERED AN AFFIRMATION OF THIS INSPECTION HAVING BEEN COMPLETED.

THE FOLLOWING DOES NOT APPLY TO CIRCUITS 1, 2, 18, & 19

ADD SENTENCE TO SECTION 834.06: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES : " PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

ADD SENTENCE TO SECTION 834.09: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES: " PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 716 AND 834

SUBSECTION: 716.03.03 TRENCHING.
REMOVE: REMOVE SENTENCE UNDER B): NO PAYMENT FOR ADDITIONAL JUNCTION BOXES FOR GREATER DEPTHS WILL BE ALLOWED.

SUBSECTION: 716.03.04 CONDUIT INSTALLATION
REVISION: ADD TO SECOND SENTENCE WITH THE FOLLOWING: BASES WITH BREAKWAY DEVICES INSTALLED.

SUBSECTION: 716.03.04 (K) BORE AND JACK.
REVISION: REPLACE TITLE WITH THE FOLLOWING: BORE AND JACK/OPEN CUT ROADWAY
ADD SENTENCES AFTER LAST SENTENCE: WITH PERMISSION OF THE ENGINEER, ROADWAY MAY BE OPEN CUT IF CONDUIT IS UNDER PAVEMENT. THE CONDUIT IN OPEN CUT CAN BE EITHER 2" RIDID STEEL OR SCHEDULE 80 PVC UNDER ALL PAVEMENTS AREAS. IF IT IS THE LOOP TRANSITION FROM THE SAW SLOT, IT SHALL BE RIGID STEEL.

SUBSECTION: 834.15.03 TRANSFORMER BASES.
REMOVE: REMOVE SENTENCE: CONSTRUCT THE DOOR OF A HIGH DENSITY POLYETHYLENE MATERIAL IN COLOR THAT MATCHES THE BASE.
REVISION: REPLACE THE FOLLOWING SENTENCE WITH THE FOLLOWING:
CONSTRUCT THE DOOR OF AN ALUMINUM MATERIAL IN A COLOR THAT MATCHES THE BASE. THERE SHALL BE A 4" BY 6" ARC FLASH WARNING STICKER INSTALLED CENTER TOP OF EACH DOOR. THE STICKER SHALL BE METALCRAFT PLY695 PREM STYLEMARK LABEL WITH .007 THICKNESS, WITH UV WHITE POLYCARBINATE MATERIAL, AND WITH MC53FL PRESSURE SENSITIVE ADHESIVE. THE STICKER SHALL HAVE TWO COLORS OF BLACK AND CUSTOM COLOR ORANGE. THE WORDING FOR THE ARC FLASH STICKER SHALL BE THE FOLLOWING: "WARNING ARC FLASH HAZARD. APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY CAN RESULT IN DEATH OR INJURY. REFER TO NFPA 70E."

SECTION: 834.15 LIGHTING POLES.

REVISION: ADD THE FOLLOWING TO THE FIRST PARAGRAGH:
THE CABINET WILL WAIVE THE REQUIREMENT STATED IN THE FIRST SENTENCE OF SECTION 5.14.6.2 - REINFORCED HOLES AND CUTOUT FOR HIGH MAST POLES (ONLY).

SECTION: 834.33 WARNING TAPE.

REVISION: REPLACE FIRST SENTENCE WITH THE FOLLOWING:
PROVIDE DETECTABLE TYPE TAPE THAT IS 6 INCHES WIDE AND 7.0 MILS (NOMINAL)THICK.

MEASUREMENT NOTE THAT ARE IN ADDITION TO SECTION 716:

WIRE OR CABLE SHALL INCLUDE INSTALLING SPECIFIED WIRE OR CABLE WITHIN CONDUIT AS INDICATED ON THE PLAN SHEETS. INCIDENTAL TO THIS ITEM SHALL BE THE FURNISHING AND INSTALLING OF SPLICE BOOTS OR ANY OTHER HARDWARE REQUIRED FOR INSTALLING CABLE. THE CONTRACTOR SHALL INSTALL ALL CABLE OR WIRE RUNS SPLICE-FREE FROM THE CONTROLLER TO EACH POLE THE CABLE OR WIRE IS FEEDING. EXCEPTIONS TO THIS MUST BE APPROVED BY THE ENGINEER OR AS SPECIFIED ON THE PLANS.

ROADWAY LIGHTING ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
34	EACH	1643	JUNCTION BOX - 24 IN (MEDIAN JUNCTION BOX)
42	EACH	4700	POLE 30 FT MTG HT
59	EACH	4701	POLE 40 FT MTG HT
8	EACH	4721	BRACKET 6 FT
4	EACH	4722	BRACKET 8 FT
33	EACH	4723	BRACKET 10 FT
8	EACH	4724	BRACKET 12 FT
14	EACH	4725	BRACKET 15 FT
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34	EACH	4741	POLE BASE IN MEDIAN WALL
67	EACH	4750	TRANSFORMER BASE
1	EACH	4760	POLE W/ SECONDARY CONTROL EQUIP
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140	EACH	4780	FUSED CONNECTOR KIT
2216	LIN FT	4795	CONDUIT - 2 INCH
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16920	LIN FT	4832	WIRE - NO. 12
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101	EACH	24589ED	LED LUMINAIRE
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GENERAL LIGHTING NOTES

1. LIGHTING ON FUTURE CIRCUITS 1& 2 (LIGHING BETWEEN OPPORTUNITY WAY AND GREENDALE ROAD) AND ON FUTURE CIRCUITS 18, & 19 (LIGHTING BETWEEN TOWNE CENTER DRIVE AND LISLE INDUSTRIAL AVENUE) -
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THE FOLLOWING DOES NOT APPLY TO CIRCUITS 1, 2, 18, & 19

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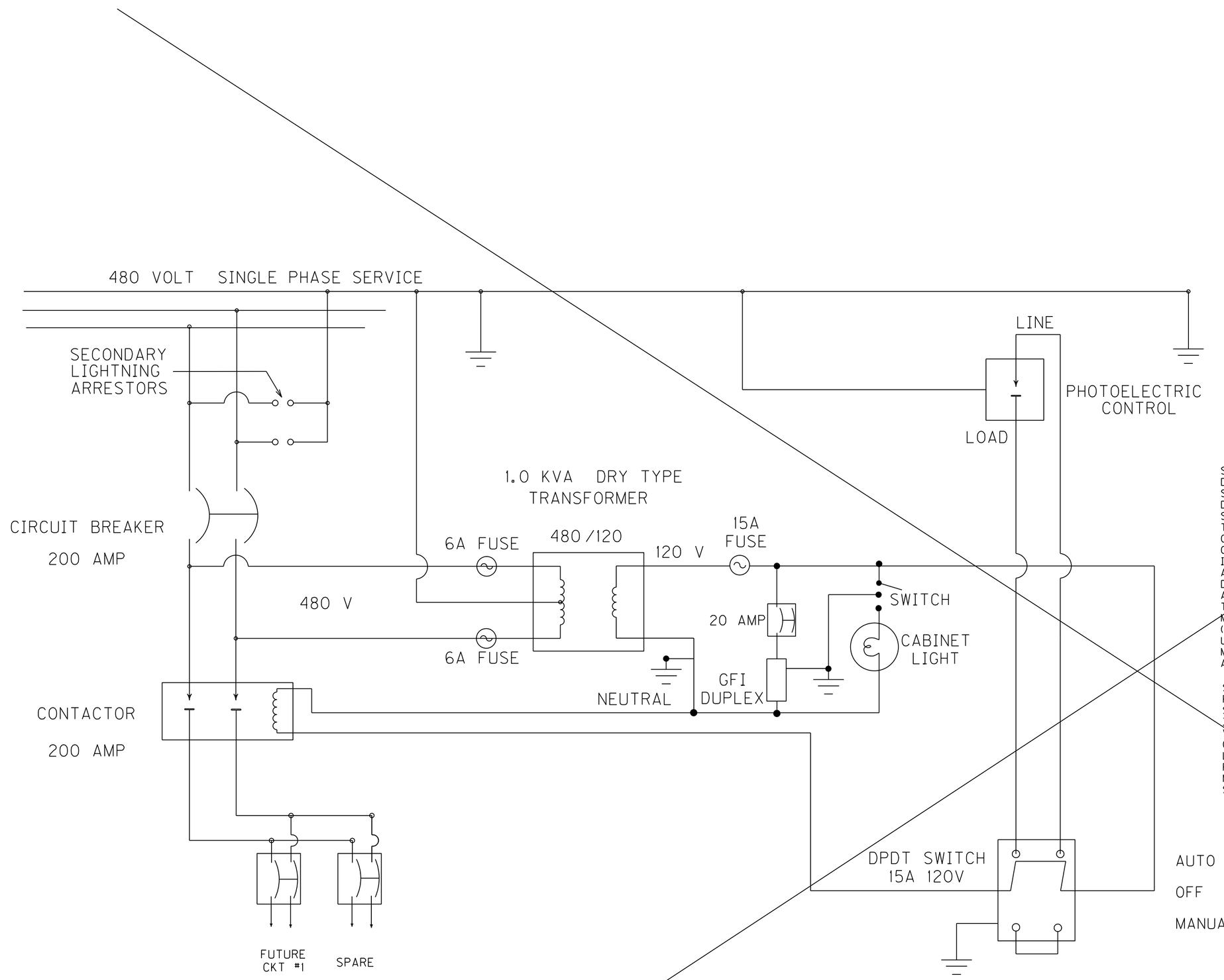
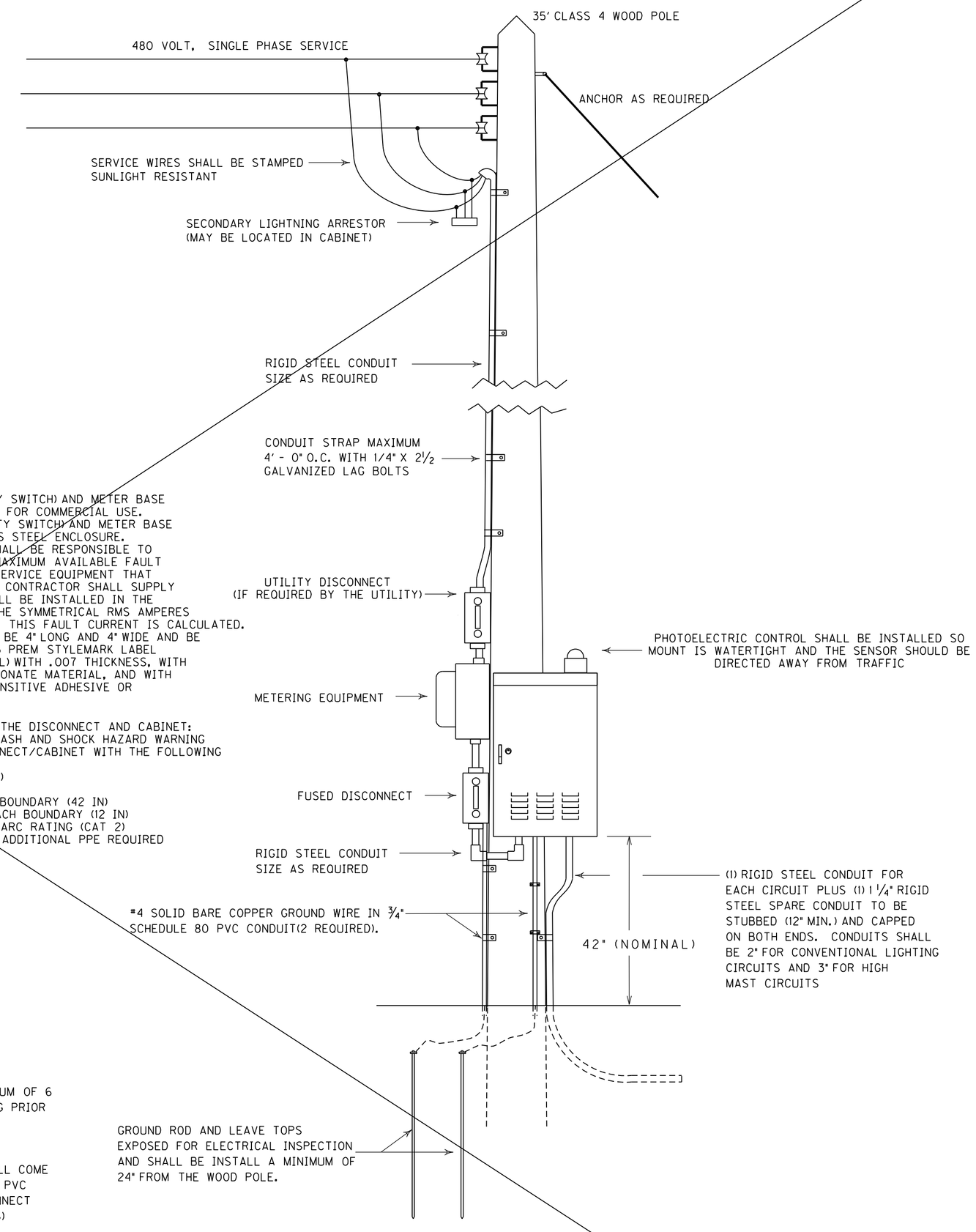




SPECIAL NOTE:
DISCONNECTS(SAFETY SWITCH) AND METER BASE SHALL BE UL RATED FOR COMMERCIAL USE. DISCONNECTS (SAFETY SWITCH) AND METER BASE SHALL BE STAINLESS STEEL ENCLOSURE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATED THE MAXIMUM AVAILABLE FAULT CURRENT FOR THE SERVICE EQUIPMENT THAT IS INSTALLED. THE CONTRACTOR SHALL SUPPLY A STICKER THAT WILL BE INSTALLED IN THE DISCONNECT WITH THE SYMMETRICAL RMS AMPERES AND THE DATE THAT THIS FAULT CURRENT IS CALCULATED. THE STICKER SHALL BE 4" LONG AND 4" WIDE AND BE METALCRAFT PLY425 PREM STYLEMARK LABEL (OR APPROVED EQUAL) WITH .007 THICKNESS, WITH UV WHITE POLYCARBONATE MATERIAL, AND WITH MC778 PRESSURE SENSITIVE ADHESIVE OR APPROVED EQUAL.

SPECIAL NOTE FOR THE DISCONNECT AND CABINET: FURNISH AN ARC FLASH AND SHOCK HAZARD WARNING STICKER ON DISCONNECT/CABINET WITH THE FOLLOWING INFORMATION:
VOLTAGE (480 VOLT)
GLOVE CLASS (0)
LIMITED APPROACH BOUNDARY (42 IN)
RESTRICTED APPROACH BOUNDARY (12 IN)
MINIMUM CLOTHING ARC RATING (CAT 2)
SEE NFPA 70E FOR ADDITIONAL PPE REQUIRED

GROUNDING REQUIREMENTS:

CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT, CABINET OR POLE.

SERVICE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE DISCONNECT AND THEN TO EACH RIGID STEEL (R S) GROUNDING BUSHING.

CABINET GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE CABINET GROUND BUS AND THEN TO EACH R S GROUNDING BUSHING.

NOTE:

ALL CONDUITS USED FOR GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED ON THE POLE AND/OR IN/TO THE CABINET ARE INCIDENTAL TO BID ITEM "4760". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE WOOD POLE.

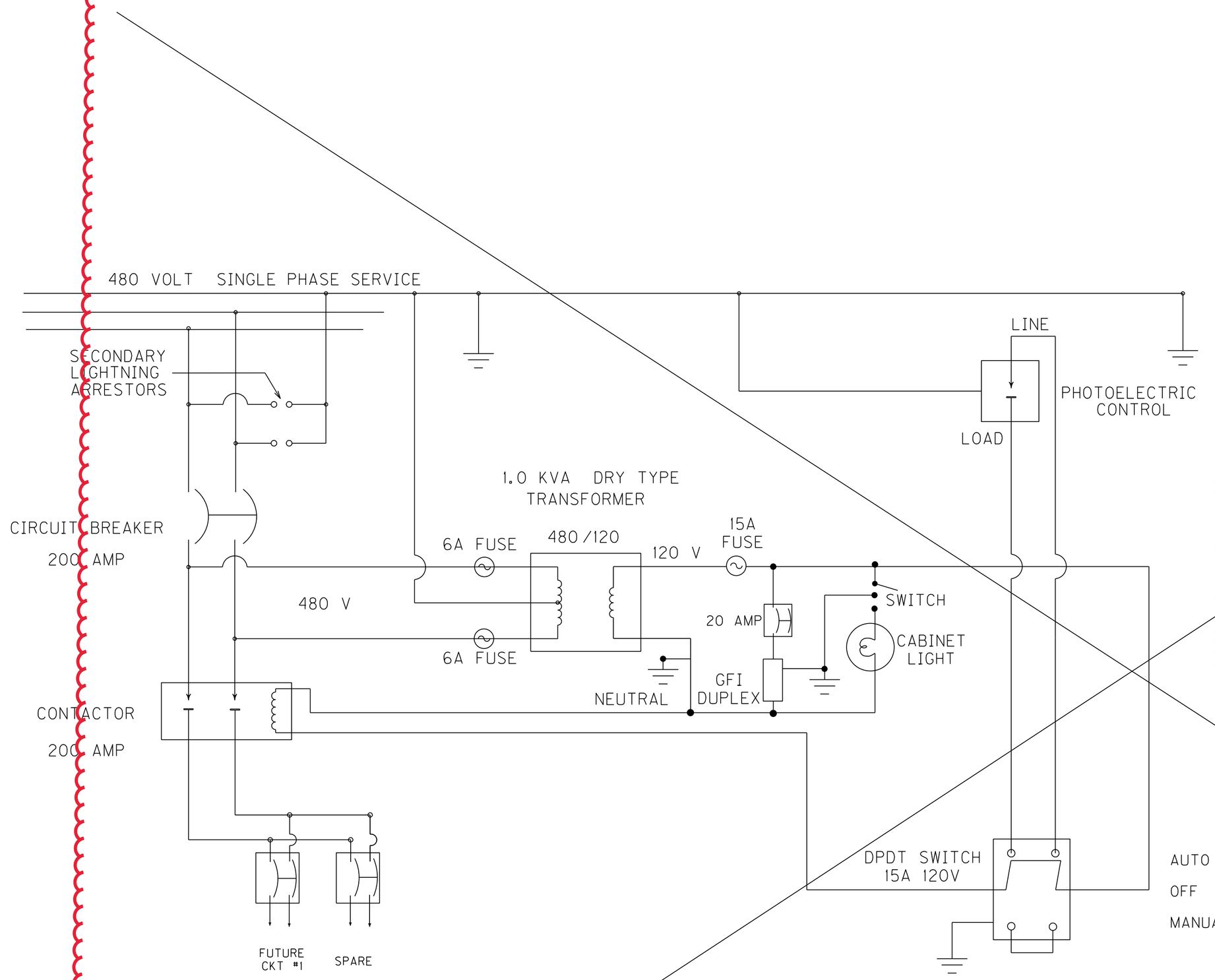
NOTE:
ALL LIGHTING CABINETS SHALL BE MANUFACTURE PER UL508A, AND THERE SHALL BE A PERMANENT LABEL ON THE OUTSIDE STATING THAT IT HAS THIS CERTIFICATION.

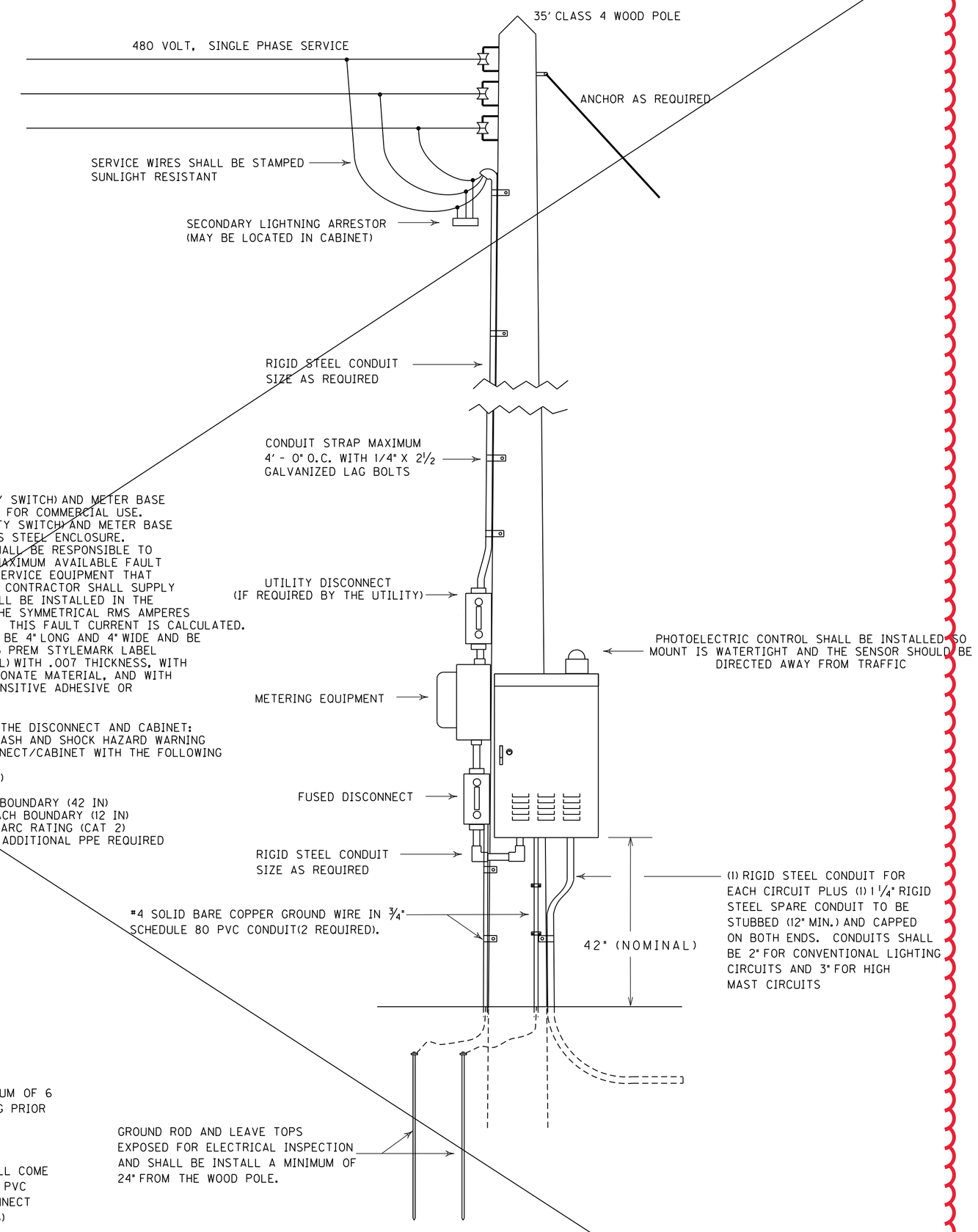
9/23/2021

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: SERVICE #1 POLE MOUNTED SERVICE DETAIL 480v

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T77





SPECIAL NOTE:
DISCONNECTS(SAFETY SWITCH) AND METER BASE SHALL BE UL RATED FOR COMMERCIAL USE. DISCONNECTS (SAFETY SWITCH) AND METER BASE SHALL BE STAINLESS STEEL ENCLOSURE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATED THE MAXIMUM AVAILABLE FAULT CURRENT FOR THE SERVICE EQUIPMENT THAT IS INSTALLED. THE CONTRACTOR SHALL SUPPLY A STICKER THAT WILL BE INSTALLED IN THE DISCONNECT WITH THE SYMMETRICAL RMS AMPERES AND THE DATE THAT THIS FAULT CURRENT IS CALCULATED. THE STICKER SHALL BE 4" LONG AND 4" WIDE AND BE METALCRAFT PLY425 PREM STYLEMARK LABEL (OR APPROVED EQUAL) WITH .007 THICKNESS, WITH UV WHITE POLYCARBONATE MATERIAL, AND WITH MC778 PRESSURE SENSITIVE ADHESIVE OR APPROVED EQUAL.

SPECIAL NOTE FOR THE DISCONNECT AND CABINET:
FURNISH AN ARC FLASH AND SHOCK HAZARD WARNING STICKER ON DISCONNECT/CABINET WITH THE FOLLOWING INFORMATION:
VOLTAGE (480 VOLT)
GLOVE CLASS (0)
LIMITED APPROACH BOUNDARY (42 IN)
RESTRICTED APPROACH BOUNDARY (12 IN)
MINIMUM CLOTHING ARC RATING (CAT 2)
SEE NFPA 70E FOR ADDITIONAL PPE REQUIRED

GROUNDING REQUIREMENTS:

CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT, CABINET OR POLE.

SERVICE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE DISCONNECT AND THEN TO EACH RIGID STEEL (R S) GROUNDING BUSHING.

CABINET GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE CABINET GROUND BUS AND THEN TO EACH R S GROUNDING BUSHING.

NOTE:

ALL CONDUITS USED FOR GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED ON THE POLE AND/OR IN/TO THE CABINET ARE INCIDENTAL TO BID ITEM "4760". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE WOOD POLE.

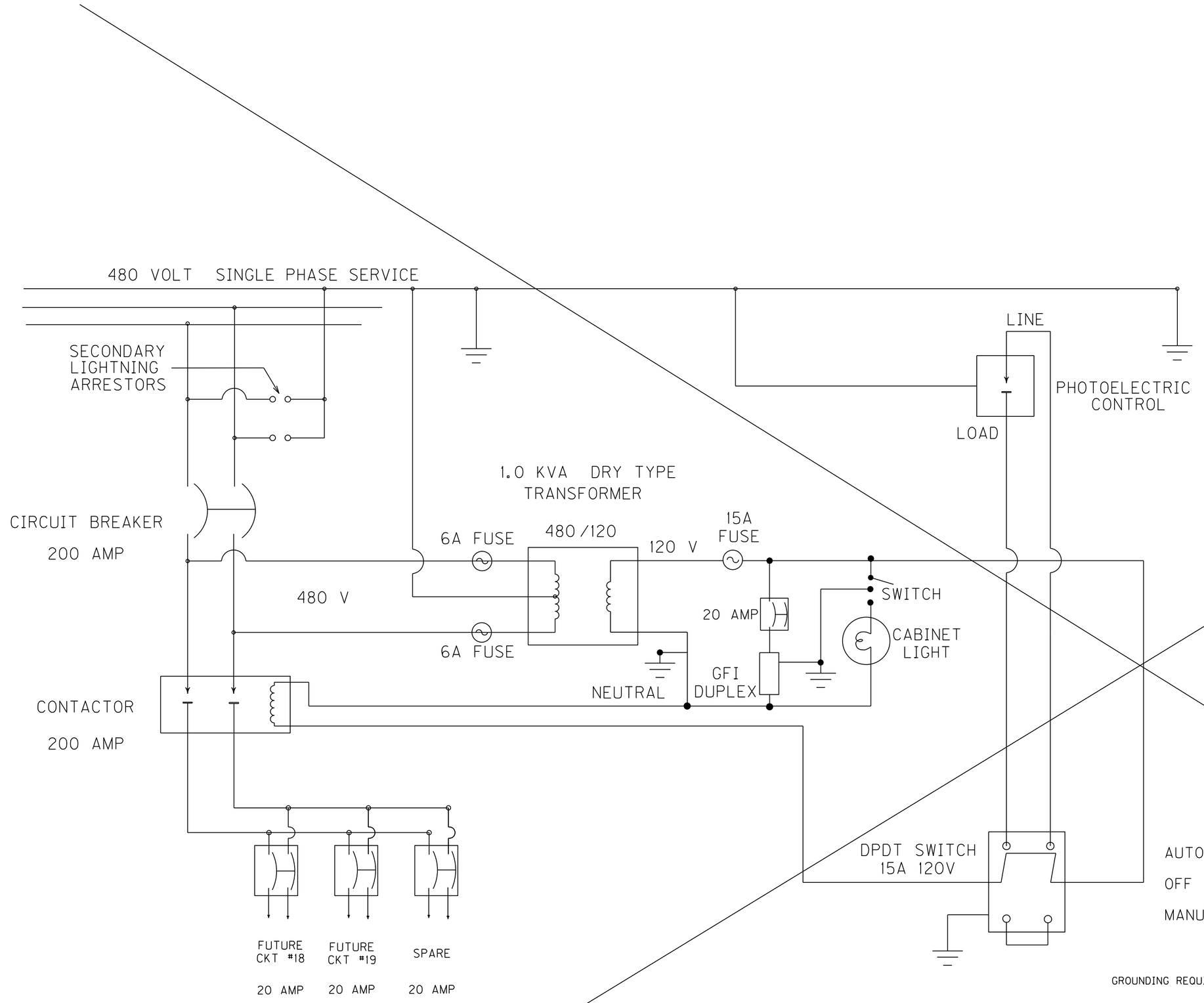
NOTE:
ALL LIGHTING CABINETS SHALL BE MANUFACTURE PER UL508A, AND THERE SHALL BE A PERMANENT LABEL ON THE OUTSIDE STATING THAT IT HAS THIS CERTIFICATION.

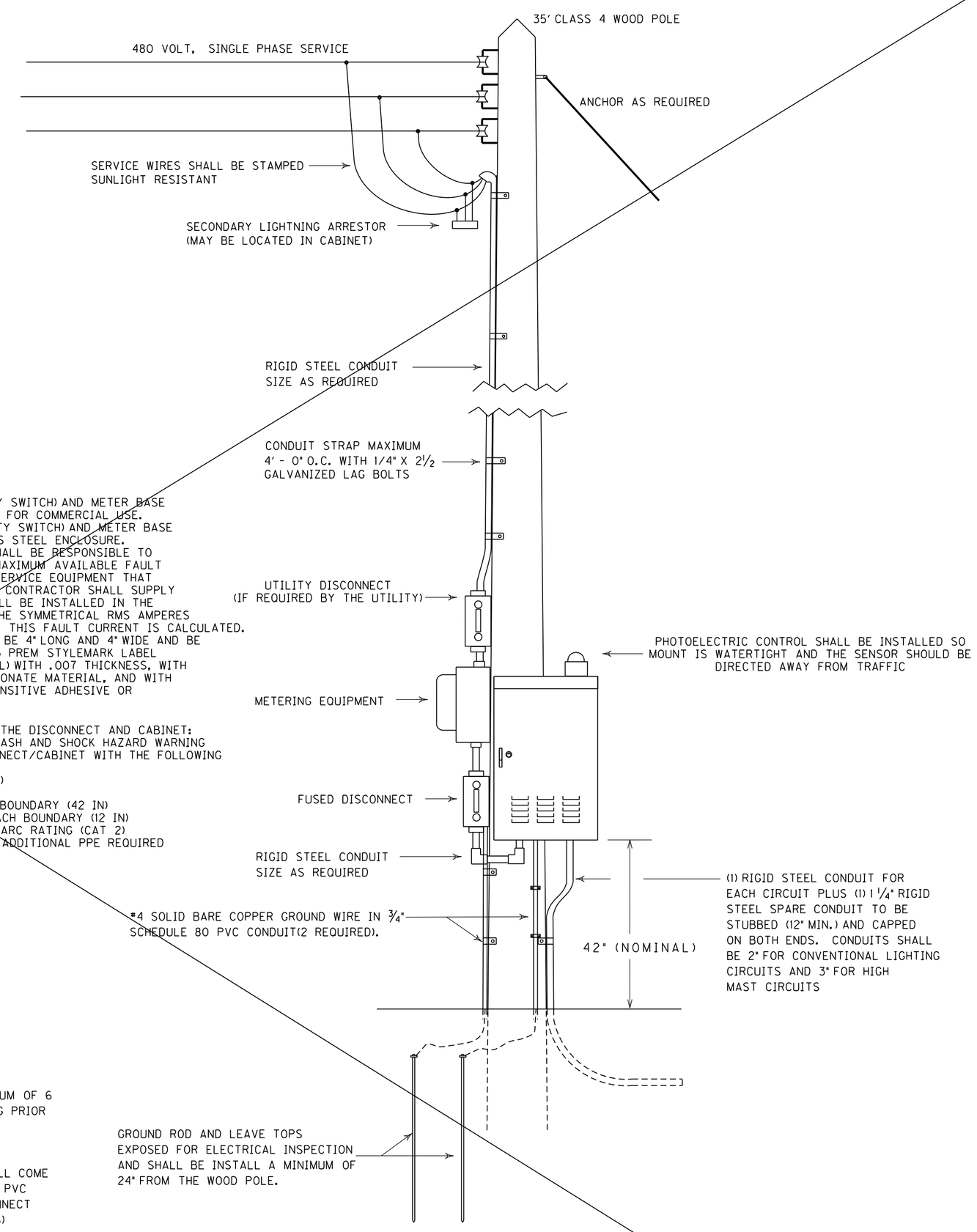
9/23/2021

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: SERVICE #1 POLE MOUNTED SERVICE DETAIL 480v

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T77





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DISCONNECTS(SAFETY SWITCH) AND METER BASE SHALL BE UL RATED FOR COMMERCIAL USE. DISCONNECTS (SAFETY SWITCH) AND METER BASE SHALL BE STAINLESS STEEL ENCLOSURE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATED THE MAXIMUM AVAILABLE FAULT CURRENT FOR THE SERVICE EQUIPMENT THAT IS INSTALLED. THE CONTRACTOR SHALL SUPPLY A STICKER THAT WILL BE INSTALLED IN THE DISCONNECT WITH THE SYMMETRICAL RMS AMPERES AND THE DATE THAT THIS FAULT CURRENT IS CALCULATED. THE STICKER SHALL BE 4" LONG AND 4" WIDE AND BE METALCRAFT PLY425 PREM STYLEMARK LABEL (OR APPROVED EQUAL) WITH .007 THICKNESS, WITH UV WHITE POLYCARBONATE MATERIAL, AND WITH MC778 PRESSURE SENSITIVE ADHESIVE OR APPROVED EQUAL.

SPECIAL NOTE FOR THE DISCONNECT AND CABINET:
FURNISH AN ARC FLASH AND SHOCK HAZARD WARNING STICKER ON DISCONNECT/CABINET WITH THE FOLLOWING INFORMATION:
VOLTAGE (480 VOLT)
GLOVE CLASS (0)
LIMITED APPROACH BOUNDARY (42 IN)
RESTRICTED APPROACH BOUNDARY (12 IN)
MINIMUM CLOTHING ARC RATING (CAT 2)
SEE NFPA 70E FOR ADDITIONAL PPE REQUIRED

GROUNDING REQUIREMENTS:

CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT, CABINET OR POLE.

SERVICE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE DISCONNECT AND THEN TO EACH RIGID STEEL (R S) GROUNDING BUSHING.

CABINET GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE CABINET GROUND BUS AND THEN TO EACH R S GROUNDING BUSHING.

NOTE:

ALL CONDUITS USED FOR GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED ON THE POLE AND/OR IN/TO THE CABINET ARE INCIDENTAL TO BID ITEM "4760". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE WOOD POLE.

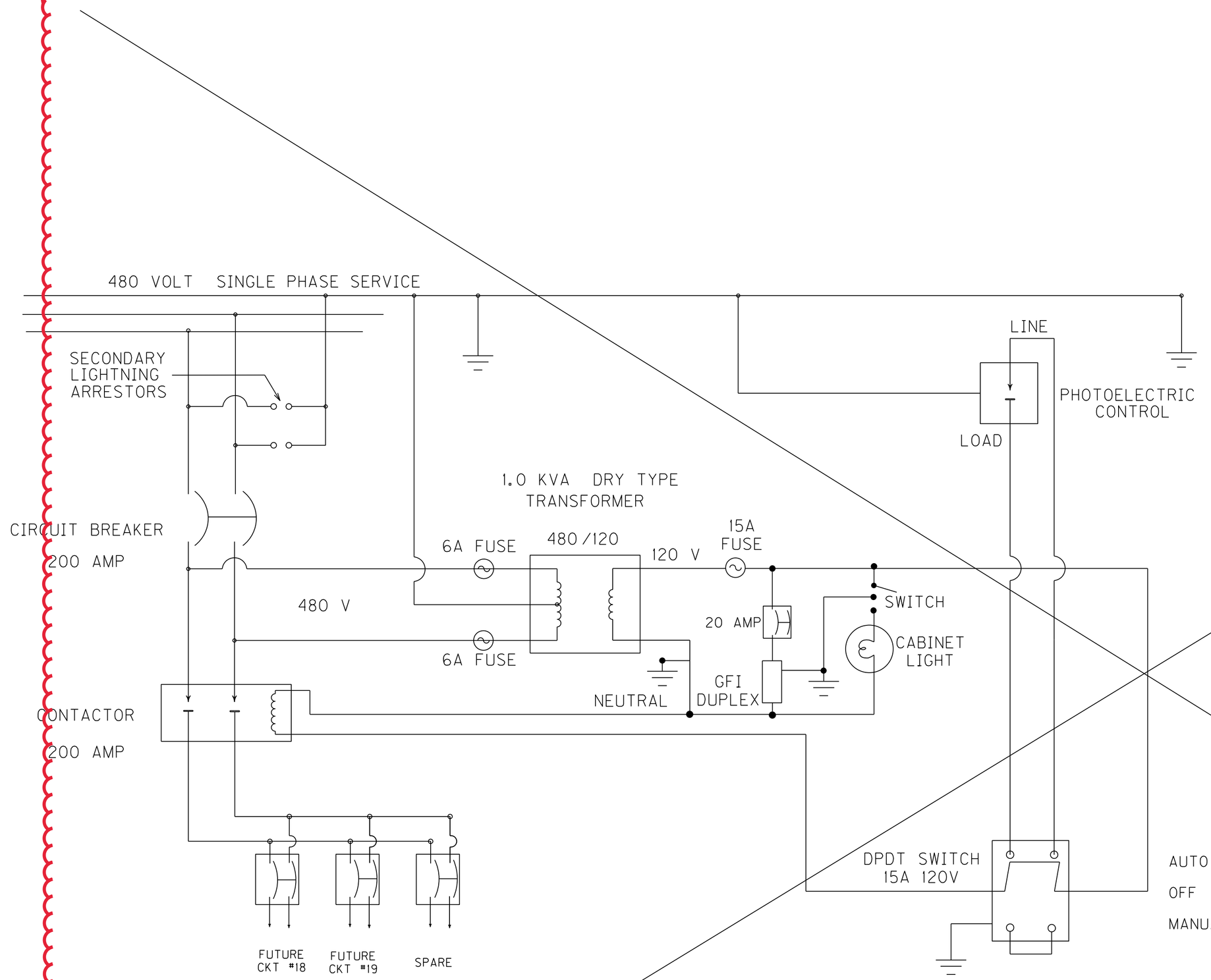
NOTE:
ALL LIGHTING CABINETS SHALL BE MANUFACTURE PER UL508A, AND THERE SHALL BE A PERMANENT LABEL ON THE OUTSIDE STATING THAT IT HAS THIS CERTIFICATION.

9/23/2021

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: SERVICE #4 POLE MOUNTED SERVICE DETAIL 480v

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T80



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SPECIAL NOTE FOR THE DISCONNECT AND CABINET:
FURNISH AN ARC FLASH AND SHOCK HAZARD WARNING STICKER ON DISCONNECT/CABINET WITH THE FOLLOWING INFORMATION:
VOLTAGE (480 VOLT)
GLOVE CLASS (0)
LIMITED APPROACH BOUNDARY (42 IN)
RESTRICTED APPROACH BOUNDARY (12 IN)
MINIMUM CLOTHING ARC RATING (CAT 2)
SEE NFPA 70E FOR ADDITIONAL PPE REQUIRED

GROUNDING REQUIREMENTS:

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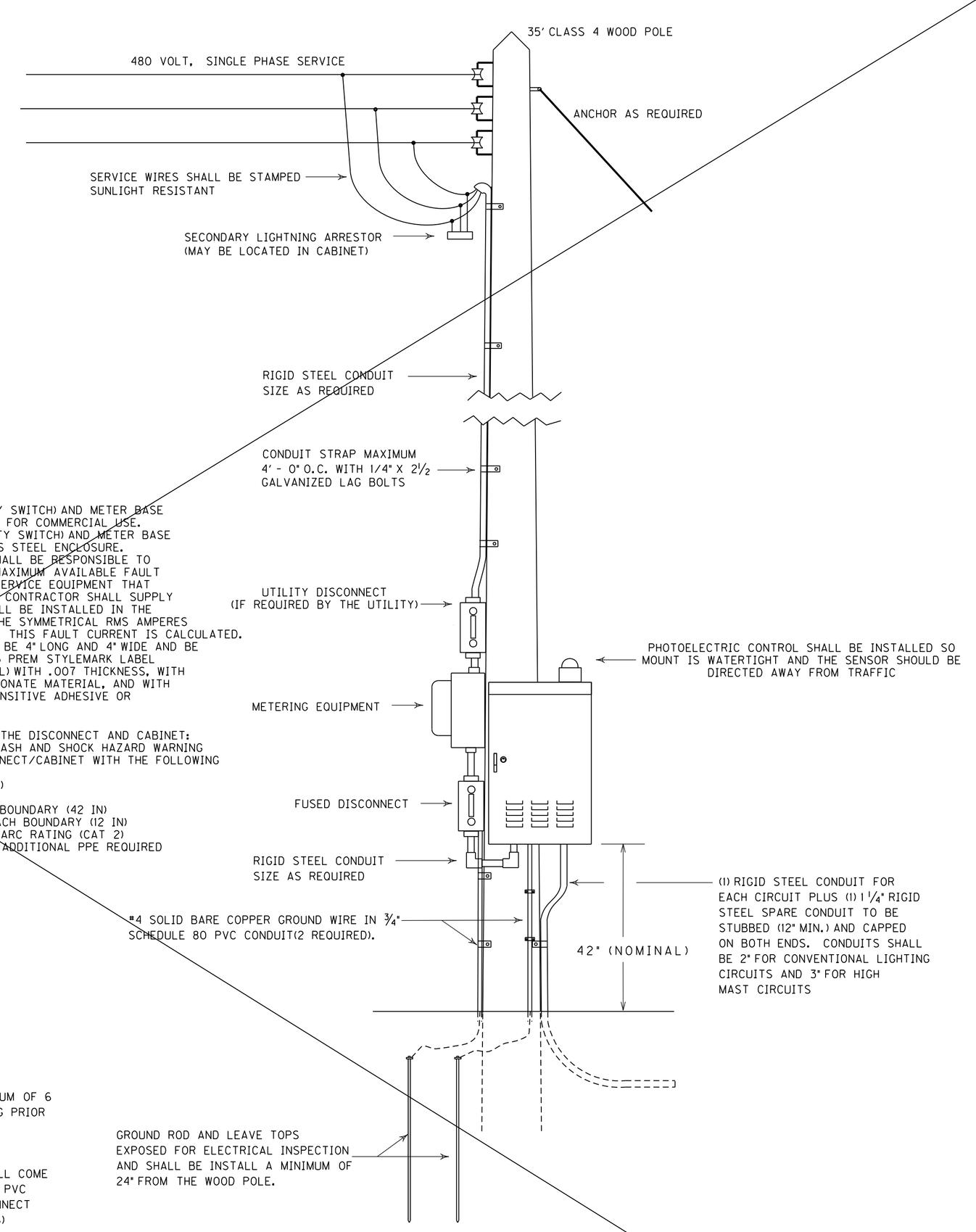
NOTE:

ALL CONDUITS USED FOR GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED ON THE POLE AND/OR IN/TO THE CABINET ARE INCIDENTAL TO BID ITEM "4760". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE WOOD POLE.



NOTE:
ALL LIGHTING CABINETS SHALL BE MANUFACTURE PER UL508A, AND THERE SHALL BE A PERMANENT LABEL ON THE OUTSIDE STATING THAT IT HAS THIS CERTIFICATION.

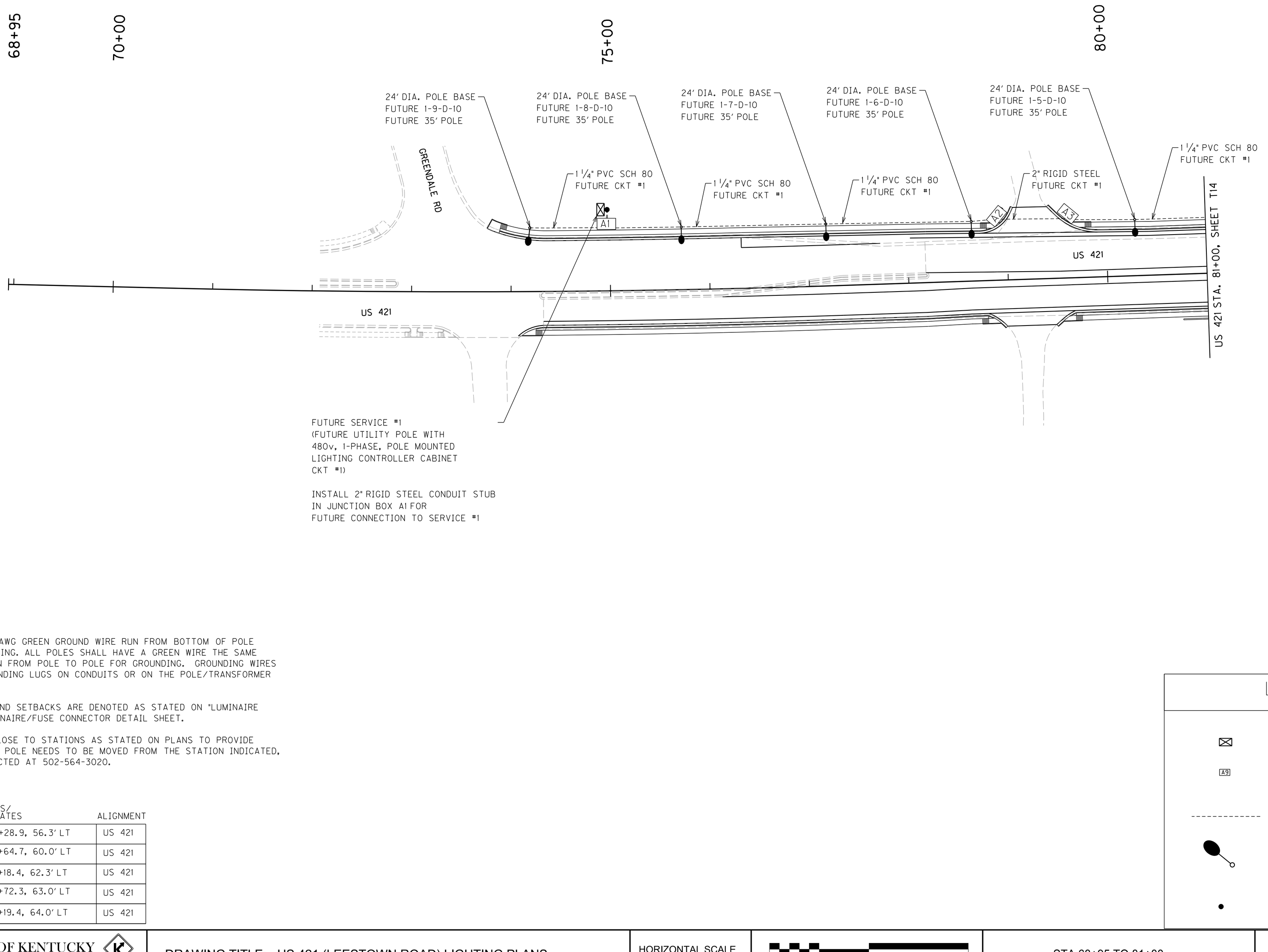
9/23/2021

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: SERVICE #4 POLE MOUNTED SERVICE DETAIL 480v

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T80



CONVENTIONAL LIGHTING:

ALL POLES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. ALL POLES SHALL HAVE A GREEN WIRE THE SAME SIZE AS THE CIRCUIT WIRE RUN FROM POLE TO POLE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

POLES SHALL BE PLACED AS CLOSE TO STATIONS AS STATED ON PLANS TO PROVIDE PROPER ILLUMINATION. IF ANY POLE NEEDS TO BE MOVED FROM THE STATION INDICATED, C.O. TRAFFIC SHALL BE CONTACTED AT 502-564-3020.

LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
FUTURE 1-5-D-10	STA. 80+28.9, 56.3' LT	US 421
FUTURE 1-6-D-10	STA. 78+64.7, 60.0' LT	US 421
FUTURE 1-7-D-10	STA. 77+18.4, 62.3' LT	US 421
FUTURE 1-8-D-10	STA. 75+72.3, 63.0' LT	US 421
FUTURE 1-9-D-10	STA. 74+19.4, 64.0' LT	US 421

LEGEND

- POLE MOUNTED CABINET
- A9 — JUNCTION BOXES - TYPES A, C & M (AS DESIGNATED)
- ---------- — 1 1/4" PVC SCH 80 CONDUIT (UNLESS OTHERWISE NOTED)
- LUMINAIRE POLE
- NEW 35 FT. WOOD SERVICE POLE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: US 421 (LEESTOWN ROAD) LIGHTING PLANS

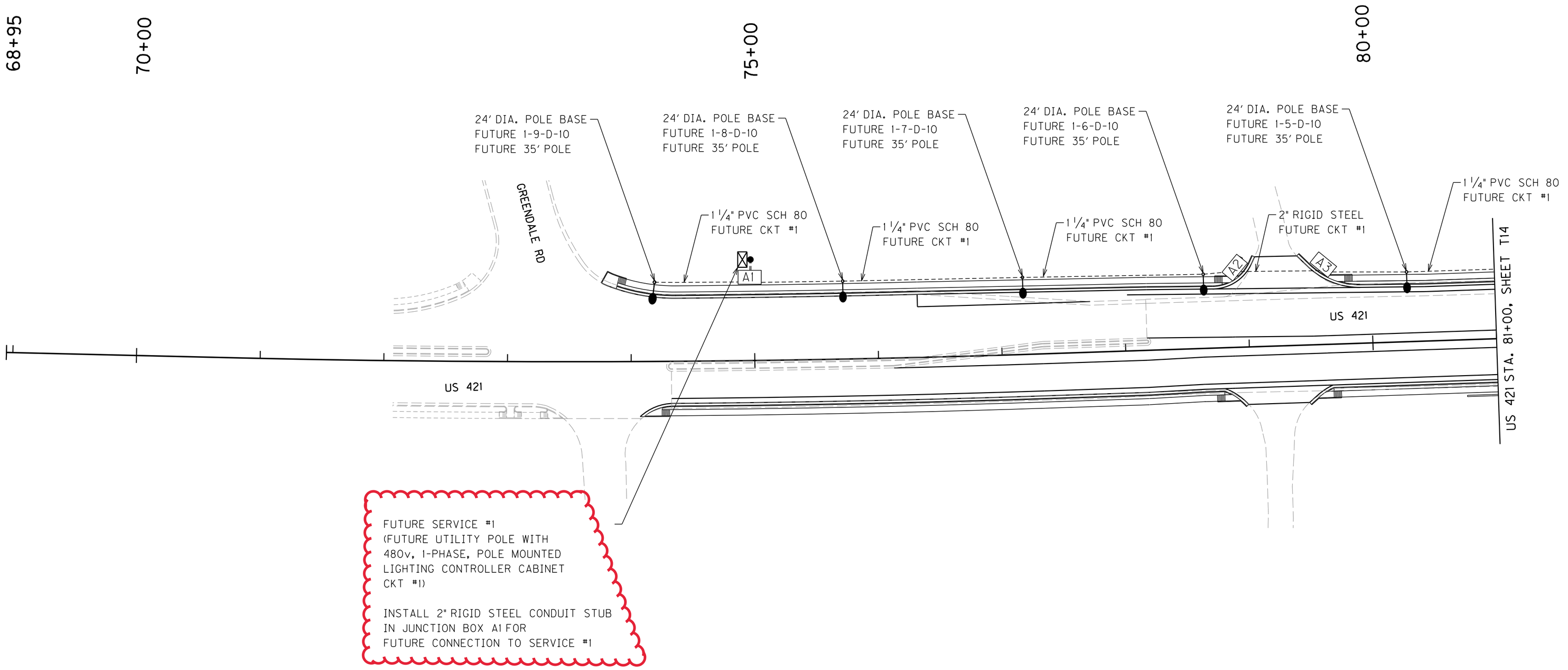
HORIZONTAL SCALE
SCALE: 1" = 50'

0' 50' 100' 200'

STA 68+95 TO 81+00

ITEM NO. 7-113.02 COUNTY OF FAYETTE

SHEET NO. T82



CONVENTIONAL LIGHTING:

ALL POLES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. ALL POLES SHALL HAVE A GREEN WIRE THE SAME SIZE AS THE CIRCUIT WIRE RUN FROM POLE TO POLE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

POLES SHALL BE PLACED AS CLOSE TO STATIONS AS STATED ON PLANS TO PROVIDE PROPER ILLUMINATION. IF ANY POLE NEEDS TO BE MOVED FROM THE STATION INDICATED, C.O. TRAFFIC SHALL BE CONTACTED AT 502-564-3020.

LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
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LEGEND

- POLE MOUNTED CABINET
- A9 — JUNCTION BOXES - TYPES A, C & M (AS DESIGNATED)
- ---------- — 1 1/4" PVC SCH 80 CONDUIT (UNLESS OTHERWISE NOTED)
- LUMINAIRE POLE
- NEW 35 FT. WOOD SERVICE POLE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

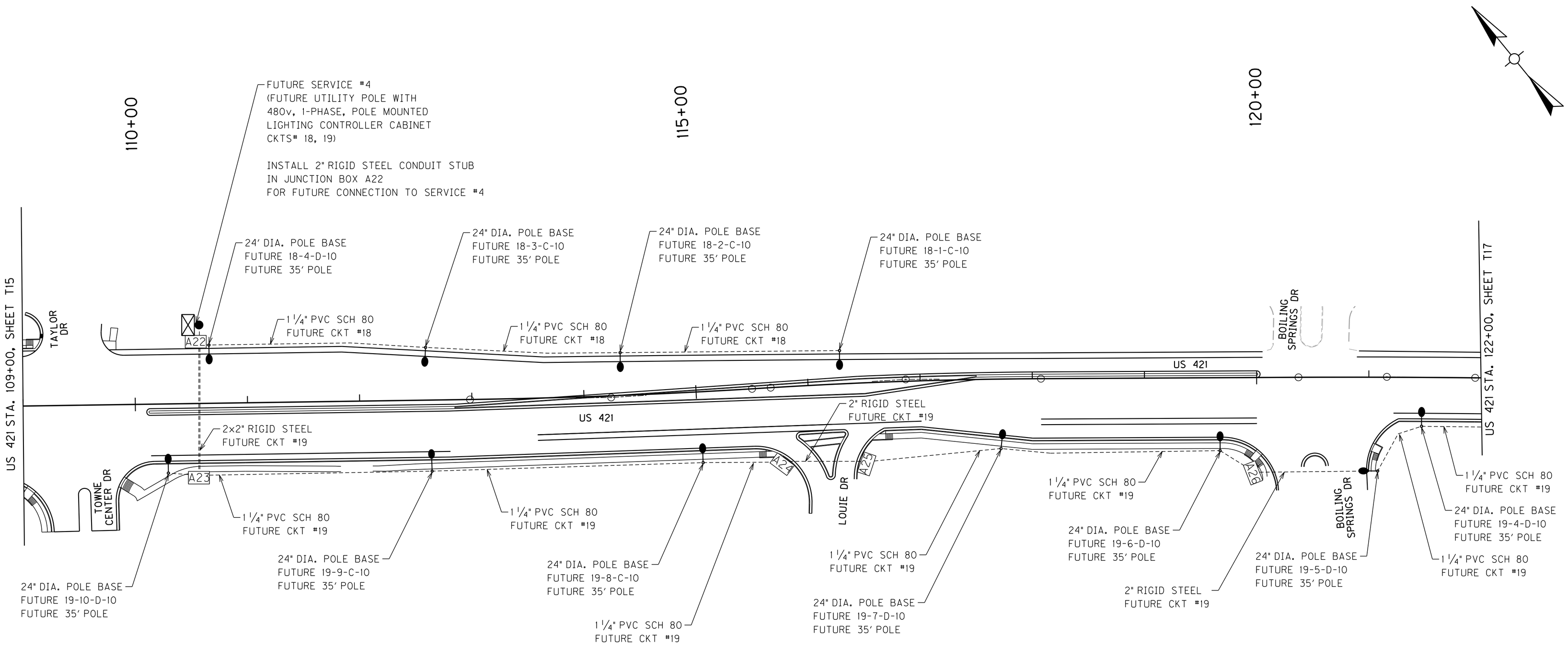
DRAWING TITLE: US 421 (LEESTOWN ROAD) LIGHTING PLANS

HORIZONTAL SCALE
SCALE: 1" = 50'

0' 50' 100' 200'

STA 68+95 TO 81+00

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T82



LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
FUTURE 18-1-C-10	STA. 116+29.4, 29.7' LT	US 421
FUTURE 18-2-C-10	STA. 114+33.8, 38.1' LT	US 421
FUTURE 18-3-C-10	STA. 112+59.4, 47.0' LT	US 421
FUTURE 18-4-D-10	STA. 110+66.4, 52.0 LT	US 421
FUTURE 19-4-D-10	STA. 121+47.2, 43.6' RT	US 421
FUTURE 19-5-D-10	STA. 121+08.0, 83.6' RT	US 421
FUTURE 19-6-D-10	STA. 119+67.1, 65.0' RT	US 421
FUTURE 19-7-D-10	STA. 117+71.3, 61.9' RT	US 421
FUTURE 19-8-C-10	STA. 115+03.0, 63.2' RT	US 421
FUTURE 19-9-C-10	STA. 112+63.7, 63.4' RT	US 421
FUTURE 19-10-D-10	STA. 110+28.6, 52.0 RT	US 421

CONVENTIONAL LIGHTING:

ALL POLES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. ALL POLES SHALL HAVE A GREEN WIRE THE SAME SIZE AS THE CIRCUIT WIRE RUN FROM POLE TO POLE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

POLES SHALL BE PLACED AS CLOSE TO STATIONS AS STATED ON PLANS TO PROVIDE PROPER ILLUMINATION. IF ANY POLE NEEDS TO BE MOVED FROM THE STATION INDICATED, C.O. TRAFFIC SHALL BE CONTACTED AT 502-564-3020.

LEGEND

- POLE MOUNTED CABINET
- A9 — JUNCTION BOXES - TYPES A, C & M (AS DESIGNATED)
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- LUMINAIRE POLE
- NEW 35 FT. WOOD SERVICE POLE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: US 421 (LEESTOWN ROAD) LIGHTING PLANS

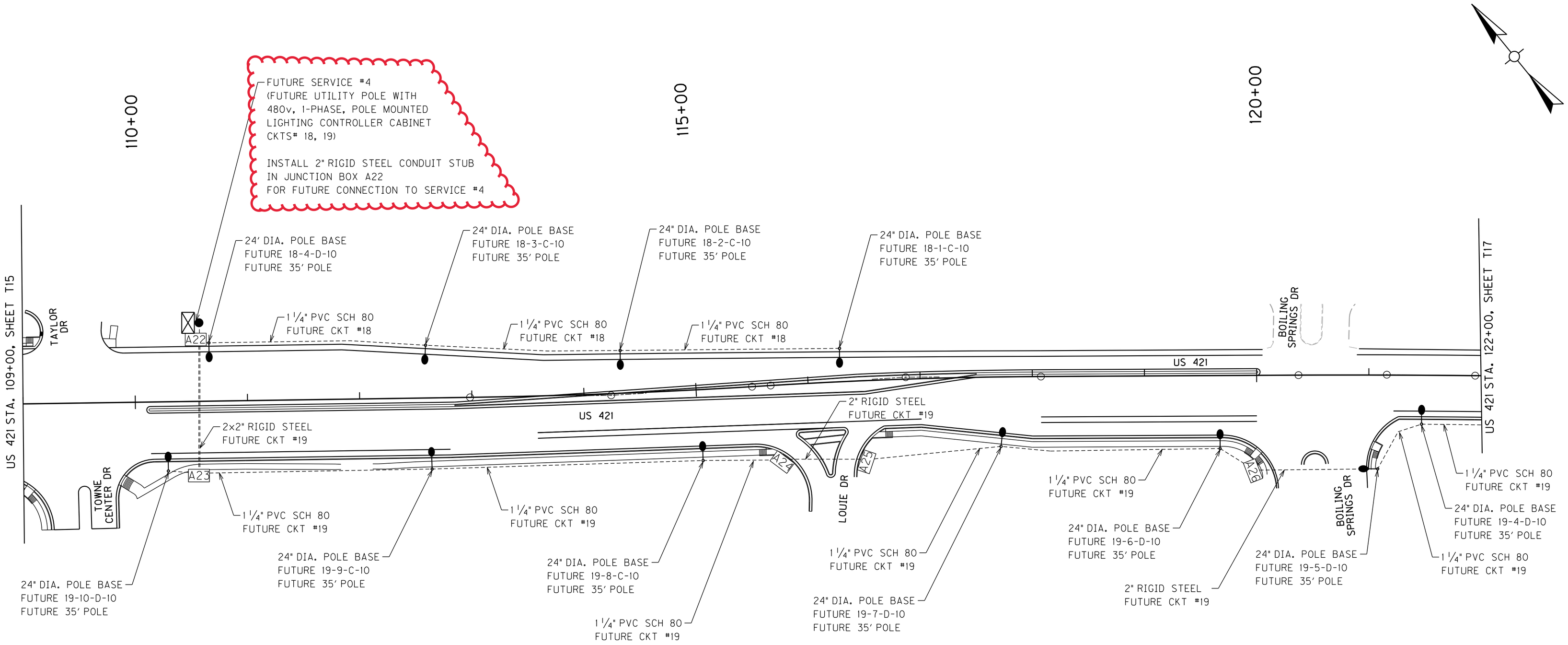
HORIZONTAL SCALE
SCALE: 1" = 50'

0' 50' 100' 200'

STA 109+00 TO 122+00

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T85

Power InRoads v8.11.9.912 USER: gulickcr DATE PLOTTED: 10/20/2023 10:16:08 AM FILE NAME: C:\BMS\WSP-PB-US-PW-02\WSP__CORRIN.GULICK\D0712148\LIGHTING SHEET 04.DGN



LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
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CONVENTIONAL LIGHTING:

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POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

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LEGEND

- POLE MOUNTED CABINET
- A9 — JUNCTION BOXES - TYPES A, C & M (AS DESIGNATED)
- ---------- — 1 1/4" PVC SCH 80 CONDUIT (UNLESS OTHERWISE NOTED)
- LUMINAIRE POLE
- NEW 35 FT. WOOD SERVICE POLE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: US 421 (LEESTOWN ROAD) LIGHTING PLANS

HORIZONTAL SCALE
SCALE: 1" = 50'

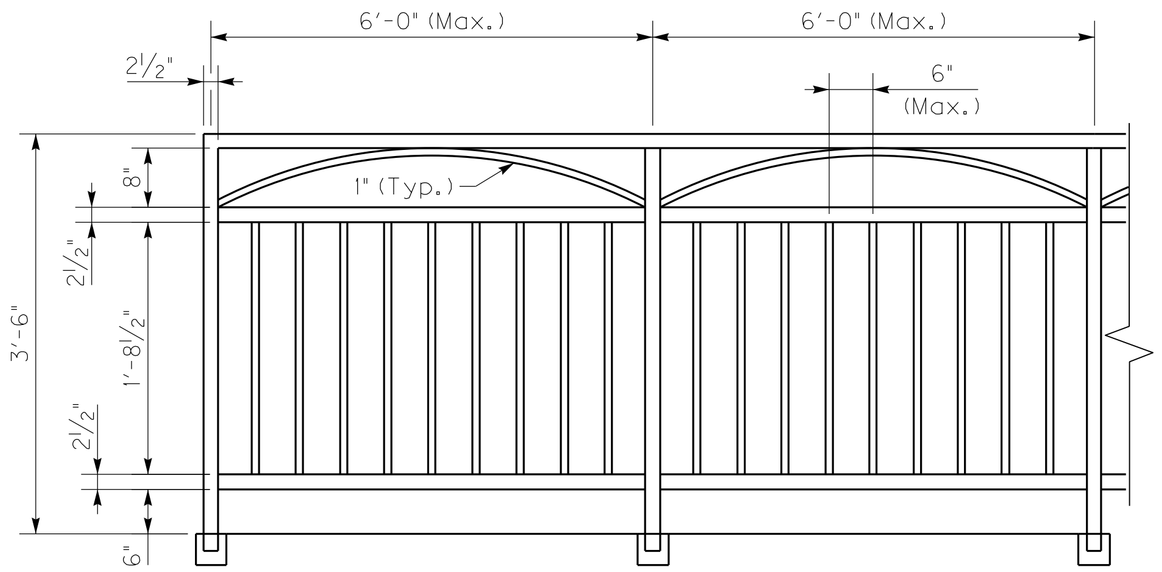
0' 50' 100' 200'

STA 109+00 TO 122+00

ITEM NO. 7-113.02
COUNTY OF FAYETTE
SHEET NO. T85

Power InRoads v8.11.9.912 USER: gulickcr DATE PLOTTED: 10/20/2023 10:16:08 AM FILE NAME: C:\BMS\WSP-PB-US-PW-02\WSP__CORRIN.GULICK\D0712148\LIGHTING SHEET 04.DGN

PANEL RECORD					
Wall Height	Bottom Panel Height	Panel Height	Panel Height	Panel Height	Panel Height
FEET	FEET	FEET	FEET	FEET	FEET
7	3.5	3.5	-	-	-
7.5	3.5	2	2	-	-
8	3	3	2	-	-
8.5	3.5	3	2	-	-
9	3	3	3	-	-
9.5	3.5	3	3	-	-
10	3.5	3.5	3	-	-
10.5	3.5	3.5	3.5	-	-
11	3	3	3	2	-
11.5	3.5	3	3	2	-
12	3	3	3	3	-
12.5	3.5	3	3	3	-
13	3.5	3.5	3	3	-
13.5	3.5	3.5	3.5	3	-
14	3.5	3.5	3.5	3.5	3
14.5	3.5	3.5	3.5	2	3
15	3	3	3	3	3
15.5	3.5	3	3	3	3.5
16	3.5	3.5	3	3	3.5



DECORATIVE FENCE DETAIL

Notes:

Fence components, internal connections, connection to concrete wall, and additional design parameters are the responsibility of the contractor. Ensure the design meets all applicable requirements of the AASHTO LRFD Bridge Design Specifications, 9th Ed.

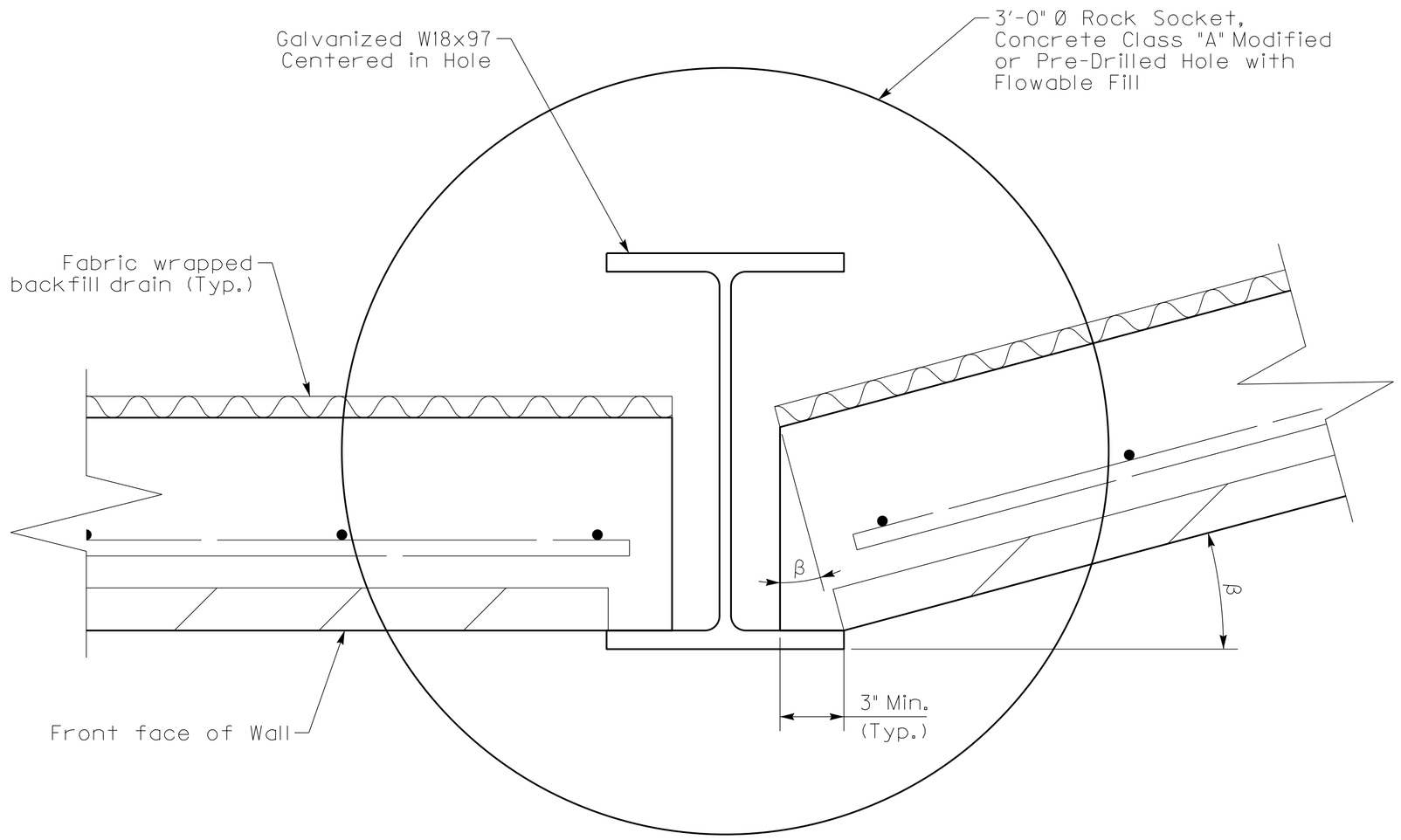
Design calculations and plan details for the fence components, internal connections, and connection to concrete wall shall be prepared and sealed by a Professional Engineer licensed in the Commonwealth of Kentucky. These shall be submitted to the Engineer for approval. Fabrication and installation shall not commence prior to approval. All labor associated with this shall be considered incidental to the unit bid price for the decorative railing.

The fence components and connections shall be steel and shall be powder coated. After galvanization in accordance with the manufacturer's recommendations. The contractor will be required to provide and test multiple color options for final approval by the Engineer. Fence components and coating shall include a 10-year warranty. All labor and materials associated with this shall be considered incidental to the unit bid price for the decorative railing.

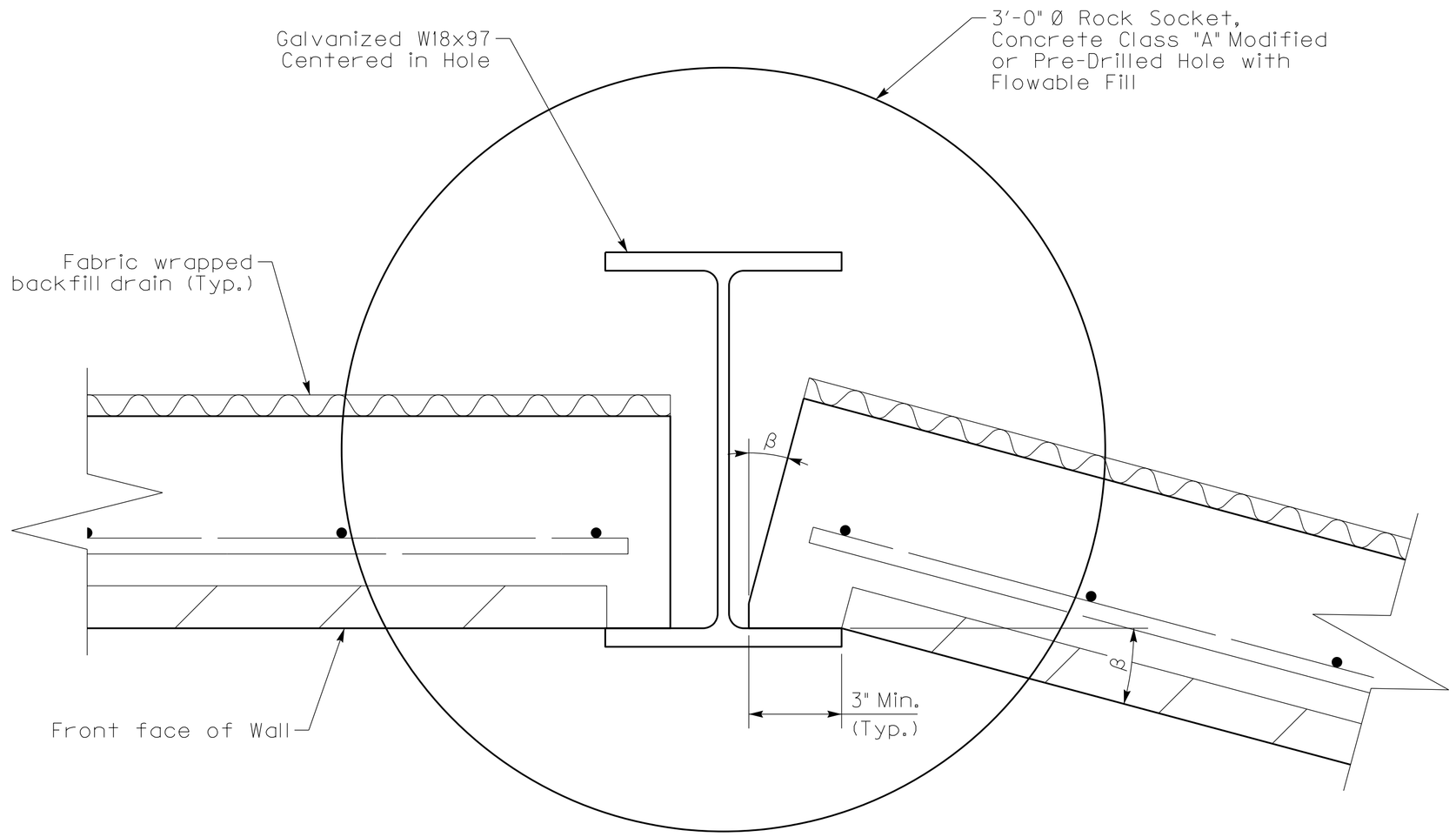
Contractor shall ensure that a minimum of 3" contact is maintained between the front face of precast panels and the flange of piles.

See LAYOUT for wall bearing angles.

Deflection angle, β, is equal to the difference in bearing angles found on LAYOUT sheet, and should not exceed 15°.



KINK POINT DETAIL



KINK POINT DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

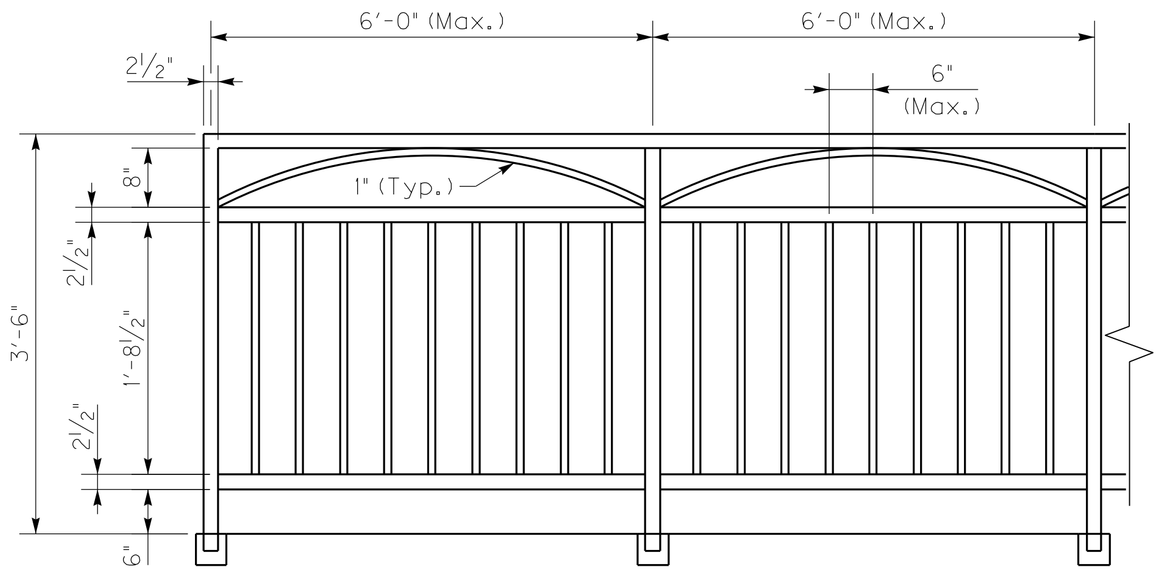
PREPARED BY
HDR

DATE: March, 2023	CHECKED BY
DESIGNED BY: M. Purcell	J. Carney
DETAILED BY: M. Purcell	J. Carney

SOLDIER PILE WALL (3 OF 3)
CROSSING
###

ROUTE	ITEM NO.	COUNTY OF
NEW CIRCLE RD (KY 4)	7-113.02	FAYETTE
	SHEET NO.	DRAWING NUMBER
	S6	28765

PANEL RECORD					
Wall Height	Bottom Panel Height	Panel Height	Panel Height	Panel Height	Panel Height
FEET	FEET	FEET	FEET	FEET	FEET
7	3.5	3.5	-	-	-
7.5	3.5	2	2	-	-
8	3	3	2	-	-
8.5	3.5	3	2	-	-
9	3	3	3	-	-
9.5	3.5	3	3	-	-
10	3.5	3.5	3	-	-
10.5	3.5	3.5	3.5	-	-
11	3	3	3	2	-
11.5	3.5	3	3	2	-
12	3	3	3	3	-
12.5	3.5	3	3	3	-
13	3.5	3.5	3	3	-
13.5	3.5	3.5	3.5	3	-
14	3.5	3.5	3.5	3.5	3
14.5	3.5	3.5	3.5	2	3
15	3	3	3	3	3
15.5	3.5	3	3	3	3.5
16	3.5	3.5	3	3	3.5



DECORATIVE FENCE DETAIL

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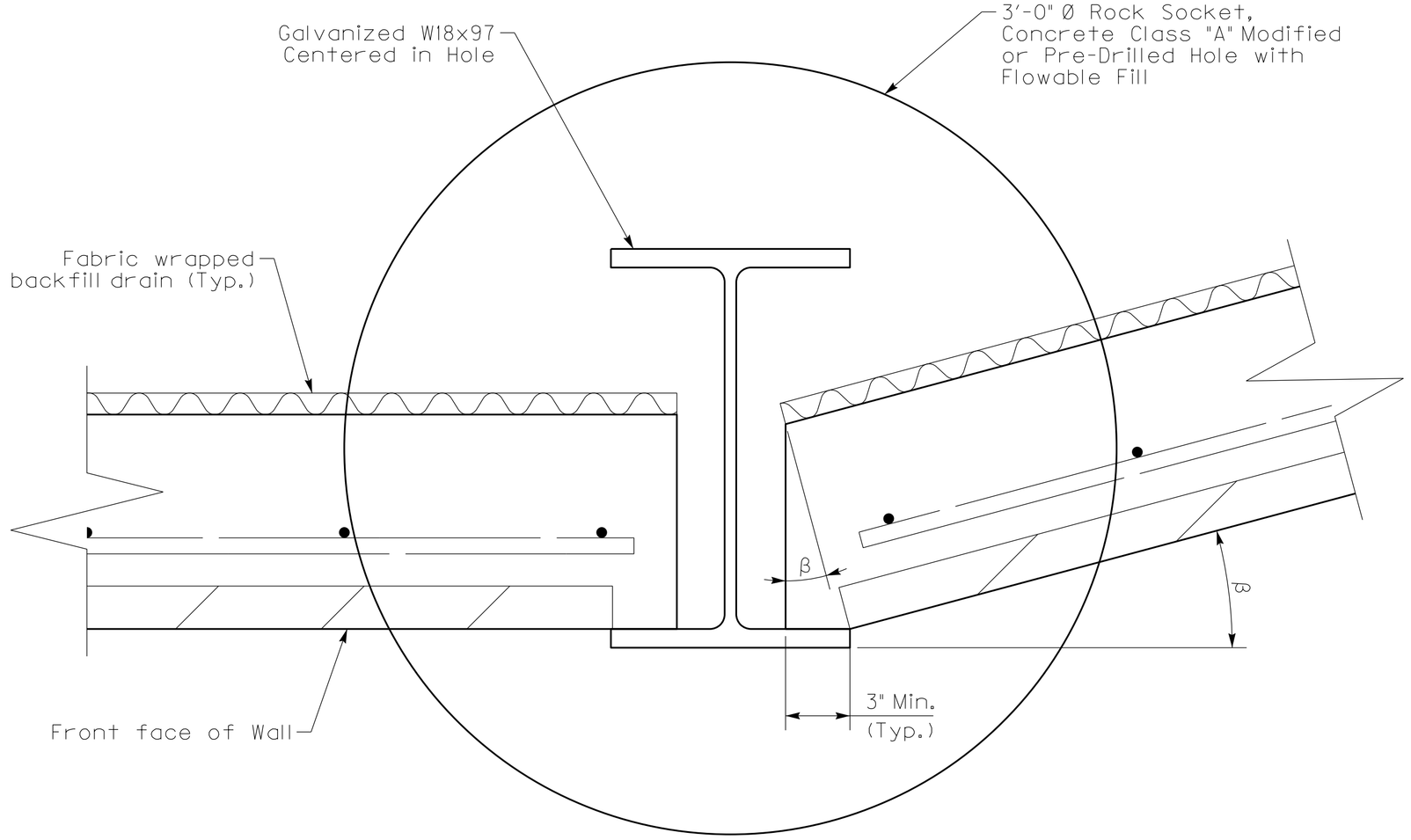
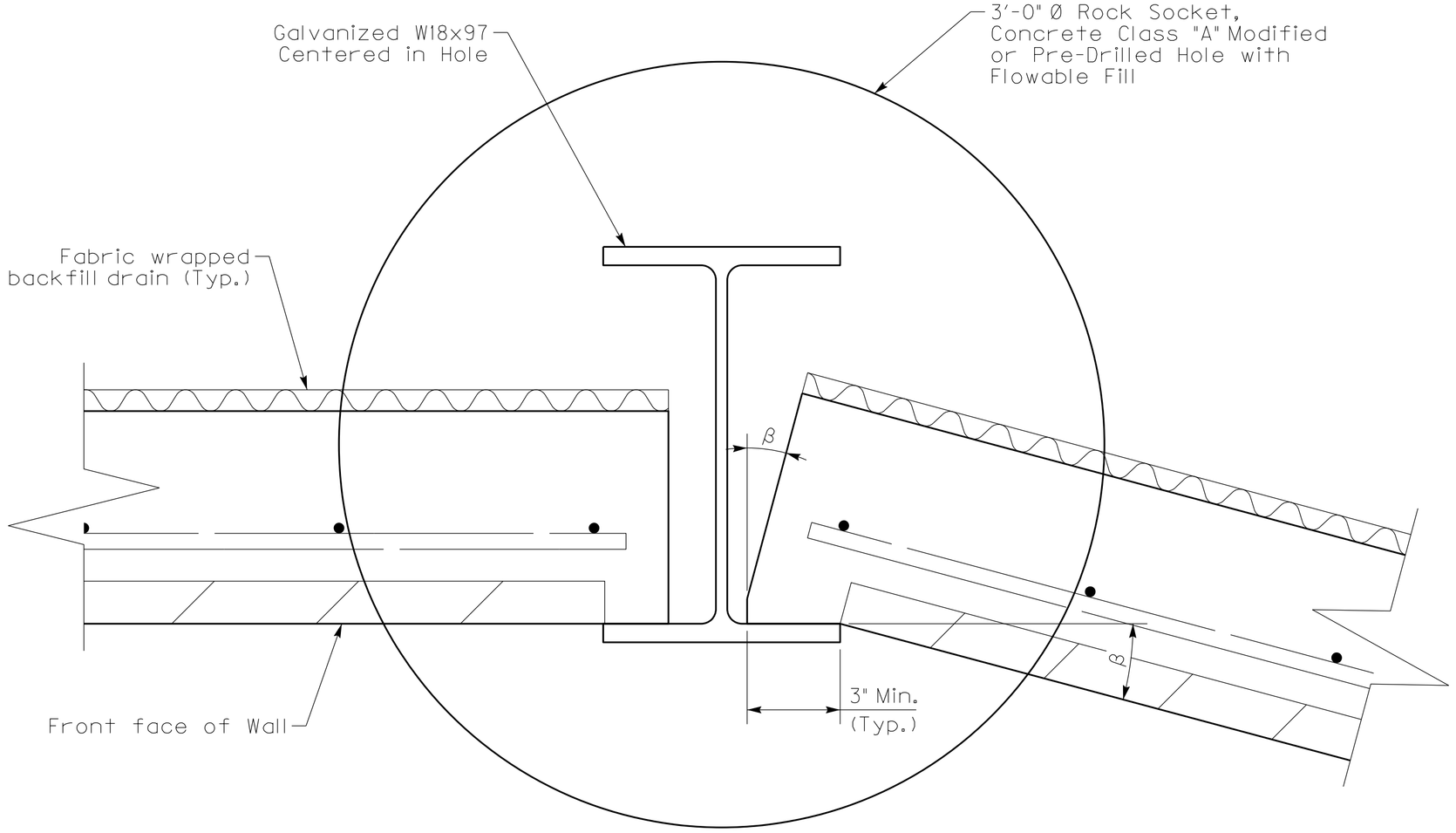


KINK POINT DETAIL



KINK POINT DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE
⚠ Added Decorative Fence detail and notes	10/17/23

PREPARED BY

DATE: March, 2023	CHECKED BY
DESIGNED BY: M. Purcell	J. Carney
DETAILED BY: M. Purcell	J. Carney

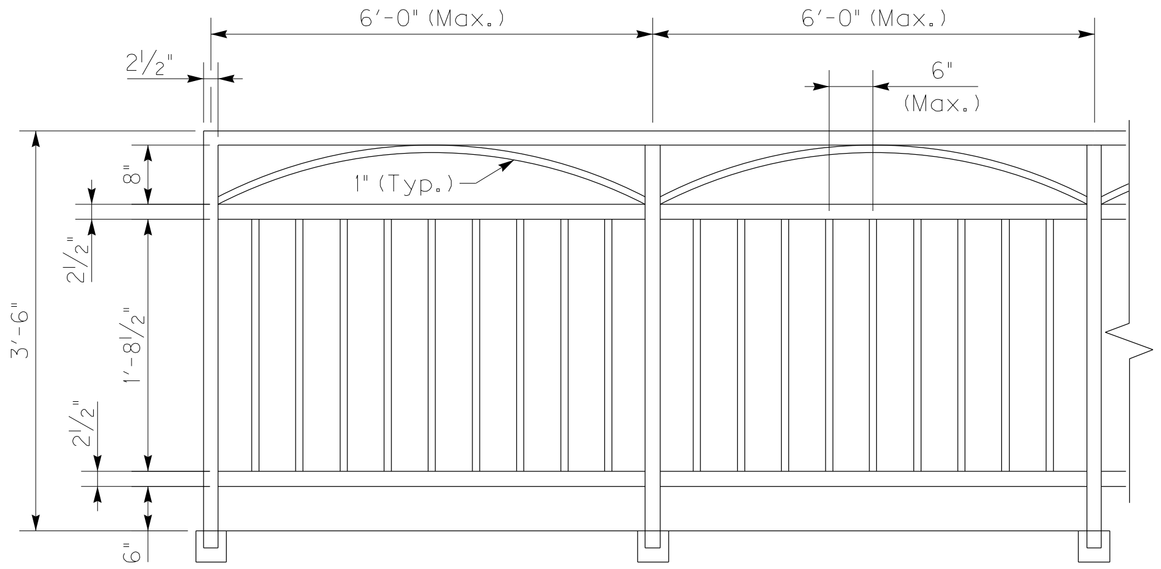
SOLDIER PILE WALL (3 OF 3)

CROSSING
###

ROUTE	ITEM NO.	COUNTY OF
NEW CIRCLE RD (KY 4)	7-113.02	FAYETTE
	SHEET NO.	DRAWING NUMBER
	S6	28765

MicroStation v8.11.9.919 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$FILE$$$$

PANEL RECORD					
Wall Height	Bottom Panel Height	Panel Height	Panel Height	Panel Height	Panel Height
FEET	FEET	FEET	FEET	FEET	FEET
6.5	3.5	3	-	-	-
7.5	3.5	2	2	-	-
8.5	3.5	3	2	-	-
9	3.5	3.5	2	-	-
10	3.5	3.5	3	-	-
11	3.5	3.5	2	2	-
12	3.5	3.5	3	2	-
12.5	3.5	3.5	3.5	2	-
13	3.5	3.5	3	3	-
13.5	3.5	3.5	3.5	3	-
14	3.5	3.5	3.5	3.5	-
14.5	3.5	3.5	3.5	2	2
15	3.5	3.5	3	3	2
15.5	3.5	3.5	3.5	3	2
16	3.5	3.5	3.5	3.5	2
16.5	3.5	3.5	3.5	3	3
17	3.5	3.5	3.5	3.5	3



DECORATIVE FENCE DETAIL

Notes:

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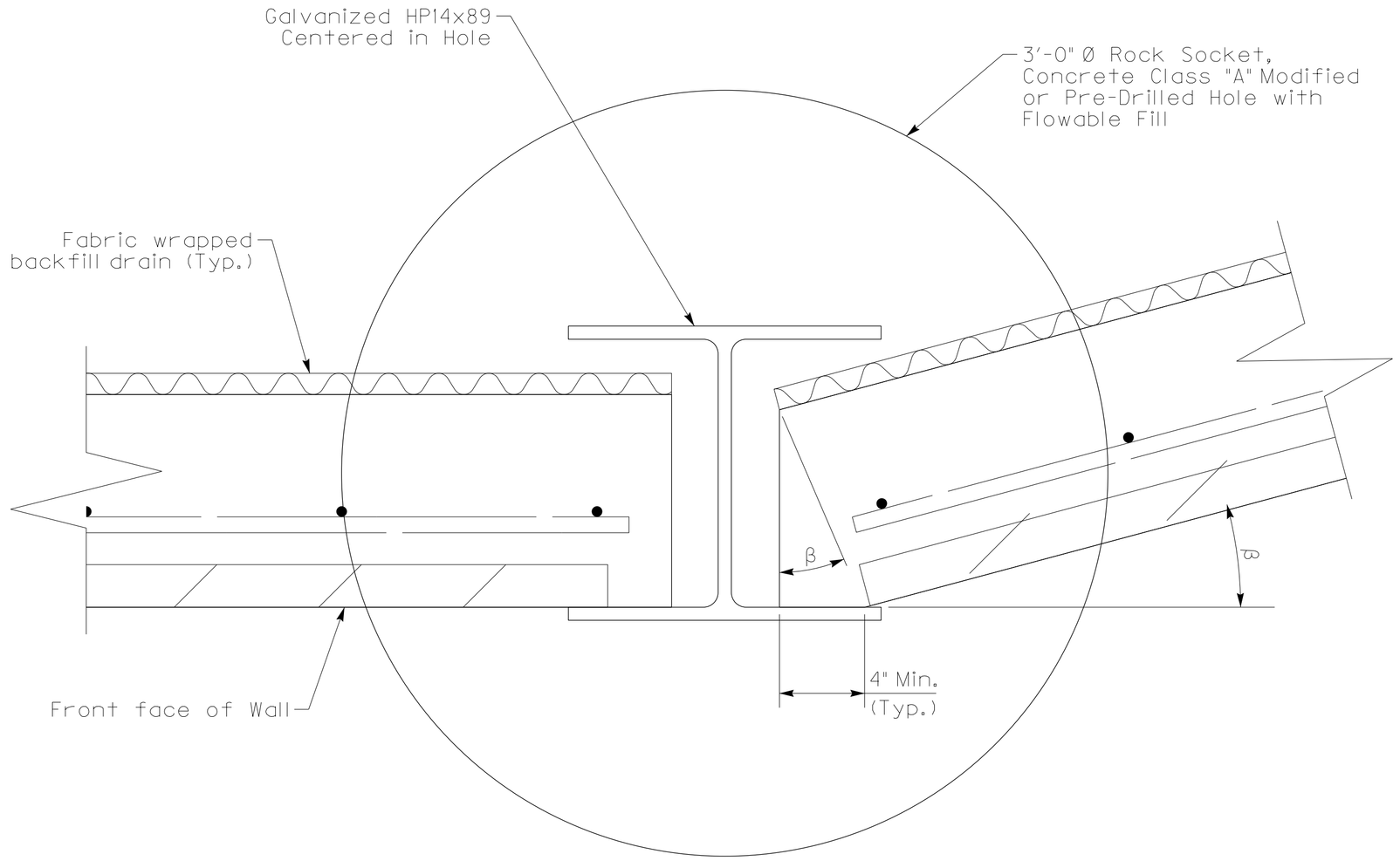
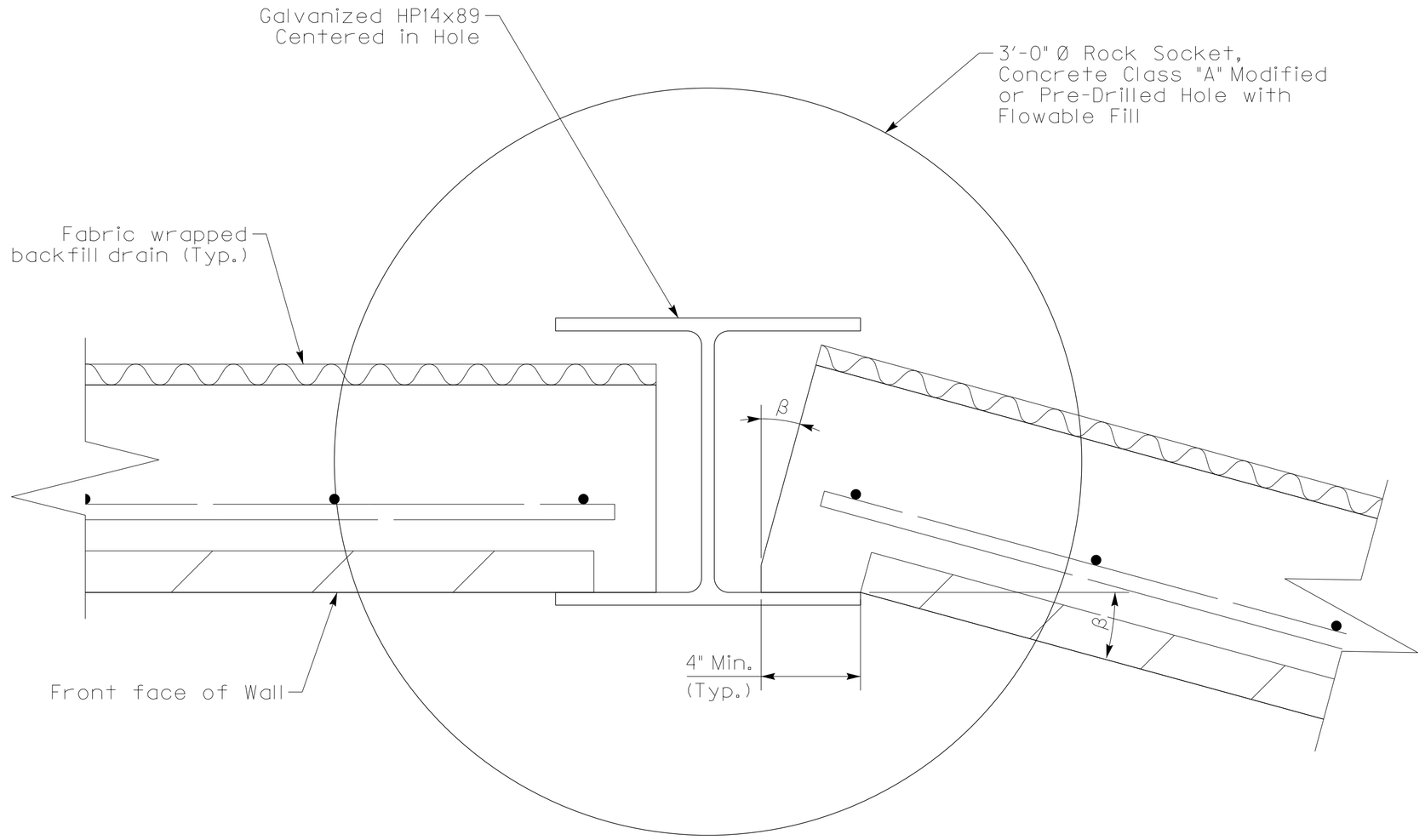
Contractor shall ensure that a minimum of 4" contact is maintained between the front face of precast panels and the flange of piles.

See LAYOUT for wall bearing angles.

Deflection angle, ß, is equal to the difference in bearing angles found on LAYOUT sheet, and should not exceed 15°.



KINK POINT DETAIL



KINK POINT DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY HDR

DATE: March, 2023	CHECKED BY
DESIGNED BY: M. Purcell	J. Carney
DETAILED BY: R. Richardson	J. Carney

SOLDIER PILE WALL (4 OF 4)
CROSSING
###

ROUTE	ITEM NO.	COUNTY OF
NEW CIRCLE RD (KY 4)	7-113.02	FAYETTE
	SHEET NO.	DRAWING NUMBER
	S7	28766

MicroStation v8.11.9.919 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$FILE$$$$

PANEL RECORD					
Wall Height	Bottom Panel Height	Panel Height	Panel Height	Panel Height	Panel Height
FEET	FEET	FEET	FEET	FEET	FEET
6.5	3.5	3	-	-	-
7.5	3.5	2	2	-	-
8.5	3.5	3	2	-	-
9	3.5	3.5	2	-	-
10	3.5	3.5	3	-	-
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12	3.5	3.5	3	2	-
12.5	3.5	3.5	3.5	2	-
13	3.5	3.5	3	3	-
13.5	3.5	3.5	3.5	3	-
14	3.5	3.5	3.5	3.5	-
14.5	3.5	3.5	3.5	2	2
15	3.5	3.5	3	3	2
15.5	3.5	3.5	3.5	3	2
16	3.5	3.5	3.5	3.5	2
16.5	3.5	3.5	3.5	3	3
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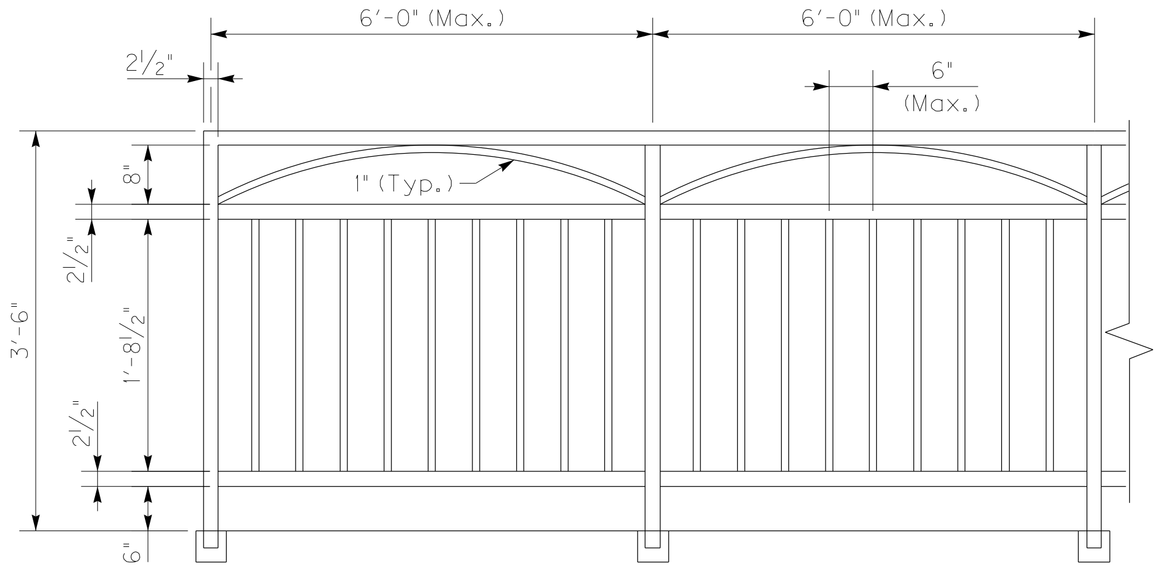

DECORATIVE FENCE DETAIL

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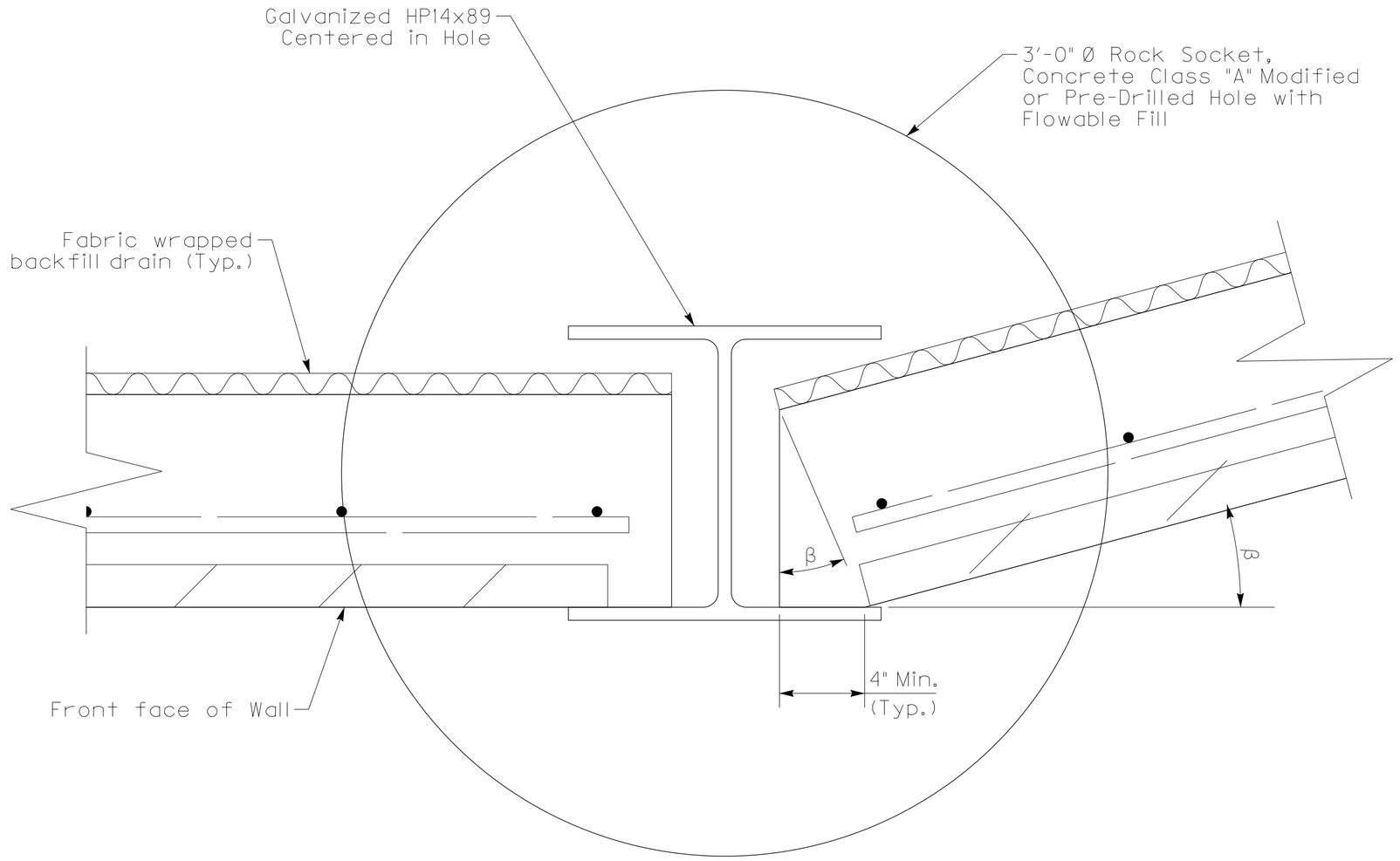
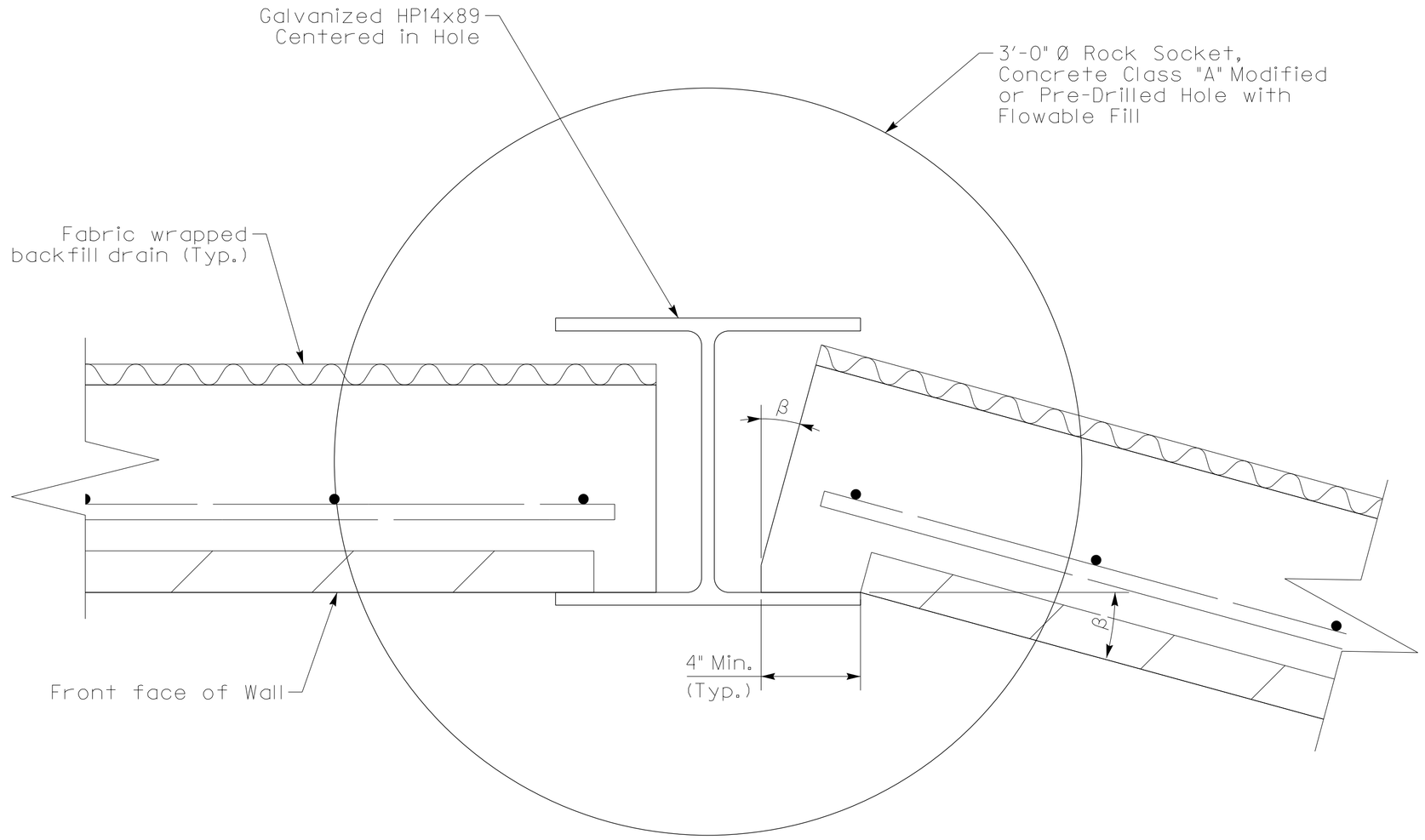


KINK POINT DETAIL



KINK POINT DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY HDR

DATE: March, 2023	CHECKED BY
DESIGNED BY: M. Purcell	J. Carney
DETAILED BY: R. Richardson	J. Carney

SOLDIER PILE WALL (4 OF 4)
CROSSING
###

ROUTE	ITEM NO.	COUNTY OF
NEW CIRCLE RD (KY 4)	7-113.02	FAYETTE
	SHEET NO.	DRAWING NUMBER
	S7	28766