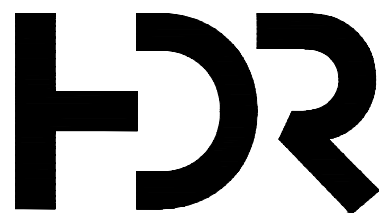


1	2	3	4	5	6	7	8
ID	Description	Manufacturer	Part #	Quantity	Unit	Comments	
1	Power Cable, 15kV, MV-105 500MCM Al, 220 mil, Cu Metallic Shield, EPR	ANY	T.B.D.	4,970	ft		
2	Conductor 556 ACSR - Dove Static Wire - 3/8" EHS Steel 7 Strand	ANY ANY	T.B.D. T.B.D.	1,600 500	ft ft		
3	DUCT SYSTEM						
	2-INCH nominal, Schedule 40 PVC	ANY	BY CONTRACTOR	281	ft	Includes an 8% margin for topography and waste.	
	6-INCH nominal, Schedule 40 PVC	ANY	BY CONTRACTOR	3,266	ft	Includes an 8% margin for topography and waste.	
	6-INCH nominal, Schedule 80 PVC	ANY	BY CONTRACTOR	80	ft	Used for riser poles	
	End Bell, 2-inch & 6-inch nominal, Schedule 40 PVC	ANY	BY CONTRACTOR	as needed	ea		
4	HORIZONTAL GROUNDING ELECTRODE CONDUCTOR: Bare 1/0AWG Copper Ground Wire, Class-B stranded, 7-core	ANY	BY CONTRACTOR	772	ft		
	Continuous Trench Ground Wire			741	ft	Includes an 8% margin for topography and waste.	
	Vault grounding			31	ft		
5	BACKFILL LAYERS						
	Duck Bank excavated native soil free of rocks (no rocks larger than 1.5-inch diameter) and free of wood, roots, vegetable matter, or other deleterious material. Compacted to at least 85% proctor or greater.	n/a	-	122	cubic yards		
	Manholes excavated native soil free of rocks (no rocks larger than 1.5-inch diameter) and free of wood, roots, vegetable matter, or other deleterious material. Compacted to at least 85% proctor or greater.	n/a	-	39	cubic yards		
6	Concrete: 3000PSI or greater. Max rho of 90 C*cm/W	ANY	BY CONTRACTOR	206	cubic yards	Material tested to meet Rho rating.	
7	Duck Bank Spacers	SNAP-N-STAC	SP6W30-2	300	ea	spacers every 5 ft	
8	Manhole 7'x7'x7' InteriorX, six 6" conduit entrances on two opposite sides (twelve total)	Oldcastle Infrastructure	7x7x7 Manhole 2	1	ea	May submit alternate manufacturer drawing for approval.	
9	Trench System						
	2'x2'x10' Interior	Trenwa	BM2424-120	1	EA	May submit alternate manufacturer drawing for approval.	
	Lid - design load 8,000 lbs	Trenwa	TEIR 8 CONCRETE LID	2	EA	May submit alternate manufacturer drawing for approval.	
10	Duct Sealing System	ANY	BY CONTRACTOR	as needed	lot	Installed at all conduit and duct cable penetrations to seal against moisture and debris ingress.	
11	FLUSH-MOUNTED HAND-HOLE: 24inch x 36inch x 30inch deep polymer concrete enclosure with "FIBER OPTIC" lid	Martin Enterprises	2436 Polymer Concrete Series Tier 22	1	ea	Alternate manufacturers are allowed.	
12	DEADBREAK T-BODY ELBOW CONNECTOR for 500MCM Al cable, with Al shearbolt Connector, capacitive test point, & Copper Stud, 15kV Class, 600A	Cooper Power Systems	BT625CC22A1T	12	ea	Alternate manufacturers are allowed.	
13	TERMINATION KIT						
	15kV Outdoor, Cold Shrink QT-III Termination Kit, 4/0AWG to 500MCM	3M	7664-S-8	6	ea	Used at pole 4. Alternate manufacturers are allowed.	
	15kV Outdoor, Cold Shrink QT-III Termination Kit, 4/0AWG to 500MCM	3M	7693-T	6	ea	Used at switchgear. Alternate manufacturers are allowed.	
14	TERMINATION LUG: Compression Lug, Aluminum, NEMA 2-hole, Long Barrel, sized for 500kcmil CU MV AC UG cable	Cooper Power Systems	YA314N	12	ea	Alternate manufacturers are allowed.	
15	PHASE MARKING TAPE						
	Red, .75-inch width	3M	TEMFLEX 1700C	as needed	lot	Used at all cable terminations	
	Orange, .75-inch width	3M	TEMFLEX 1700C	as needed	lot	Used at all cable terminations	
	Black, .75-inch width	3M	TEMFLEX 1700C	as needed	lot	Used at all cable terminations	
16	COPPER COMPRESSION TAP: for 1/0AWG wire to 1/0AWG OR #2AWG wire connections	Burndy	YGHC26C26	as needed	ea	Installed throughout to bond ground wires and tails to each other.	
17	COPPER COMPRESSION TAP: for 1/0AWG wire to 3/8-inch Rod connections	Burndy	YGHC26C26	as needed	ea	Installed in the Manholes to bond the shield wires to the ground bus	
18	GROUND ROD: 5/8-inch x 96-inches diameter, Copper Bonded, Pointed	ERICO	615803	2	ea	Installed at Manholes	
19	GROUND ROD ACCESSORY: STEEL DRIVING STUD, 3/4-INCH	ANY	BY CONTRACTOR	as needed	ea		
20	EXOTHERMIC GROUND CONNECTOR - Horizontal Tee: 1/0AWG Run to 1/0AWG tap	CADWELD by ERICO	TAC2C2C (mold) with type 90 (welding material)	as needed	ea	This is the primary tee-type wire to wire direct buried grounding connection throughout the project.	
21	EXOTHERMIC GROUND CONNECTOR - Through Cable to Top of Ground Rod: 1/0AWG to 5/8inch ground rod	CADWELD by ERICO	GTC162C (mold) with type 90 (welding material)	as needed	ea	This is the primary connection type for ground rods to ground wires below grade throughout the project.	
22	EXOTHERMIC GROUND CONNECTOR - Horizontal Splice: 1/0AWG Run to 1/0AWG tap	CADWELD by ERICO	SSC2C (mold) with type 90 (welding material)	as needed	ea	This is the primary ground wire splicing method throughout the project.	
23	CABLE SUPPORT CLAMP SE 36-52mm	Dutchclamp	SE 36-52	12	ea	Single cable clamp used for supporting 500 MCM. Alternatives may be submitted for approval.	
24	UNISTRUT - P3300	UNISTRUT	P3300-HG	as needed	lot	Used to support cable at control house and in vaults.	
25	KWIK HUS 1/2" by 3" anchor screw	HILTI	KWIK HUS	as needed	lot	Used to support cable.	
26	45' H1 Pole	Any	BY CONTRACTOR	2	ea		
27	55' H2 Pole	Any	BY CONTRACTOR	1	ea		
28	55' H2 Pole	Any	BY CONTRACTOR	1	ea		
29	H1.1 Grounding Assembly	Any	BY CONTRACTOR	3	ea	For poles 1-3	
30	H4.1 - Ground Mat Assembly	Any		1	ea	For riser switch	
31	VA5.1 - Single Deadend	ARP	46SKCE-SHP	3	ea	Suspension Insulators must be rated for minimum 10,000 lbs	
	VC5.71L - Single Deadend Crossarm Assembly			5	ea	Total Assembly Count	
32	Crossarm	PUPI	DA4000120EB9X2	5	ea		
	Suspension Insulators	ARP	46SKCE-SHP	15	ea	Suspension Insulators must be rated for minimum 10,000 lbs. Fiberglass crossarm must be rated for 4,000 lbs minimum.	
	VC6.21 - Double Deadend Crossarm Assembly			1	ea	Total Assembly Count	
33	Crossarm	PUPI	DA4000120EB9X2	1	ea		
	Suspension Insulators	ARP	46SKCE-SHP	6	ea	Suspension Insulators must be rated for minimum 10,000 lbs. Fiberglass crossarm must be rated for 4,000 lbs minimum.	
34	Arresters - 15kV rms rated	Any	BY CONTRACTOR	3	ea		
35	TG-22A-GSI			14	ea		
	Anchor, Shackle, 3-1/2" Long, 7/8" Diameter, 60K lbs	Maclean	ASH-67-BC	14	ea		
	Guy, Grip, Big-Grip Deadend, 5/8" EHS	PREFORMED	BG-2111	56	ea		
	Thimble Clevis, 40K	Maclean	CT-100H	14	ea		
	Guy, Strain Insulator, 96" long, 35K lbs, Roller	Hughes	CF696-96R2	14	ea		
	Wire, Galvanized, 7 Steel Strand, 5/8" EHS	Any	BY CONTRACTOR	as needed	lot		
36	TA-3H			14	ea		
	Anchor Extension 1-1/2" SQ. Shaft 7'-0"	Hubble	12657	14	ea		
	Anchor, 1-1/2" SQ. Shaft 8", 10", and 12" Helix with tripeye adapter	Maclean	D6636TU	14	ea		
37	TM-4 - OHGW Assemblies	Any	BY CONTRACTOR	9	ea		
38	TM-GM - Guy Marker	Any	BY CONTRACTOR	14	ea		
39	S2.32 Ground Operated Airbreak Switch - Three-phase	LineBoss	G19SLFR1223	1	ea	Alternate manufacturers maybe submitted for approval.	
*BOM is for info only. Contractor to verify and confirm quantities with drawings and specifications.							

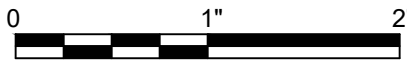


0	6/8/22	ISSUE_FOR_CONSTRUCTION
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER Trevor Hauck	
PROJECT NUMBER	10333743



EAST SUBSTATION CABLE REPLACEMENT
BILL OF MATERIALS



FILENAME	SURF_E116
SCALE	SCALE

SHEET
E116