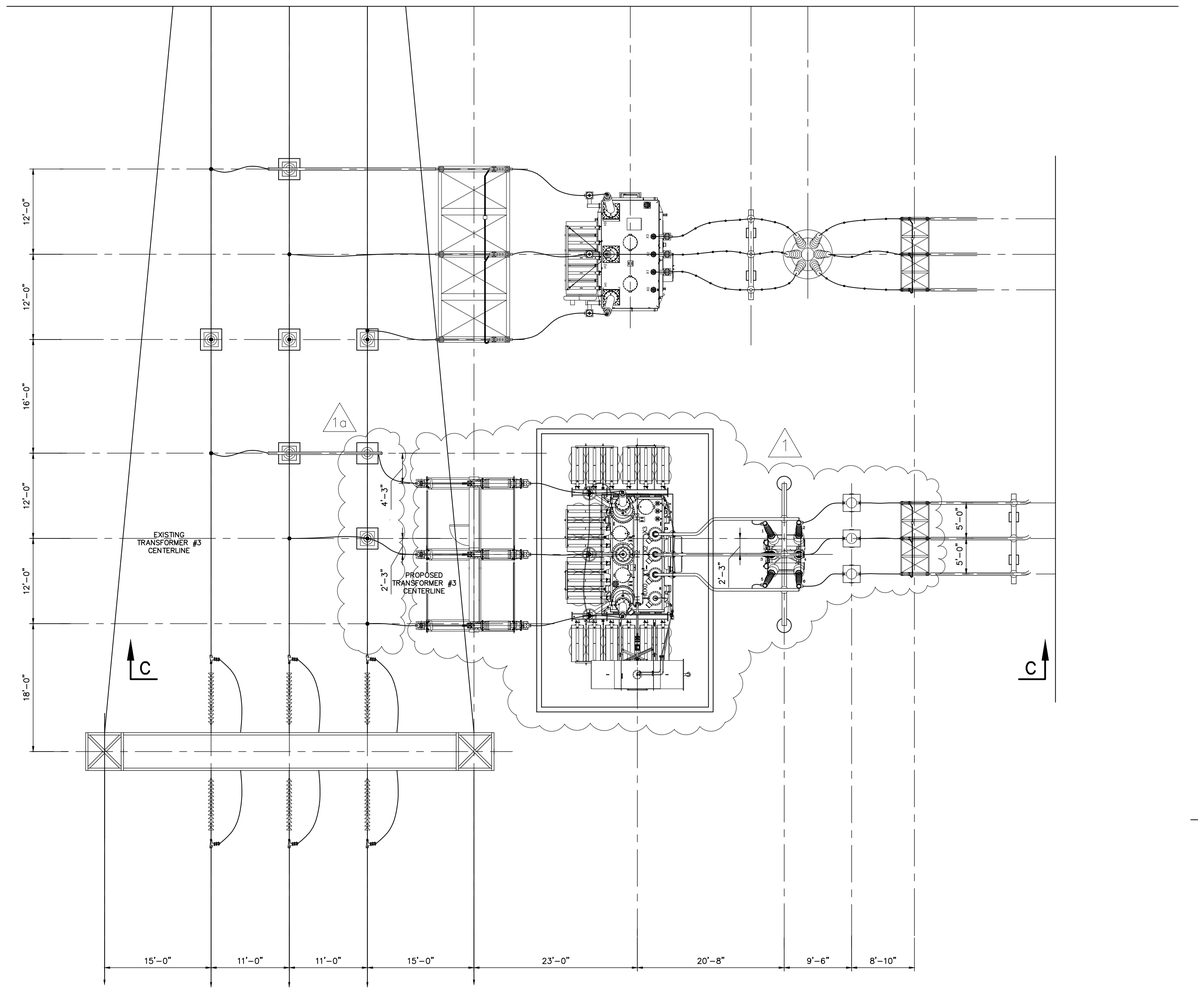
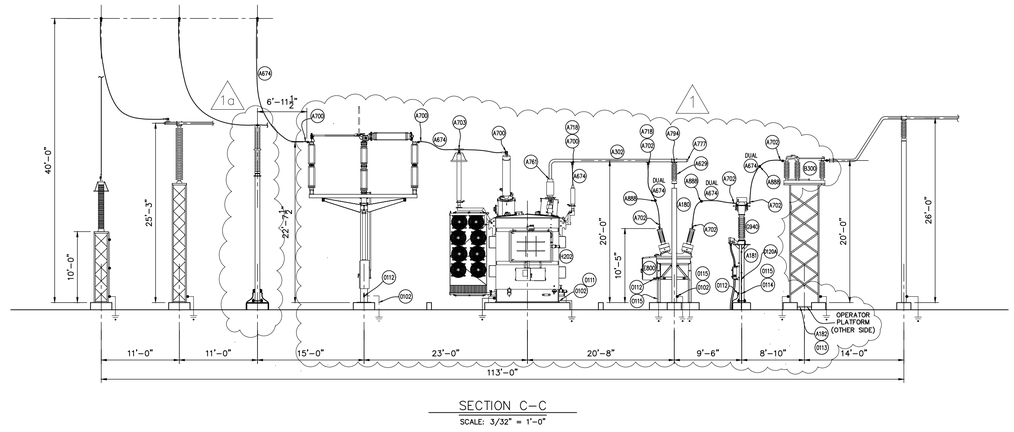


PLAN VIEW

SCALE: 3/32" = 1'-0"



SECTION C-C

SCALE: 3/32" = 1'-0"

1 – AREA OF CONSTRUCTION FOR 2022

1a – DEP AREA OF CONSTRUCTION FOR 2022

PLAN VIEW

SCALE: 1/8"=1'-0"

CONDUCTOR/BUS AMPACITIES

CONDUCTOR	APPROX. CURRENT CARRYING CAPACITY*
TUBING, 4" NPS SCH. 80 AL.	3720 AMPS.
TUBING, 3" NPS SCH. 80 AL.	2760
TUBING, 2" NPS SCH. 80 AL.	1700
TUBING, 4" NPS SCH. 40 AL.	3165
TUBING, 3" NPS SCH. 40 AL.	2425
TUBING, 2" NPS SCH. 40 AL.	1465
ACSR, 1272 MCM, 26/7	1200
ACSR, 954 MCM, 26/7	1010
ACSR, 795 MCM, 26/7	900
ACSR, 336.4 MCM, 18/1	530
ACSR, 2/0 AWG, 6/1	340
ACSR, 1/0 AWG, 6/1	230
COPPER, 1000 MCM, 61 STD.	1285
COPPER, 750 MCM, 61 STD.	1075
COPPER, 500 MCM, 37 STD.	830
COPPER, 4/0 AWG, 7 STD.	480
COPPER, 2/0 AWG, 7 STD.	355
COPPER, #2 AWG, SOLID	231
UABC, 4" x 4" x 3/8"	3125
UABC, 4" x 4" x 1/4"	2625
UABC, 3 1/4" x 3 1/4" x 1/4"	2340
AL, BAR 4" x 1/2"	1390
AL, BAR 4" x 1/4"	955
AL, BAR 3 1/2" x 1/4"	780

* AC. 60 HZ, 40° C AMBIENT, 50° C RISE HORIZONTAL ORIENTATION, OUTDOORS, WIND = 2 FPS

STATION DESIGN DATA

STRUCTURE, APPARATUS AND LIGHTNING ARRESTERS ARE ALL GROUNDED TO THE SAME GROUNDING SYSTEM. STATION DESIGNED FOR THE FOLLOWING ELECTRICAL CLEARANCES/SPACINGS:

RATED KV	BIL KV	RIGID BUS CONDUCTORS (IEEE, NEMA, NESC)				GROUP-OPERATED SWITCHES (NEMA)		
		SPACING (2)	CLEARANCE (1)			℄ TO ℄ SPACING (2)		
		PHASE TO PHASE ℄ TO ℄ (3)	METAL TO METAL(4)	PHASE TO GROUND(5)	CLEARANCE ABOVE GRADE(6)	HORN GAP VERT./HOR. BREAK	DISCONNECT VERTICAL BREAK	DISCONNECT HORIZONTAL BREAK
230	900	11'-0"	7'-5"	6'-8"	15'-0"	18'-0"	13'-0"	18'-0"
69	350	5'-0"	2'-7"	2'-6"	11'-0"	7'-0"	5'-0"	6'-0"

NOTES:
1. "CLEARANCE" IS DEFINED AS A SURFACE-TO-SURFACE MEASUREMENT.
2. "SPACING" IS DEFINED AS A ℄ TO ℄ MEASUREMENT.
3. INTENDED FOR PHASES ORIENTED IN PARALLEL RUNS.
4. INTENDED FOR NON-PARALLEL POINTS OF CROSSING.
5. EXCEEDS MINIMUM CLEARANCES TO MATCH NEMA STANDARD POST INSULATOR DIMENSIONS.
6. ROUNDED UP TO THE NEAREST EVEN FOOT, PER NESC (2017). MEASURED FROM TOP OF EQUIPMENT FOUNDATIONS, IF SUITABLE FOR PEDESTRIAN ACCESS.

DEADEND STRUCTURE(S) SHALL WITHSTAND 0° TO 15° LINE TAKE-OFF IN ANY DIRECTION WITH A DESIGN LINE TENSION OF 2500 POUNDS PER PHASE CONDUCTOR/1500 POUNDS STATIC OR NEUTRAL CONDUCTOR. A MINIMUM VERTICAL CLEARANCE OF 8'-6" SHALL BE MAINTAINED FOR ANY SURFACE OF INDETERMINATE POTENTIAL SUCH AS LIGHTNING ARRESTERS, UNGROUNDED SURFACES, BUSHINGS, AS PER NESC RULE 124.A.3.

EQUIPMENT BOLT TORQUING TABLE

DIAMETER BOLT (INCHES)	RECOMMENDED TORQUE NON-LUBRICATED STEEL & SILICON BRONZE HARDWARE (FOOT*LBS)	RECOMMENDED TORQUE LUBRICATED HARDWARE & ALUMINUM HARDWARE (FOOT*LBS)
1/2"	40	25
5/8"	55	40
3/4"	70	60

LEGEND

F	FIXED CONNECTION
S	SLIP FIT

INSTALLATION NOTES:

1. MATERIALMAN/FABRICATOR TO VERIFY THAT CONDUCTOR TERMINAL PADS MATCH AND FIT ONTO SWITCH TERMINAL PADS (SIZE, NEMA RATING AND SHOULDER).
2. STRUCTURAL DIMENSIONS ARE APPROXIMATE, SEE MANUFACTURE DRAWINGS FOR ACTUAL DIMENSIONS.
3. EQUIPMENT VIEW IS PRELIMINARY. WAITING ON VENDOR PRINTS.

REFERENCES

PLAN VIEW 18899GA1
SECTIONS 18899GA2-GA5
DETAILS 18899GA6
BILL OF MATERIAL 18899BOM

ROCKY MOUNT
UTILITY & ENERGY SERVICES
THE CENTER OF IT ALL

Booth & Associates
581 Glenwood Avenue, Raleigh NC 27612
NC F-0221

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07/13/2022

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NO.	REVISIONS	ENG.	DATE
A	ISSUED FOR BIDS	MJW	7/13/2022

CLIENT NAME: CITY OF ROCKY MOUNT
ROCKY MOUNT, NORTH CAROLINA

STATION NAME: ROCKY MOUNT SOUTH POD 230KV
PLAN VIEW AND SECTION C-C

DRAWN BY:	JRT
CHECKED BY:	JBS
APPROVED BY:	MJW
DATE:	07/07/2021
SCALE:	3/32"=1'-0"
FILE NUMBER:	18899
SHEET:	GA1