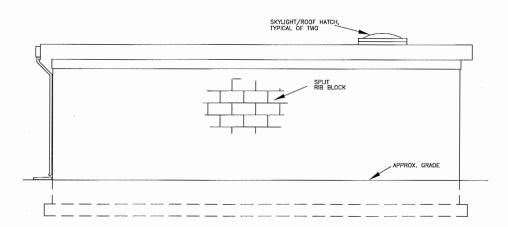
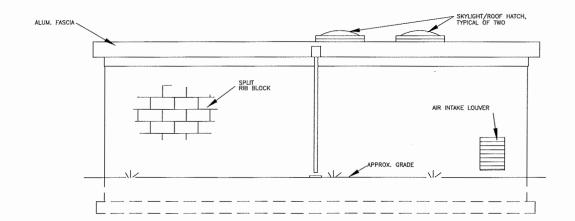


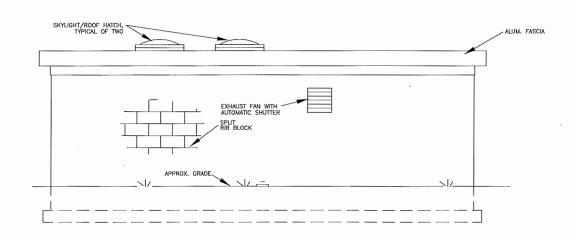
FRONT ELEVATION SCALE: 1/4" = 1'-0"



REAR ELEVATION SCALE: 1/4" = 1"-0"



RIGHT ELEVATION



LEFT ELEVATION

SEMINOLE BOOSTER PUMP STATION #1

FINAL DRAWINGS FOR CONSTRUCTION

REVISIONS BY DATE DESCRIPTION



P.O. BOX 4428 ASHEBORO, NC 27204 Phone: (336) 629-3931 Fax: (336) 629-3932 NC License No. C-644 CONSULTING ENGINEERS, P.A.

BOOSTER PUMP STATION EXTERIOR ELEVATIONS

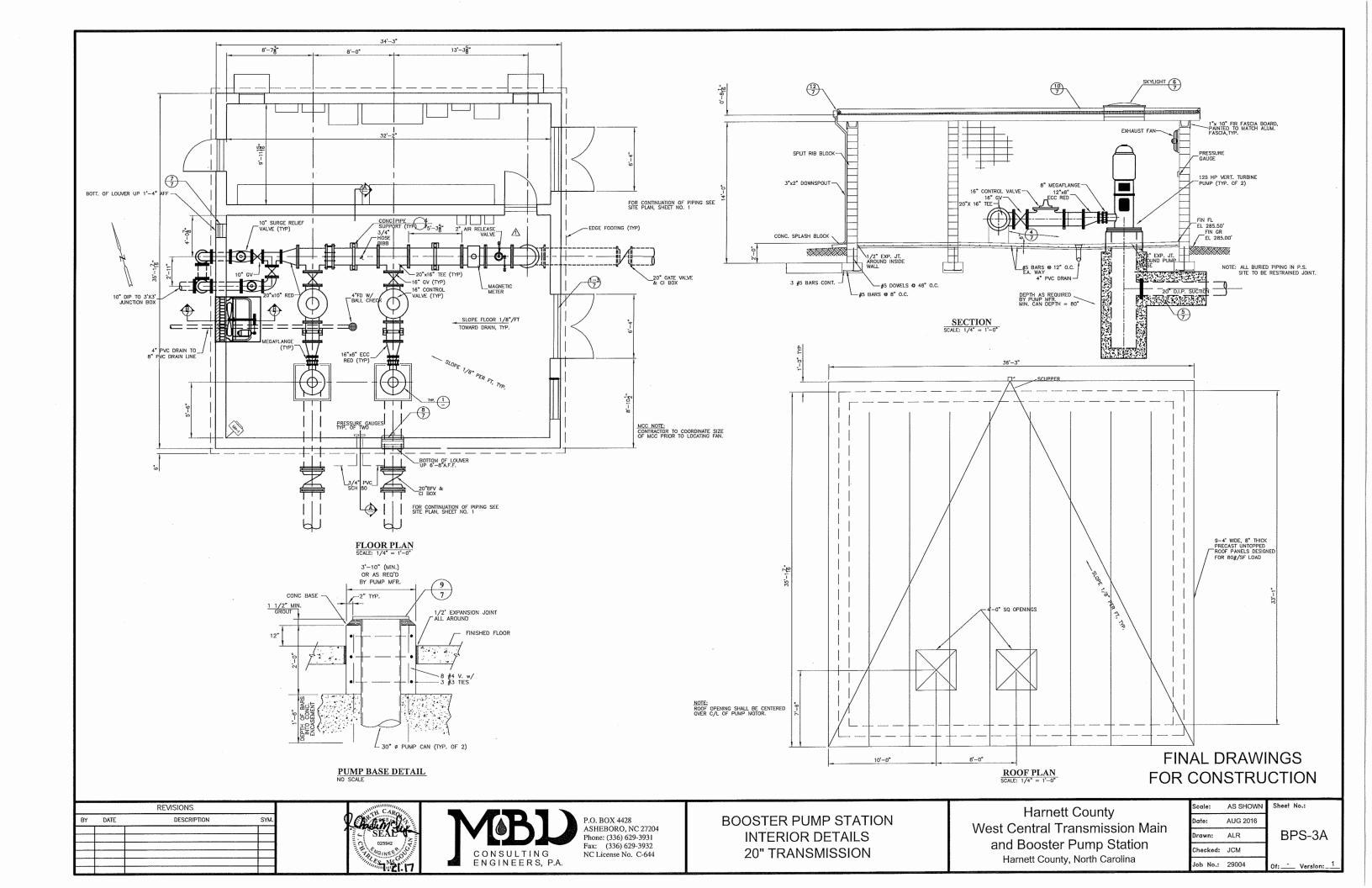
Harnett County West Central Transmission Main and Booster Pump Station Harnett County, North Carolina

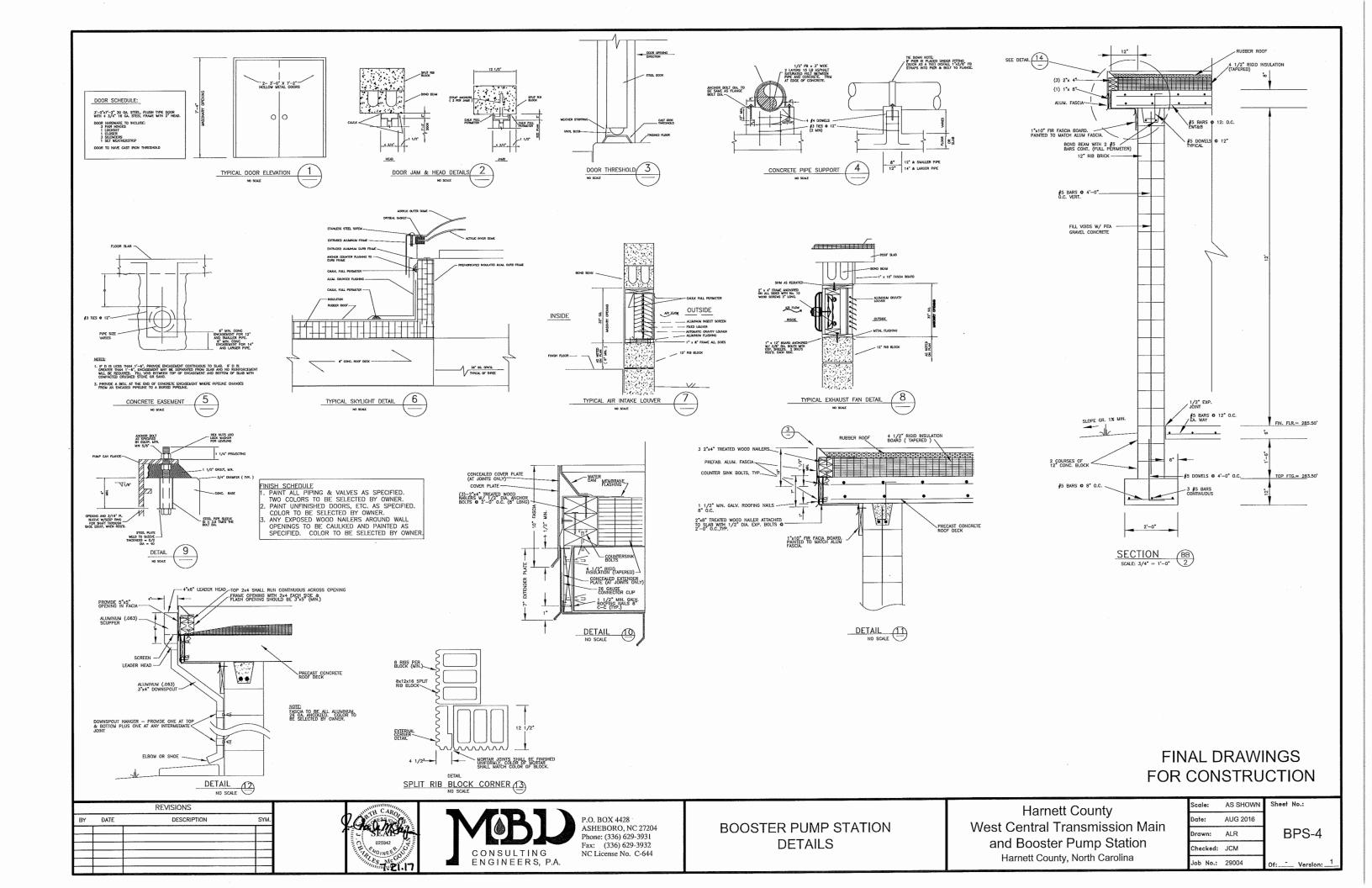
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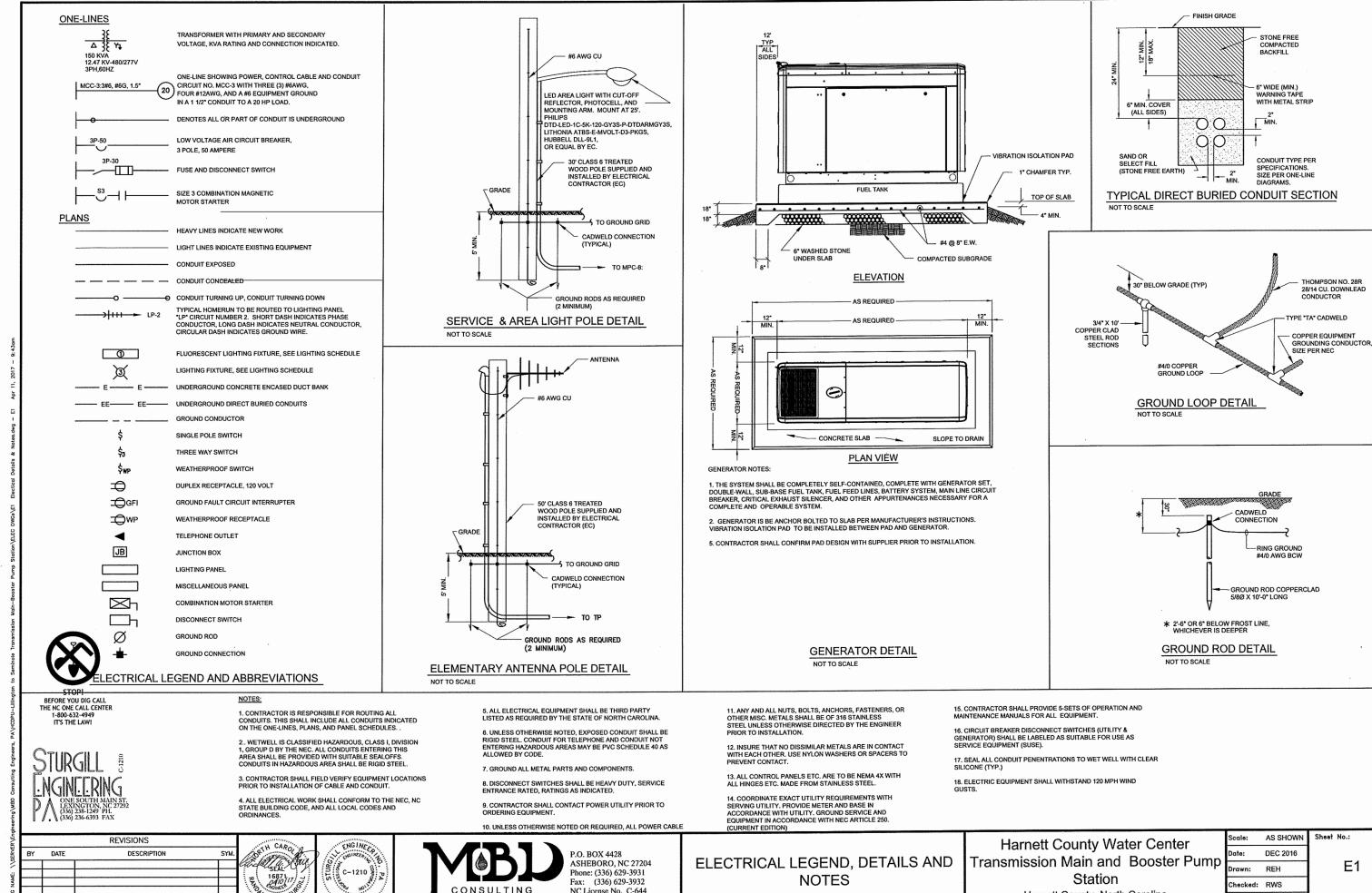
Job No.: 29004

BPS-2

Sheet No.:







CONSULTING

ENGINEERS, P.A.

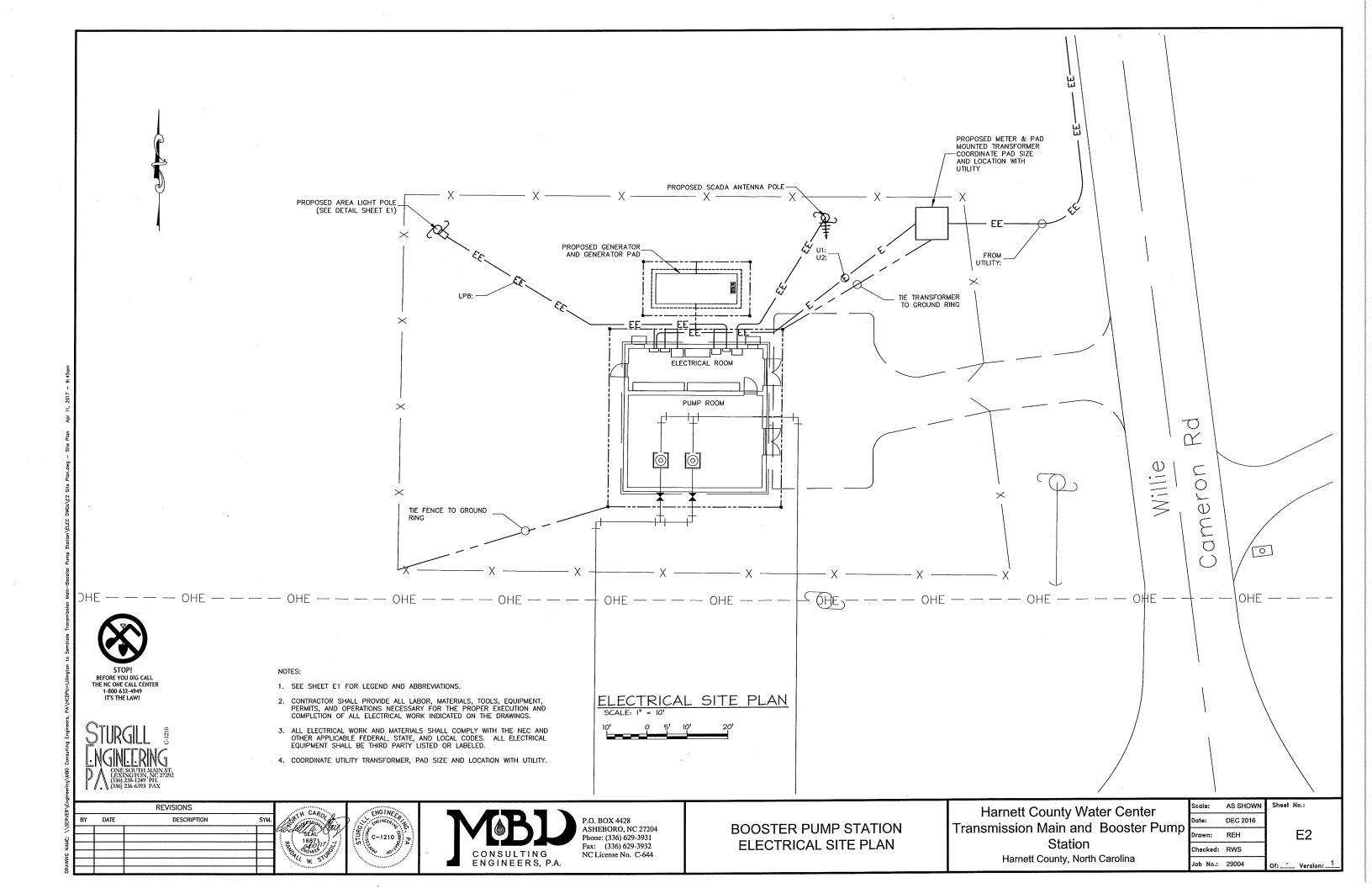
NC License No. C-644

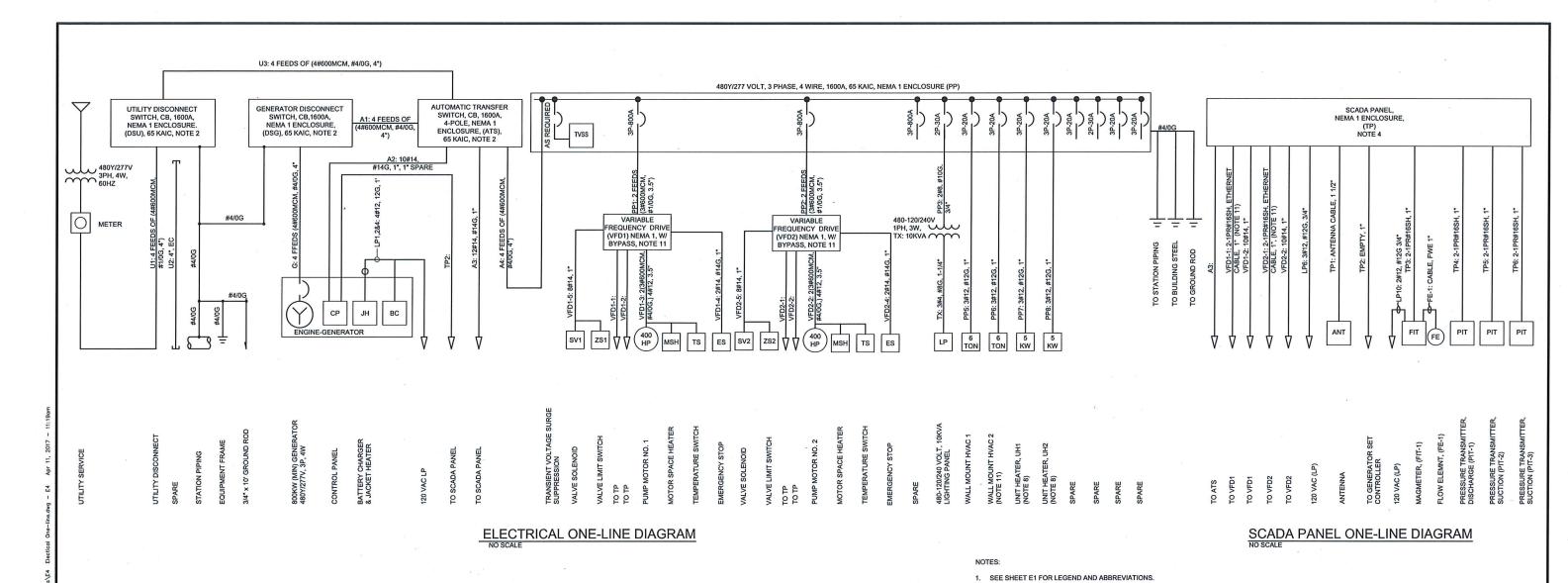
hecked: RWS

Job No.: 29004

Version:

Harnett County, North Carolina





PANELBOARD: LP			BUS: AS REQ'D		-	-	
SERVICE: 480 - 120/240 VAC, 1PH		RA'	RATING: 100A		MA	AIN CB: 50A-3P	
MOUNTING: NEMA 1				LC	LOCATION: PUMP STATION		
LOAD	AMP	POLE	Ck	(T#	POLE	AMP	LOAD
ENGINE BATTERY CHARGER	20	1P	1	2	2P	30	ENGINE JACKET HEATER
OUTSIDE BUILDING FLOOD LIGHT	20	1P	3	4	1	-1	1
EXHAUST FAN (EF1)	20	1P	5	6	1P	20	SCADA PANEL
PUMP ROOM LIGHTS	20	1P	7	8	1P	20	AREA LIGHT
INSIDE RECEPTACLES	20	1P	9	10	1P	20	MAG METER FIT-1
OUTSIDE GFI RECEPTACLE	20	1P	11	12	1P	20	ELECTRICAL ROOM LIGHTS

SPARE SPARE 20 1P 19 20 1P 20 SPARE 20 1P 21 22 1P 20 SPARE

STOP! BEFORE YOU DIG CALL THE NC ONE CALL CENTER



ELECTRICAL PANEL SCHEDULE

11. BASE BID INCLUDES VFD'S WITH RVAT BYPASS. ALTERNATE NO. 1 IS RVAT MOTOR STARTER ONLY AND NOE HVAC UNIT.

REVISIONS DATE DESCRIPTION







Harnett County Water Center Transmission Main and Booster Pump Station Harnett County, North Carolina

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ELECTRICAL ONE-LINE DIAGRAM 20" TRANSMISSION

2. INCLUDE ARC FLASH REDUCTION AS REQUIRED BY CODE. 3. COORDINATE LOCATION OF PANEL WITH OWNER

BE RATED FOR CONTINUOUS OPERATION AT 120VAC.

4. TP FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR. CABLE AND CONDUIT PROVIDED BY CONTRACTOR.

5. PCP PROVIDED WITH PUMPS. PANEL MOUNTING, CABLE, CONDUIT AND TERMINATIONS BY CONTRACTOR 6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, PERMITS, AND OPERATIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK INDICATED ON THE 7. ALL ELECTRICAL WORK AND MATERIALS SHALL COMPLY WITH THE NEC AND OTHER APPLICABLE FEDERAL,

STATE, AND LOCAL CODES. ALL ELECTRICAL EQUIPMENT SHALL BE THIRD PARTY LISTED OR LABELED.

ASSEMBLY, DISCONNECT SWITCH, CONTACTOR, THERMOSTAT, CONTROL TRANSFORMER IF REQUIRED, AND WALL/CEILING MOUNTING HARDWARE. UNIT HEATER SHALL BE RATED 5 KW AT 480 VAC THREE PHASE. HEATER ELEMENTS SHALL BE STEEL PLATE, FIN TYPE WITH ELEMENTS BRAZED TO COMMON FINS FOR MAXIMUM STRENGTH AND HEAT TRANSFER. FAN MOTOR SHALL BE PROVIDED WITH THERMAL OVERLOAD PROTECTION

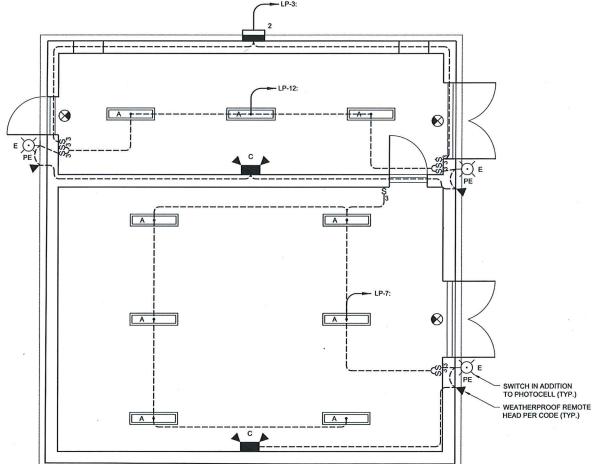
SCREEN, AND DAMPER MOTOR. INTAKE LOUVER SHALL BE RUSKIN ELC6375 OR EQUAL. DAMPER MOTOR SHALL

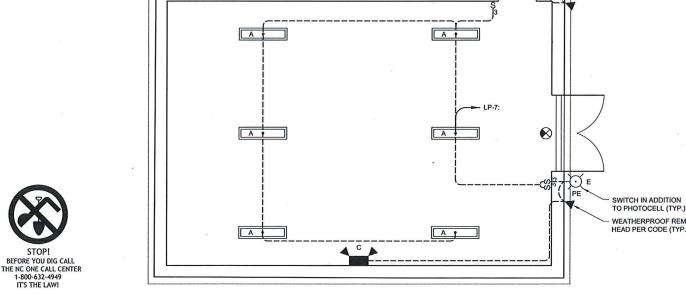
10. EXHAUST FAN EF1 SHALL BE RATED 2500CFM @ 0.5 IN. STATIC. 120VAC. 1PH., INCLUDE WALL HOUSING, INSECT SCREEN, GRAVITY OPERATED DAMPER, PROPELLER, MOTOR, OSHA APPROVED GUARD, MOTOR RATED DISCONNECT SWITCH, AND LINE VOLTAGE THERMOSTAT. EXHAUST FAN SHALL BE MANUFACTURED BY

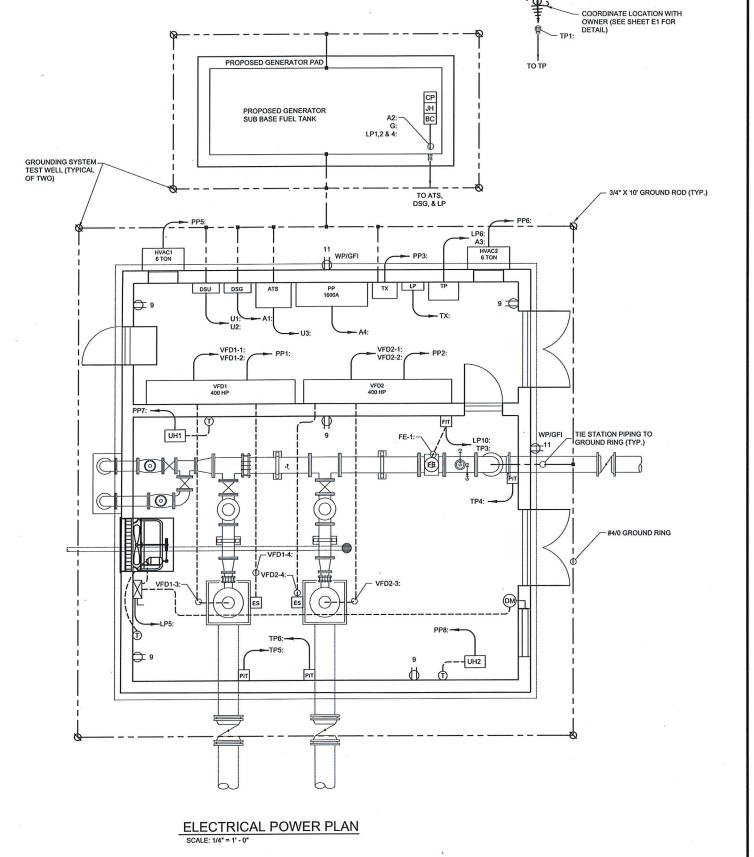
8. UNIT HEATERS UH-1 AND 2 SHALL BE HEAVY DUTY AND SHALL INCLUDE HEATING COIL, FAN AND MOTOR

9. INTAKE LOUVER SHALL BE ALUMINUM COMBINATION LOUVER DAMPER WITH DRAINABLE BLADES, INSECT

WITH AUTOMATIC RESET. UNIT HEATER SHALL BE SERIES 5100 BY MARKEL OR EQUAL.







ELECTRICAL LIGHTING PLAN

REVISIONS DATE DESCRIPTION



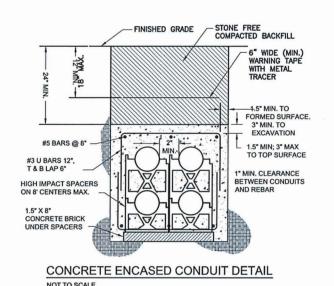


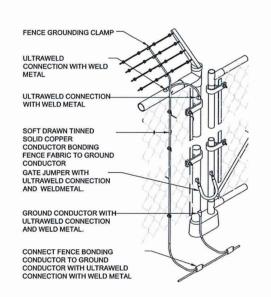


ELECTRICAL LIGHTING AND POWER ASHEBORO, NC 27204 **PLAN** Phone: (336) 629-3931 Fax: (336) 629-3932 NC License No. C-644 20" TRANSMISSION

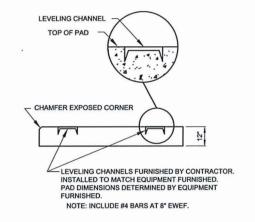
Harnett County Water Center Transmission Main and Booster Pum Station Harnett County, North Carolina

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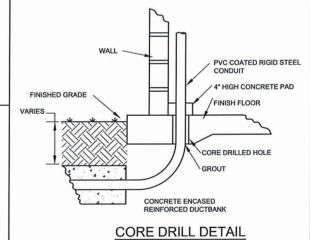


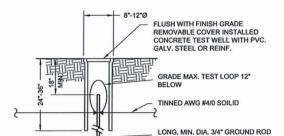


FENCE GROUNDING DETAIL NOT TO SCALE



EQUIPMENT PAD DETAIL



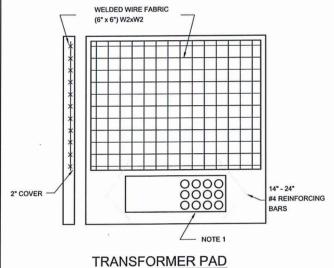


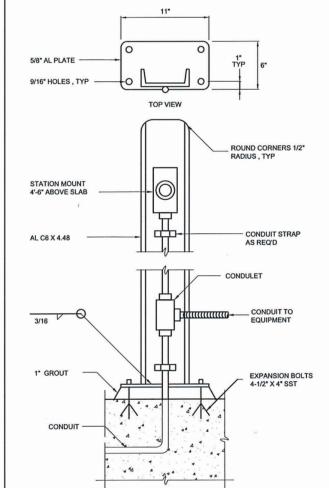
GROUND SYSTEM TESTING WELL DETAIL NOT TO SCALE

MIN. 10' COPPER-CLAD STEEL

TRANSFORMER PAD NOTES

- 1. THE CONTRACTOR SHALL INSTALL CONDUITS 1" ABOVE THE TOP OF THE CONCRETE PAD TO PREVENT WATER FROM ENTERING THE SWITCHBOARD. CONDUIT AREA LIMITED TO AREA INDICATED.
- 2. COORDINATE PADS WITH LOCAL UTILITY PRIOR TO INSTALLATION.
- 3. THE CONTRACTOR SHALL VERIFY TRANSFORMER LOCATION AND DIMENSIONS WITH THE DUKE POWER COMPANY PRIOR TO INSTALL TRANSFORMER PADS. TWO PADS ARE REQUIRED.
- 4. THE TRANSFORMER PADS SHALL HAVE 4 FEET CLEARANCE ON SIDES OTHER THAN CONDUIT SIDE. THE CONDUIT SIDE SHALL HAVE 10 FEET CLEARANCE.
- 5. CONCRETE MIX PLACED IN PAD SHALL MEET THE FOLLOWING
 - A. 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI. (MIN)
 - B. MAXIMUM WATER/CEMENT RATIO OF 0,50.
 C. MAXIMUM SLUMP OF 4 INCHES.
 - D. AIR-ENTRAINMENT CONTENT BETWEEN 4 AND 8 PERCENT.
- 6. CONCRETE SHALL BE AFFORDED ADEQUATE CURE FOR A MINIMUM OF 7 DAYS. ADEQUATE CURE CAN BE PERFORMED BY WATERPROOF MEMBRANES, SPRINKLING OR SOAKING OR CURING COMPOUNDS.
- 7. PAD SHALL BE SUPPORTED ON A SUBBASE OF SAND, GRAVEL, OR CRUSHED STONE. THE GRANULAR SUBBASE IS TO BE A MINIMUM OF 4" THICK AND SHALL BE COMPACTED WITH
- 8. DAMPEN THE SUBBASE PRIOR TO CONCRETE PLACEMENT. AT THE TIME OF PLACEMENT, THE SUBBASE SHALL NOT CONTAIN STANDING WATER.





- 1. COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
- 2. SUPPLY 1'-2" DIAMETER X 2'-6" DEEP FOUNDATION WHERE MOUNTING SURFACE IS NOT AVAILABLE.

SIDE VIEW

3. USE SST WASHERS, NUTS AND BOLTS FOR MOUNTING DEVICES.

TYPICAL EMERGENCY STOP MOUNTING DETAIL

THE NC ONE CALL CENTER 1-800-632-4949 IT'S THE LAW!

REVISIONS DATE DESCRIPTION







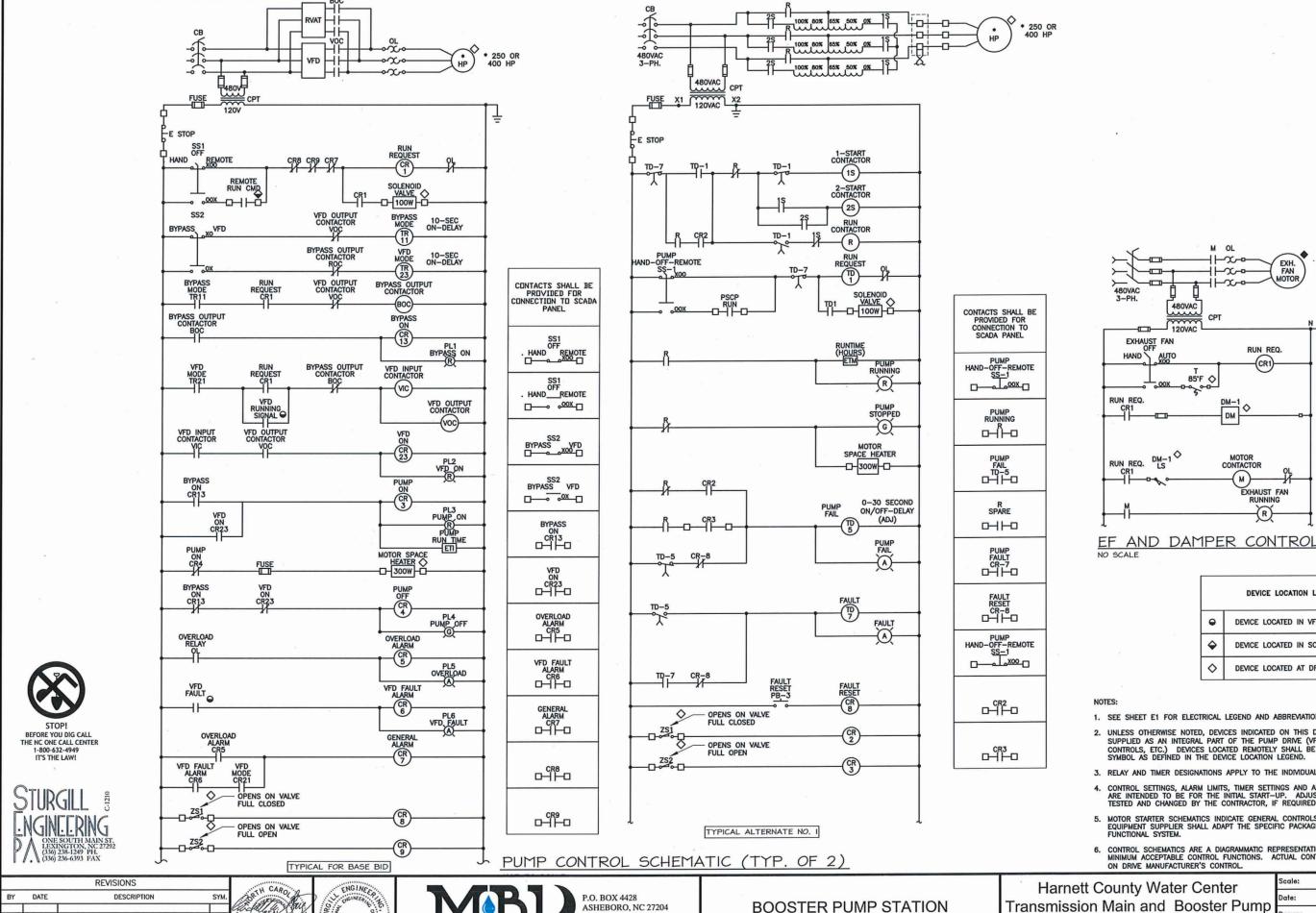
ASHEBORO, NC 27204 Phone: (336) 629-3931 Fax: (336) 629-3932 NC License No. C-644

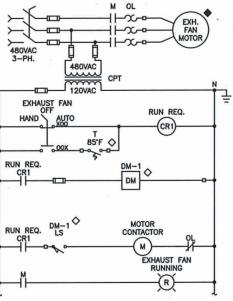
Harnett County Water Center Transmission Main and Booster Pump Station

Harnett County, North Carolina

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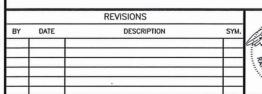
ELECTRICAL DETAILS







- 1. SEE SHEET E1 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
- UNLESS OTHERWISE NOTED, DEVICES INDICATED ON THIS DRAWING SHALL BE SUPPLIED AS AN INTEGRAL PART OF THE PUMP DRIVE (VFD, RVAT, CONTACTORS, CONTROLS, ETC.) DEVICES LOCATED REMOTELY SHALL BE IDENTIFIED BY A LOCATION SYMBOL AS DEFINED IN THE DEVICE LOCATION LEGEND.
- 3. RELAY AND TIMER DESIGNATIONS APPLY TO THE INDIVIDUAL SCHEMATIC ONLY.
- CONTROL SETTINGS, ALARM LIMITS, TIMER SETTINGS AND ADJUSTABLE PARAMETERS
 ARE INTENDED TO BE FOR THE INITIAL START—UP. ADJUSTABLE SETTINGS SHALL BE
 TESTED AND CHANGED BY THE CONTRACTOR, IF REQUIRED FOR PROPER OPERATION.
- MOTOR STARTER SCHEMATICS INDICATE GENERAL CONTROLS AND SEQUENCING. EQUIPMENT SUPPLIER SHALL ADAPT THE SPECIFIC PACKAGE TO PROVIDE A FULLY FUNCTIONAL SYSTEM.
- 6. CONTROL SCHEMATICS ARE A DIAGRAMMATIC REPRESENTATION TO INDICATE THE MINIMUM ACCEPTABLE CONTROL FUNCTIONS. ACTUAL CONTROL LOGIC WILL DEPEND







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CONTROL SCHEMATIC DIAGRAMS

Station Harnett County, North Carolina

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	Checked:	RWS	9
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