GENERAL ELECTRICAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, INSTALLING AND CONNECTING ALL LINE AND LOW VOLTAGE CONDUIT, CONDUCTORS, SWITCHES, DISCONNECTS, JUNCTION BOXES, AND FIXTURES FOR POWER, TELECOMMUNICATIONS, AND LIGHTING SYSTEMS.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, INSTALLING, AND CONNECTING ALL CONTROL CONDUIT AND CONDUCTORS FOR CONTROL SYSTEM.
3. THE ELECTRICAL CONTRACTOR SHALL SUPPLY, RIG AND MOUNT THE NEW TRANSFER SWITCH AND ASSOCIATED COMPONENTS.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ATS START UP AND TESTING.
5. LABEL ALL PANELS, DISCONNECTS, MOTOR STARTERS, AND CONTROLLERS. ALL LABELS ARE TO BE SELF ADHERING PLASTIC LAMINATED WITH 3/8" WHITE LETTERS ON A BLACK BACKGROUND. ALL DEVICES WILL BE IDENTIFIED BY THEIR NUMBER, VOLTAGE AND SOURCE OF POWER.
6. PROVIDE A TYPEWRITTEN CIRCUIT DIRECTORY IN ALL NEW PANEL BOXES.
7. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING AND SCHEDULING ALL ELECTRICAL INSPECTIONS, PAY ALL FEES, AND SUBMIT A FINAL INSPECTION REPORT TO THE ENGINEER.
8. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL GROUNDING IN ACCORDANCE WITH NEC ARTICLE 250 AND ACCORDING TO THE REQUIREMENTS INDICATED ON THE DRAWINGS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE USED. GROUNDING THROUGH RACEWAY AND CONDUITS IS NOT PERMITTED.
9. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL GROUND CONDUCTORS TO BOND THE WTP GROUNDING SYSTEM TOGETHER.
10. THE LOCATIONS AND ROUTES OF CONDUITS AND RACEWAYS SHOWN ON THESE DRAWINGS ARE SCHEMATIC. ALL CONDUITS ABOVE THE SLAB SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING. CONDUITS ABOVE THE CEILING SHALL BE MOUNTED AS HIGH AS POSSIBLE. ALL BELOW GROUND CONDUITS SHALL BE INSTALLED USING THE MOST DIRECT ROUTE WITH CONSIDERATION OF PROPER COORDINATION WITH OTHER UTILITIES - UNDERGROUND OR ABOVE GROUND.
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND CONDUCTORS FOR TELEPHONE AND LAN SYSTEMS. ALL CONDUCTORS SHALL BE COPPER WITH TYPE THHN/THWN OR XHHW INSULATION UNLESS OTHERWISE NOTED. ALL CONDUIT AND CONDUCTORS SHALL BE SIZED PER NEC.
12. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LAMPS FOR ALL LIGHTING FIXTURES.
13. ALL DUPLEX RECEPTACLES SHALL BE MOUNTED VERTICALLY AND 18" NOMINALLY AFF TO BOTTOM OF BOX UNLESS OTHERWISE INDICATED.
14. ALL LIGHTING SHALL BE WARRANTED BY THE MANUFACTURER FOR 5 YEARS. ALL LIGHTING THAT FAIL WITHIN THE FIRST YEAR OF SUBSTANTIAL COMPLETION SHALL BE REPLACED BY THE ELECTRICAL CONTRACTOR AT NO COST TO THE OWNER.
15. FASTENING OF HANGERS TO THE ROOF WILL NOT BE PERMITTED. ANY CONTRACTOR RESPONSIBLE FOR PUNCTURING THE ROOF STRUCTURE WILL REPAIR THE ROOF AT THEIR EXPENSE.
16. ALL DISCONNECT SWITCHES AND SAFETY SWITCHES ARE TO BE HEAVY DUTY TYPE.
17. MC CABLE WILL NOT BE ACCEPTED.
18. "GREENFIELD" AND LIQUID TIGHT FLEX CONDUIT MAY BE USED IN LENGTHS NOT TO EXCEED 72".
19. THE ELECTRICAL CONTRACTOR SHALL CAULK ALL PENETRATIONS,RELATED TO ELECTRICAL WORK, IN 1 & 2 RATED HR FIRE WALL WITH 3M FIRE CAULK. SEAL LARGER OPENINGS WITH WIREMOLD "FLAMESTOPPER" KIT.
20. ALL EXTERIOR EXPOSED CONDUIT SHALL BE PVC COATED GRC.
21. ALL CONDUIT IN CLASS 1 DIV 1 LOCATIONS SHALL BE PVC COATED GRC.
22. THE ELECTRICAL CONTRACTOR SHALL PROVIDE SEAL OFFS FOR ALL CONDUIT BETWEEN CLASSIFIED AND UNCLASSIFIED LOCATIONS.
23. ALL CONDUIT IN CHEMICAL ROOMS SHALL BE PVC.
24. ALL OTHER INTERIOR CONDUIT SHALL BE GRC.
25. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT CONDUIT AND CONDUCTORS FOR THE HVAC EQUIPMENT. THIS SHALL INCLUDE LINE AND LOW VOLTAGE EQUIPMENT.
26. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL FIBER OPTIC CABLE AND CONDUITS FOR THE FIBER RUNS.
27. THE SCADA VENDOR SHALL BE RESPONSIBLE FOR ALL FIBER OPTIC TERMINATIONS AND TESTING.
28. THE SCADA VENDOR SHALL PROVIDE ALL TERMINATIONS FOR SCADA VENDOR SUPPLIED PANELS. SCADA VENDOR SHALL PROVIDE CONTROL PANEL START UP.
29. THE ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL, AND TERMINATE ALL CONDUIT AND CONDUCTORS FOR VENDOR SUPPLIED CONTROL PANELS.

SYMBOLS

Symbol	Description
	GROUND GRID EXOTHERMIC CONNECTION TO BUILDING FOUNDATION REINFORCING BAR SIZE AS INDICATED ON DRAWINGS
	MAIN GROUND GRID CONDUCTOR BELOW GRADE (BURY 30" BELOW GRADE THROUGHOUT) SIZE AS INDICATED ON DRAWINGS
	3/4"x 10' COPPER CLAD GROUND ROD WITH EXOTHERMIC CONNECTION TO MAIN GROUND GRID CONDUCTOR
	GROUND GRID RISER CONDUCTOR THROUGH SLAB FOR CONNECTION TO COLUMN, EQUIPMENT, ETC.
	EXOTHERMIC CONNECTION BETWEEN GROUND GRID CONDUCTORS
	NEW PANEL
GP-2	HOMERUN GP = GENERAL PURPOSE PANEL 'GP' 2 = CIRCUIT No.
	CONDUIT UP
	CONDUIT DOWN
	FLEXIBLE CONDUIT CONNECTION
	SPECIAL USE RECEPTACLE REFER TO INFORMATION ON INDIVIDUAL DRAWINGS
GF WP CKT	RECEPTACLE GF = GROUND FAULT WP = WEATHERPROOF CKT = CIRCUIT
	SINGLE RECEPTACLE
A 3	SWITCH A = SWITCHING SCHEME 3 = 3 WAY 4 = 4 WAY M = MOTOR STARTER TYPE
	NEW TELEPHONE JACK
E	NEW ETHERNET JACK
DR	WALL MOUNTED DOOR HOLDER
L.A.	LIGHTNING ARRESTER
1600 1200 SST LT ST IT	CIRCUIT BREAKER = DRAW-OUT 1600 = AMP FRAME SIZE 1200 = AMP TRIP SENSOR SST = SOLID STATE TRIP UNIT LT = LONG TIME TRIP FUNCTION ST = SHORT TIME TRIP FUNCTION IT = INSTANTANEOUS TRIP FUNCTION
300 300	CIRCUIT BREAKER 400 = AMP FRAME SIZE 300 = AMP TRIP RATING
52	DRAW-OUT TYPE POWER CIRCUIT BREAKER
	DELTA-WYE TRANSFORMER SIZE AS INDICATED ON DRAWINGS
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
SSS	SOLID STATE SOFT STARTER
	LOCAL START / LOCK STOP CONTROLLER
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESION
FACP	FIRE ALARM CONTROL PANEL
RADIO	RADIO TRANSCEIVER
	OMNI DIRECTIONAL ANTENNA WITH MODULE
	SOUNDER STROBE
TM	60 MIN TIMER
TRANSMITTER	FLOW METER CONTROL BOX TRANSMITTER
FM	FLOW METER
ANN	ANNUNCIATOR PANEL
NMM	ADDRESSABLE MINI MODULE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	DISCONNECT SWITCH
	DISCONNECT SWITCH
	COMBINATION DISCONNECT SWITCH MOTOR STARTER GREENHECK MODEL AS INDICATED ON CONDUIT SCHEDULE
E	EMERGENCY STOP
X	MOTOR SIZE AS INDICATED ON DRAWINGS X = HORSEPOWER
K	KEY INTERLOCK
J	JUNCTION BOX
80E	SIZE 80E = RATING
	GENERATOR SIZE AS INDICATED ON DRAWINGS
VFD	VARIABLE FREQUENCY DRIVE
O	METHANE SENSOR
M	OXYGEN SENSOR
H	H2S SENSOR
F	STROBE LIGHT
F	FIRE ALARM PULL STATION WITH KEY RESET
S	PHOTOELECTRIC SMOKE DETECTOR
XS	EXPLOSION PROOF SMOKE DETECTOR
XF	EXPLOSION PROOF FIRE PULL STATION WITH KEY RESET
E	EXTERIOR STROBE LIGHT WITH HORN
H X	HEAT DETECTOR X = RATE OF RISE IN DEGREES
ANSUL	SUPPRESSION SYSTEM SUPERVISION

DATE: 9/30/2024
DRAWN BY: EMB
SCALE: NTS
REVIEWED BY: RF
PROJECT NO.: ----
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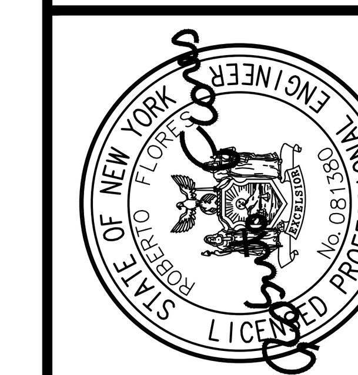

REVISIONS

NO.	DATE	DESCRIPTION

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

ELECTRICAL NOTES &
LEGEND

SHEET:
E-001