

PROJECT GENERAL NOTES:

1. THE PROCESS BUILDING IS FACTORY DESIGNED, BUILT, TESTED AND DELIVERED TO THE SITE FULLY ASSEMBLED BY NEWTERRA. ALL WORK INSTALLED BY NEWTERRA SHALL MEET 2020 NEC INSPECTION CODES.
2. THE CONTRACTOR SHALL WORK WITH NEWTERRA MANUFACTURING TO PROVIDE AND INSTALL ALL ELECTRICAL AND CONTROLS COMPLETE WITH ASSOCIATED CIRCUITRY NECESSARY TO PERFORM THE INTENDED FUNCTIONS OF THE CONTRACT DOCUMENTS. ANY MATERIALS, DEVICES AND CIRCUITRY NOT SPECIFICALLY INDICATED BUT NECESSARY TO PERFORM INTENDED FUNCTIONS AND CORRECT OPERATION SHALL BE PROVIDED AND INSTALLED.
3. ELECTRICAL INSTALLATION OF POWER AND CONTROLS ON EQUIPMENT SKIDS SHALL BE BY THE MANUFACTURER.
4. ALL EQUIPMENT, DEVICE AND RACEWAY DIMENSIONS, PLANS AND ELEVATIONS INDICATED ON THE DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL USE SHOP DRAWINGS FOR PROPER LAYOUT, FOUNDATION AND PAD FOR FINAL INSTALLATION.
5. ALL OVERCURRENT DEVICES (CIRCUIT BREAKERS, FUSES, OVERLOADS, ETC.) SIZES INDICATED ARE ESTIMATED. THE CONTRACTOR SHALL PROVIDE AND INSTALL OVERCURRENT DEVICES SIZED AS REQUIRED BY THE NEC FOR THE CONNECTED LOAD AND ACTUAL EQUIPMENT RATING. ALL OVERCURRENT DEVICES SIZES SHALL BE APPROVED BY THE ENGINEER.

SITE WORK:

1. ALL WORK SHALL BE COORDINATED WITH OTHER UNDER GROUND UTILITIES.
2. THE CONTRACTOR SHALL FOLLOW TRENCH DETAILS FOR CONDUIT AND WIRE.

GENERATOR PAD:

1. SIZE PAD TO EXTEND A MINIMUM OF 18" PAST THE EDGE OF GENERATOR ENCLOSURE PROVIDED. COMPACT SOIL UNDER GENERATOR PADS TO 95% STANDARD PROCTOR. THE FINAL PAD THICKNESS IS A MINIMUM OF 6".
2. STEEL REINFORCING BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420), DEFORMED. ALL REINFORCING STEEL SHALL BE UNIFORMLY TIED TO REINFORCING STEEL TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT WITH BOLSTERS, CHAIRS, OR SPACERS.
3. ALL CONCRETE SHALL BE AIR PROPORTION NORMAL-WEIGHT CONCRETE MIXTURE AS FOLLOWS:
  - a. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS.
  - b. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO: 0.45.
  - c. SLUMP LIMIT: 5 INCHES, PLUS OR MINUS 1 INCH.
  - d. AIR CONTENT: 6 PERCENT, PLUS OR MINUS 1.5 PERCENT AT POINT OF DELIVERY FOR 3/4-INCH NOMINAL MAXIMUM AGGREGATE SIZE.
4. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. COMPLY WITH ACI 306.1 FOR COLD-WEATHER PROTECTION AND ACI 301 FOR HOT-WEATHER PROTECTION DURING CURING.

SITE (POWER) TRENCH DETAIL:

1. FOR THE CONDUIT TRENCHES TO THE INSTALL SCHEDULE 40 PVC CONDUIT WITH RIGID ELBOWS. REBAR STAKE AND TIE THE CONDUIT AT 5' INTERVALS ABOVE THE BOTTOM OF THE TRENCH AND FLOW FILL 8" WITH CONCRETE SLURRY.

2. COORDINATE TRENCH WIDTH WITH OWNER AND WHERE NEEDED CONDUITS CAN BE STACKED TO MINIMIZE TRENCH WIDTH

SERVICE:

1. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE ALONG WITH ANY LOCAL BUILDING CODES.
2. ALL WORK INVOLVING THE UTILITY SHALL BE REVIEWED AND CONFIRMED, PRIOR TO ANY INSTALLATION. ALL WORK TO CONFORM TO YAMPA VALLEY ELECTRIC ASSOCIATION REQUIREMENTS.
3. ALL FEEDERS ARE TO BE COPPER.
4. PANEL SCHEDULES SHALL BE UPDATED AND TYPED PRIOR TO COMPLETION OF THE PROJECT.
5. THE E.C. SHALL SUBMIT ELECTRICAL DISTRIBUTION GEAR, AND GENERATOR SHOP DRAWINGS TO THE OWNER AND ENGINEER FOR APPROVAL PRIOR TO FINAL PURCHASE.
6. THE SERVICE EQUIPMENT SHALL BE BUILT AT THE EDGE OF THE TANK PAD WITH A RACK AS SHOWN OR MOUNTED ON THE CONTAINER EXTERIOR PER OWNER PREFERENCE.

STAND-BY GENERATOR AND ATS:

1. THE GENERATOR SHALL BE INSTALLED WITH ALL CONNECTIONS, CONDUCTORS AND CONDUITS PER THE CODE.
2. REFER TO GENERATOR SPECIFICATION TABLE FOR DETAILS ON THE PROJECT SPECIFIC GENERATOR.
3. THE CONTRACTOR SHALL PROVIDE A CONCRETE HOUSEKEEPING PAD PER DETAIL.
4. SUPPLY AUTOMATIC TRANSFER SWITCH IN THE AMPERAGE AND VOLTAGE SPECIFIED. SWITCH SHALL BE (3) POLE WITH A SOLID NEUTRAL CONNECTION.
5. GROUND GENERATOR PER NEC 250-35(B) FOR A NON-SEPARATELY DERIVED SYSTEM.
6. CONTROL CONDUCTORS FROM THE GENERATOR TO THE REMOTE CONTROL PANEL AND ATS SWITCH SHALL BE VERIFIED FROM THE MANUFACTURER AND INSTALLED PER CODE.
7. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE GENERATOR AND TRANSFER SWITCHES TO THE ENGINEER PRIOR TO PURCHASE.
8. THE CONTRACTOR IS RESPONSIBLE TO TEST AND SHOW PROPER OPERATION OF THE STANDBY SYSTEM TO THE OWNER.

GROUNDING:

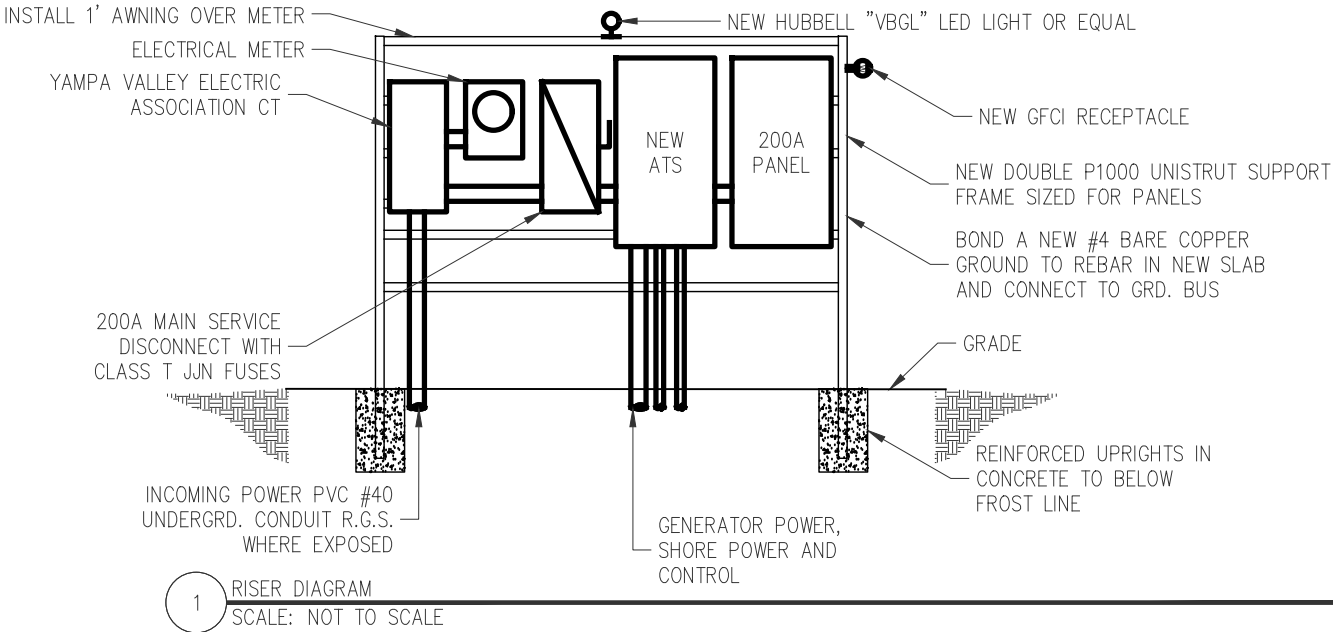
1. PROVIDE NEW MAIN SERVICE GROUNDING WITH THE FOLLOWING:
  - A WALL MOUNTED 2" X 8" X 1/4" GROUND BAR MOUNTED ON WALL BY MAIN SERVICE BOND ALL CONDUCTORS HERE.
  - 2- 5/8" GROUND RODS AT ENTRANCE PER NEC.
  - INSTALL 20' OF BARE GROUND WIRE IN THE TRENCH TO THE GENERATOR AND COVER WITH CONCRETE.
  - BOND BUILDING STEEL OF NEW CONTAINERIZED PLANT.

DETAIL NOTES ALL SHEETS:

1. THE CONTRACTOR SHALL VERIFY THE NUMBER OF CONTROL CABLES BETWEEN THE GENERATOR AND ATS SWITCH. THERE WILL BE A SET OF GENERATOR START CONTACTS ALONG WITH A COMMUNICATIONS CONNECTION FOR GENERATOR ALARM SIGNALS TO THE SCADA SYSTEM. COORDINATE WITH NEWTERRA ON CONNECTION TO SCADA.

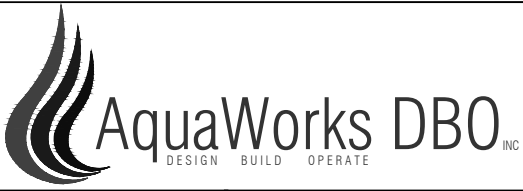
CONTROL SYSTEM WORK BY ELECTRICAL:

1. ALL CONTROL DEVICES, CABLING AND CONNECTIONS INSIDE THE BUILDING WILL BE INSTALLED BY THE MANUFACTURER.
2. ALL CONTROL DEVICES AND FACTORY SUPPLIED CABLING FOR THE TANKS SHALL BE SUPPLIED BY NEWTERRA.
3. THE ELECTRICAL CONTRACTOR SHALL INSTALL CONTROL CONDUITS BETWEEN THE INTERIOR PANELS AND THE TANKS.
4. THE E.C. SHALL SUPPLY THE CONTROL CABLING FROM THE BUILDING TO THE TANKS AS LISTED IN THE NEWTERRA SUBMITTAL AND THE SCHEDULE. EC TO PROVIDE CABLING BETWEEN CONTAINERS PER THE NEWTERRA ONE-LINE.



1 RISER DIAGRAM  
SCALE: NOT TO SCALE

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PROJECT: WWTP IMPROVEMENT PROJECT COMMUNITY OF PHIPPSBURG ROUTT COUNTY, COLORADO		SHEET TITLE: ELECTRICAL NOTES & DETAILS		
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: #2479	SCALE: NOT TO SCALE	SHEET: E1

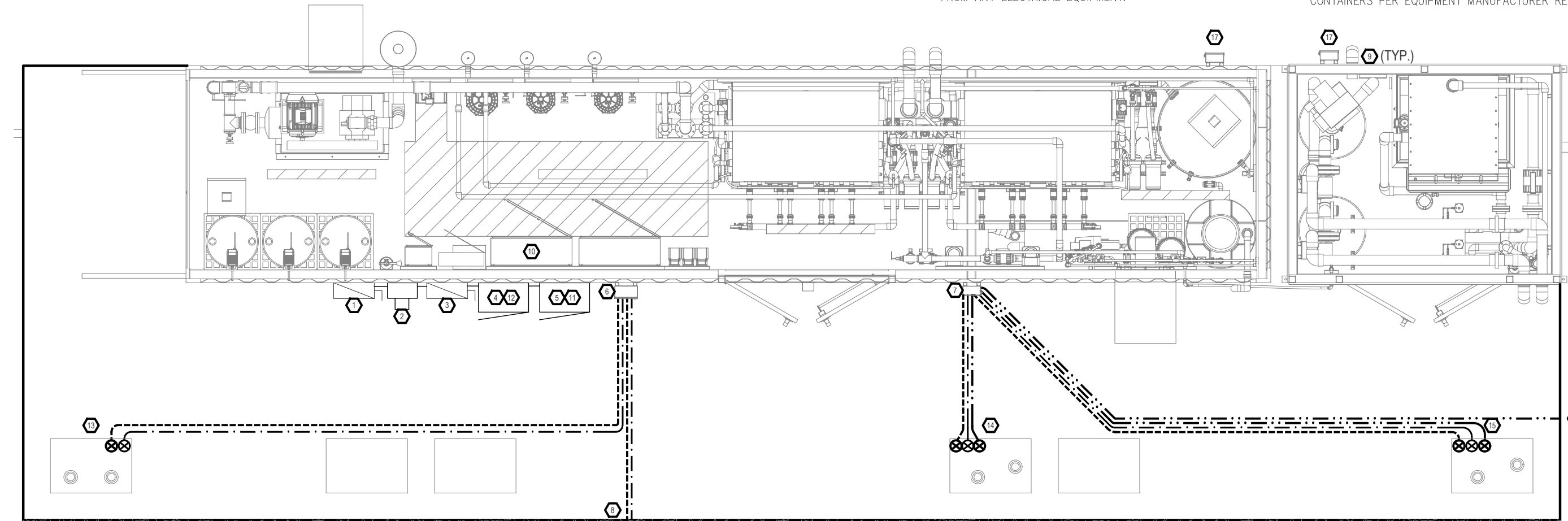


GENERAL NOTES:

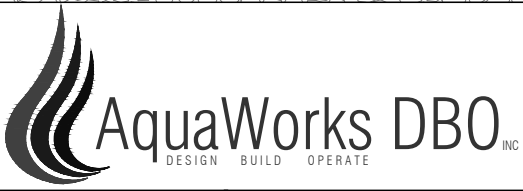
- A. ALL CONDUCTORS SIZING IS BASED ON COPPER ONLY.
- B. EC TO COORDINATE WITH YAMPA VALLEY ELECTRIC ASSOCIATION TO VERIFY SIZE AND AVAILABLE FAULT CURRENT FOR THE UTILITY TRANSFORMER. IF ANY VALUES EXCEED THE ONES LISTED ON THE SHORT CIRCUIT TABLE, CONTACT ENGINEER IMMEDIATELY TO REVISE DESIGN AND CALCULATIONS.
- C. VOLTAGE DROP IS TO BE TESTED AND IF NEEDED, UPSIZED BY THE EC.
- D. SEE INSTRUMENTATION TABLE ON E3 FOR POWER CONNECTION REQUIREMENTS, COMMUNICATION CABLE TYPES, CONDUIT SIZES, JUNCTION BOX ROUTING, HAZARDOUS AREA CLASSIFICATIONS AND TERMINATION INFORMATION
- E. ALL CONDUIT PATHWAYS SHOWN IN THIS DRAWING ARE DIAGRAMMATIC ONLY. EC TO DETERMINE THE BEST ROUTING FOLLOWING THE INSTRUMENTATION SCHEDULE ON PAGE E3
- F. TRANSFORMER ASSUMED TO BE NO FURTHER THEN 50' AWAY. IF THERE IS A DISCREPANCY, CONTACT ENGINEER FOR RECALCULATIONS

KEYED NOTES: 17

1. 200A YAMPA VALLEY ELECTRIC ASSOCIATION ASSOCIATION 600V NEMA 3R CT.
2. 200A YAMPA VALLEY ELECTRIC ASSOCIATION ASSOCIATION METER.
3. 200A YAMPA VALLEY ELECTRIC ASSOCIATION ASSOCIATION 600V NEMA 3R SERVICE DISCONNECT.
4. 200A, 480/277V, 3PHASE, 4 WIRE, NEMA 3R, AUTOMATIC TRANSFER SWITCH.
5. 200A, 480/277V, 3PHASE, 4 WIRE, NEMA 3R PANEL.
6. JUNCTION BOXES JB-TNK1, JB-TNK1-DC.
7. JUNCTION BOXES JB-TNK2-CL2, JB-TNK2-IS, JB-TNK2, & JB-TNK2-DC.
8. U.G. POWER AND CONTROL CONDUITS FOR GENERATOR. SEE CIVIL PLANS FOR EXACT LOCATIONS. GENERATOR IS ABOUT 60' NORTH OF THE PLANT. ATS TO RECEIVE 120V AND 24VDC CONNECTIONS.
9. EXTEND VENTILATION WHEN NEEDED TO ENSURE IT IS 3' AWAY FROM ANY ELECTRICAL EQUIPMENT.
10. PROPOSED LOCATION OF 120/208V 3PHASE PANEL. PANEL TO SUPPLY GENERATOR AND RACK'S SMALL LOADS.
11. MAINTENANCE LED LIGHT & GFI ON RACK 120V FROM NEW 120/208V PANEL.
12. COORDINATE OVERHEAD ROUTE FOR INCOMING 200A FEED FROM TRANSFER SWITCH.
13. SLUDGE HOLDING TANK TNK-0901. TANK TO RECEIVE 480V CONNECTIONS AND 24VDC CONNECTIONS. SEE E3 FOR EQUIPMENT CONNECTION SCHEDULE.
14. AERATION TANK TNK-0501. TANK TO RECEIVE 480V CONNECTIONS, CLASS 2 CONNECTIONS AND 24VDC. SEE E3 FOR EQUIPMENT CONNECTION SCHEDULE.
15. EQUALIZATION TANK TNK-0301. TANK TO RECEIVE 480V CONNECTIONS, 24VDC, AND INTRINSICALLY SAFE/CLASS 2 CONNECTIONS. SEE E3 FOR EQUIPMENT CONNECTION SCHEDULE.
16. INSTALL ULTRASONIC TRANSDUCER AT EXISTING FLUME (INTRINSICALLY SAFE.)
17. PROVIDE ELECTRICAL CONNECTIONS BETWEEN THE TWO CONTAINERS PER EQUIPMENT MANUFACTURER REQUIREMENTS.



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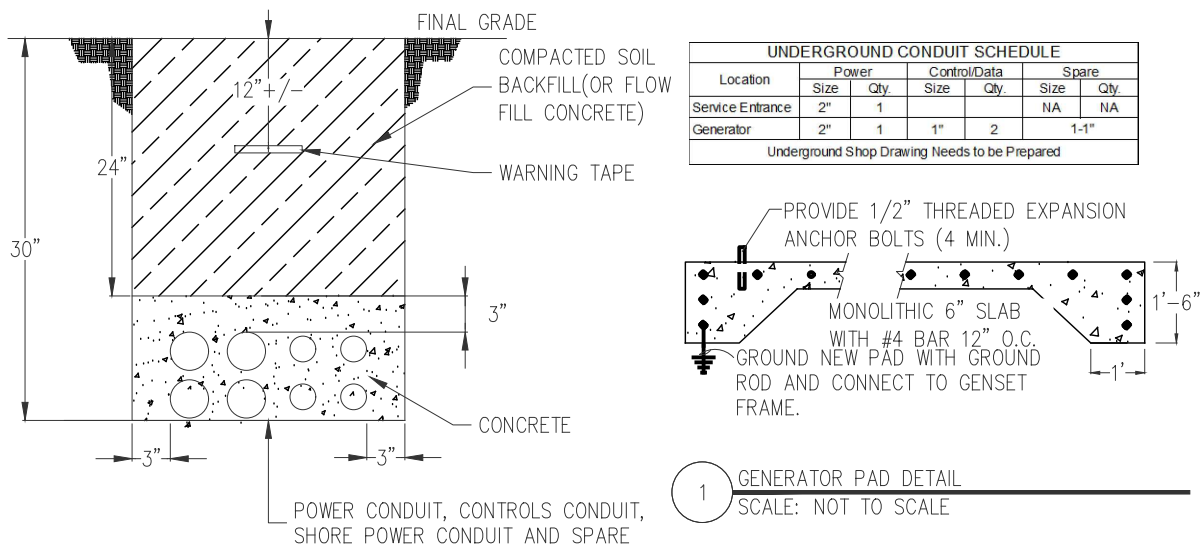
PROJECT: WWTP IMPROVEMENT PROJECT COMMUNITY OF PHIPPSBURG ROUTT COUNTY, COLORADO		SHEET TITLE: ELECTRICAL LAYOUT		
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: #2479	SCALE: NOT TO SCALE	SHEET: E2



TANK POWER & INSTRUMENT CONNECTION										
TANK #	TAG	480V	120V	24VDC	IS/CL2	ITEM	CABLE IN CONDUIT	AREA CLASSIFICATION	CONNECTION	TERMINATION
301	P-0301	YES	-	-	-	Equalization Tank Pump #1 (Duty)	3-#12, 1-#12, -3/4" Rigid	Cl1, Div1 Seal-Off	JB-TNk2	Plant MPP
	P-0302	YES	-	-	-	Equalization Tank Pump #2 (Standby)	3-#12, 1-#12, -3/4" Rigid			
	LT-301	-	-	-	YES	Level Transmitter	Separate 1" Conduits for all connections. Verify the Qty of #16, pairs of #16 STP, & 24Vdc, and other pump control cables		JB-TNk2-IS	Plant MCP
	LSLL-301	-	-	-	YES	Level Switch High High				
	LSHH-301	-	-	-	YES	Level Switch High High				
501	P-0501	YES	-	-	-	Aeration Tank Pump #1 (Duty)	3-#12, 1-#12, -3/4" Rigid	General Purpose	JB-TNk2	Plant MPP
	P-0502	YES	-	-	-	Aeration Tank Pump #2 (Standby)	3-#12, 1-#12, -3/4" Rigid			
	PH-0501	-	-	YES	-	pH Transmitter	Separate 1" Conduits for all connections. Verify the Qty of #16, and other pump control cables		JB-TNk2-DC	Plant MCP
	DO-0501	-	-	YES	-	Dissolved Oxygen Transmitter				
	LSHH-0501	-	-	-	YES	Level Switch High High				
	LSLL-0501	-	-	-	YES	Level Switch Low Low				
901	LT-0501	-	-	-	YES	Level Transmitter		General Purpose	JB-TNk1	Plant MPP
	P-0901	YES	-	-	-	Activated Sludge Decant Pump #1 (Duty)	3-#12, 1-#12, -3/4" Rigid			
	P-0902	YES	-	-	-	Activated Sludge Decant Pump #2 (Standby)	3-#12, 1-#12, -3/4" Rigid			
	LSLL-0901	-	-	YES	-	Level Switch Low Low	Separate 1" Conduits for all connections. Verify the Qty of #16, pairs of #16 STP, & other sensor cables		JB-TNk1-DC	Plant MCP
	LSHH-0901	-	-	YES	-	Level Switch High High				

MAIN SERVICE CALCULATION				480 Volts
Computed Loads		Demand Factor		
Lighting	0.3 kVA	125% =	0.3 kVA	
Receptacle (1st 10 kW)	1.4 kVA	100% =	1.4 kVA	
Receptacle (Over 10 kW)	0.0 kVA	50% =	0.0 kVA	
Motor Loads	34.5 kVA	100% =	34.5 kVA	
Largest Motor	22.5 kVA	125% =	28.1 kVA	
Fixed Electric Heat	15.8 kVA	100% =	15.8 kVA	
Other Load	5.8 kVA	100% =	5.8 kVA	
		<b>TOTAL DEMAND</b>		85.9 kVA
On 200A Service		<b>3Φ Load</b>	103.3 Amps	

WWTP Generator Specifications		
Manufacturer	MTU Rolls-Royce	
Model	4R0120 DS100	
Voltage	480	V
Duty	Standby	
Size (Rated for Site)	100kW/120kVA	kW/kVA
Phase/Wire	3ph/4w	
Engine	OM924LA	
Fuel	diesel	
Site Elevation	6500'	FT
Ambient Temp	95F	Deg
Low Temp Design	-20F	Deg
Max Starting kVA	344skV at 30%	kVA
Maximum Voltage Dip	30%	%
Sound	Steel Weather	
Exhaust	Internal Muffler w/ Top Exhaust	
Emergency Power Off Switch	QTY (2)	
Housing	Level 3	
Width	48	inches
Length	144.08	inches
Height	110.78	inches
UL Base Tank	24 hour	
Approximate Weight	5730	Lbs
Accessories:		
Extreme Cold Weather Kit with Snow		
Block Heater	1500W 120V for (-20F)	
Battery Charger/Heat	10A	
Remote Annunciator	Yes	
Automatic Transfer Switch.	Yes	
ATS Cable/Annunciator	TBD	



FAULT CURRENT AND VOLTAGE DROP CALCULATION TABLE																					
POINT	FAULT DESCRIPTION	LENGTH (L) (ft)	LOAD ON FEEDER (Amps)	POWER FACTOR (%)	VOLTAGE (E <sub>L</sub> )	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	CONDUCTOR LOSS	C VALUE	# OF PARALLEL RUNS	I <sub>sc</sub> AVAILABLE UPSTREAM (SEE NOTE 5)	I <sub>sc</sub> AT EQUIP (I <sub>sc</sub> )	% OF VOLTAGE DROP	VOLTAGE AT START (V <sub>L</sub> )	VOLTAGE AT END (V <sub>R</sub> )	TOTAL % VD	POINT
F0	XFMR	—	200	90%	480	—	—	—	—	—	—	—	—	—	20,500	4,800	—	480	—	—	F0
F1	CYMBLET	80	200	90%	480	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	800V	151	13923	1	20,500	15,045	0.0%	478	478	0.4%	F1
F2	DISCONNECT	5	200	90%	480	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	800V	151	13923	1	15,545	5,000	0.0%	478	478	0.4%	F2
F3	ATS	5	200	90%	480	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	800V	151	13923	1	5,000	4,968	0.0%	478	478	0.4%	F3
F4	MEP	200	500	90%	480	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	800V	151	13923	1	4,968	4,903	0.0%	478	478	0.5%	F4
F5	MPP	15	200	90%	480	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	800V	151	13923	1	4,936	4,884	0.1%	478	477	0.6%	F5

- NOTES:
1. ALL CALCULATIONS WERE DONE USING BUSSMAN "POINT-TO-POINT" METHOD.
  2. REFER TO PLANS FOR ASSUMED UTILITY TRANSFORMER SIZE UTILIZED FOR CALCULATIONS.
  3. TRANSFORMER IMPEDANCES USED IN THE CALCULATIONS WERE TAKEN FROM EATON'S PUBLISHED IMPEDANCES FOR DOE 2016 DRY-TYPE TRANSFORMERS.
  4. CONDUCTOR LENGTHS INDICATED IN THIS SCHEDULE ARE FOR THE PURPOSES OF FAULT CURRENT CALCULATIONS ONLY. THESE LENGTHS ASSUME WORST CASE SHORTEST DISTANCE CONDITIONS AND SHOULD NOT BE UTILIZED BY THE ELECTRICAL CONTRACTOR FOR BIDDING PURPOSES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ESTIMATING AND MEASURING ACTUAL FIELD CONDITION LENGTHS AS PART OF THE BID PROCESS.

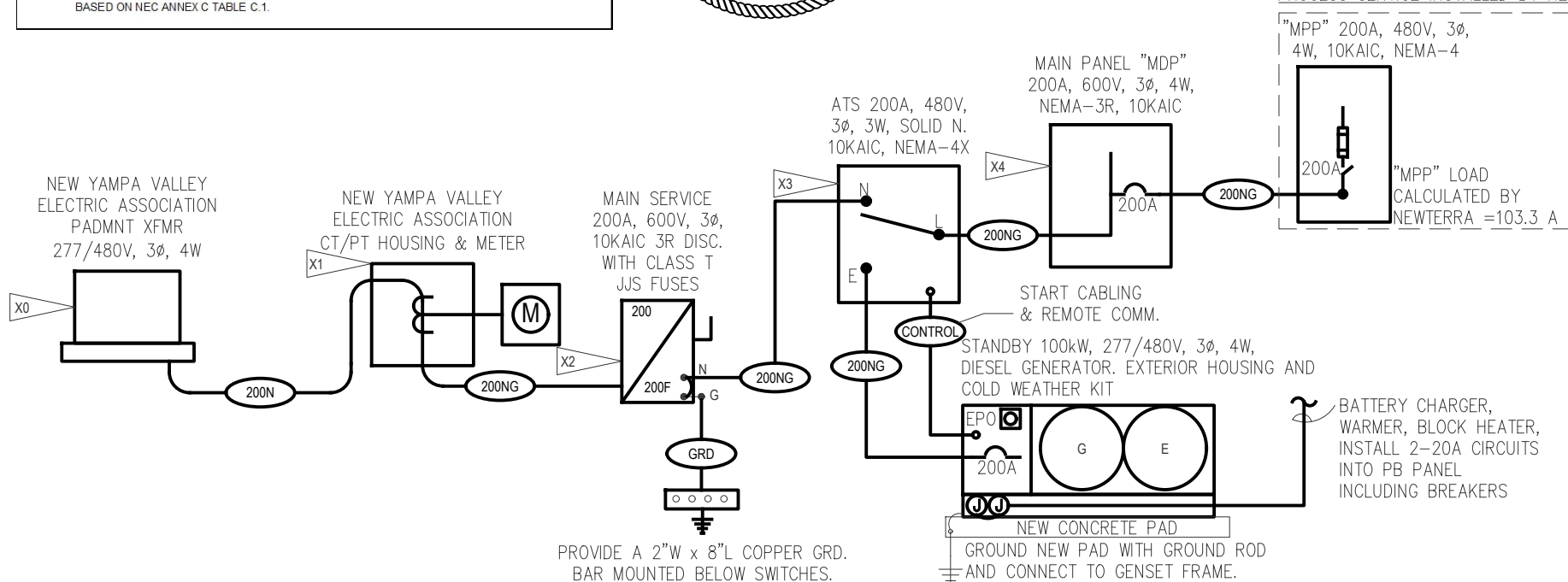
FEEDER SCHEDULE - COPPER				
KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS			
SERVICE ENTRANCE FEEDERS				
200N	1[4#3/0, 2" C]			
EQUIPMENT FEEDERS				
200NGX	4#3/0, 1#6G, 2-1/2" C	200NG	3#3/0, 1#6G, 2-1/2" C	200G      2#3/0, 1#6G, 2" C
GROUNDING CONDUCTORS				
NOTES:			ABREVIATIONS MECH      SEE MECH SCHEDULE XFMR      SEE XFMR SCHEDULE	
1. FEEDER FOR SECONDARY OF SEPARATELY DERIVED SYSTEM (SDS). GROUND SIZE PER NEC TABLE INCLUDED IN ARTICLE 250.66.  2. ALL CONDUCTORS ARE SINGLE CONDUCTOR COPPER THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON THE NEC TABLE INCLUDED IN ARTICLE 310.  3. ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C.1.				



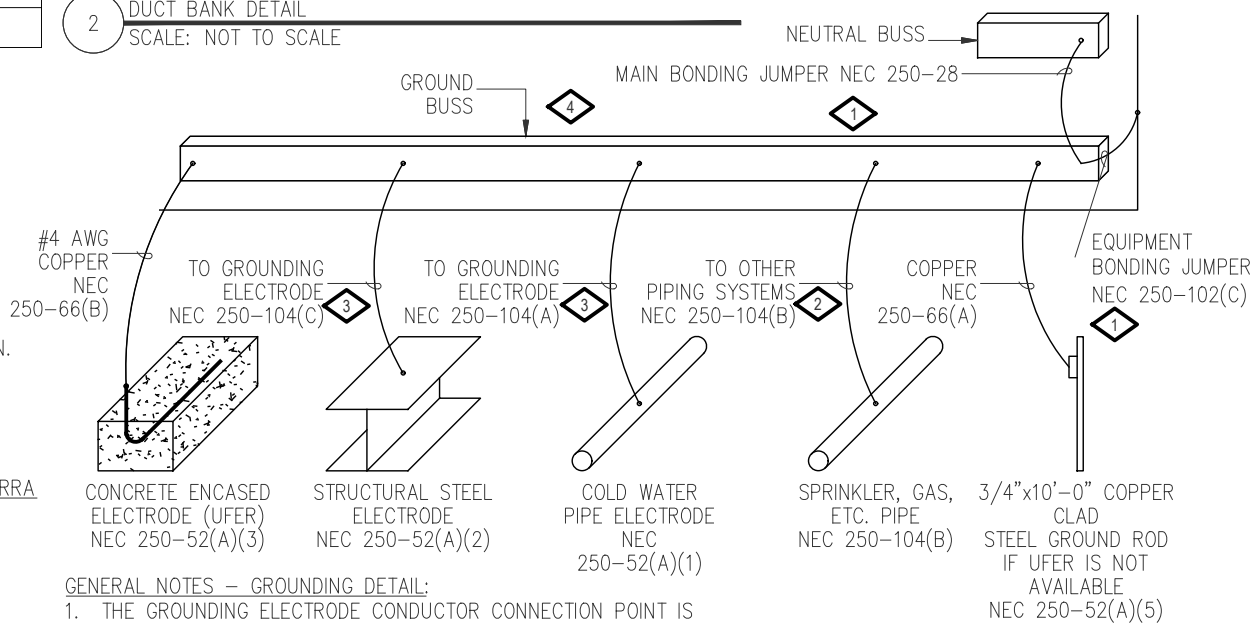
CONTRACTOR NOTE – UTILITY XFMR:  
1. EC TO COORDINATE WITH YAMPA VALLEY ELECTRIC ASSOCIATION TO VERIFY SIZE AND AVAILABLE FAULT CURRENT FOR THE UTILITY TRANSFORMER. IF ANY VALUES EXCEED THE ONES LISTED ON THE SHORT CIRCUIT TABLE, CONTACT ENGINEER IMMEDIATELY TO REVISE DESIGN AND CALCULATIONS.

2. FOR DESIGN PURPOSES 75KVA XFMR USED TO CALCULATE FAULT CURRENT. EC TO COORDINATE AND CONFIRM. IF FAULT XFMR OR FAULT EXCEED VALUES LISTED, CONTACT ENGINEER IMMEDIATELY FOR REDESIGN.

3. ENSURE DOWNSTREAM BREAKERS ARE COMPATIBLE WITH CLASS T JJS FUSES SERIES RATING FOR FAULT CURRENT LIMITING PURPOSES.




2 DUCT BANK DETAIL  
SCALE: NOT TO SCALE



- GENERAL NOTES – GROUNDING DETAIL:
1. THE GROUNDING ELECTRODE CONDUCTOR CONNECTION POINT IS NOT NECESSARILY A PHYSICAL CONNECTION. IT IS PROVIDED TO ILLUSTRATE THE INTERCONNECTION OF THE GROUNDING ELECTRODE SYSTEM. IT COULD, FOR EXAMPLE, BE THE WATER PIPE.
  2. NEC REFERENCES ARE FROM 2017 NATIONAL ELECTRIC CODE.
  3. BONDS SHALL BE MECHANICAL TYPE. INTERIOR BONDS MAY BE EXOTHERMIC.
  4. BOND SIZE SHALL MATCH CONDUCTORS SHOWN ON FEEDER SCHEDULE.
  5. GROUND CONDUCTORS SHALL BE STRANDED COPPER INSULATED CABLE, U.N.O.

- DETAIL NOTES – GROUNDING DETAIL:
- 1 SIZE PER TABLE 250–66 UP TO 1100 KCMIL. SIZE TO 12.5% OF FEEDERS WHEN OVER 1100 KCMIL. MAIN BONDING JUMPER FOR SERVICES GREATER THAN 1000A, PROVIDED WITH SERVICE ENTRANCE SWITCHGEAR ARE ACCEPTABLE.
- 2 SIZE PER TABLE 250–122. ASSUMES MAIN DEVICE RATING IS EQUAL TO FEEDER SIZE.
- 3 SIZE PER TABLE 250–66.

BONDING CONDUCTOR SIZE				
SES SIZE	MBJ/EBJ 1	PIPING 2	GF 3	ISB 4
100A	6	8	6	4
200A	4	6	4	4
400A	1/0	3	1/0	6
600A	2/0	1	2/0	6
800A	2/0	1/0	2/0	6
1000A	3/0	2/0	3/0	6
1200A	4/0	3/0	3/0	6
1600A	250 KCMIL	4/0	3/0	6
2000A	300 KCMIL	250 KCMIL	3/0	6

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ENGINEER:	AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915

SHEET TITLE:  
ELECTRICAL ONE LINE & DETAILS

PROJECT NUMBER:	SCALE:	SHEET:
#2479	NOT TO SCALE	E3