

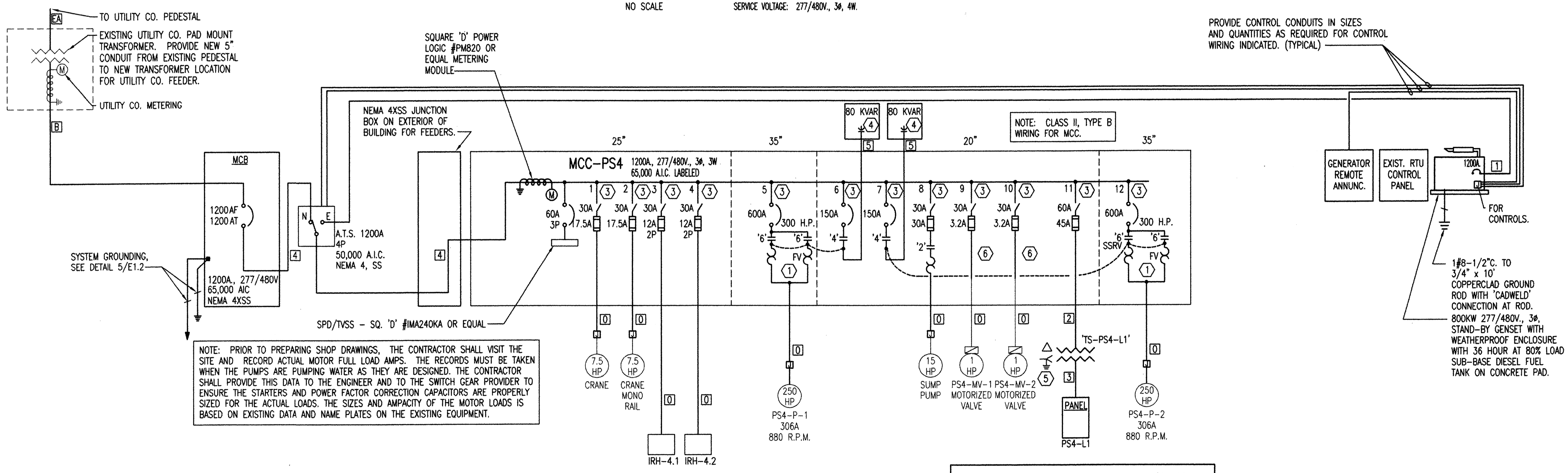
EXISTING ELECTRICAL ONE-LINE DIAGRAM
NO SCALE SERVICE VOLTAGE: 277/480V, 3Ø, 4W.

GENERAL ONE-LINE DIAGRAM NOTES:

- UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS AND/OR SWITCHES ARE THREE POLE.
- ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT LINE, IS EXISTING TO REMAIN.
- ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK LINE, IS NEW WORK UNDER THIS CONTRACT.
- ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK DASHED LINE, IS TO BE REMOVED UNDER THIS CONTRACT.

KEY NOTES:

- SOLID STATE REDUCE VOLTAGE STARTER WITH FULL VOLTAGE ACROSS THE LINE BY-PASS. SOLID STATE STARTER SHALL HAVE H-O-A CONTROL WITH MANUAL BY-PASS SWITCH FOR ACROSS THE LINE. CONTROLLER OVERSIZED FOR LOW R.P.M.
- EXISTING MCC TO BE REMOVED AND REPLACED WITH NEW MCCPS4 IN SAME LOCATION.
- BREAKER SHALL BE PROVIDED WITH LOCK-OUT TAG OUT CAPABILITY.
- PROVIDE POWER FACTOR CORRECTION CAPACITORS PER SPECIFICATION 16410 (BASED ON CLASS B MOTOR OPERATING AT (880 R.P.M.) POWER FACTOR CORRECTION CAPACITOR WILL BE INSTALLED ON WALL ABOVE MCC.
- SEE TYPICAL TRANSFORMER GROUNDING DETAIL 4/E1.2.
- INTERLOCK MOTORIZED VALVE WITH ASSOCIATED STORM WATER PUMP.



ELECTRICAL ONE-LINE DIAGRAM
NO SCALE SERVICE VOLTAGE: 277/480V, 3Ø, 4W.

NOTE: PRIOR TO PREPARING SHOP DRAWINGS, THE CONTRACTOR SHALL VISIT THE SITE AND RECORD ACTUAL MOTOR FULL LOAD AMPS. THE RECORDS MUST BE TAKEN WHEN THE PUMPS ARE PUMPING WATER AS THEY ARE DESIGNED. THE CONTRACTOR SHALL PROVIDE THIS DATA TO THE ENGINEER AND TO THE SWITCH GEAR PROVIDER TO ENSURE THE STARTERS AND POWER FACTOR CORRECTION CAPACITORS ARE PROPERLY SIZED FOR THE ACTUAL LOADS. THE SIZES AND AMPACITY OF THE MOTOR LOADS IS BASED ON EXISTING DATA AND NAME PLATES ON THE EXISTING EQUIPMENT.

PROVIDE CONTROL CONDUITS IN SIZES AND QUANTITIES AS REQUIRED FOR CONTROL WIRING INDICATED. (TYPICAL)

1#8-1/2" TO 3/4" x 10" COPPERCLAD GROUND ROD WITH 'CADWELD' CONNECTION AT ROD. 800KW 277/480V, 3Ø, STAND-BY GENSET WITH WEATHERPROOF ENCLOSURE WITH 36 HOUR AT 80% LOAD SUB-BASE DIESEL FUEL TANK ON CONCRETE PAD.

PANELBOARD: PS4-L1 208/120 VOLTS, 3 PHASE, 4 WIRE 100 AMP MAIN BRK, SURFACE MTD. 10000 AIC LABELED

CIRC. NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	AMP SIZE	USE SIZE	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A. NO.
1	1830	M	EF-PS4-EF1	20	A	20	CONTROL PANEL	1000 2
3					B	20	INTERIOR LIGHTING	630 4
5	1000	LH	EXTERIOR LIGHTING	20	C	20	RECEPTACLES	600 8
7	200	LH	EMERGENCY LGHT/HORN	20	A	30	BLOCK HEATER	4000 8
9	500	M	MOTORIZED DAMPER	20	B	1		10
11		SPR	SPARE	20	C	30	BLOCK HEATER	4000 12
13		SPR	SPARE	20	A	1		14
15		SPR	SPARE	20	B	20	CONTROLS	500 16
17		SPR	SPARE	20	C	20	BATTERY CHARGER	1000 18

TRANSFORMER SCHEDULE

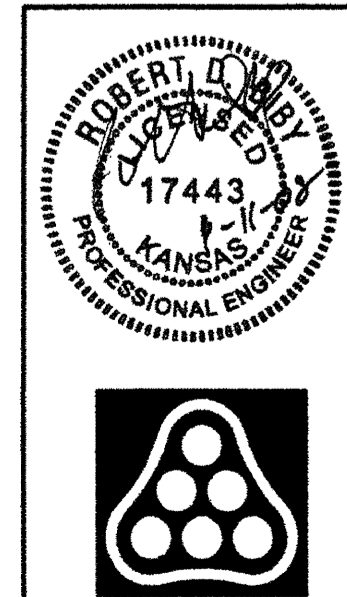
TRANSF. DESIG.	KVA RATING	PRIMARY VOLTAGE	SECONDARY VOLTAGE	DRY TYPE	PRIMARY FEEDER (SEE FEEDER SCHEDULE)	SECONDARY FEEDER (SEE FEEDER SCHEDULE)	GROUND WIRE TO NEAREST GROUNDING SOURCE PER N.E.C. ARTICLE 250-30(a)(3)
TS-PS4-L1	30	480 3Ø, 3W.	12470 3Ø, 3W. 120/208 3Ø, 4W. 277/480 3Ø, 4W.		[2]	[3]	1-#8, 1/2" C.

TRANSFORMER TS-PS4-L1 SHALL BE WALL MOUNTED ABOVE PANEL PS4-L1.

FEEDER SCHEDULE

DESIG.	SETS	NO.	CONDUCTORS SIZE	GROUND PER SET	ISOLATED GROUND SIZE	CONDUIT SIZE PER SET
EA	1	-	UTILITY PRIMARY	-	----	5"
B	4	4	#350 KCMIL CU	-	----	4"
O	-	-	SEE EQUIPMENT CONNECTION SCHEDULE			
1	4	4	#350 KCMIL CU	#3/0	----	4"
2	1	3	#6	#10	----	1"
3	1	4	#1 CU	#6	----	2"
4	4	3	#350 KCMIL CU	#3/0	----	4"
5	1	3	#1/0 CU (PFCC)	#6	----	1 1/2"

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No. _____ Revision _____ By _____ Date _____
 CITY OF WICHITA, KANSAS
PUMP STATION #4
RISER DIAGRAM AND SCHEDULES
 STORMWATER SYSTEM IMPROVEMENTS
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 Designed by RDB, EJW Job No. 34-06060-042 Sht. E2.1 of 6
 Drawn by SMS Date SEPTEMBER 2008