

- ELECTRICAL KEY NOTES:**
- EMERGENCY GENERATOR SHALL BE 120/208 VOLT, 3 PHASE, 4 WIRE WYE UNIT. 150KW NOMINAL OUTPUT. DIESEL FIRED STANDBY ENGINE/GENERATOR UNIT SHALL BE COMPLETE WITH TRANSFER SWITCH, LOW OIL, HIGH TEMP, FUEL LEVEL, OVER SPEED, VOLTAGE CONTROLS AND GAUGES, STARTING BATTERIES, CONTINUOUS CHARGING HARDWARE, OUTPUT CIRCUIT PROTECTION, WATER-JACKET HEATER AND WEATHERPROOF ENCLOSURE. PROVIDE REMOTE ANNUNCIATOR WITH BACK-UP BATTERY LOCATED IN OFFICE. UNIT SHALL BE COMPLETE WITH ALL ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER, AND SHALL BE FURNISHED COMPLETE WITH MANUFACTURERS START-UP SERVICE. ALL EQUIPMENT AND INSTALLATION SHALL CONFORM TO ARTICLE 645 ON THE NEC AND NFPA 110. GENERATOR SHALL BE SEISMIC CERTIFIED, FUEL CAPACITY FOR MINIMUM 24 HOUR RUNTIME AT FULL LOAD. CUMMINS, FURNISHED BY OWNER, INSTALLED, CONNECTED AND TESTED BY ELECTRICAL CONTRACTOR.
 - MOUNT ON CONCRETE PAD IN LOCATION INDICATED ON SITE PLAN. CIRCUIT TO TRANSFER SWITCH AS SHOWN BY ONE-LINE DIAGRAM. INTEGRAL GENERATOR BREAKERS SHALL BE COORDINATED WITH DISTRIBUTION EQUIPMENT. BREAKERS SHALL BE BY SAME MANUFACTURER AS THE PANELS/SWITCHBOARD TO ASSURE SELECTIVE COORDINATION. PROVIDE BREAKER, INCLUDE FORM C AUXILIARY CONTACT.
 - CONFIRM ALL LUG SIZE WITH MANUFACTURE PRIOR TO INSTALLING ANY FEEDERS.
 - CONFIRM ALL BOOST PUMP CONNECTION REQUIREMENTS WITH INSTALLER AND MANUFACTURE.

- ELECTRICAL GENERAL NOTES:**
- OUTSIDE THE BUILDING AND BELOW GRADE, WIRING MAY BE IN SCHEDULE-40 PVC CONDUIT WITH GROUNDING CONDUCTOR IF ACCEPTABLE BY LOCAL CODES. NOT LESS THAN 3/4" CONDUIT.
 - INSTALL EXTERIOR CIRCUITS UNDERGROUND. DIRECT BURIED BRANCH CIRCUIT WIRING OUTSIDE THE BUILDING AND BELOW GRADE MAY BE IN TYPE UF MOISTURE RESISTANT CABLE, NOT LESS THAN 16AWG CONDUCTORS OR AS NOTED. COMPLY WITH ELECTRICAL CODE AS REQUIRED AND NOTED ON COVER.

1 ONE LINE DIAGRAM
SCALE: 208Y/120V 3P/4W

panel	PH	mounting SURFACE		location		connected load amps	
		phase	3	bus & main	Pump House	334	calculated load amps
1	LIGHTING	12	559	20/1	1	2	SPACE
5	EF-1	12	864	15/1	3	4	SPACE
2	RECEPTACLES	12	540	20/1	5	6	SPACE
2	RECEPTACLES	12	360	20/1	7	8	SPACE
5	HEATER	12	1667	20/3	9	10	SPACE
5		12	1667	11	11	12	SPACE
5		12	1667	13	13	14	SPACE
	SPACE			15	15	16	SPACE
	SPACE			17	17	18	SPACE
	SPACE			19	19	20	SPACE
	SPACE			21	21	22	SPACE
	SPACE			23	23	24	SPACE
	SPACE			25	25	26	SPACE
	SPACE			27	27	28	SPACE
	SPACE			29	29	30	SPACE
	SPACE			31	31	32	SPACE
	SPACE			33	33	34	SPACE
	SPACE			35	35	36	SPACE
5	BOOSTER PUMP	37564	350/3	37	37	38	SPACE
5		37564	39	39	39	40	SPACE
5		37564	41	41	41	42	SPACE

Phase A 40149 VA
Phase B 40094 VA
Phase C 39770 VA
Total Connected 120014 VA

load code:	ph. A	ph. B	ph. C	total	factor	calculated load (va)
1. LIGHTS=	559	0	0 VA	559	1.25	699
2. RECEPT.=	360	0	540 VA	900	+ 0.5	900
3. HEATING=	0	0	0 VA	0	1.00	0
4. KITCHEN=	0	0	0 VA	0	1.00	0
5. EQUIP.=	39230	40094	39230 VA	118555	1.00	118555
6. MOTORS=	0	0	0 VA	0	*	0
7. RESIDENTIAL=	0	0	0 VA	0	1.00	0

(* 125% of the largest motor + 100% of the balance) TOTAL = 120154

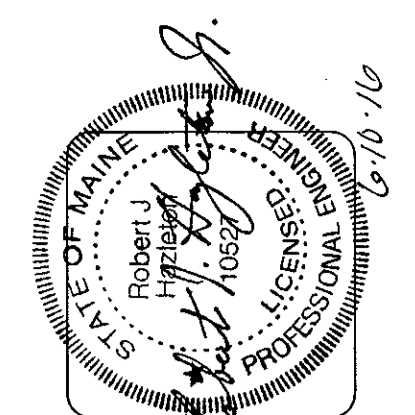
2 LIGHTING - WIRING DIAGRAM
SCALE: NTS

TYPE	DISCRIPTION	LAMP	MANUFACTURE
S2	CATEGORY: VAPOR TIGHT STRIP	TYPE: LED	LITHONIA DMW2-L24-4000LM-PFL-WD-MVOLT-G21-50K-80CRI
	HOUSING: FIBERGLASS 24"x5.88"x3.74"(LxWxH)	QUANTITY:	
	LENS/REFL: FROSTED POLYCARBONATE, 0.08" MIN	CCT (K):	5000
	BALLAST: ELECTRONIC	CRI:	40
TP	CATEGORY: 16" TAPE LIGHT, FIELD CUTTABLE @ 4"	TYPE: LED	AMERICAN LIGHTING HTL68-WW, LED-DR100-24
	HOUSING: FLEXIBLE	QUANTITY: @ 0.63" OC	
	LENS/REFL: REMOTE ELECTRONIC	CCT (K):	3000
	BALLAST: REMOTE ELECTRONIC	CRI:	90
SW	CATEGORY: WALL MOUNTED RESIDENCES	TYPE: LED	WAC LIGHTING WS-W24509
	HOUSING: ALUMINUM 6" DIA DECROITIVE	QUANTITY:	
	LENS/REFL: CLEAR HAMMERED SEEDED GLASS	CCT (K):	3000
	BALLAST: ELECTRONIC	CRI:	90
SW2	CATEGORY: LED WALL MOUNT	TYPE: LED	LITHONIA OLWXL2LED-90W-50K-PE-DOB
	HOUSING: ALUMINUM 12.3/4"x14.1/2"x5.1/2" (HxWxD)	QUANTITY:	4
	LENS/REFL: TEMPERED GLASS	CCT (K):	4000
	BALLAST: ELECTRONIC	CRI:	80
SF	CATEGORY: SITE FLOODLIGHT	TYPE: LED	KIM LIGHTING EL218-W
	HOUSING: ALUMINUM 3" DIA BY 5-1/2" LONG	QUANTITY:	8
	LENS/REFL: BARN DOORS	CCT (K):	4000
	BALLAST: ELECTRONIC	CRI:	72
SS	CATEGORY: SITE SPOTLIGHT	TYPE: LED	KIM LIGHTING EL218-S
	HOUSING: ALUMINUM 3" DIA BY 5-1/2" LONG	QUANTITY:	8
	LENS/REFL: FIXED HOOD	CCT (K):	4000
	BALLAST: ELECTRONIC	CRI:	72

3 FEEDER SCHEDULE

TAG	AMPERAGE	COPPER - 75°C			ALUMINUM - 75°C		
		CONDUCTOR (A)	GROUND (B)	CONDUIT (C)	CONDUCTOR (A)	GROUND (B)	CONDUIT (C)
60	60	(4) #8	(1) #10	1"	(4) #4	(1) #6	1-1/4"
80	80	(4) #4	(1) #6	1-1/4"	(4) #2	(1) #6	1-1/4"
100	100	(4) #2	(1) #6	1-1/4"	(4) #1	(1) #6	1-1/2"
125	125	(4) #1	(1) #6	1-1/2"	(4) #20	(1) #4	2"
150	150	(4) #1/0	(1) #6	1-1/2"	(4) #30	(1) #4	2"
200	200	(4) #3/0	(1) #6	2"	(4) #250	(1) #4	2-1/2"
225	225	(4) #4/0	(1) #4	2-1/2"	(4) #300	(1) #2	3"
225G	225	(4) #250	(1) #4	4"	(4) #400	(1) #2	4"
250	250	(4) #250	(1) #4	2-1/2"	(4) #400	(1) #2	3"
300	300	(4) #350	(1) #4	4"	(4) #500	(1) #2	4"
350	350	(3) #500	(1) #3	4"	(4) #700	(1) #1	4"
350G	350	(4) #600	(1) #3	(2) 4"	N/A	N/A	N/A
400	400	(4) #600	(1) #3	4"	(4) #900	(1) #1	4"
400U	400	(3) #600	(1) #3	4"	-	-	-
1200	1200	4 SETS (4) #350	-	4 SETS 4"	4 SETS (4) #500	-	4 SETS 4"
1600	1600	5 SETS (4) #400	-	5 SETS 4"	5 SETS (4) #600	-	5 SETS 4"
2000	2000	6 SETS (4) #400	-	6 SETS 4"	6 SETS (4) #600	-	6 SETS 4"
2500	2500	8 SETS (4) #400	-	8 SETS 4"	8 SETS (4) #600	-	8 SETS 4"
3000	3000	8 SETS (4) #500	-	8 SETS 4"	8 SETS (4) #700	-	8 SETS 4"

(A) - BASED ON NEC TABLE 310.15(B)(16)
(B) - BASED ON NEC TABLE 250.122
(C) - BASED ON 40 PERCENT FILL



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LEGEND, DETAILS, AND SCHEDULES - MECH, ELEC, PLMB

DATE
5/27/2016

REVISED DATE

SHEET
PH4.2