POWER RISER DIAGRAM

NO SCALE

PM – PROVIDE POWER METER PER SPECIFICATION SECTION 262300.

RISER DIAGRAM NOTES:

1. REMOVE SHUNT TRIP MAIN CIRCUIT BREAKER FROM PANEL AND REPLACE WITH 175 AMP MOLDED CASE SWITCH. SWITCH TO BE COMPATIBLE WITH EXISTING CUTLER HAMMER PANEL. MODIFY INTERIOR PANEL COVER WITH BLANK FILLER PLATE(S) AS REQUIRED TO ACCOMMODATE THE MAIN BREAKER CHANGE.
2. REMOVE SHUNT TRIP MAIN CIRCUIT BREAKER FROM PANEL AND REPLACE WITH 200 AMP MOLDED CASE SWITCH. SWITCH TO BE COMPATIBLE WITH EXISTING CUTLER HAMMER PANEL. MODIFY INTERIOR PANEL COVER WITH BLANK FILLER PLATE(S) AS REQUIRED TO ACCOMMODATE THE MAIN BREAKER CHANGE.

HIGH EFFICIENCY TRANSFORMER SCHEDULE: (REFER TO SPECIFICATIONS)

T1. 225 KVA, 480V, 3ø, 3 WIRE, DELTA PRIMARY, 120/208V, 3ø, 4 WIRE, WYE SECONDARY. FLOOR MOUNTED.

NOTES:

1. INSTALL COUNTERPOISE MIN. 30" BELOW GRADE IN GRASS AREA OUTSIDE OF ELECTRICAL SERVICE ENTRANCE AND CONNECT TO GROUND OF MAIN SERVICE DISCONNECT.

COUNTERPOISE GROUNDING DETAIL

NO SCALE

SQUARE D SWITCHBOARD QED-2 — APPROVED FOR SERVICE ENTRANCE

WITH GRD. BAR & 100% RATED NEUTRAL — AIC RATING 65,000
PANEL 'MDB' MAINS 1200A MCB — ø 3 — WIRES 4 — MTG. SPACE 117"
VOLTS 277/480 — MOUNTING FREE-STANDING — LOCATION ELECTRIC D-127

REMARKS AND LOCATION	LOAD	BKR	CKT			CKT	BKR	LOAD	REMARKS AND LOCATION
EXIST. PANEL LP8	24245	100/3	1			2	100/3	32660	EXIST. PANEL LP6
EXIST. PANEL LP7	32107	225/3	3			4	175/3	91840	EXIST. PANEL LPK
EXIST. PANEL LP5	53818	200/3	5			6	200/3	44400	EXIST. PANEL LP3
EXIST. PANEL LP4	15564	200/3	7			8	250/3	100000	EXIST. CHILLER #1
PANEL SDB VIA TRANSF. T1	240920	350/3	9			10	250/3	100000	EXIST. CHILLER #2
EXIST. PANEL LP1	48720	200/3	11			12	200/3	45400	EXIST. PANEL LP2
LIFE SAFETY ATS	6619	60/3	13			14	150/3	82060	NON-CRITICAL ATS
TVSS DEVICE	–	60/3	15			16	100/3	–	SPARE
SPACE	–	–/3	17			18	–/3	–	SPACE
SPACE	–	–/3	19			20	–/3	–	SPACE

UTILIZE THIS WIRE CHART FOR DETERMINING WIRE AND CONDUIT SIZE REQUIRED, UNLESS NOTED OTHERWISE. FOR EACH PANEL FEEDER SHOWN ON POWER RISER DIAGRAM AND EMERGENCY POWER RISER DIAGRAM BASED UPON WIRE AMPACITY AND WIRE QUANTITY INDICATED AT EACH PANEL, DISCONNECT AND/OR TRANSFORMER.

WIRE / CONDUIT SIZE CHART

Wire Ampacity	Parallel Number of Sets	Wire Size (CU) Conductor / Ground (THHN/THWN) or XHHW-2	Conduit Size 1ø,2W+G	Conduit Size 1ø,3W+G 3ø,3W+G	Conduit Size 3ø,4W+G
30	---	#10 / #10	3/4"	3/4"	3/4"
50	---	#6 / #10	1"	1"	1"
60	---	#4 / #8	1"	1"	1 1/4"
70	---	#4 / #8	1"	1"	1 1/4"
80	---	#3 / #8	1"	1 1/4"	1 1/4"
90	---	#2 / #8	1"	1 1/4"	1 1/4"
100	---	#1 / #6	1 1/4"	1 1/2"	1 1/2"
110	---	#1 / #6	---	1 1/2"	1 1/2"
125	---	#1 / #6	---	1 1/2"	1 1/2"
150	---	#1/0 / #6	---	1 1/2"	2"
175	---	#2/0 / #6	---	2"	2"
200	---	#3/0 / #6	---	2"	2"
225	---	#4/0 / #4	---	2"	2 1/2"
250	---	250kcmil / #4	---	2 1/2"	3"
300	---	300kcmil / #4	---	3"	3"
350	---	500kcmil / #2	---	3"	4"
400	---	500kcmil / #2	---	3"	4"
450	2	#4/0 / #2	---	2"	2 1/2"
500	2	#4/0 / #2	---	2"	2 1/2"
600	2	300kcmil / #1	---	2 1/2"	3"
700	2	400kcmil / #1/0	---	3"	4"
800	2	500kcmil / #1/0	---	3"	4"
1000	3	400kcmil / #2/0	---	3"	4"
1200	4	350kcmil / #3/0	---	3"	3"
Ground Feed	Provide #4/0 cu grounding connection to cold water & sprinkler pipe, gas piping, concrete slab rebar and building steel per N.E.C. article 250.				
Generator start ckt	Generator start circuits in 1" conduit.				

Note: Ground sizes are not for service entrances.Copper compression connectors must be used at both ends of cables.

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MAIN POWER RISER DIAGRAM

RENOVATIONS TO THE REAMSTOWN ELEMENTARY SCHOOL
COCALICO SCHOOL DISTRICT
SOUTH REAMSTOWN ROAD, REAMSTOWN, PENNSYLVANIA, LANCASTER COUNTY, PA

All DIMENSIONS and EXISTING CONDITIONS shall be CHECKED and VERIFIED by the CONTRACTOR at the SITE.

JOB NO.: 22011.00
DRAWN BY: DS
DATE: 04.14.23

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