DISTRIBUTION PANEL SCHEDULE SUMMARY

PANEL	C.B. USED	SPACE	POLES	VOLTAGE PHASE/AMPS	FLUSH/ SURFACE	MCB	PANEL TYPE*	COMMENTS	LOAD
MDP	SEE RISER DIAGRAM	55.5"	93"	208Y/120V 3ϕ, 4W	SURFACE	1,200A BACK-FED MCB	HCR-U	U.L. LISTED SERVICE ENTRANCE EQUIPMENT. PROVIDE WARNING TAG, SEE BELOW.	431.4 KW (1)
EMDP	SEE RISER DIAGRAM	63"	18"	208Y/120V 3ϕ, 4W	SURFACE	800A MLO	HCP		266.0 KW
CRDP	SEE RISER DIAGRAM	13.5"	27"	208Y/120V 3ϕ, 4W	SURFACE	400A MLO	HCN		83.0 KW
LSDP	SEE RISER DIAGRAM	9"	27"	208Y/120V 3ϕ, 4W	SURFACE	225A MLO	HCN		68.6 KW

*BASED ON SQUARE-D. ALL DISTRIBUTION PANELS 65KAIC.

(1) SEE TOTAL CONNECTED LOAD SUMMARY.

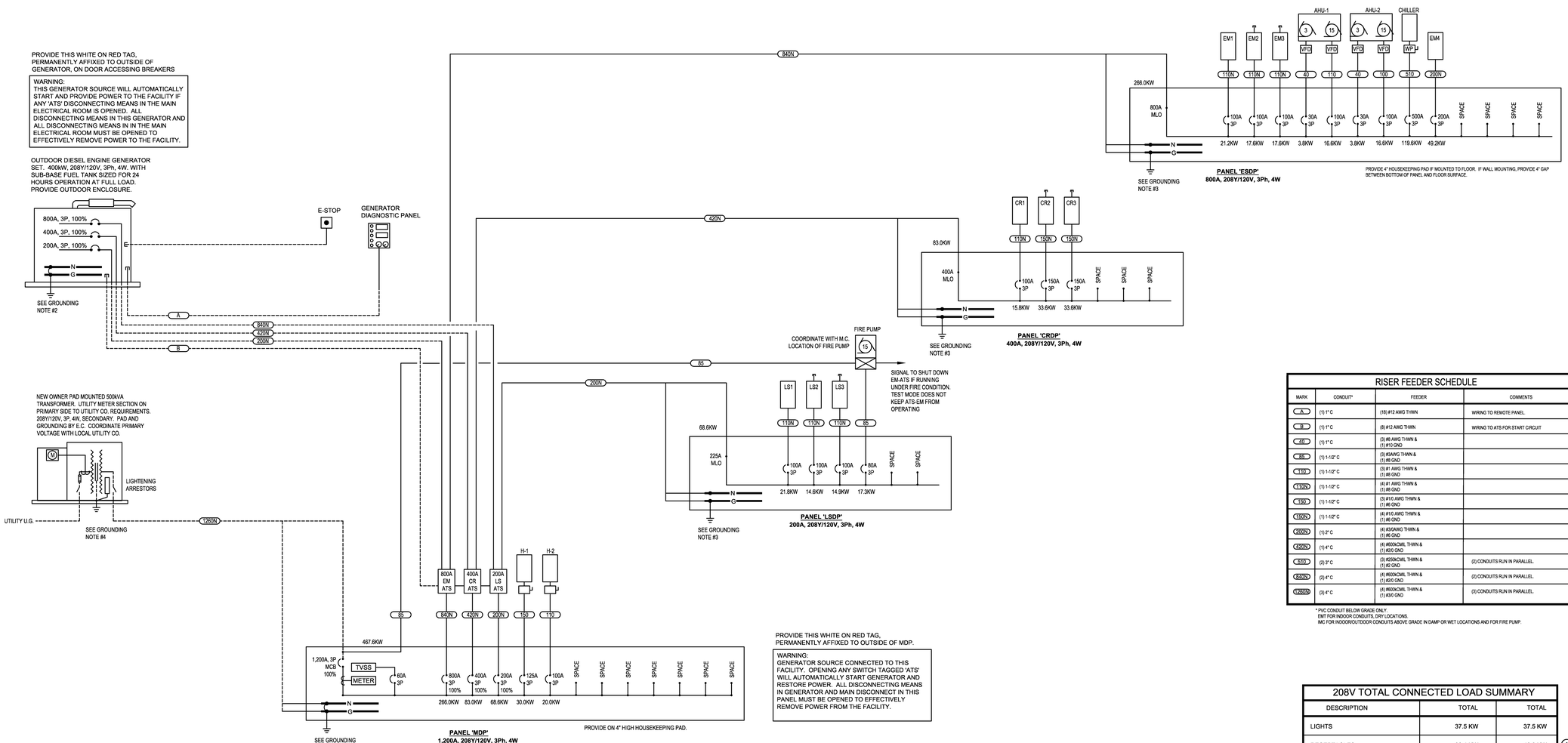
TRANSFER SWITCH SUMMARY

TAG	VOLTAGE	AMPERAGE	POLES	WALL/ FLOOR	SWITCH TYPE	COMMENTS
EM ATS	208Y/120V, 3PH, 4W	800A	3P	WALL	AUTO	PROVIDE WITH 20 SECOND DELAY. TIE INTO FIRE PUMP FOR INTERLOCK.
CR MTS	208Y/120V, 3PH, 4W	400A	3P	WALL	AUTO	
LS MTS	208Y/120V, 3PH, 4W	200A	3P	WALL	AUTO	

BRANCH PANEL SCHEDULE SUMMARY

PANEL	C.B. USED	SPACE	POLES	VOLTAGE PHASE/AMPS	FLUSH/ SURFACE	MCB	PANEL TYPE*	COMMENTS	LOAD
EM1	SEE PANEL SCHEDULES	0	30	208Y/120V 3ϕ, 4W	SURFACE	100A MLO	NQOD		21.2 KW
EM2	SEE PANEL SCHEDULES	0	30	208Y/120V 3ϕ, 4W	FLUSH	100A MLO	NQOD	PROVIDE (4) 1" SPARE CONDUITS TO ABOVE SUSPENDED CEILING	17.6 KW
EM3	SEE PANEL SCHEDULES	0	30	208Y/120V 3ϕ, 4W	FLUSH	100A MLO	NQOD	PROVIDE (4) 1" SPARE CONDUITS TO ABOVE SUSPENDED CEILING	17.6 KW
EM4	SEE PANEL SCHEDULES	0	42	208Y/120V 3ϕ, 4W	SURFACE	225A MLO	NQOD		49.2 KW
CR1	SEE PANEL SCHEDULES	0	42	208Y/120V 3ϕ, 4W	SURFACE	225A MLO	NQOD		15.8 KW
CR2	SEE PANEL SCHEDULES	0	42	208Y/120V 3ϕ, 4W	FLUSH	225A MLO	NQOD	PROVIDE (4) 1" SPARE CONDUITS TO ABOVE SUSPENDED CEILING	33.6 KW
CR3	SEE PANEL SCHEDULES	0	42	208Y/120V 3ϕ, 4W	FLUSH	225A MLO	NQOD	PROVIDE (4) 1" SPARE CONDUITS TO ABOVE SUSPENDED CEILING	33.6 KW
LS1	SEE PANEL SCHEDULES	0	30	208Y/120V 3ϕ, 4W	SURFACE	100A MLO	NQOD		21.8 KW
LS2	SEE PANEL SCHEDULES	0	30	208Y/120V 3ϕ, 4W	FLUSH	100A MLO	NQOD	PROVIDE (4) 1" SPARE CONDUITS TO ABOVE SUSPENDED CEILING	14.6 KW
LS3	SEE PANEL SCHEDULES	0	30	208Y/120V 3ϕ, 4W	FLUSH	100A MLO	NQOD	PROVIDE (4) 1" SPARE CONDUITS TO ABOVE SUSPENDED CEILING	14.9 KW

*BASED ON SQUARE-D. ALL BRANCH PANELS 22KAIC.



1 ELECTRICAL RISER DIAGRAM
SCALE: N.T.S.

RISER FEEDER SCHEDULE

MARK	CONDUIT*	FEEDER	COMMENTS
A	(1) 1" C	(18) #12 AWG THWN	WIRING TO REMOTE PANEL.
B	(1) 1" C	(6) #12 AWG THWN	WIRING TO ATS FOR START CIRCUIT
40	(1) 1" C	(3) #8 AWG THWN & (1) #10 GND	
85	(1) 1-1/2" C	(3) #3AWG THWN & (1) #6 GND	
110	(1) 1-1/2" C	(3) #1 AWG THWN & (1) #6 GND	
110N	(1) 1-1/2" C	(4) #1 AWG THWN & (1) #6 GND	
150	(1) 1-1/2" C	(3) #1/0 AWG THWN & (1) #6 GND	
150N	(1) 1-1/2" C	(4) #1/0 AWG THWN & (1) #6 GND	
200N	(1) 2" C	(4) #3/0AWG THWN & (1) #6 GND	
420N	(1) 4" C	(4) #600kCMIL THWN & (1) #3/0 GND	
510	(2) 3" C	(3) #250kCMIL THWN & (1) #2 GND	(2) CONDUITS RUN IN PARALLEL.
840N	(2) 4" C	(4) #600kCMIL THWN & (1) #3/0 GND	(2) CONDUITS RUN IN PARALLEL.
1260N	(3) 4" C	(4) #600kCMIL THWN & (1) #3/0 GND	(3) CONDUITS RUN IN PARALLEL.

* PVC CONDUIT BELOW GRADE ONLY.
EMT FOR INDOOR CONDUITS, DRY LOCATIONS.
IMC FOR INDOOR/OUTDOOR CONDUITS ABOVE GRADE IN DAMP OR WET LOCATIONS AND FOR FIRE PUMP.

208V TOTAL CONNECTED LOAD SUMMARY

DESCRIPTION	TOTAL	TOTAL
LIGHTS	37.5 KW	37.5 KW
RECEPTACLES	82.4 KW	46.2 KW (1)
HEATING	74.8 KW	74.8 KW
MOTORS	272.9 KW	272.9 KW
TOTALS	467.6 KW 1,297.9A AT 208V	431.4 KW 1,197.4A AT 208V

(1) DEMAND FACTOR APPLIED PER 2008 NEC SECTION 220.44 RECEPTACLE LOADS OTHER THAN DWELLING UNITS. RESIDENT ROOMS DO NOT APPLY AS DWELLING UNITS PER NEC ARTICLE 100 SINCE NO PERMANENT COOKING PROVISIONS ARE INSTALLED IN EACH ROOM. 10KW TAKEN AT 100%, THE REMAINING KW AT 50%.

GROUND NOTES:

1. PROVIDE (3) 3/4" x 10'-0" GROUND RODS BELOW GRADE OUTSIDE OF THE BUILDING. SPACE RODS 10'-0" APART AND CONNECT WITH #3/0 COPPER. WELD GROUND CABLE TO TOP OF GROUND RODS WITH EXOTHERMIC WELD PROCESS. TIE GROUND TO BUILDING STEEL, UNDERGROUND WATER SERVICE AND GAS PIPING WITH #3/0 COPPER.
2. GROUNDING TO GENERATORS WITH #3/0 COPPER TO BUILDING STEEL AND MAIN SERVICE GROUND. SEE DETAIL SHEET.
3. GROUNDING FOR DISTRIBUTION PANELS TO BE (1) 3/4" X 10'-0" GROUND ROD WITH #2 AWG COPPER TO GROUND LUG.
4. PROVIDE (4) 3/4" X 10'-0" GROUND RODS BELOW GRADE AT EACH CORNER OF THE TRANSFORMER PAD. SEE DETAIL SHEET.

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THE COTTAGE at THORNAPPLE

Hastings, MI

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ELECTRICAL RISER AND SCHEDULES

E300