

Branch Panel: MDP										
Location: ELEC 903				Volts: 480Y/277			A.I.C. Rating: 14,000 AMPS SYMMETRICAL			
Supply From: Mains Type: MAIN CB				Phases: 3			Mains Rating: 600.0 A			
Mounting: SURFACE				Wires: 4			MCB Rating: 600.0 A			
Enclosure: NEMA 1										
Notes: SERVICE ENTRANCE RATED										
CKT	Circuit Description	Trip	Pol es	A	B	C	Pol es	Trip	Circuit Description	CKT
1	PANELS P11, P12 VIA XFMR T1	175.0 A	3	14303 VA 0 VA	14921 VA 0 VA	12243 VA 0 VA	3	60.0 A	SPD	2
3										4
5										6
7	ELEVATOR D.S.	80.0 A	3	11085 VA 15077 VA	11085 VA 14194 VA	11085 VA 16806 VA	3	175.0 A	PANEL MRP VIA XFMR T2	8
9										10
11										12
13	RTU01 D.S.	150.0 A	3	28931 VA 1115 VA	28931 VA 2871 VA	28931 VA 470 VA	1	20.0 A	LTS: MECH. E.E.C. TELEDATA, CORR. TLTS, STAIRS	14
15										16
17										18
19	SPARE	20.0 A	1	0 VA	1374 VA	0 VA	1	20.0 A	LTS: 1ST FLR CLASSROOMS	20
21	SPARE	20.0 A	1		0 VA	140 VA	1	20.0 A	LTS: ELEV SHAFT	22
23	SPARE	20.0 A	1			0 VA	1	20.0 A	LTS: 2ND FLR CLASSROOMS	24
25	SPARE	20.0 A	1	0 VA	0 VA		1	20.0 A	SPARE	26
27	SPARE	20.0 A	1		0 VA	0 VA	1	20.0 A	SPARE	28
29	SPARE	20.0 A	1				1	20.0 A	SPARE	30
31	SPACE	--	--	0 VA	0 VA		1	20.0 A	SPARE	32
33	SPACE	--	--		0 VA	0 VA	1	20.0 A	SPARE	34
35	SPACE	--	--			0 VA	1	20.0 A	SPARE	36
37	SPACE	--	--	0 VA	0 VA		--	--	SPACE	38
39	SPACE	--	--		0 VA	0 VA	--	--	SPACE	40
41	SPACE	--	--			0 VA	0 VA	--	SPACE	42
Total Load:				71591 VA	71978 VA	72283 VA				
Total Amps:				258.5 A	260.1 A	261.2 A				
Legend:										
Load Classification		Connected Load	Demand Factor	Estimated Demand	Panel Totals					
HVAC		90708 VA	100.00%	90708 VA	Total Conn. Load: 180756 VA					
Motor		60 VA	125.00%	75 VA	Total Est. Demand: 159991 VA					
Other		2630 VA	100.00%	2630 VA	Total Conn.: 159991 VA					
Power		18950 VA	100.00%	18950 VA	Total Est. Demand: 217.4 A					
RCPT		54824 VA	59.12%	32412 VA						
Lighting		1873 VA	100.00%	1873 VA						
LTS		6504 VA	125.00%	8130 VA						
Heating		6614 VA	100.00%	6614 VA						
Notes: 1. HVAC EQUIPMENT MUST USE TYPE HACR BREAKERS. 2. PROVIDE GFI BREAKER. 3. PROVIDE BREAKER HANDEL LOCKING DEVICE.										

Branch Panel: P11										
Location: ELEC 903				Volts: 208Y/120			A.I.C. Rating: 10,000 AMPS SYMMETRICAL			
Supply From: T1				Phases: 3			Mains Type: MAIN CB			
Mounting: Enclosure: NEMA 1				Wires: 4			Mains Rating: 200.0 A			
							MCB Rating: 200.0 A			
Notes:										
CKT	Circuit Description	Trip	Pol es	A	B	C	Pol es	Trip	Circuit Description	CKT
1	RCPTS: ELECT. MECH. EXTERIOR	20.0 A	1	720 VA	540 VA		1	20.0 A	RCPTS: TLTS	2
3	RCPTS: HEALTH SCIENCE	20.0 A	1		540 VA	1380 VA	1	20.0 A	HAND DRYER	4
5	RCPTS: HEALTH SCIENCE	20.0 A	1			180 VA	1	20.0 A	HAND DRYER	6
7	RCPTS: HEALTH SCIENCE	20.0 A	1	885 VA	1380 VA		1	20.0 A	HAND DRYER	8
9	RCPTS: HEALTH SCIENCE	20.0 A	1		885 VA	1380 VA	1	20.0 A	HAND DRYER	10
11	RCPTS: HEALTH SCIENCE	20.0 A	1			1080 VA	1	20.0 A	RCPT: COPIER/PRINTER	12
13	RCPTS: HEALTH SCIENCE	20.0 A	1	540 VA	1380 VA		1	20.0 A	HAND DRYER	14
15	RCPTS: HEALTH SCIENCE	20.0 A	1		885 VA	180 VA	1	20.0 A	RCPT: WRK RM	16
17	RCPTS: HEALTH SCIENCE	20.0 A	1			885 VA	1	20.0 A	HAND DRYER IN TLT	18
19	RCPT: DRYER IN TLT	30.0 A	2	2496 VA	180 VA		1	20.0 A	RCPT: 350 WASH BASIN (NOTE 2)	20
21	RCPT: WASHER IN TLT	20.0 A	1		2496 VA	1080 VA	1	20.0 A	RCPTS: CORR	22
23	RCPT: EWC (NOTE 2)	20.0 A	1			1200 VA	1	20.0 A	RCPTS: CLASSROOM	24
25	RCPT: EWC (NOTE 2)	20.0 A	1	430 VA	1080 VA		1	20.0 A	RCPTS: CLASSROOM	26
27	RCPTS: CLASSROOM	20.0 A	1		1080 VA	1080 VA	1	20.0 A	RCPTS: CLASSROOM	28
29	RCPTS: CLASSROOM	20.0 A	1			720 VA	1	20.0 A	RCPTS: CLASSROOM	30
31	AREA OD RESCUE CALL PANEL	20.0 A	1	400 VA	240 VA		1	20.0 A	RCPT	32
33	RCPTS: HEALTH SCIENCE BED	20.0 A	1		180 VA	0 VA	1	20.0 A	SPARE	34
35	RCPTS: HEALTH SCIENCE BED	20.0 A	1			180 VA	1	20.0 A	SPARE	36
37	RCPTS: HEALTH SCIENCE BED	20.0 A	1	180 VA	0 VA		1	20.0 A	SPARE	38
39	RCPTS: HEALTH SCIENCE BED	20.0 A	1		180 VA	0 VA	1	20.0 A	SPARE	40
41	RCPTS: HEALTH SCIENCE BED	20.0 A	1			180 VA	1	20.0 A	SPARE	42
Total Load:				10447 VA	11341 VA	9723 VA				
Total Amps:				88.0 A	95.4 A	81.0 A				
Legend:										
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals						
Motor	60 VA	125.00%	75 VA	Total Conn. Load: 31511 VA						
Power	9040 VA	100.00%	9040 VA	Total Est. Demand: 25320 VA						
RCPT	22412 VA	72.31%	16206 VA	Total Conn.: 87.5 A						
				Total Est. Demand: 70.3 A						
Notes:										
1. HVAC EQUIPMENT MUST USE TYPE HACR BREAKERS.										
2. PROVIDE GFI BREAKER.										
3. PROVIDE BREAKER HANDEL LOCKING DEVICE.										

Branch Panel: P12											
Location: ELEC 903				Volts: 208Y/120			A.I.C. Rating: 10,000 AMPS SYMMETRICAL				
Supply From: T1				Phases: 3			Mains Type: MAIN CB				
Mounting:				Wires: 4			Mains Rating: 200.0 A				
Enclosure: NEMA 1							MCB Rating: 200.0 A				
Notes:											
CKT	Circuit Description	Trip	Pol es	A	B	C	Pol es	Trip	Circuit Description	CKT	
1	RCPTS: PLTW LAB	20.0 A	1	720 VA	540 VA		1	20.0 A	RCPTS: PLTW LAB	2	
3	RCPTS: PLTW LAB	20.0 A	1		360 VA	720 VA	1	20.0 A	RCPTS: PLTW LAB	4	
5	RCPTS: DISHWASHER IN PLTW LAB	20.0 A	1			1440 VA	180 VA	1	20.0 A	RCPTS: PLTW LAB, HOT & C.W. S.V.S	6
7	RCPTS: PLTW LAB	20.0 A	1	360 VA	180 VA		1	20.0 A	RCPTS: PLTW LAB	8	
9	RCPT: U.C. REFRIG	20.0 A	1		600 VA	900 VA	1	20.0 A	RCPTS: PLTW LAB	10	
11	RCPTS: PLTW LAB	20.0 A	1			540 VA	360 VA	1	20.0 A	RCPTS: PLTW LAB	12
13	PV03 D.S.	20.0 A	1	1656 VA	400 VA		1	20.0 A	DDC CONTROL PANEL	14	
15	EPO CONTACTOR	20.0 A	1		400 VA	600 VA	1	20.0 A	HANDICAP DOOR ACTUATOR	16	
17	SPARE	20.0 A	1			0 VA	0 VA	1	20.0 A	SPARE	18
19	SPARE	20.0 A	1	0 VA	0 VA		1	20.0 A	SPARE	20	
21	SPARE	20.0 A	1		0 VA	0 VA	1	20.0 A	SPARE	22	
23	SPARE	20.0 A	1			0 VA	0 VA	1	20.0 A	SPARE	24
25	SPARE	20.0 A	1	0 VA	0 VA		1	20.0 A	SPARE	26	
27	SPARE	20.0 A	1		0 VA	0 VA	1	20.0 A	SPARE	28	
29	SPARE	20.0 A	1			0 VA	0 VA	1	20.0 A	SPARE	30
31	SPACE	--	--	0 VA	0 VA		--	--	SPACE	32	
33	SPACE	--	--		0 VA	0 VA	--	--	SPACE	34	
35	SPACE	--	--			0 VA	0 VA	--	SPACE	36	
37	SPACE	--	--	0 VA	0 VA		--	--	SPACE	38	
39	SPACE	--	--		0 VA	0 VA	--	--	SPACE	40	
41	SPACE	--	--			0 VA	0 VA	--	SPACE	42	
Total Load:				3856 VA	3580 VA	2520 VA					
Total Amps:				33.5 A	31.2 A	21.0 A					
Legend:											
Load Classification		Connected Load	Demand Factor	Estimated Demand	Panel Totals						
HVAC		1656 VA	100.00%	1656 VA	Total Conn. Load: 9556 VA						
Power		1000 VA	100.00%	1000 VA	Total Est. Demand: 9556 VA						
RCPT		6900 VA	100.00%	6900 VA	Total Conn.: 26.5 A						
					Total Est. Demand: 26.5 A						
Notes:											
1. HVAC EQUIPMENT MUST USE TYPE HACR BREAKERS.											
2. MAIN BREAKER MUST BE PROVIDED WITH SHUNT TRIP.											

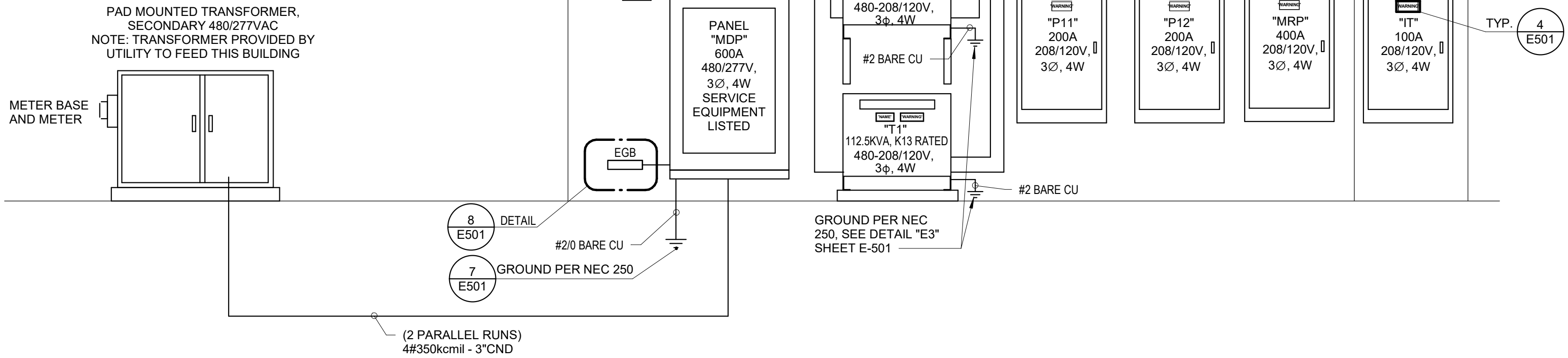
AVAILABLE FAULT CURRENT

AT PNL MDP: 9,084 AMPS
AT PNL MRP: 5,277 AMPS
AT PNL P11: 5,267 AMPS
AT PNL P12: 5,267 AMPS

AT PNL P21: 3,801 AMPS
AT PNL P22: 3,801 AMPS
AT PNL IT: 4,624 AMPS

- NOTE:
- SHORT CIRCUIT CALCULATION COMPLETED ON 04/16/2020. BASED ON A 300KVA PAD MOUNTED TRANSFORMER @ 3.5% IMPEDANCE, AND 5.3 X/R. VERIFY ACTUAL PARAMETERS WITH UTILITY COMPANY AND EQUIPMENT CHARACTERISTICS PRIOR TO INSTALLATION.
 - SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED WITH MAX. AVAILABLE FAULT CURRENT, INCLUDING THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED, PER NEC 110.24

- SURGE PROTECTION DEVICE (SPD) SHALL BE MOUNTED TO KEEP LEADS AS SHORT AS POSSIBLE.
- SPD's ARE SHOWN WITH A 60A, 3 POLE BREAKER IN PANELBOARD BEING PROTECTED. MAKE CONNECTION WITH #8BAYC CONDUCTORS, IF SPD MANUFACTURER RECOMMENDS LARGER BREAKER OR LEADS, PROVIDE AT NO ADDITIONAL COST TO OWNER.



1 RISER DIAGRAM

NO SCALE

LOAD SUMMARY

VOLTAGE	PHASE
480	3
LARGEST MOTOR APPROX. AMPS	104 AMPS
LARGEST MOTOR APPROX. AMPS x .25	26 AMPS
HVAC	
RTU	86,799 VA
HWP1	960 VA
HWP2	960 VA
PV01	768 VA
PV02	36 VA
PV03	1,656 VA
PV04	252 VA
PV05	252 VA
EUH01	3,307 VA
EUH02	3,307 VA
B01	403 VA
B02	403 VA
SP1	941 VA
CUH01	586 VA
CUH02	586 VA
WATER HEATER	4,500 VA
DUCTLESS	1,830 VA
SUB-TOTAL HVAC DEMAND	107,546 VA
SUB-TOTAL HVAC DEMAND	129 AMPS
EQUIPMENT	
ELEVATOR	33,256 VA
SECURITY	400 VA
FA	400 VA
MISCELLANEOUS	7,560 VA
HAND DRYERS	15,180 VA
SUB-TOTAL EQUIPMENT DEMAND	56,796 VA
SUB-TOTAL EQUIPMENT DEMAND	68 AMPS
ADD FOR LARGEST MOTOR DEMAND	26 AMPS
TOTAL EQUIPMENT DEMAND	94 AMPS
LIGHTING	
LIGHTS (INTERIOR, BASED ON NEC 220.12)	41,566 VA
LIGHTS (EXTERIOR)	600 VA
SIGN	1,200 VA
TOTAL LIGHTING LOAD	43,366 VA
LIGHTING LOAD x 1.25	54,233 VA
TOTAL DEMAND FOR LIGHTING	65 AMPS
RECEPTACLES	
RECEPTACLES	54,619 VA
FIRST 1000VA	10,000 VA
REMAINDER @ 50%	22,310 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	32,310 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	39 AMPS
TOTAL DEMAND BUILDING AMPS	
TOTAL DEMAND BUILDING AMPS	328 AMPS
TOTAL DEMAND BUILDING AMPS	272,563 VA
TOTAL BUILDING CONNECTED LOAD	
TOTAL BUILDING CONNECTED LOAD	262,348 VA