

Branch Panel: MD

Mounting: Surface
Volts: 120/240 Single
Phases: 1
Wires: 3
A.I.C. Rating:
Mains Rating: 400 A

CKT	Circuit Description	Trip	Poles	A	B	Poles	Trip	Circuit Description	CKT	
MD-1	PNL-2A	150 A	2	18341	200 VA	1	15 A	HR-1	MD-2	
MD-3					13069	200 VA	1	15 A	Receptacle - Telecom Backboard	MD-4
MD-5	CU-1	60 A	2	3400	3400		2	60 A	CU-2	MD-6
MD-7					3400	3400				MD-8
MD-9	HWT-1	15 A	1	375 VA	400 VA		1	15 A	Receptacle - Security Backboard	MD-10
MD-11	Receptacle - Security Backboard	15 A	1		200 VA	1012	1	20 A	RP-1	MD-12
MD-13	HRV-1	15 A	1	650 VA	850 VA		1	20 A	SP-1	MD-14
MD-15	F-2	20 A	1		1012	0 VA	1	20 A	Hose Reel	MD-16
MD-17	HRV-1-COIL	60 A	2	5000	200 VA		1	15 A	Receptacle - Security Backboard	MD-18
MD-19					5000	3400				MD-20
MD-21	Receptacle - Mechanical Catwalk	15 A	1	200 VA						MD-22
MD-23										MD-24
MD-25	F-3	20 A	1	1012						MD-26
MD-27										MD-28
MD-29	F-1	20 A	1	1012						MD-30
MD-31										MD-32
MD-33	EUH-1 - Mechanical 134	25 A	2	2000						MD-34
MD-35					2000					MD-36
MD-37										MD-38
MD-39	FFH-1 - Vestibule 101	25 A	2		2000					MD-40
MD-41					42441 VA	34694 VA				MD-42
				Total Load:						
				Total Amps:	354 A	289 A				

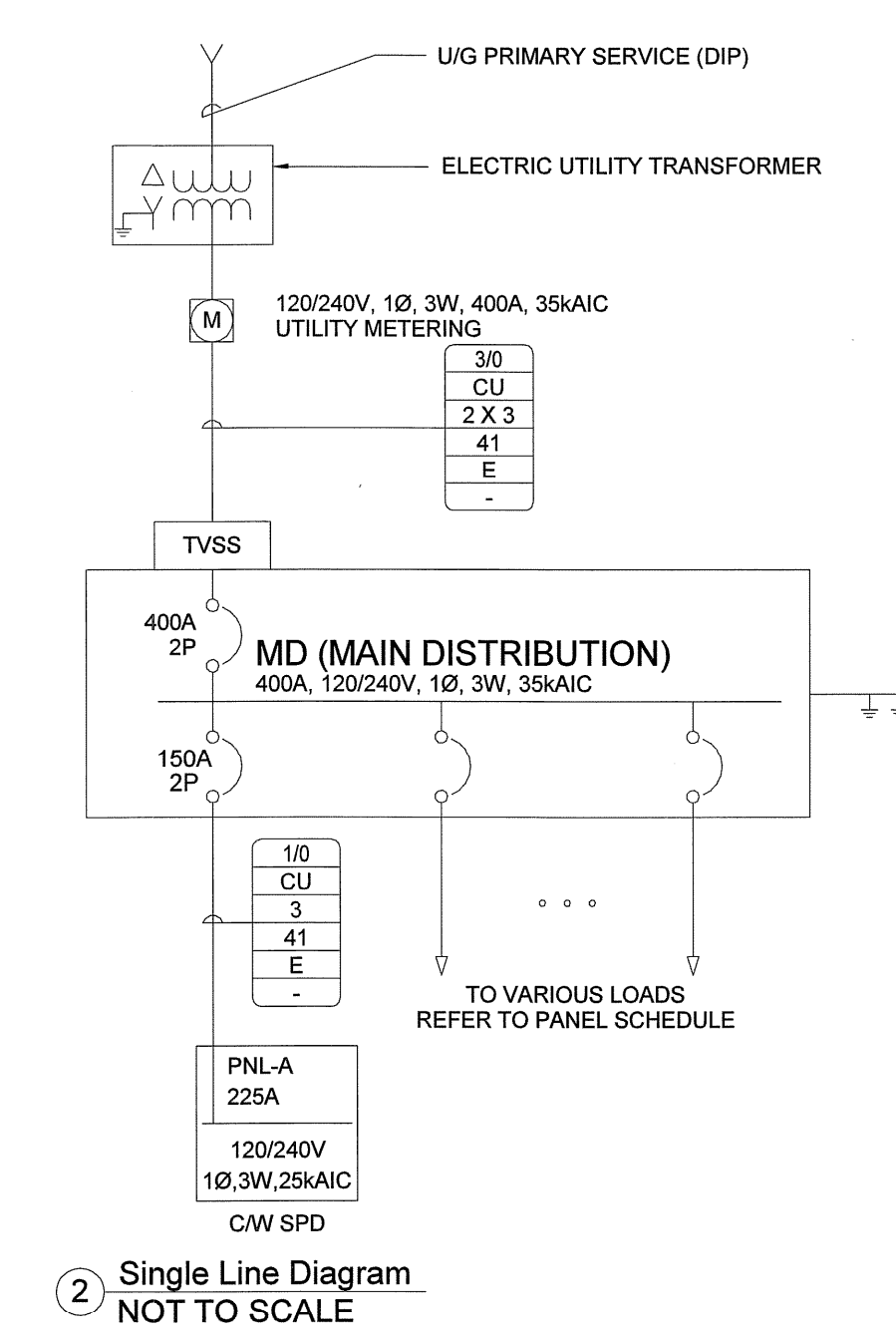
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Cooling	20400 VA	80.00%	16320 VA	Total Conn. Load: 77135 VA
HVAC	8002 VA	80.00%	6401 VA	
Lighting	5858 VA	100.00%	5858 VA	Total Est. Demand: 63700 VA
Motor	16373 VA	80.00%	13098 VA	
Other	948 VA	100.00%	948 VA	Total Conn.: 321 A
Power	15594 VA	100.00%	15594 VA	
Receptacle	9960 VA	55.02%	5480 VA	Total Est. Demand: 265 A

Branch Panel: PNL-2A

Mounting: Surface
Volts: 120/240 Single
Phases: 1
Wires: 3
A.I.C. Rating:
Mains Rating: 225 A

CKT	Circuit Description	Trip	Poles	A	B	Poles	Trip	Circuit Description	CKT	
2A-1	Night Lights, Emergency Lights	15 A	1	247 VA	0 VA		1	0 A	Fire Alarm Panel	2A-2
2A-3	Lighting Servery 103	15 A	1		60 VA	200 VA	1	15 A	Receptacle Harvest Storage 105	2A-4
2A-5	Lighting - MPR2	15 A	1	1160	360 VA		1	15 A	Receptacle Servery 103	2A-6
2A-7	Lighting - MPR2	15 A	1		1160	250 VA	1	20 A	Motor	2A-8
2A-9	Lighting - MPR2	15 A	1	1160	600 VA		1	15 A	Lighting - Crawlspace	2A-10
2A-11	Lighting - Servery, Storage & Mech Rm.	15 A	1		1111	200 VA	1	15 A	Receptacle - Storage	2A-12
2A-13	Lighting - MPR1, Vestibule & WCs	15 A	1	396 VA	720 VA		1	15 A	Power - Automatic Door Openers	2A-14
2A-15	Amplifier Recp - Janitor 104	20 A	1		200 VA	1440	1	15 A	Power - Automatic Door Openers	2A-16
2A-17	Stove	30 A	2	2496	200 VA		1	15 A	Range Hood	2A-18
2A-19					2496	200 VA	1	15 A	Receptacle Servery 103	2A-20
2A-21	Receptacle Data Rack	20 A	1	200 VA	800 VA		1	15 A	Receptacle Servery 103	2A-22
2A-23	Receptacle Harvest Storage 105	15 A	1		200 VA	256 VA	1	20 A	Exterior Lighting	2A-24
2A-25	Automatic Hand Dryer	20 A	1	1725	800 VA		1	15 A	Receptacle Multi-Purpose 1 107	2A-26
2A-27	Receptacle Servery 103	15 A	1		400 VA	600 VA	1	15 A	Receptacle Multi-Purpose 2 102	2A-28
2A-29	Exterior Lighting	20 A	1	256 VA	600 VA		1	15 A	Receptacle - Servery & MP2	2A-30
2A-31	Receptacle - Washrooms	15 A	1		400 VA	400 VA	1	15 A	Receptacle - MP2	2A-32
2A-33	Receptacle Janitor 104	20 A	1	200 VA	400 VA		1	15 A	Ceiling Fans	2A-34
2A-35	Receptacle - Microwave	15 A	1		800 VA	200 VA	1	20 A	Receptacle - Catwalk	2A-36
2A-37	Receptacles - Exterior	15 A	1	1000	800 VA		1	15 A	Receptacle - Fridge	2A-38
2A-39	Dishwasher - Servery 103	40 A	2		2496					2A-40
2A-41					2496	1725	1	20 A	Automatic Hand Dryer	2A-42
				Total Load:	18341 VA	13069 VA				
				Total Amps:	153 A	109 A				

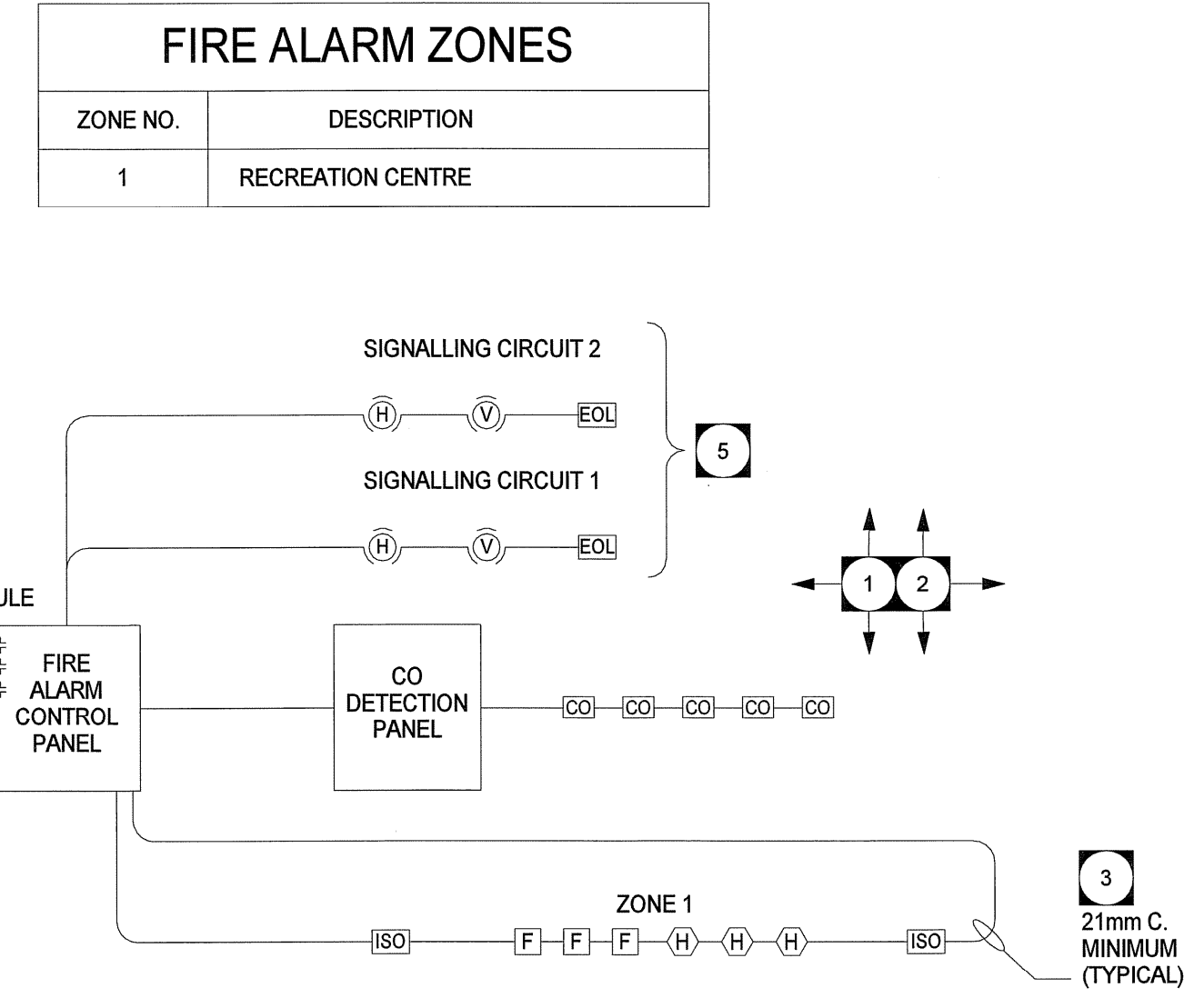
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	5858 VA	100.00%	5858 VA	Total Conn. Load: 31410 VA
Motor	250 VA	80.00%	200 VA	
Other	948 VA	100.00%	948 VA	Total Est. Demand: 27480 VA
Power	15594 VA	100.00%	15594 VA	
Receptacle	8760 VA	55.71%	4880 VA	Total Conn.: 131 A
				Total Est. Demand: 115 A



LOAD SUMMARY

TRANSFORMER/PANEL/LOAD	CONNECTED LOAD (KW)	DEMAND FACTOR (%)	DEMAND LOAD (KW)
COOLING	20.5	100	20.5
HVAC	8	100	8
LIGHTING	5.5	100	5.5
MOTOR	14	100	14
OTHER	0.5	100	0.5
POWER	12	100	12
RECEPTACLES	7	100	7
TOTALS	67.5		67.5
kW / (208*SQRT(3))		187.5	187.5
+ 25%		234	234

- ### FIRE ALARM RISER NOTES:
- RISER DIAGRAM REPRESENTS OVERALL SYSTEM. FOR EXACT QUANTITIES AND LOCATIONS OF DEVICES, REFER TO DRAWING E3.1.
 - ALL WIRE AND CABLES SHALL BE IN CONDUIT. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL CONDUIT AND PULL CORDS. FIRE ALARM SUPPLIER TO PROVIDE AND INSTALL SIGNALING/INITIATING DEVICES, CABLE TERMINATION AND OTHER DEVICES TO MAKE IT FULLY FUNCTIONAL FIRE ALARM SYSTEM.
 - ALL CONDUITS SHALL BE 21mm (MINIMUM DIAMETER), UPSIZE CONDUIT SIZE AS NECESSARY AND COMPLY WITH CEC AND TO ACCOMMODATE ALL REQUIRED WIRING. TYPICAL.
 - PROVIDE SUFFICIENT NUMBER OF CONTACTS AND RELAYS IN FIRE ALARM PANEL. WIRE AND CONNECT RELAYS TO SHUT DOWN MECHANICAL EQUIPMENT (ALL AIR HANDLING UNITS AND FANS) ON FIRE CONDITION.
 - ALL STROBES SHALL BE SYNCHRONIZED THROUGHOUT THE BUILDING. PROVIDE ADDITIONAL SIGNAL CIRCUITS AND POWER BOOSTERS AS REQUIRED FOR STROBES/HORNS POWER.



ELECTRIC HEATER SCHEDULE

Mark	Description	Manufacturer	Model	Voltage	Phase	Load	Circuit
FFH-1	Electric Forced-Flow Heater	OUELLET	OAWH04800	240 V	1	4001 VA	MD-39,41
EUH-1	Electric Unit Heater	OUELLET	OAS04000	240 V	1	4001 VA	MD-33,35

MOTOR/EQUIPMENT SCHEDULE

Mark	Description	Location	kW/HP/Am ps	Volts/Phase	Circuit	Starter Type	Remarks
CU-1	CONDENSING UNIT	ROOF	34.8 A	240/1	MD-5,7		
CU-2	CONDENSING UNIT	ROOF	34.8 A	240/1	MD-6,8		
CU-3	CONDENSING UNIT	ROOF	34.8 A	240/1	MD-18,20		
EF-1	EXHAUST FAN	SERVERY	frac. hp	120/1	2A-8	-	
F-1	FURNACE	M/E RM	1 hp	120/1	MD-29		
F-2	FURNACE	M/E RM	1 hp	120/1	MD-15		
F-3	FURNACE	M/E RM	1 hp	120/1	MD-25		
HR-1	ELECTRIC HOSE REEL	M/E RM	0 hp	120/1	MD-2		PROVIDE TRANSFORMER IF REQUIRED
HRV-1	HEAT RECOVERY VENTILATOR	M/E RM	650 W	120/1	MD-13		
HRV-1-COIL	HEATING COIL	M/E RM	10 kW	240/1	MD-17,19	-	
HWT-1	HOT WATER TANK	M/E RM	3.1 A	120/1	MD-9	-	
RP-1	CIRCULATION PUMP	M/E RM	1/4 hp	120/1	MD-12		
SP-1/2	DUPLEX SUMP PUMP	CRAWLSPACE	1/3 hp	120/1	MD-14		

EMERGENCY BATTERY BANK SCHEDULE

No.	Manufacturer	Model	Input Volts	Output Volts	Capacity	Minimum Wattage x 1.25	
EBB-1	Lumacell	RG24S-720-2-MQM20W	120 V	24 V	6	11	568 V

NOTES:
 LUMACELL LS-U
 LUMACELL MQM-2NG-24V20W-BK
 WIRE AND CONNECT AREA LIGHTING CIRCUITS TO VOLTAGE SENSING RELAYS

LUMINAIRE SCHEDULE

Type	Manufacturer	Model	Lamp No.	Lamp	Voltage	Mounting	Description	Comments	Load
F1	Cooper Industries, Inc.	MPBE-5A-250-120	1	250W MH	120 V	C	Aluminium Low-Bay	C/W safety chain and wire guard	290 VA
F2	Industrial Rig Lights	VFN42CUW-LP-PG	1	13W CF MED. BASE	120 V	W	Compact Fluorescent Vapolet (Wall Mounted)		20 VA
F3	Cooper Industries, Inc.	2GR8-232-A125-UNV-L8841-ER8	2	32W T8	120 V	R	General Purpose T8 Commercial Troffer	C/W DRYWALL KIT	61 VA
F5	Cooper Industries, Inc.	IAF-SS-2-32-120V-GL-ER8-WG	2	32W T8	120 V	S	1 X 4 TRACK		64 VA
F6	Hi-Lite	H-WGUC-CLR	1	13W CF MED. BASE	120 V	C	INTERIOR JAM JAR		13 VA
F7	Generic	ANY	1	13W CF MED. BASE	120 V	S	Keyless Porcelan C/W Wire Guard	CEILING MOUNT	20 VA
F8	Cooper Industries, Inc.	SNL-232-120V-ER81	2	32W T8	120 V	W	Wall Mounted Linear Fluorescent		65 VA
F9	Pappi	LO-PRO	1	T5HO	120 V	W	CANTILEVER		64 VA

NOTES:
 1. ALL FLUORESCENT LAMPS ARE TO BE 4100K AND A MINIMUM 82CRI UNLESS NOTED OTHERWISE.
 2. FINISH AS SELECTED BY INTERIOR DESIGNER.

MOUNTING:
 S = SURFACE
 R = RECESSED
 C = CEILING

W = WALL
 V = VALENCE
 P = PENDANT

TB = T-BAR
 DW = DRYWALL
 CH = CHAIN