

LUMINAIRE SCHEDULE

SMS ENGINEERING

FXT. TYPE	LAMPS	VOLTAGE	DESCRIPTION	NOTES	APPROVED MANUFACTURERS
AA	2 F32 T8	120 V 1Ø	4' INDUSTRIAL C/W SLOTTED REFLECTOR AND TURRET SOCKETS CHAIN SUSPENDED TO 10'-0" AFF		DAYBRITE: ATIA-232 CFI: TU248-SO LITHONIA: AF10-232 METALUX: DIM-232 PEERLESS: ITA-4-232
BC	3 F32 T8	120 V 1Ø	RECESSED 2'x4' IN T-BAR CEILING C/W CAM ACTION HINGED FRAMED .125" K12 ACRYLIC LENS		DAYBRITE: 2GRS-332-FS12 CFI: AA348-VB LITHONIA: 2GT8332A12125 METALUX: 2GRB-332A.125 PEERLESS: LACH-24G-332-12.125

OWNERS EQUIPMENT SCHEDULE

SMSENGINEERING

ROOM NUMBER	EQUIPMENT NUMBER	DESCRIPTION	LOAD/KVA	VOLTS	FEEDER	CIRCUIT	REMARKS
118	502691	BIO SAFETY CABINET	8 FLA	120V 1Ø	2#12	NL-441	DIRECT CONNECTION NOTE 1
118	501686	FREEZER		120V 1Ø			NOTE 1
118	501179	FRIDGE		120V 1Ø			NOTE 1
118	501688	FRIDGE		120V 1Ø			NOTE 1
122	501209	FRIDGE		120V 1Ø			NOTE 1
124	502691	BIO SAFETY CABINET		120V 1Ø			DIRECT CONNECTION NOTE 1
126A	497942	LAMINAR FLOW CLEAN BENCH	8 FLA	120V 1Ø	2#12	NL-440	DIRECT CONNECTION
126B	428773	COPY STAND		120V 1Ø			NOTE 1
126B	503733	UNDER COUNTER FRIDGE		120V 1Ø			NOTE 1
128	451155	FRIDGE		120V 1Ø			NOTE 1
128	500723	FRIDGE		120V 1Ø			NOTE 1
141	503213	MASS SPECTROMETER		N/A			FED FROM POWER SUPPLY
141	302304	FRIDGE		120V 1Ø			NOTE 1
141	500990	POWER SUPPLY		208V 1Ø	2#12	NL-732,733	DIRECT CONNECTION
143	503401	FRIDGE		120V 1Ø			NOTE 1
143	451053	FRIDGE		120V 1Ø	2#12	NL734	PROVIDE RECEPTACLE
144	420447	FRIDGE		120V 1Ø			NOTE 1
144	497719	2 DOOR COOLER		120V 1Ø			NOTE 1
145	503673	UPRIGHT FREEZER	8 AMP	120V 1Ø	2#12	NL-735	PROVIDE RECEPTACLE
145	497893	BENCH FREEZE DRYER		120V 1Ø			NOTE 1
145	497764	FREEZER		120V 1Ø			NOTE 1
145	497765	FREEZER		120V 1Ø			NOTE 1
145	503219	FREEZER		120V 1Ø	2#12		PROVIDE RECEPTACLE

Project: Morden Research Station
Job Number: 13-130-01
11/10/2013 8:07 AM

OWNERS EQUIPMENT SCHEDULE

SMSENGINEERING

ROOM NUMBER	EQUIPMENT NUMBER	DESCRIPTION	LOAD/KVA	VOLTS	FEEDER	CIRCUIT	REMARKS
148	NOT ASSIGNED	GLASS DOOR FRIDGE		120V 1Ø			NOTE 1
148-1	420081	FRIDGE		120V 1Ø			NOTE 1
148-1	452388	FRIDGE		120V 1Ø			NOTE 1
148-1	NOT ASSIGNED	BSC HOOD		120V 1Ø			NOTE 1
149	428858	CENTRIFUGE		120V 1Ø			NOTE 1
149	NOT ASSIGNED	2 DOOR COOLER		120V 1Ø			NOTE 1
169	414234	BRUKER NMR		120V 1Ø	2 #12	PHL-530	PROVIDE 20 AMP T-SLOT REC.
170	414188	LECO		120V 1Ø	2#12	E342	PROVIDE RECEPTACLE NOTE 2
170	414320	GAS CHROMATOGRAM	7 AMP	120V 1Ø	2#12	PHL-522	PROVIDE 20 AMP T-SLOT REC.
170	646201	GAS CHROMATOGRAM		120V 1Ø	2#12	PHL-523	PROVIDE 20 AMP T-SLOT REC.
170	646186	ISOTEMP DRYING OVEN	11 AMP	120V 1Ø	2#12	PHL-524	PROVIDE DUPLEX RECEPTACLE
175-1	420086	CABINET AIR FLOW	8 AMP	120V 1Ø	2#12	FP-202	DIRECT CONNECTION
175-1	420296	FLOW HOOD	11 AMP	120V 1Ø	2#12	FP-203	DIRECT CONNECTION
175-1	420297	FLOW HOOD	11 AMP	120V 1Ø	2#12	FP-204	DIRECT CONNECTION
175-1	451637	INCUBATOR	8 AMP	120V 1Ø	2#12	FP-205	PROVIDE RECEPTACLE
175-1	199892	SAFETY HOOD	8 AMP	120V 1Ø	2#12	FP-206	DIRECT CONNECTION
176	428858	FREEZER	11 AMP	120V 1Ø	2#12	FP-501	PROVIDE RECEPTACLE
176	170943	FREEZER	11 AMP	120V 1Ø	2#12	FP-502	PROVIDE RECEPTACLE
176	452983	FREEZER	11 AMP	120V 1Ø	2#12	FP-503	PROVIDE RECEPTACLE
176	501193	FREEZER	11 AMP	120V 1Ø	2#12	FP-523	PROVIDE RECEPTACLE
176	452735	FREEZER	11 AMP	120V 1Ø	2#12	FP-525	PROVIDE RECEPTACLE
176	497965	CENTRIFUGE	11 AMP	120V 1Ø	2#12	FP-504	PROVIDE RECEPTACLE
176	503597	CENTRIFUGE	11 AMP	120V 1Ø	2#12	FP-522	PROVIDE RECEPTACLE
176	503681	ICE MACHINE	10 AMP	120V 1Ø	2#12	FP-524	PROVIDE RECEPTACLE

NOTES:

- EQUIPMENT TO PLUG INTO EXISTING RECEPTACLE.
- CONNECT TO EXISTING EMERGENCY POWER PANEL E300, PROVIDE 15A-1P BREAKER.

Project: Morden Research Station
Job Number: 13-130-01
11/10/2013 8:07 AM

MOTOR SCHEDULE

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MOTOR No.	NAME	LOCATION	H.P. (kW)	VOLTS	STARTER & ACC.				CIRCUIT	STARTER LOCATION	FEEDER	REMARKS
					MAN	MAG	PL	HOA				
AC-1	AC UNIT	ROOM 176	3.30 MCA	208V 1Ø					FP-531,532	PACKAGED UNIT	3 #12	INTERLOCK WITH CU-1
AC-2	AC UNIT	ROOM 176	3.30 MCA	208V 1Ø					FP-535,536	PACKAGED UNIT	3 #12	INTERLOCK WITH CU-2
AC-3	AC UNIT	ROOM 176	3.30A MCA	208V 1Ø					FP-228,229	PACKAGED UNIT	3 #12	INTERLOCK WITH CU-3
CU-1	CONDENSING UNIT	ROOF	25 FLA	208V 1Ø					FP-533,534	PACKAGED UNIT	3 #8	
CU-2	CONDENSING UNIT	ROOF	25 FLA	208V 1Ø					FP-537,538	PACKAGED UNIT	3 #8	
CU-3	CONDENSING UNIT	ROOF	25 FLA	208V 1Ø					FP-230,231	PACKAGED UNIT	3 #8	
EF-13	EXHAUST FAN	SERVICE CORRIDOR	1/4 HP	120V 1Ø	✓			✓	FP-232	CORRIDOR BY FAN	2/C #12 TECK	FAN RUNS CONTINUOUSLY PROVIDE EXPLOSION PROOF CONNECTOR AT FAN
EF-14	EXHAUST FAN	SERVICE CORRIDOR	1/4 HP	120V 1Ø	✓			✓	FP-233	CORRIDOR BY FAN	2/C #12 TECK	FAN RUNS CONTINUOUSLY PROVIDE EXPLOSION PROOF CONNECTOR AT FAN

Project:MORDEN RESEARCH STATION LAB
Job Number: 13-130-01
11/10/2013 8:07 AM

PANEL: **FP200 (EXIST.)**
FED FROM:

LOCATION: ROOM 175
LOCATION:

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
RECEPTACLES	3R 600	15	1	A	22	20	1300	RECEPTACLE ROOM 175
FUME HOOD ROOM 175-1	1350	20	2	B	23	20	1300	RECEPTACLE ROOM 175
FUME HOOD ROOM 175-1	1350	20	3	C	24	20	1300	RECEPTACLE ROOM 175
FUME HOOD ROOM 175-1	1350	20	4	A	25	20	1300	RECEPTACLE ROOM 175
RECEPTACLE	1R 1200	20	5	B	26	20	1300	RECEPTACLE ROOM 175
FUME HOOD ROOM 175-1	1350	20	6	C	27	20	1300	RECEPTACLE ROOM 175
RECEPTACLE ROOM 175	1300	20	7	A	28	15	345	AC-3
RECEPTACLE ROOM 175	1300	20	8	B	29	2P	345	
RECEPTACLE ROOM 175	1300	20	9	C	30	40	2600	CU-3
RECEPTACLE ITEM AAFC #20 2 #10	2000	30	10	A	31	2P	2600	
	2000	2P	11	B	32	15	700	EXHAUST FAN EF-13
RECEPTACLE ROOM 175	1300	20	12	C	33	15	700	EXHAUST FAN EF-14
RECEPTACLE ROOM 175	1300	20	13	A	34	20		SPARE
RECEPTACLE ROOM 175	1300	20	14	B	35	20		SPARE
RECEPTACLE ROOM 175	1300	20	15	C	36	15		SPARE
RECEPTACLE ROOM 175	1300	20	16	A	37	15		SPARE
RECEPTACLE ROOM 175	1300	20	17	B	38			
VAV R-1,S-1	100	15	18	C	39			
EXISTING EQUIPMENT		30	19	A	40			
			20	B	41			
		3P	21	C	42			

VOLTAGE: 120/208V,3Ø,4W

CAPACITY: 225A

MOUNTING: SURFACE

REMARKS:

LOADS -

PHA 13395

PH.B 12095

PH.C 12600

TOTAL 38090

REMOVE ALL REDUNDANT BREAKERS AND TURN OVER TO OWNERS.
PROVIDE NEW SUB-BREAKERS AS NOTED.

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PANEL SCHEDULE FP200 (EXIST.)

PROJECT: MORDEN RESEARCH STATION
FILE: 13-130-01
DATE: 11-Oct-13

PANEL: FP500				LOCATION: ROOM 176				
FED FROM: CDP 'C'				LOCATION: MIDDLE PENTHOUSE				
Designation	Load (VA)	Ckt.	bkr.	Phase	Ckt.	bkr.	Load (VA)	Designation
		Trip	No.		No.	Trip		
RECEPTACLE ROOM 176	1R 1300	20	1	A	31	15	345	AC-1
RECEPTACLE ROOM 176	1R 1300	20	2	B	32	2P	345	
RECEPTACLE ROOM 176	1R 1300	20	3	C	33	40	2600	CU-1
RECEPTACLE ROOM 176	1R 1300	20	4	A	34	2P	2600	
RECEPTACLE ROOM 176	1R 1300	20	5	B	35	15	345	AC-2
RECEPTACLE ROOM 176	1R 1300	20	6	C	36	2P	345	
RECEPTACLE ROOM 176	1R 1300	20	7	A	37	40	2600	CU-2
RECEPTACLE ROOM 176	1R 1300	20	8	B	38	2P	2600	
SPARE		20	9	C	39	20	1300	RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	10	A	40	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	11	B	41	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	12	C	42	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	13	A	43	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	14	B	44	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	15	C	45	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	16	A	46	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	17	B	47	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	18	C	48	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	19	A	49	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	20	B	50	20	1300	1R RECEPTACLE ROOM 176
RECEPTACLE ROOM 176	1R 1300	20	21	C	51			
RECEPTACLE ROOM 176	1R 1300	20	22	A	52			
RECEPTACLE ROOM 176	1R 1300	20	23	B	53			
RECEPTACLE ROOM 176	1R 1300	20	24	C	54			
RECEPTACLE ROOM 176	1R 1300	20	25	A	55			
SPARE		20	26	B	56			
SPARE		20	27	C	57			
SPARE		20	28	A	58			
SPARE		15	29	B	59			
SPARE		15	30	C	60			
VOLTAGE:		120/208V,3Ø,4W		LOADS -		PH.A	22445	
CAPACITY:		225A				PH.B	18890	
MOUNTING:		SURFACE				PH.C	17245	
REMARKS:						TOTAL	58580	
<div>SMSENGINEERING</div> <div>SMS Engineering Ltd. Consulting Engineers 770 Bradford Street Winnipeg MB Canada R3H 0N3 Telephone 204.775.0291 Fax 204.772.2153 sms@smseng.com</div>						<div>PANEL SCHEDULE FP500</div> <div>PROJECT: MORDEN RESEARCH STATION FILE: 13-130-01 DATE: 11-Oct-13</div>		

PANEL: **PHL500 (EXIST.)**
FED FROM: ROOM 168

LOCATION:
LOCATION:

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
EXISTING CIRCUITS			1	A	22	20	1000 1R	ITEM #414320 RECEPTACLE ROOM 170
EXISTING CIRCUITS			2	B	23	20	1000 1R	ITEM #646201 RECEPTACLE ROOM 170
EXISTING CIRCUITS			3	C	24	20	800 1R	FRIDGE RECEPTACLE ROOM 170
EXISTING CIRCUITS			4	A	25			EXISTING CIRCUITS
EXISTING CIRCUITS			5	B	26			EXISTING CIRCUITS
EXISTING CIRCUITS			6	C	27			EXISTING CIRCUITS
EXISTING CIRCUITS			7	A	28			EXISTING CIRCUITS
EXISTING CIRCUITS			8	B	29			EXISTING CIRCUITS
EXISTING CIRCUITS			9	C	30	20	1000 1R	ITEM #414234 RECEPTACLE ROOM 169
EXISTING CIRCUITS			10	A	31	20		SPARE
EXISTING CIRCUITS			11	B	32	20		SPARE
EXISTING CIRCUITS			12	C	33	15		SPARE
EXISTING CIRCUITS			13	A	34	15		SPARE
DISHWASHER ROOM 170	3100	30	14	B	35			
2 #10	3100	2P	15	C	36			
EXISTING CIRCUITS			16	A	37			
EXISTING CIRCUITS			17	B	38			
EXISTING CIRCUITS			18	C	39			
EXISTING CIRCUITS			19	A	40			
WIREWAY RECEPTACLE ROOM 168	1R 800	20	20	B	41			
WIREWAY RECEPTACLE ROOM 168	1R 800	20	21	C	42			
VOLTAGE: 120/208V, 3Ø, 4W LOADS - P.H.A 1000 CAPACITY: 225A P.H.B 4900 MOUNTING: FLUSH P.H.C 5700 REMARKS: TOTAL 11600								

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PANEL SCHEDULE PHL500 (EXIST.)

PROJECT: MORDEN RESEARCH STATION
FILE: 13-130-01
DATE: 11-Oct-13

PANEL: **NL-700 (EXIST.)**
FED FROM:

LOCATION: ROOM 143
LOCATION:

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
EXISTING CIRCUITS			1	A	22			EXISTING CIRCUITS
EXISTING CIRCUITS			2	B	23			EXISTING CIRCUITS
EXISTING CIRCUITS			3	C	24			EXISTING CIRCUITS
EXISTING CIRCUITS			4	A	25			EXISTING CIRCUITS
EXISTING CIRCUITS			5	B	26			EXISTING CIRCUITS
EXISTING CIRCUITS			6	C	27			EXISTING CIRCUITS
EXISTING CIRCUITS			7	A	28			EXISTING CIRCUITS
EXISTING CIRCUITS			8	B	29			EXISTING CIRCUITS
EXISTING CIRCUITS			9	C	30			EXISTING CIRCUITS
EXISTING CIRCUITS			10	A	31			EXISTING CIRCUITS
EXISTING CIRCUITS			11	B	32	15		#500990 POWER SUPPLY
EXISTING CIRCUITS			12	C	33	2P		FOR MASS SPECTROMETER
EXISTING CIRCUITS			13	A	34	15	1R	RECEPTACLE ITEM #451053
EXISTING CIRCUITS			14	B	35	15	1R	RECEPTACLE ITEM #503673
EXISTING CIRCUITS			15	C	36			
EXISTING CIRCUITS			16	A	37			
EXISTING CIRCUITS			17	B	38			EXISTING CIRCUITS
EXISTING CIRCUITS			18	C	39			EXISTING CIRCUITS
EXISTING CIRCUITS			19	A	40			EXISTING CIRCUITS
EXISTING CIRCUITS			20	B	41			EXISTING CIRCUITS
EXISTING CIRCUITS			21	C	42			EXISTING CIRCUITS
VOLTAGE: 120/208V, 3Ø, 4W				LOADS -		PH.A	0	
CAPACITY: 225A						PH.B	0	
MOUNTING: FLUSH						PH.C	0	
REMARKS:						TOTAL	0	

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PANEL SCHEDULE NL-700 (EXIST.)

PROJECT: MORDEN RESEARCH STATION
FILE: 13-130-01
DATE: 11-Oct-13

PANEL: **NL-1200 (EXIST.)**
 FED FROM:

LOCATION: ROOM 147
 LOCATION:

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
EXISTING CIRCUITS			1	A	22			EXISTING CIRCUITS
EXISTING CIRCUITS			2	B	23			EXISTING CIRCUITS
EXISTING CIRCUITS			3	C	24			EXISTING CIRCUITS
EXISTING CIRCUITS			4	A	25			EXISTING CIRCUITS
EXISTING CIRCUITS			5	B	26			EXISTING CIRCUITS
EXISTING CIRCUITS			6	C	27			EXISTING CIRCUITS
EXISTING CIRCUITS			7	A	28			EXISTING CIRCUITS
EXISTING CIRCUITS			8	B	29			EXISTING CIRCUITS
EXISTING CIRCUITS			9	C	30			EXISTING CIRCUITS
EXISTING CIRCUITS			10	A	31			EXISTING CIRCUITS
EXISTING CIRCUITS			11	B	32			EXISTING CIRCUITS
EXISTING CIRCUITS			12	C	33			EXISTING CIRCUITS
EXISTING CIRCUITS			13	A	34			EXISTING CIRCUITS
EXISTING CIRCUITS			14	B	35			EXISTING CIRCUITS
EXISTING CIRCUITS			15	C	36	30	3100	DISHWASHER
EXISTING CIRCUITS			16	A	37	2P	3100	2 #10
EXISTING CIRCUITS			17	B	38			
EXISTING CIRCUITS			18	C	39			
EXISTING CIRCUITS			19	A	40			
EXISTING CIRCUITS			20	B	41			
EXISTING CIRCUITS			21	C	42			

VOLTAGE: **120/208V,3Ø,4W**
 CAPACITY: **225AQ**
 MOUNTING: **FLUSH**
 REMARKS:

LOADS - PH.A 3100
 PH.B 0
 PH.C 3100
 TOTAL **6200**

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PANEL SCHEDULE NL-1200 (EXIST.)

PROJECT: MORDEN RESEARCH STATION
 FILE: 13-130-01
 DATE: 11-Oct-13