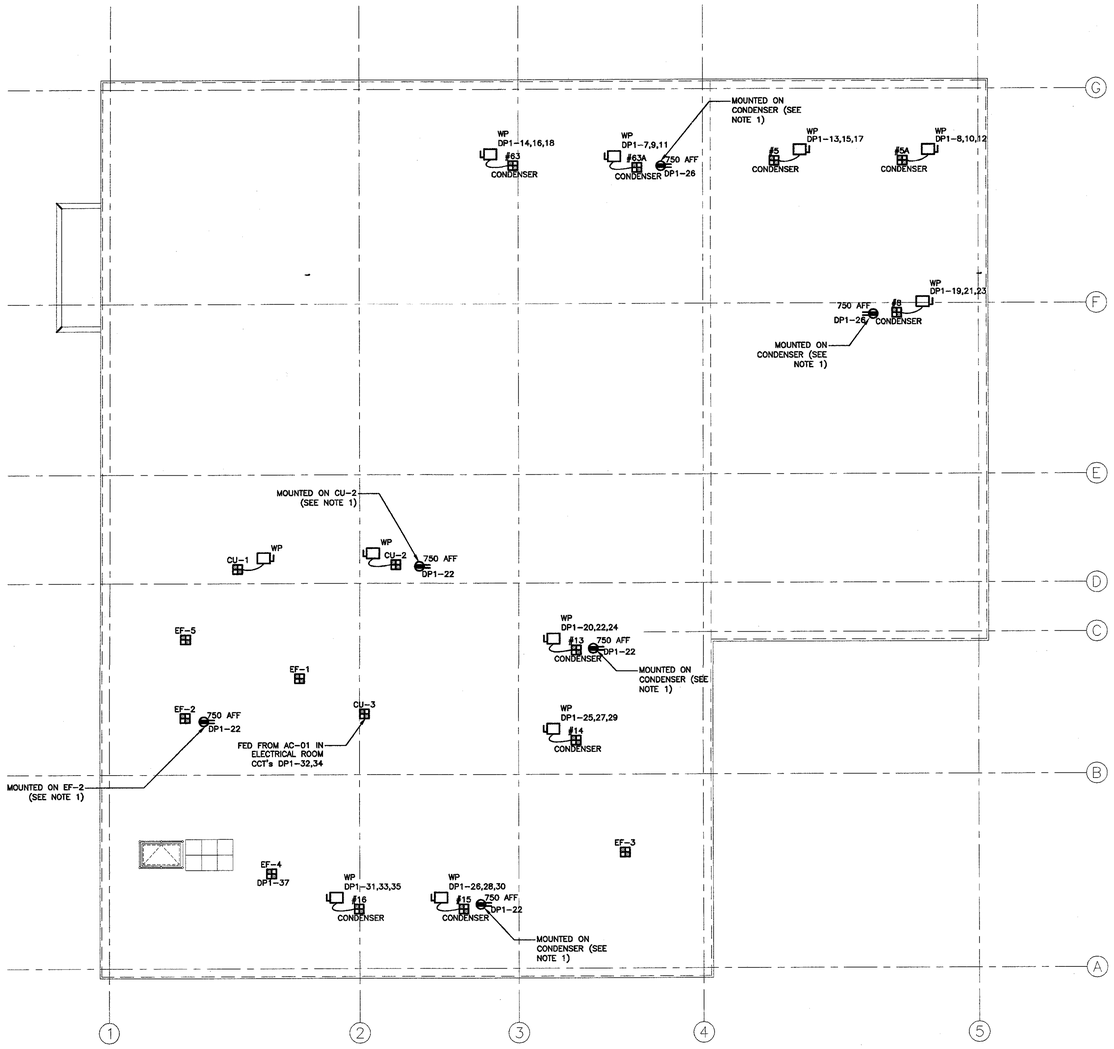

ROOF-ELECTRICAL LAYOUT

SCALE : 1:100

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

COMMUNICATIONS CABLE/CONDUIT CAPACITY TABLE

CONDUIT TRADE SIZE		ALLOWABLE QUANTITY OF CABLES CABLE OUTSIDE DIAMETER							
		3.3mm	4.6mm	5.6mm	6.1mm	7.4mm	7.9mm	9.4mm	13.5mm
mm	INCHES	0.13"	0.18"	0.22"	0.24"	0.29"	0.31"	0.37"	0.53"
16	1/2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	3/4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27	1	8	8	7	6	3	3	2	1
35	1 1/4	16	14	12	10	6	4	3	1
41	1 1/2	20	18	16	15	7	6	4	2
53	2	30	26	22	20	14	12	7	4
63	2 1/2	45	40	36	30	17	14	12	6
78	3	70	60	50	40	20	20	17	7
91	3 1/2	N/A	N/A	N/A	N/A	N/A	N/A	22	12
103	4	N/A	N/A	N/A	N/A	N/A	N/A	30	14

MINIMUM CONDUCTOR SIZING TABLE FOR 120V, 15A BRANCH CIRCUITS

BRANCH CIRCUIT LENGTH OF RUN			PHASE WIRE SIZE	SEPARATE NEUTRAL SIZE	COMMON NEUTRAL SIZE	BOND WIRE SIZE
0m	to	24.8m	#12 AWG	#12 AWG	#10 AWG	#12 AWG
24.9m	to	40.2m	#10 AWG	#10 AWG	#8 AWG	#10 AWG
40.3m	to	63.8m	#8 AWG	#8 AWG	#6 AWG	#10 AWG
63.9m	to	101.7m	#6 AWG	#6 AWG	#4 AWG	#8 AWG

MINIMUM CONDUCTOR SIZING TABLE FOR 120V, 20A BRANCH CIRCUITS

BRANCH CIRCUIT LENGTH OF RUN			PHASE WIRE SIZE	SEPARATE NEUTRAL SIZE	COMMON NEUTRAL SIZE	BOND WIRE SIZE
0m	to	18.3m	#12 AWG	#12 AWG	#10 AWG	#12 AWG
18.4m	to	30.8m	#10 AWG	#10 AWG	#8 AWG	#10 AWG
30.9m	to	49.9m	#8 AWG	#8 AWG	#6 AWG	#10 AWG
50.0m	to	77.9m	#6 AWG	#6 AWG	#4 AWG	#8 AWG

NOTES

1 ALL OTHER 120V BRANCH CIRCUIT WIRING SIZES TO BE SIZED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE FOR NO MORE THAN 3% VOLTAGE DROP AND APPROPRIATE DISTANCE CORRECTION FACTORSIN ACCORDANCE WITH TABLE D3 AS WELL AS CABLE AMPACITY CORRECTION FACTORS SPECIFIED IN TABLE 5C.

LEGEND

	15A, 120V, DUPLEX RECEPTACLE
	20A, 120V, DUPLEX RECEPTACLE
	SPECIAL RECEPTACLE
	DIRECT CONNECTION TO EQUIPMENT
	VOICE OUTLET, QUANTITY AS INDICATED, QUANTITY IS 1 IF LEFT BLANK
	DATA OUTLET, QUANTITY AS INDICATED, QUANTITY IS 1 IF LEFT BLANK
	VOICE/DATA OUTLET LOCATION VOICE AND DATA ARE TO BE GROUPED IN SEPARATE OUTLET BOXES #D INDICATES QUANTITY OF DATA #V INDICATES QUANTITY OF VOICE
	PUSHBUTTON
	MULTIPLE PUSH BUTTONS
DO	CONNECTION TO DOOR OPENER
EL	CONNECTION TO ELECTRONIC LATCH RETRACTION
HD	CONNECTION TO HAND DRYER
GFI	GROUND FAULT CIRCUIT INTERRUPTING DEVICE
WP	WEATHERPROOF
CTP	DEVICE MOUNTED 150mm ABOVE COUNTER TOP
MW	MICROWAVE
FR	FRIDGE
DW	DISH WASHER

NOTES:

1. COORDINATE EXACT LOCATION OF ROOFTOP RECEPTACLES MOUNTED ON EQUIPMENT ON-SITE. CONDUITS SHALL POKE THROUGH CEILING AT SAME LOCATION AS MECHANICAL FEEDS.

REGISTERED PROFESSIONAL ENGINEER Province of New Brunswick #M6830 Troy M. Langlois Signature Nouveau-Brunswick Province du INGÉNIEUR IMMATRICULÉ

Public Works and Government Services Canada / Travaux Publics et Services gouvernementaux Canada

CBCL LIMITED
Consulting Engineers

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project / projet
NEW FOOD SERVICES BUILDING
WESTMORLAND INSTITUTION

DORCHESTER, NB

drawing / dessin
ELECTRICAL
ROOF-ELECTRICAL LAYOUT

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date	Aug. 3, 2013	
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