

VOLTS <u>120/208</u>		PANEL <u>PANEL A</u>		INTERRUPTING <u>22</u> KA		ENCLOSURE <u>CSA 1</u>	
PHASE <u>3</u>		LOCATION <u>ELECTRICAL BUILDING</u>		MAINS <u>225</u> AMPS			
WIRE <u>4</u>		FED FROM <u>NSPI SERVICE</u>		MOUNTING <u>SURFACE MOUNTED IN ELECT BLDG</u>			

DESIGNATION	KW			WIRE SIZE	CIR NO.	BKR	DESIGNATION		
	A	B	C				A	B	C
RECEPTACLE R1 - PC#1	2.88			1	30A		15A	2	WHARF AREA LIGHTS - POLES 1, 3, 5
RECEPTACLE R2 - PC#1	1.92			3	20A		15A	4	WHARF AREA LIGHTS - POLES 2, 4, 6
RECEPTACLE R3 - PC#2		2.88		5	30A		20A	6	LIGHTING CONTROLS
RECEPTACLE R4 - PC#2	1.92			7	20A		15A	8	RECEPTACLES - ELECTRICAL SHED
RECEPTACLE R5 - PC#3		2.88		9	30A		15A	10	LIGHTING - ELECTRICAL SHED
RECEPTACLE R6 - PC#3		1.92		11	20A		15A	12	LIGHTING CONTACTOR
6 BLANK SPACES									
PANEL B									
TOTAL LOAD <u>40,100</u> KW <u>111,3065</u> AMPS @ <u>208V, 3φ</u>									

PANEL 'A' SCHEDULE

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E3

VOLTS <u>120/208</u>		PANEL <u>PANEL B</u>		INTERRUPTING <u>22</u> KA		ENCLOSURE <u>CSA 4X</u>	
PHASE <u>3</u>		LOCATION <u>WHARF</u>		MAINS <u>100</u> AMPS		MAIN BKR <u>60</u> AMPS	
WIRE <u>4</u>		FED FROM <u>PANEL A</u>		MOUNTING <u>SURFACE MOUNTED IN A S/S ENCLOSURE</u>			

DESIGNATION	KW			WIRE SIZE	CIR NO.	BKR	DESIGNATION		
	A	B	C				A	B	C
MAIN BREAKER									
RECEPTACLE R7 - PC#4	2.88			7	30A		20A	4	RECEPTACLE R09 - PC#5
RECEPTACLE R8 - PC#4	1.92			9	20A		30A	6	RECEPTACLE R10 - PC#5
SPACE									
TOTAL LOAD <u>19,200</u> KW <u>53,2939</u> AMPS @ <u>208V, 3φ</u>									

PANEL 'B' SCHEDULE

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E3

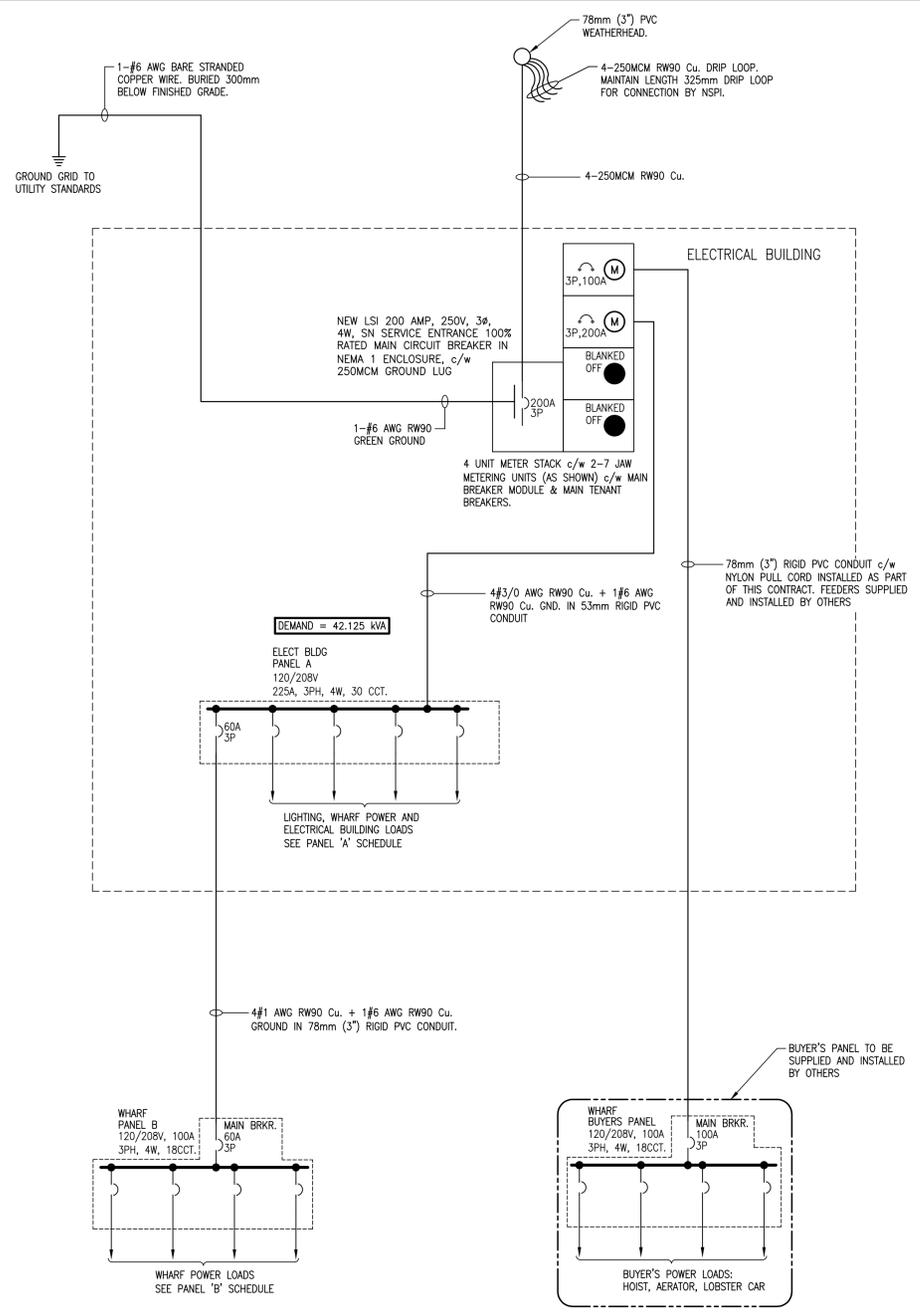
LOAD CALCULATION (DEMAND) - CHEBOGUE WHARF

- RECEPTACLE LOAD (CEC 78-056)
 - (4 X 30A X 120) 100% = 14,400 kW
 - (3 X 30A X 120) 65% = 7,020 kW
 - (1 X 20A X 120) 65% = 1,560 kW
 - (5 X 20A X 120) 50% = 6,000 kW
 - (2 X 20A X 120) 25% = 1,200 kW
 - SUBTOTAL = 30,180 kW
- WHARF LIGHTING
 - 6 - 168 WATT AREA LIGHTS = 6 X 168 = 1,008 kW
 - 1 - 177 WATT FLOOD LIGHTS = 1 X 177 = 0,177 kW
 - SUBTOTAL = 1,125 kW
- SHED LOADING
 - LIGHTING = 170 WATTS
 - RECEPTACLES = 600 WATTS
 - HEATER = 1,125 WATTS
 - LIGHTING CONTACTOR = 500 WATTS
 - SUBTOTAL = 2,395 WATTS > 2.395 kW
- BUYER'S PANEL (ESTIMATED LOAD) = 19,114 kW
 - RECEPTACLES = 30,180 kW
 - LIGHTS = 1,125 kW
 - ELECTRICAL BUILDING = 2,395 kW
 - BUYER'S PANEL = 19,144 kW
 - TOTAL = 52,844 kW

TOTAL = 52,844 kW @ 208 VOLTS, 3φ X 1.25 = 66,055 KVA
 SERVICE LOADING = 66,055 KVA/208 VOLTS, 3φ = 183,35035 AMPS @ 208V, 3φ

LOAD CALCULATION

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E3



ELECTRICAL SINGLE LINE DIAGRAM

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E3

CABLE #	LOADS	LOCATION	BRK. RATING	VOLTAGE	RATED CURRENT	CIRCUIT	DISTANCE METER (FT)	VOLTAGE DROP	FEEDER SIZE	JUNCTION BOX SIZE (mm)
1	AREA LIGHTING	POLE 1 POLES 3 & 5	15 AMP	120V	4.2 AMPS	A-2	N/A	2.20V (2.77%)	2#12 AWG RW90 Cu. + 1#12 AWG RW90 Cu. BOND	150 x 150 x 50
2	AREA LIGHTING	POLES 2, 4, 6	15 AMP	120V	4.2 AMPS	A-4	N/A	2.26V (1.89%)	2#6 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	150 x 150 x 50
3	RECEPTACLE - R1	POWER CENTRE 1	30 AMP	120V	24 AMPS	A-1	41m (134.5')	2.67V (2.22%)	2#6 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	300 x 300 x 150
4	RECEPTACLE - R2	POWER CENTRE 1	20 AMP	120V	16 AMPS	A-3		2.77V (2.31%)	2#8 AWG RW90 Cu. + 1#10 AWG RW90 Cu. BOND	300 x 300 x 150
5	RECEPTACLE - R3	POWER CENTRE 2	30 AMP	120V	24 AMPS	A-5	72m (236')	3.02V (2.52%)	2#4 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	300 x 300 x 150
6	RECEPTACLE - R4	POWER CENTRE 2	20 AMP	120V	16 AMPS	A-7		3.11V (2.59%)	2#6 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	300 x 300 x 150
7	RECEPTACLE - R5	POWER CENTRE 3	30 AMP	120V	24 AMPS	A-9	62m (203.4')	2.60V (2.17%)	2#4 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	300 x 300 x 150
8	RECEPTACLE - R6	POWER CENTRE 3	20 AMP	120V	16 AMPS	A-11		2.69V (2.24%)	2#6 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	300 x 300 x 150
9	RECEPTACLE - R7	POWER CENTRE 4	30 AMP	120V	24 AMPS	B-7	24m (79')	2.44V (2.03%)	2#8 AWG RW90 Cu. + 1#10 AWG RW90 Cu. BOND	300 x 300 x 150
10	RECEPTACLE - R8	POWER CENTRE 4	20 AMP	120V	16 AMPS	B-9		2.55V (2.12%)	2#10 AWG RW90 Cu. + 1#12 AWG RW90 Cu. BOND	300 x 300 x 150
11	RECEPTACLE - R9	POWER CENTRE 5	30 AMP	120V	24 AMPS	B-2	15m (49')	2.39V (1.99%)	2#10 AWG RW90 Cu. + 1#12 AWG RW90 Cu. BOND	300 x 300 x 150
12	RECEPTACLE - R10	POWER CENTRE 5	20 AMP	120V	16 AMPS	B-4		2.52V (2.09%)	2#12 AWG RW90 Cu. + 1#12 AWG RW90 Cu. BOND	300 x 300 x 150
13	RECEPTACLE - R11	POWER CENTRE 6	30 AMP	120V	24 AMPS	B-6	31m (102')	3.15V (2.62%)	2#8 AWG RW90 Cu. + 1#10 AWG RW90 Cu. BOND	300 x 300 x 150
14	RECEPTACLE - R12	POWER CENTRE 6	20 AMP	120V	16 AMPS	B-8		3.29V (2.74%)	2#10 AWG RW90 Cu. + 1#12 AWG RW90 Cu. BOND	300 x 300 x 150
15	RECEPTACLE - R13	POWER CENTRE 7	30 AMP	120V	24 AMPS	B-10	35m (115')	2.28V (1.90%)	2#6 AWG RW90 Cu. + 1#8 AWG RW90 Cu. BOND	300 x 300 x 150
16	RECEPTACLE - R14	POWER CENTRE 7	20 AMP	120V	16 AMPS	B-12		2.37V (1.95%)	2#8 AWG RW90 Cu. + 1#10 AWG RW90 Cu. BOND	300 x 300 x 150
17	FLOOD LIGHTING	POLE 3	15 AMP	120V	1.475 AMPS	A-20	113m (371')	1.95V (1.63%)	2#12 AWG RW90 Cu. + 1#12 AWG RW90 Cu. BOND	150 x 150 x 50

FEEDER INFORMATION SCHEDULE

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E3

0	ISSUED FOR TENDER	OCT.15 2019
revisions		date
project	CHEBOGUE WHARF RECONSTRUCTION YARMOUTH COUNTY NOVA SCOTIA	
drawing	design	
SINGLE LINE DEMAND CALC'S & SCHEDULES		
designed	K. WOLFE	conçu
date	OCTOBER 2019	
drawn	K. WOLFE	dessiné
date	OCTOBER 2019	
approved		approuvé
date		
Tender	Soumission	
PWGSC Project Manager	Administrateur de projets TPSC	
project number	no. du projet	
	R.100885.001	
drawing no.	no. du dessin	
	E3	