

NOTES	VOLTS <u>120/208</u>			PANEL <u>PANEL A</u>			INTERRUPTING <u>22</u> KA			ENCLOSURE <u>CSA 1</u>			NOTES					
	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	A	B	C	BKR	CIR NO.	WIRE SIZE	KW			DESIGNATION	
		A	B	C										A	B	C		A
RECEPTACLE R1 - PC#1		2.88				1	30A					15A	2	0.504			WHARF AREA LIGHTS - POLES 1, 3, 5	
RECEPTACLE R2 - PC#1		1.92				3	20A					15A	4	0.504			WHARF AREA LIGHTS - POLES 2, 4, 6	
RECEPTACLE R3 - PC#2			2.88			5	30A					20A	6	1.920			LIGHTING CONTROLS	
RECEPTACLE R4 - PC#2		1.92				7	20A					15A	8	0.600			RECEPTACLES - ELECTRICAL SHED	
RECEPTACLE R5 - PC#3			2.88			9	30A					15A	10	0.170			LIGHTING - ELECTRICAL SHED	
RECEPTACLE R6 - PC#3				1.92		11	20A					15A	12	0.500			LIGHTING CONTACTOR	
6 BLANK SPACES						13						2P	14		1.125		HEATER - ELECTRICAL SHED	
						15						15A	16					
						17						15A	18		1.000		RECEPTACLE FOR CCTV EQUIPMENT	
						19						15A	20	0.177			FLOOD LIGHT - POLE 3	
						21												
						23												6 BLANK SPACES
PANEL B		7.68				25	3P						25					
			6.72			27	60A						25					
						29							30					
				4.80														
ø "A" TOTAL		14.3235		KW		NOTES: -												
ø "B" TOTAL		12.7565		KW		-												
ø "C" TOTAL		13.02		KW		-												
TOTAL LOAD		40,100		KW		111.3065 AMPS @ 208V, 3ø		FEEDER 4#3/0 AWG RW90 Cu. + 1#6 AWG RW90 Cu. IN A 78mm EMT CONDUIT										

PANEL 'A' SCHEDULE

SCALE : N.T.S.

NOTES	VOLTS <u>120/208</u>		PANEL <u>PANEL B</u>		INTERRUPTING <u>22</u> KA		ENCLOSURE <u>CSA 4X</u>		NOTES										
	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	A	B	C	BKR	CIR NO.	WIRE SIZE	A	B	C	DESIGNATION			
		A	B	C															
MAIN BREAKER						1	60A	○			30A	2	2.88				RECEPTACLE R09 - PC#5		
						3		○			20A	4			1.92			RECEPTACLE R10 - PC#5	
						5		○			30A	6			2.88			RECEPTACLE R11 - PC#6	
RECEPTACLE R7 - PC#4		2.88				7	30A	○			20A	8	1.92					RECEPTACLE R12 - PC#6	
RECEPTACLE R8 - PC#4			1.92			9	20A	○			30A	10	2.88					RECEPTACLE R13 - PC#7	
SPACE						11		○			20A	12	1.92					RECEPTACLE R14 - PC#7	
						13		○			14								
						15		○			16							SPACE	
						17		○			18								
											19								
ø "A" TOTAL		7.68	KW																
ø "B" TOTAL		6.72	KW																
ø "C" TOTAL		4.8	KW																
TOTAL LOAD		19,200	KW		53.2939	AMPS @ 208V, 3ø													

PANEL 'B' SCHEDULE

SCALE : N.T.S.

FEEDER SCHEDULE/VOLTAGE DROP/WIRE SIZE CALCULATIONS										
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	
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	
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	
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	
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	
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	
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	
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	
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

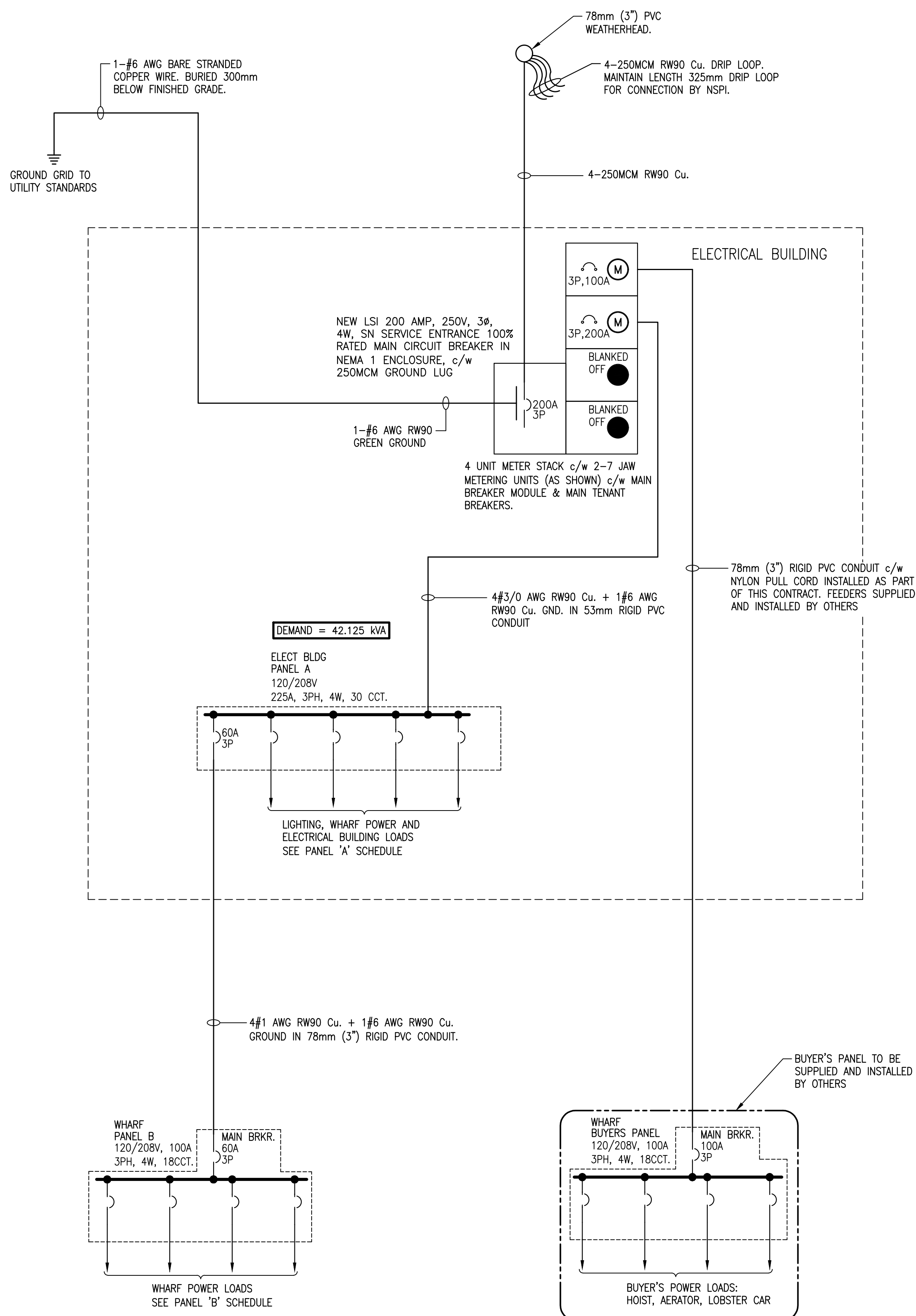
SCALE : N.T.S.

LOAD CALCULATION (DEMAND) - CHEBOGUE WHARF

1. 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
2. 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
3. SHED LOADING		
LIGHTING	=	170 WATTS
RECEPTACLES	=	600 WATTS
HEATER	=	1,125 WATTS
LIGHTING CONTACTOR	=	500 WATTS
SUBTOTAL	=	2,395 WATTS > 2,395 kW
4. 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, 3ø X 1.25 = 66,055 KVA		
SERVICE LOADING = 66,055 KVA/208 VOLTS, 3ø = 183.35035 AMPS @ 208V, 3ø		

LOAD CALCULATION

SCALE : N.T.S.



ELECTRICAL SINGLE LINE DIAGRAM

SCALE : N.T.S.



0	ISSUED FOR TENDER	OCT. 2019
revisions		date
project	project	
CHEBOGUE WHARF RECONSTRUCTION YARMOUTH COUNTY NOVA SCOTIA		
drawing	dessin	
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
PWGS Project Manager	Administrateur de projets TP50C	
project number	no. du projet	
R.100885.001		
drawing no.	no. du dessin	
E3		