



LOAD CALCULATION (DEMAND) - PANEL A

1. RECEPTACLE LOAD (CEC 78-056)

• (1 x 50A x 240) 100%	= 12.00kW
• (3 x 30A x 120) 100%	= 10.80kW
• (2 x 30A x 120) 65%	= 4.680kW
• (2 x 20A x 120) 65%	= 3.120kW
• (3 x 20A x 120) 50%	= 3.600kW
SUBTOTAL	= 34.200 kW

2. WHARF LIGHTING

6 - 185 WATT LED AREA LIGHTS = 6 x 1185 = 1.110 kW

3. WINCH (NON-CONTINUOUS LOAD)

1 x 3.0HP x 746W = 2.238 kW x 80% = 1.7904 kW

TOTAL DERRICK LOAD = 1.7904 kW

TOTAL LOAD	RECEPTACLES	= 34.200 kW
	WHARF LIGHTING	= 1.1100 kW
	WINCH	= 1.7904 kW
	TOTAL	= 37.1004 kW
TOTAL	= 37.1004 kW x 1.25	= 46.3755 kVA
TOTAL SERVICE LOADING	= 46.3755 kVA/240 VOLTS	= 193.23125 AMPS

NOTES	VOLTS	120/240		PANEL	A													
	PHASE	1		LOCATION	WHARF		MAINS		200		AMPS							
	WIRE	3		FED FROM	75kVA NSPI XFMR		BRANCH BREAKER I.C.		10		kA		MTG.		SURFACE			
	DESIGNATION	KW		WIRE SIZE	CIR NO.	BKR	A	B	BKR	CIR NO.	WIRE SIZE	KW		DESIGNATION				
		A	B									A	B					
	DERRICK (3HP)	2.238		10	1	2P	⊗		30A	2	10/8/10	2.40	RECEPTACLE R1			1.3		
					3	40A	⊗		20A	4	12	1.92	RECEPTACLE R2			2		
	WHARF LIGHTING	0.695		12	5	15A	⊗		2P	6	8	9.60	RECEPTACLE R3 (WELDING RECEPTACLE)					
	LIGHTING CONTACTOR	0.200		12	7	15A	⊗		50A	8								
					9		⊗		30A	10	10	2.40	RECEPTACLE R4			2		
					11		⊗		20A	12	12	1.92	RECEPTACLE R5			1		
					13		⊗		30A	14	10	2.40	RECEPTACLE R6			2		
					15		⊗		20A	16	12	1.92	RECEPTACLE R7			1		
					17		⊗		30A	18	10/6/10	2.40	RECEPTACLE R8			1.3		
					19		⊗		20A	20	12/10/12	1.92	RECEPTACLE R9			2.3		
					21		⊗		30A	22	10/6/10	2.40	RECEPTACLE R10			1.3		
					23		⊗		20A	24	12/8/12	1.92	RECEPTACLE R11			2.3		
					25		⊗			26								
					27		⊗			28								
					29		⊗			30								
NOTES:																		
1. TWIST LOCK RECEPTACLE																		
2. GFCI RECEPTACLE																		
3. CIRCUIT CONDUCTORS TO INCREASE IN SIZE TO ALLOW FOR VOLTAGE DROP																		
FEEDER 3-#300 MCM AWG RW75 Cu. + 1-#4 GROUND IN 78mm RIGID PVC CONDUIT																		
⊕ "A" TOTAL 19029 WATTS																		
⊕ "B" TOTAL 15719 WATTS																		
TOTAL LOAD 34.748 KW 144.783 AMPS @ 240V																		

CABLE #	LOADS	LOCATION	BRK. RATING	VOLTAGE	RATED CURRENT	CIRCUIT	DISTANCE METER (FT)	VOLTAGE DROP	FEEDER SIZE	JUNCTION BOX SIZE
①	RECEPTACLE #R1	POWER CENTRE #1	30 AMP	120V	24 AMPS	A-2	26m (85')	2.663V (2.219%)	2/C #8 TECK CABLE WITH #10 BOND	200mm x 200mm x 100mm (8"x8"x4") MOUNTED ON POWER CENTRE
②	RECEPTACLE #R2	POWER CENTRE #1	20 AMP	120V	16 AMPS	A-4	26m (85')	2.77V (2.31%)	2/C #10 TECK CABLE WITH #12 BOND	
③	RECEPTACLE #R3	POWER CENTRE #2	50 AMP	240V	40 AMPS	A-6	1m (3')	0.171V (0.071%)	2/C #8 TECK CABLE WITH #10 BOND	NO JUNCTION BOX REQUIRED
④	RECEPTACLE #R4	POWER CENTRE #2	30 AMP	120V	24 AMPS	A-8,10	1m (3')	0.16V (0.133%)	2/C #10 TECK CABLE WITH #12 BOND	
⑤	RECEPTACLE #R5	POWER CENTRE #2	20 AMP	120V	16 AMPS	A-12	1m (3')	0.126V (0.105%)	2/C #12 TECK CABLE WITH #14 BOND	
⑥	RECEPTACLE #R6	POWER CENTRE #3	30 AMP	120V	24 AMPS	A-14	16m (52.5')	2.561V (2.134%)	2/C #10 TECK CABLE WITH #12 BOND	200mm x 200mm x 100mm (8"x8"x4")
⑦	RECEPTACLE #R7	POWER CENTRE #3	20 AMP	120V	16 AMPS	A-16	16m (52.5')	2.69V (2.24%)	2/C #12 TECK CABLE WITH #14 BOND	MOUNTED ON POWER CENTRE
⑧	RECEPTACLE #R8	POWER CENTRE #4	30 AMP	120V	24 AMPS	A-18	49m (160')	3.217V (2.680%)	2/C #6 TECK CABLE WITH #8 BOND	200mm x 200mm x 100mm (8"x8"x4")
⑨	RECEPTACLE #R9	POWER CENTRE #4	20 AMP	120V	16 AMPS	A-20	49m (160')	3.34V (2.78%)	2/C #8 TECK CABLE WITH #10 BOND	MOUNTED ON POWER CENTRE
⑩	WINCH	WHARF	40 AMP	240V	17 AMPS (FLA)	A-1,3	30m (98')	3.402V (1.417%)	2/C #10 TECK CABLE WITH #12 BOND	COMBINATION STARTER
⑪	WHARF LIGHTING	POLES 1 - 5	15 AMP	120V	4.625 AMPS	A-5	81m (105')	0.917V (0.764%)	2/C #12 TECK CABLE WITH #14 BOND	100mm x 100mm x 50mm (4"x4"x2") ON POLES
⑫	RECEPTACLE #R10	POWER CENTRE #5	30 AMP	120V	24 AMPS	A-22	52m (170.6')	3.414V (2.845%)	2/C #6 TECK CABLE WITH #8 BOND	200mm x 200mm x 100mm (8"x8"x4")
⑬	RECEPTACLE #R11	POWER CENTRE #5	20 AMP	120V	16 AMPS	A-24	52m (170.6')	3.55V (2.95%)	2/C #8 TECK CABLE WITH #10 BOND	MOUNTED ON POWER CENTRE

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WHARF CONSTRUCTION

MARIE JOSEPH GUYSBOROUGH COUNTY NOVA SCOTIA

drawing K. WOLFE

DESIGN K. WOLFE/G. BOWSER

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