

CABLE/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
1	R1a	PC#1	30	120	24	D-5	34(112)	2.64	6	200x200x100
2	R1b	PC#1	20	120	16	D-7	34(112)	2.80	8	
3	R1c	PC#1	20	120	16	D-9	34(112)	2.80	8	
4	R2a	PC#2	20	120	16	D-11	10(33)	2.09	12	400x400x200
5	R2b	PC#2	20	120	16	D-13	10(33)	2.09	12	
6	R2c	PC#2	20	120	16	D-15	10(33)	2.09	12	
7	R2d	PC#2	20	120	16	D-17	10(33)	2.09	12	400x400x200
8	R2e	PC#2	30	120	24	D-8	10(33)	1.97	10	
9	R3a	PC#3	150	240	120	D-1,3	28(92)	2.70	1/0	
10	R8a	PC#8	20	120	16	C-1	27(89)	2.23	8	200x200x100
11	R8b	PC#8	20	120	16	C-3	27(89)	2.23	8	
12	R9a	PC#9	20	120	16	C-5	54(178)	2.80	6	
13	R9b	PC#9	20	120	16	C-7	54(178)	2.80	6	200x200x100
14	R10a	PC#10	20	120	16	-	36(120)	3.00	8	
15	R10b	PC#10	30	120	24	-	36(120)	2.83	6	
16	R10c	PC#10	30	120	24	-	36(120)	2.83	6	200x200x100
17	R11a	PC#11	20	120	16	-	57(190)	2.99	6	
18	R11b	PC#11	30	120	24	-	57(190)	2.82	4	
19	R11c	PC#11	30	120	24	-	57(190)	2.82	4	200x200x100
20	-	-	-	-	-	-	-	-	-	
21	DERRICK	PC#8	-	-	-	-	27(89)	-	-	
22	FUEL TANK	PC#8	20	120	16	D-10	28(92)	2.30	8	200x200x100
23	DECK/SERVICE LIGHTS	COAST GUARD LIGHTS	15	347	8	B-1	128(420)	2.08	4	
24	DECK LIGHTS	WHARF LIGHTS	15	347	1	A-1	54(178)	2.23	8	
25	DECK LIGHTS	WHARF LIGHTS	15	347	2	F-1	57(190)	2.38	8	200x200x100
26	SHED #2	-	100	600	60	A-2,4,6	100(328)	2.53	4/0	

**LOAD CALCULATION (DEMAND) - PORT BICKERTON**

- RECEPTACLE LOAD (CEC 78-056)
  - (1 x 150A x 240V) 100% = 36,000W
  - (3 x 30A x 120V) 100% = 10,800W
  - (4 x 30A x 120V) 65% = 9,360W
  - (1 x 30A x 120V) 50% = 1,800W
  - (4 x 20A x 120V) 50% = 4,800W
  - (6 x 20A x 120V) 25% = 3,600W

SUBTOTAL = 66,360W x 1.25 = 83 kVA
- LIGHTING - WHARF AND FLOATING DOCKS

27 FIXTURES @ 138W (347V) = 3,726W

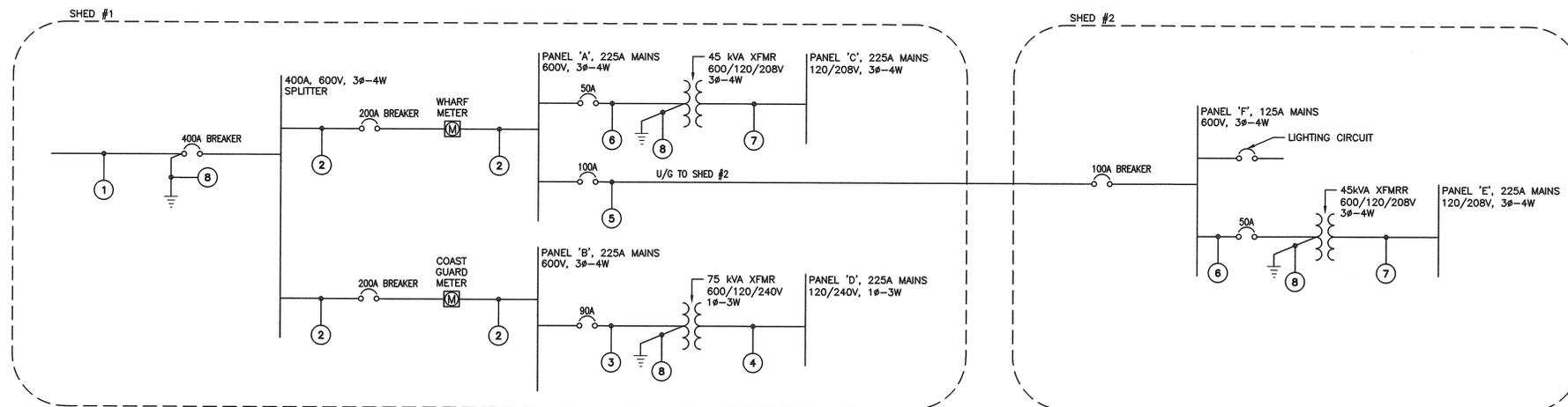
SUBTOTAL = 3,726W x 1.25 = 4.7 kVA
- FUEL PUMP

1 HP @ 240V, 1PH, =
- DERRICK @ 208V, 1PH =
- ELECTRICAL BUILDING = 4,500W x 1.25 = 5.625 kVA

TOTAL LOAD = 66.36 kW  
3.726 kW  
0.94 kW  
4.5 kW

TOTAL = 75.526 kW x 1.25 = 94.4 kVA

SERVICE LOADING = 94.400 kVA/600 VOLTS, 3φ = 90.9 AMPS



**POWER RISER DIAGRAM**  
SCALE : N.T.S.

- CABLE SCHEDULE**
- 2 RUNS OF 4#3/0 Cu. RUN IN 53mm (2") PVC CONDUIT c/w WEATHERHEAD
  - 4#3/0 Cu. + #4 Cu. BOND RUN IN 63mm (2 1/2") CONDUIT
  - 3#3 Cu. + #8 Cu. BOND RUN IN 35mm (1 1/4") CONDUIT
  - 3#300 MCM Cu. + #4 Cu. BOND RUN IN 63mm (2 1/2") CONDUIT
  - 4#4/0 Cu. + #4 Cu. BOND RUN IN 63mm (2 1/2") CONDUIT
  - 3#8 Cu. + #10 Cu. BOND RUN IN 27mm (1") CONDUIT
  - 4#1/0 Cu. + #6 Cu. BOND RUN IN 53mm (2") CONDUIT
  - #6 Cu. INSULATED GREEN GROUND

0	ISSUED FOR TENDER	JUN 05 2017
revisions		date

project **HARBOUR REDEVELOPMENT PORT BICKERTON EAST GUYSBOROUGH COUNTY NOVA SCOTIA** projet

**ELECTRICAL SINGLE LINE DIAGRAM AND VOLTAGE CALCULATIONS**

designed	M.N.	conçu
date	JUN 05, 2017	
drawn	D.C.	dessiné
date	JUN 05, 2017	
approved	<i>Regina Walker</i>	approuvé
date	06/06/17	
tender		soumission
PWSC Project Manager	Administrateur de projets TPSOC	
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	<b>E3</b>	

