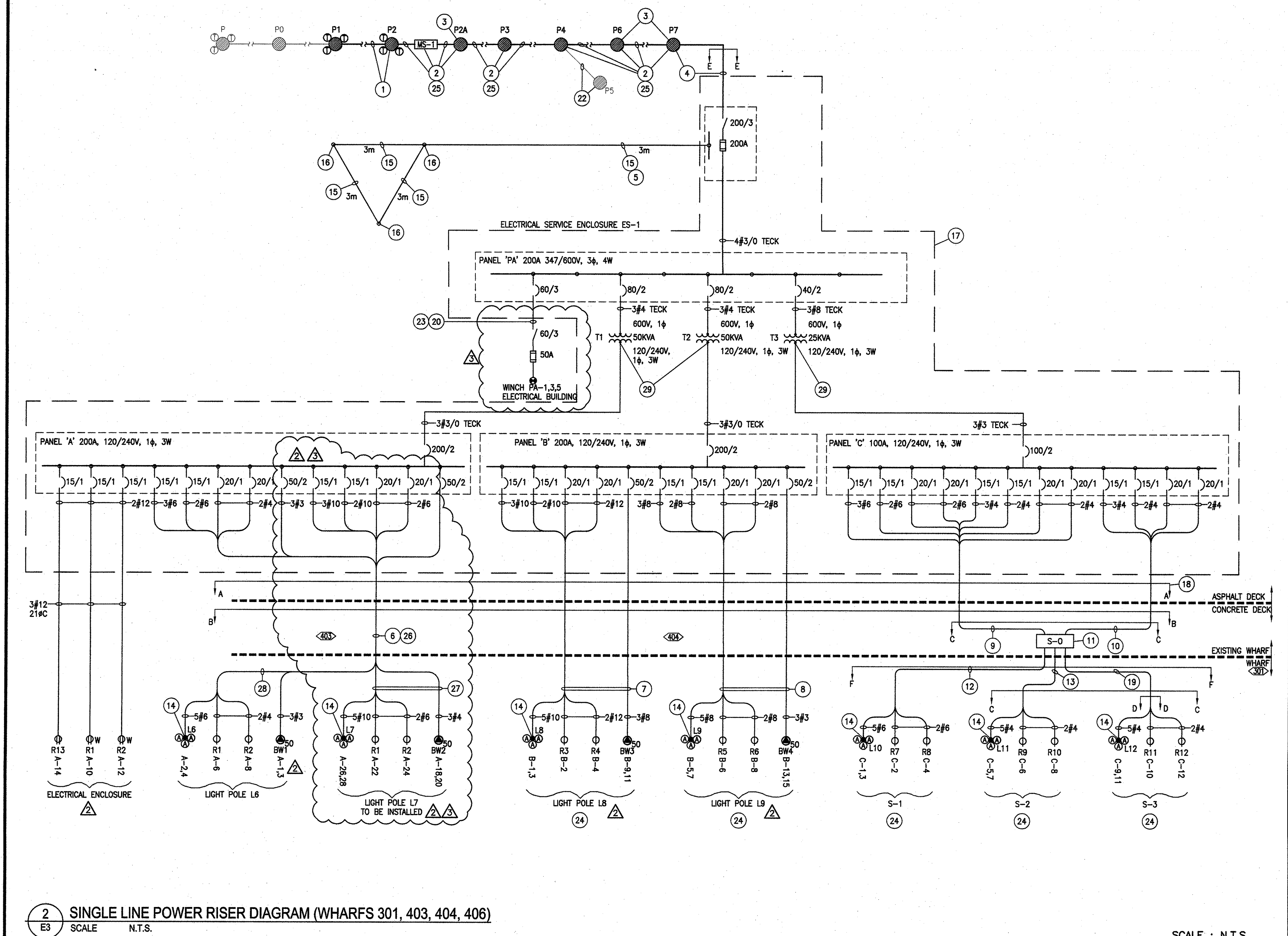
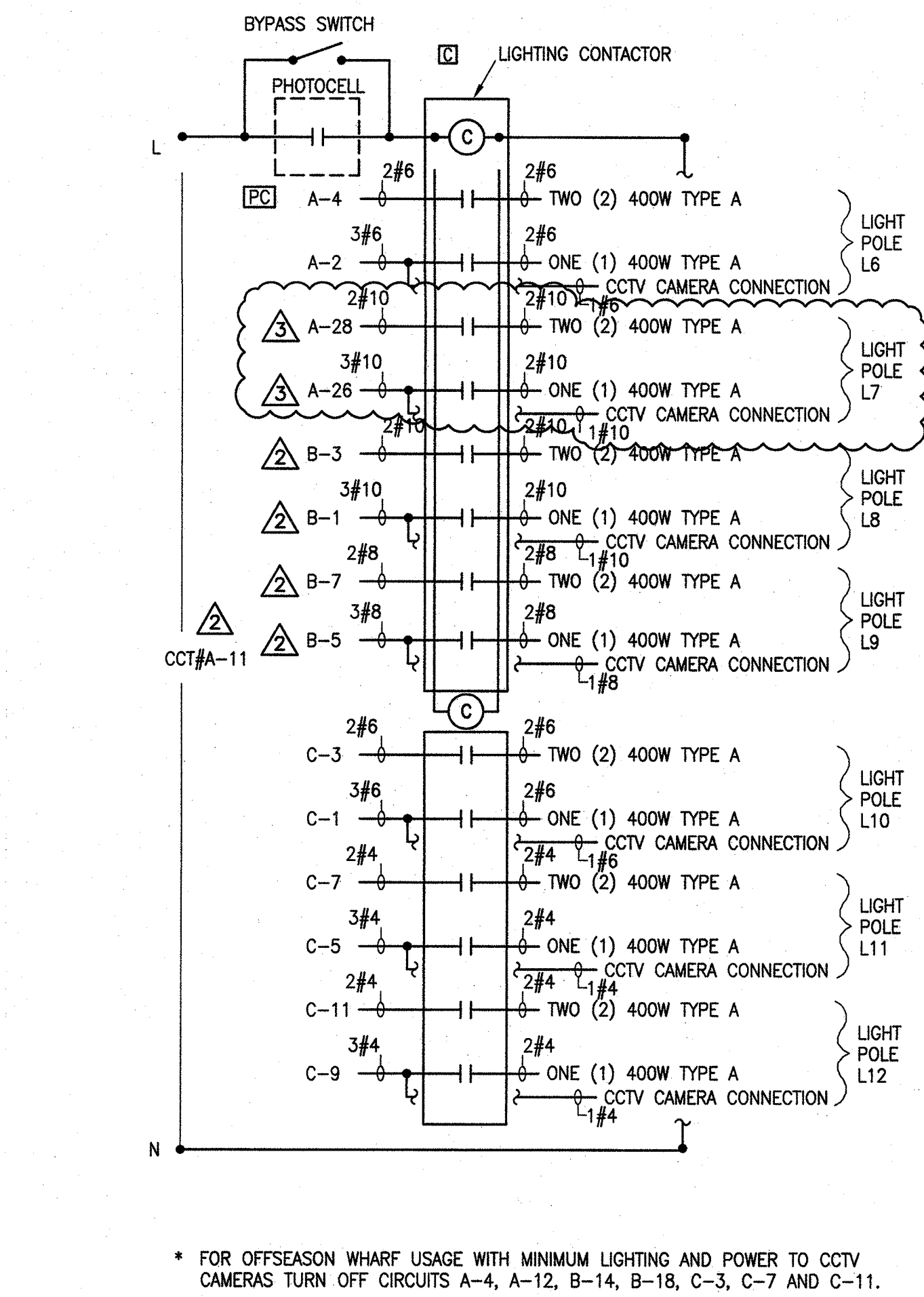


SERVICE CALCULATION (CEC RULE 78)				(1218)
#	DESCRIPTION			TOTALS
1	DETERMINE LOADS			
3-5-15R RECEPTACLES	120V 12A	1,440 WATTS	=	4,320
14-L5-20R RECEPTACLES	120V 16A	1,920 WATTS	=	26,800
3-6-50R WELCING/BUYER	240V 40A	9,600 WATTS	=	38,400
1-60A 600V WINCH	600V 30 40A	4,152 WATTS	=	41,520
21-400W MH FLOOR LIGHTS	120V 4	480 WATTS	=	10,080
				121,120 W
2	PANEL 'A' - LOADING (TOTAL 34,080W)			
2 X (6-50R WELDING)	9600 WATTS X 100% =	19,200 WATTS		
2 X (L5-20R RECEPT)	1920 WATTS X 100% =	3,840 WATTS		
2 X (L5-20R RECEPT)	1920 WATTS X 65% =	2,496 WATTS		
2 X (5-15R RECEPT)	1440 WATTS X 65% =	1,872 WATTS		
1 X (5-15R RECEPT)	1440 WATTS X 50% =	720 WATTS		
6 X (400W MH LTS)	480 WATTS	=	2,880 WATTS	31,008 W
3	PANEL 'B' - LOADING (TOTAL 29,160W)			
2 X (6-50R BUYER)	9600 WATTS X 100% =	19,200 WATTS		
2 X (L5-20R RECEPT)	1920 WATTS X 100% =	3,840 WATTS		
2 X (L5-20R RECEPT)	1920 WATTS X 65% =	2,496 WATTS		
6 X (400W MH LTS)	480 WATTS	=	2,880 WATTS	28,416 W
4	PANEL 'C' - LOADING (TOTAL 15,840W)			
4 X (L5-20R RECEPT)	1920 WATTS X 100% =	7,680 WATTS		
2 X (L5-20R RECEPT)	1920 WATTS X 65% =	2,496 WATTS		
9 X (400W MH LTS)	480 WATTS	=	4,320 WATTS	14,496 W
5	PANEL 'PA' - LOADING (TOTAL 121,200W)			
1 X (60A 600V WINCH)	41520 WATTS X 100% =	41,520 WATTS		
3 X (6-50R WELDING/BUYER)	9600 WATTS X 100% =	28,800 WATTS		
1 X (6-50R WELDING/BUYER)	9600 WATTS X 65% =	6,240 WATTS		
3 X (L5-20R RECEPT)	1920 WATTS X 65% =	3,744 WATTS		
5 X (L5-20R RECEPT)	1920 WATTS X 50% =	4,800 WATTS		
6 X (L5-20R RECEPT)	1920 WATTS X 25% =	2,880 WATTS		
3 X (5-15R RECEPT)	1440 WATTS X 25% =	1,080 WATTS		
21 X (400W MH LTS)	480 WATTS	=	10,080 WATTS	99,144 W
6	SERVICE SIZE			
1.	(99,144W/600*1.73)*1.25 =	119A		
2.	25% CAPACITY FOR FUTURE =	30A		
	TOTAL =	149A		
			USE 200A @ 600V, 30, 4W	
			FEEDER 4#3/0 @ 875°C	

LOAD CALCULATION FOR WHARFS 301, 403, 404, 406

SCALE: N.T.S.

- NOTES**
1. NB POWER TO UPGRADE EXISTING SERVICE AND INSTALL NEW 12.47KV TO 347/600V, 30, 4 WIRE TRANSFORMER BANK.
 2. CONTRACTOR TO INSTALL NEW 347/600V, 30, 4 WIRE, 200A QUADPLEX OVERHEAD SERVICE FROM POLE P2A, P3, P4, P6 AND P7 C/W POLES, OVERHEAD LINES AND HARDWARE.
 3. NEW WOOD POLE P2A, P6 AND P7.
 4. 4#3/0 RW90 + 1#3 GND IN PVC 530 C/W WEATHERHEAD AND FIVE (5) CAT.5e CABLES IN 530 PVC RUN DOWN POLE P7 AND UNDERGROUND TO ELECTRICAL ENCLOSURE ES-1. REFER TO DETAIL 2 ON DRAWING E5.
 5. SUPPLY AND INSTALL GROUND GRID AS SPECIFIED ON DETAIL 1 ON THIS DRAWING AND DETAIL 2 ON DRAWING E5.
 6. EXISTING 530 CONDUIT STUBBED UP AT POLE P5 TO BE EXTENDED TO LIGHT POLES L7 AND L6.
 7. NEW 5#10 AND 4#12 + G RUN IN EXISTING 530C TO FEED RECEPTACLES R3, R4 AND LIGHT POLE L8 LIGHTS. NEW 3#8 RUN IN EXISTING 530C TO FEED BUYERS OUTLET BWT.
 8. NEW 5#8 AND 4#8 + G RUN IN EXISTING 530C TO FEED RECEPTACLES R5, R6 AND LIGHT POLE L9 LIGHTS. NEW 3#8 RUN IN EXISTING 530C TO FEED BUYERS OUTLET BWT.
 9. NEW 5#4, 5#6, 4#4 AND 4#6 + G RUN IN EXISTING 530C TO NEW SHROUDS S-1 AND S-2 THROUGH SHROUD S-0.
 10. NEW 5#4 AND 4#4 + G RUN IN EXISTING 530C TO NEW SHROUD S-3 THROUGH SHROUD S-0.
 11. CONTRACTOR TO INSTALL NEW SHROUD S-0 C/W TWO (2) NEW 300 X 300 X 200mm JUNCTION BOXES. EXISTING CONDUITS TO EXTEND TO FIRST JUNCTION BOX INSIDE SHROUD AND LEAVE SECOND JUNCTION BOX MOUNTED ON BACK OF SHROUD AND EXTEND TO MEET NEW CONDUITS AS SHOWN. REFER TO DETAIL 1 ON DRAWING E-3 FOR MORE INFORMATION.
 12. NEW 5#6 AND 4#6 + G RUN IN NEW 530C TO NEW SHROUD S-1.
 13. NEW 5#4 AND 4#4 + G RUN IN NEW 530C TO NEW SHROUD S-2.
 14. CONTRACTOR TO RUN ONE (1) EXTRA WIRE WITH CIRCUITS A-2, A-10, B-12, B-16, C-1, C-5, AND C-9 AS INDICATED ON LIGHTING CONTROL DETAIL (DETAIL 4 DRAWING E3) FOR FUTURE CCTV CONNECTION.
 15. NEW 1#3 RW90 GRN. IN 27mm PVC ABOVE AND BELOW GROUND + 27mm EMT INDOORS.
 16. NEW 21mm DIA. X 3M LONG COPPER GROUND RODS WITH TOP 1M BELOW GROUND DRIVEN VERTICALLY OR LAID HORIZONTALLY.
 17. NEW ELECTRICAL ENCLOSURE ES-1 TO BE COMPLETED UNDER THIS CONTRACT. CONTRACTOR TO BACK FILL AREA UNDER SLAB. REFER TO DETAILS 1, 2 AND 4 ON DRAWING E5.
 18. SEE DETAIL 2 ON DRAWING E5 FOR CONDUIT EXTENSIONS.
 19. NEW 5#4 AND 4#4 + G RUN IN NEW 530C TO NEW SHROUD S-3.
 20. REMOVE EXISTING WINCH DISCONNECT AND PROVIDE NEW STAINLESS STEEL 60A, 30, 600V DISCONNECT FUSED AT 50A C/W WINDOW AT SAME LOCATION.
 21. NOT USED.
 22. EXISTING OVERHEAD POWER FEED TO POLE P5 SERVICE TO BE REMOVED C/W POLE 5 AND ALL ELECTRICAL EQUIPMENT ON POLE.
 23. NEW 4#4 IN 530 CONDUIT FROM PANEL 'PA' TO NEW DISCONNECT AT WINCH. CONTRACTOR TO EXTEND UP WINCH COLUMN, REFER TO NOTES 20 AND 21.
 24. SEE SPECIFICATION SECTION 01 00 50 FOR WORK PREVIOUSLY COMPLETED.
 25. FIVE (5) CAT.5e CABLES TO BE INSTALLED OVERHEAD FROM POLE P2, P2A, P3, P4, P6 AND P7 C/W ALL HARDWARE.
 26. NEW 5#6, 5#10 FOR LIGHTS, 4#4 AND 4#6 FOR RECEPTACLES AND 3#8 FOR WELDING + G RUN IN EXISTING 530 PVC CONDUIT.
 27. NEW 5#10 FOR LIGHTS, 4#6 FOR RECEPTACLES AND 3#8 FOR WELDING + G RUN IN NEW 530 PVC CONDUIT IN NEW TRENCH TO LIGHT POLE L7.
 28. NEW 5#6 FOR LIGHTS AND 4#4 + G FOR RECEPTACLES RUN IN NEW 530 CONDUIT AND 1-CAT.5e TEL CABLE IN 530 PVC CONDUIT IN NEW TRENCH TO LIGHT POLE L6.
 29. USE #3 GREEN RW90 IN 27mm PVC TO GROUND SECONDARY OF TRANSFORMERS TO MAIN GROUND BUS AT DISCONNECT. ALL CIRCUITS TO INCLUDE A 1#8 GREEN GROUND WIRE UNLESS INDICATED OTHERWISE.



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North Nord Stamp Estampe

REGISTERED PROFESSIONAL ENGINEER
Ralph A. Smith
PROVINCE OF NEW BRUNSWICK

3	WHARF 403 ELECTRICAL UPGRADE	2015.03.31
2	AS-BUILT	2014.12.19
1	ISSUED FOR TENDER	2013.10.18
revisions	description	date

project

RECONSTRUCTION OF STRUCTURE 403 PUBLIC WHARF MISCOU
NEW BRUNSWICK

drawing

NEW ELECTRICAL WHARF 301, 403, 404, 406 RISERS & DETAILS

designed RALPH SMITH, P.ENG compu

date 2015.03.31

drawn JODI PARKER dessin

date 2015.03.31

approved RALPH SMITH, P.ENG approuvé

date 2015.03.31

Tender 2015/05/14 Soumission

PWCSO Project Manager Administrateur de projets TPSGO

project number R.073265.001 no. du projet

drawing no. E3 of E6 no. du dessin

E3 of E6

1218

E-DRM/GDD-E: 508635 Version 1