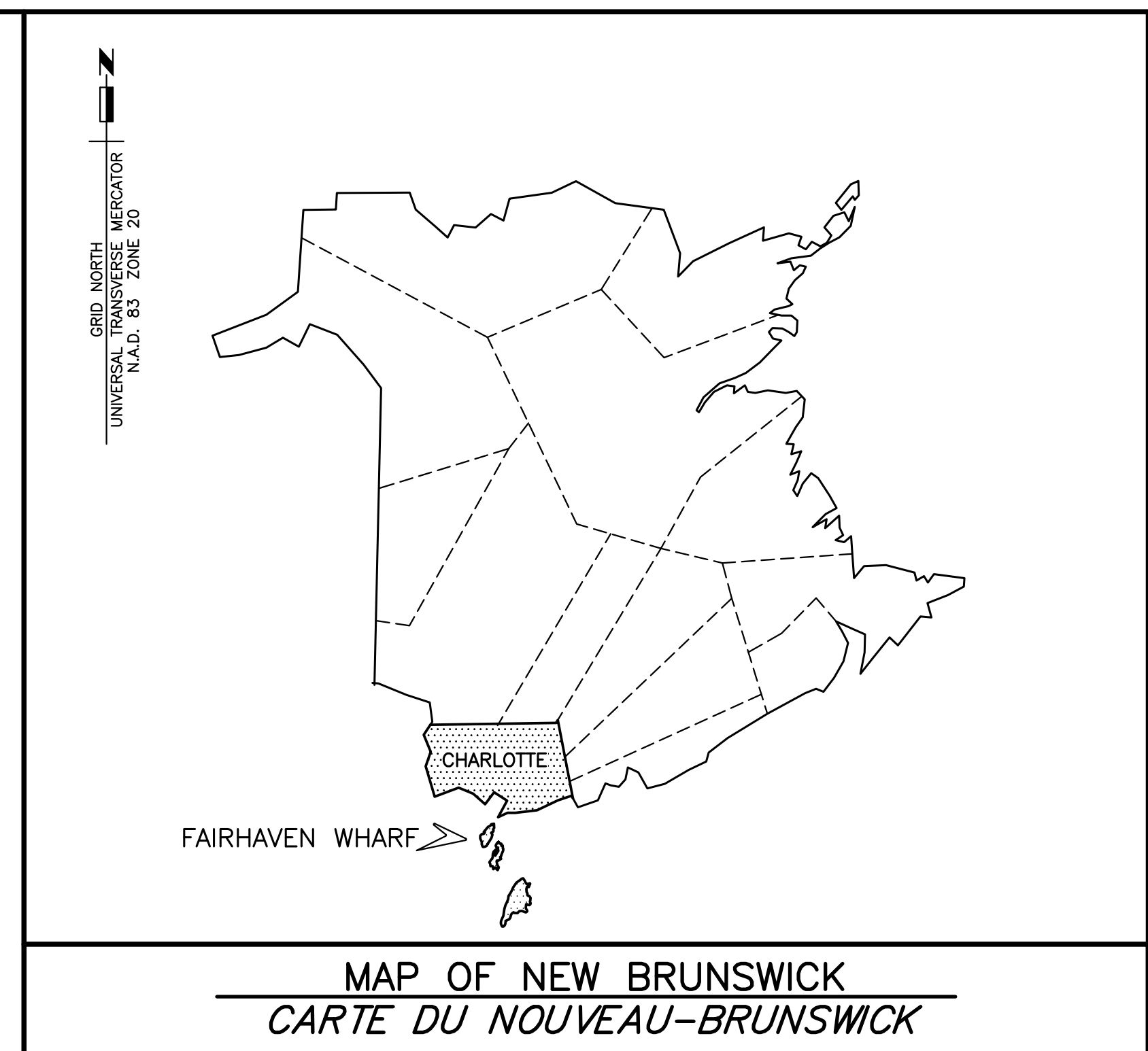


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FAIRHAVEN WHARF DEER ISLAND CHARLOTTE COUNTY NEW BRUNSWICK

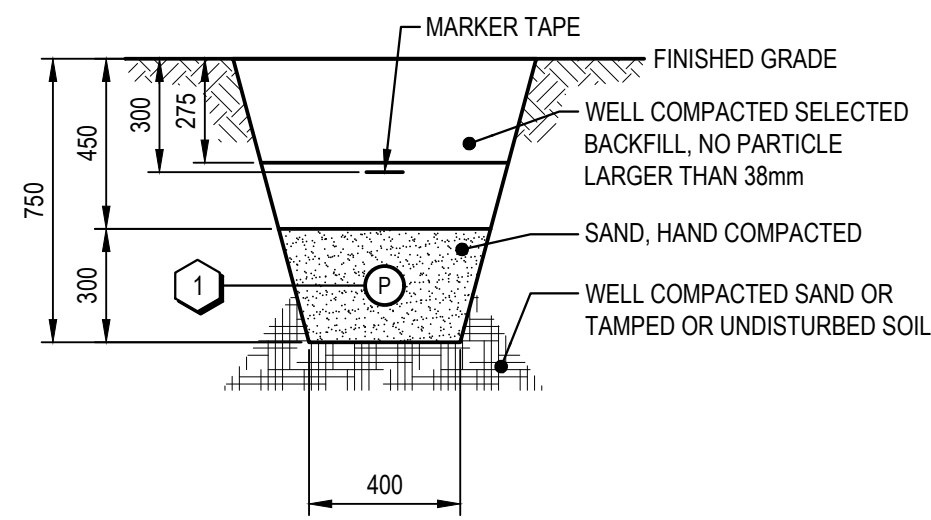
PROJECT NO. C2-00329

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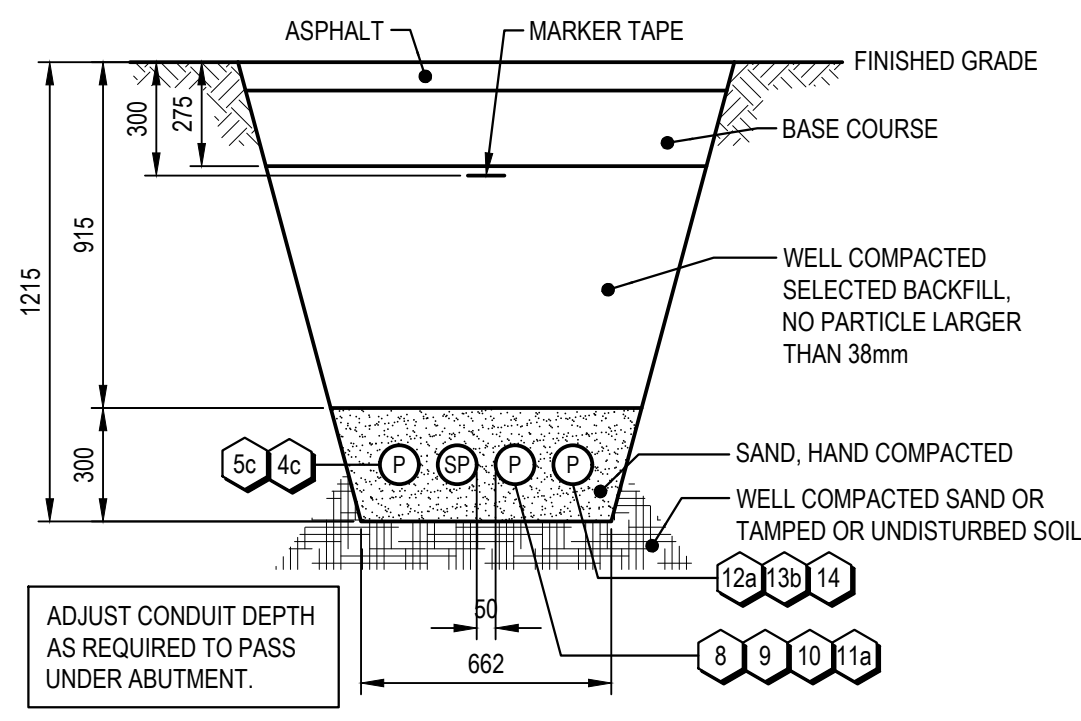
ELECTRICAL

- E1 WHARF PLAN ELECTRICAL
- E2 ELECTRICAL DETAILS
- E3 ELECTRICAL SCHEDULES
- E4 WHARF PLAN EXISTING ELECTRICAL

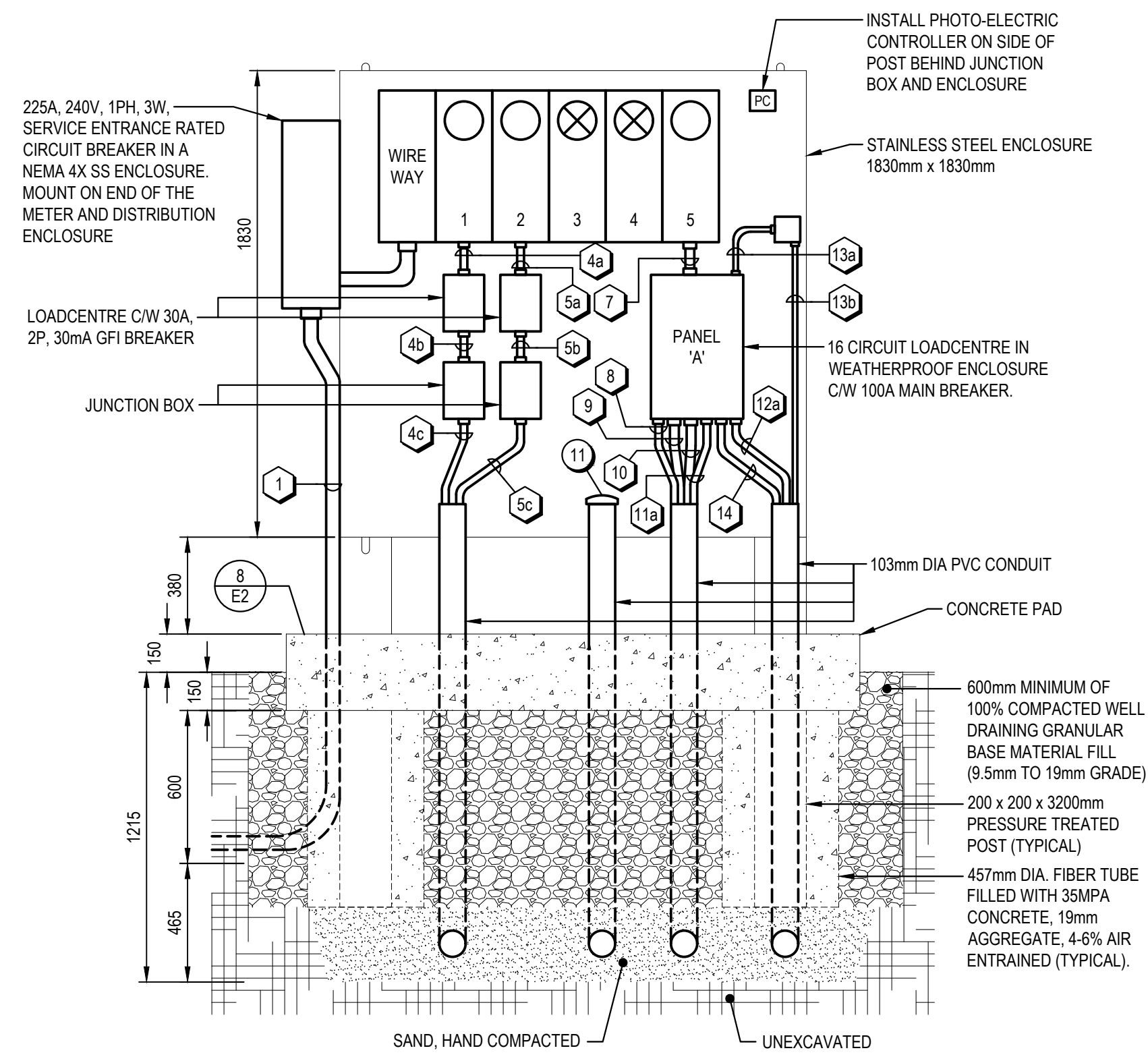
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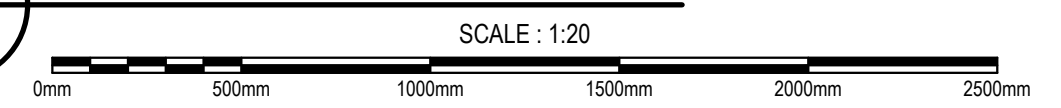
A TRENCH DETAIL 'A'
E1



B TRENCH DETAIL 'B'
E1



1 METER CENTRE DETAIL
E1

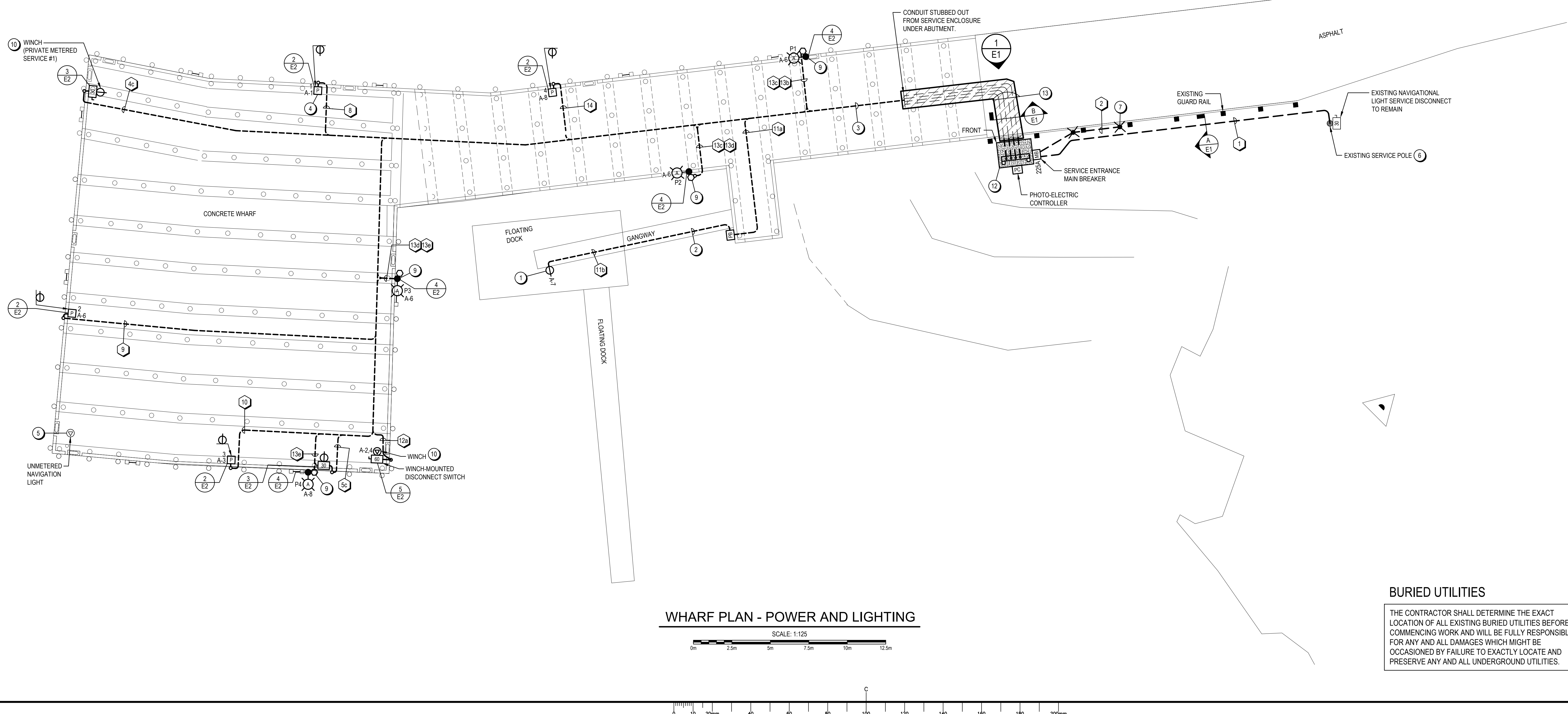


LEGEND

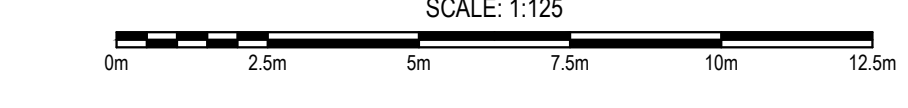
- SURFACE WIRING UNDER OR ALONG CONCRETE DECK
- UNDERGROUND WIRING
- WIRING UP
- A-9 INDICATES CIRCUIT #9 IN PANEL 'A'
- JUNCTION BOX
- PULL BOX
- ⊕ DIRECT CONNECTION, EQUIPMENT BY OTHERS
- SINGLE RECEPTACLE: 5-20R
- ⊙ SITE LIGHTING LUMINAIRE ON EXISTING WOOD POLE: A - INDICATES TYPE IN LUMINAIRE SCHEDULE P1 - INDICATES POLE 1
- ⊙ SITE LIGHTING - EXISTING
- ⊙ PHOTO-ELECTRIC CONTROLLER
- ⊙ SHORE POWER SERVICE MODULE C/W OUTLETS AS INDICATED 1 - INDICATES SERVICE MODULE NUMBER
- ⊙ UNFUSED DISCONNECT SWITCH 60 - INDICATES SIZE
- ⊙ MAIN SERVICE ENTRANCE BREAKER 225A - INDICATES 225A BREAKER
- ⊙ GROUND ROD
- LIGHT INDICATES EXISTING TO REMAIN
- BOLD INDICATES NEW WORK

NOTES

1. SUPPLY AND INSTALL NEW SINGLE 20A, 125V RECEPTACLE ON SIDE AND BOTTOM OF GANGWAY. RECEPTACLE TO BE CSA CONFIGURATION 5-20R, MARINE GRADE C/W WATERPROOF COVER AND A GFI MODULE IN A MARINE GRADE TWO GANG PVC CONDUIT BOX
2. 20#10 TECK FASTENED TO UNDERSIDE OF GANGWAY. ALLOW ADEQUATE SLACK AT PULL BOX FOR GANGWAY MOVEMENT.
3. NEW TECK CABLES TO BE SUPPORTED BY STAINLESS STEEL STRUT SUPPORTS ON UNDERSIDE OF WHARF CONCRETE STRUCTURE. CABLES TO BE SUPPORTED EVERY 1200mm (MAXIMUM) ON CENTER.
4. EXISTING PULL BOX, SHROUD, AND RECEPTACLES TO BE REPLACED. SEE NEW SERVICE MODULE DETAIL.
5. EXISTING NAVIGATIONAL LIGHT FEED TO REMAIN.
6. TERMINATE DUCTS AT POLE IN ACCORDANCE WITH NB POWER SCP EDU-30.
7. 3050mm x 27mm COPPER CLAD GROUND RODS SPACED 3050mm FROM SERVICE ENCLOSURE AND 3050mm APART. RODS TO BE DRIVEN 300mm BELOW GRADE. CONNECT GROUND WIRE USING COMPRESSION CONNECTIONS. IF RODS CANNOT BE INSTALLED DUE TO ROCK, USE GROUND PLATES.
8. COORDINATE AND SCHEDULE ALL POWER OUTAGES WITH OWNER TO LIMIT DOWN TIME.
9. LIGHT POLE JUNCTION BOX TO BE MOUNTED IN A LOCATION ON POLE ACCESSIBLE FROM WHARF.
10. SUPPLY AND INSTALL NEW DISCONNECT AND FEED FOR WINCH. EXACT LOCATION FOR DISCONNECT TO BE CONFIRMED ON SITE TO AVOID INTERFERENCE WITH WINCH OPERATION.
11. SUPPLY AND INSTALL SPARE 103mm PVC CONDUIT C/W POLYPROPYLENE PULL CORD. CAP CONDUIT INSIDE SERVICE ENTRANCE ENCLOSURE.
12. NEW SERVICE ENTRANCE ENCLOSURE MOUNTED ON NEW CONCRETE PAD. CONCRETE PAD TO EXTEND OUT 1.0m IN FRONT OF SERVICE ENTRANCE ENCLOSURE.
13. CONDUITS INSTALLED FROM SERVICE AND STUBBED OUT TO WHERE ACCESSIBLE UNDER WHARF UNDER ANOTHER CONTRACT. EXTEND EXISTING CONDUITS FROM EDGE OF ASPHALT TO ENTER SERVICE ENCLOSURE.



WHARF PLAN - POWER AND LIGHTING
SCALE: 1:125



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Small Craft Harbours / Ports pour Petits Bateaux
Maritimes / Gulf Region

TEX CONSULTANTS LIMITED
CONSULTING ELECTRICAL ENGINEERS
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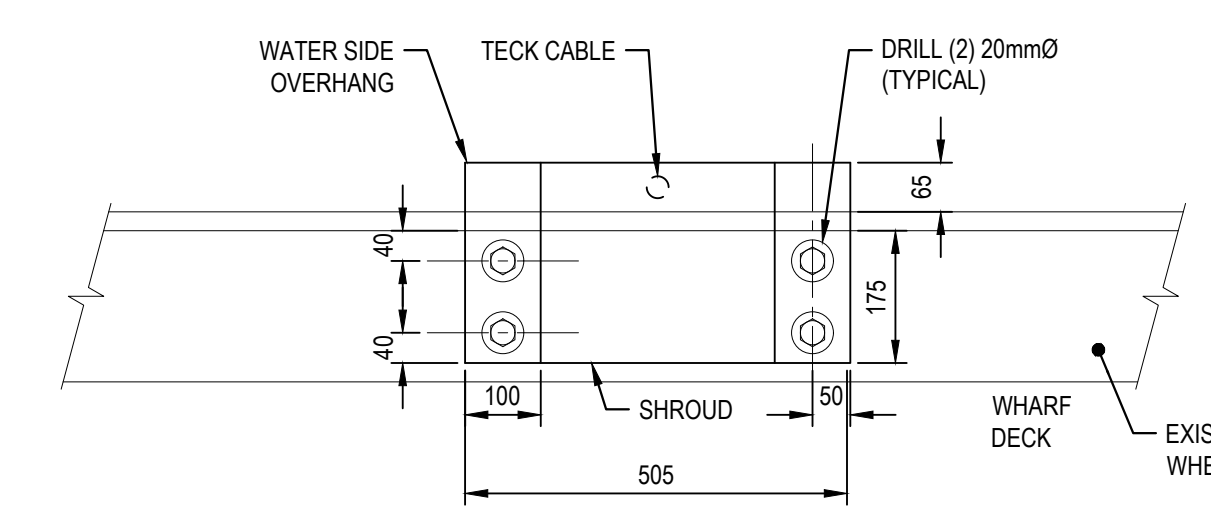
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WHARF PLAN ELECTRICAL

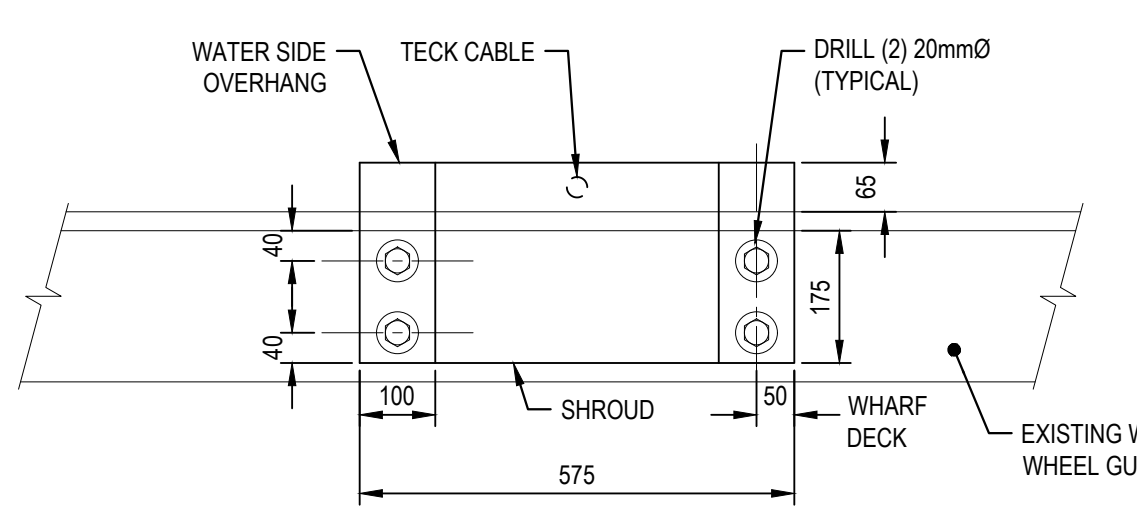
designed	R.M.B./T.M.L.	conçu
date	MARCH 2022	
drawn	R.Z./D.J.L.	dessiné
date	MARCH 2022	
approved	B.E.T.	approuvé
date	MARCH 2022	
Tender		Soumission
Project Manager		Administrateur de projets
project number	C2-00329	no. du projet
drawing no.	E1 OF 4	no. du dessin

BURIED UTILITIES
THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING BURIED UTILITIES BEFORE COMMENCING WORK AND WILL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

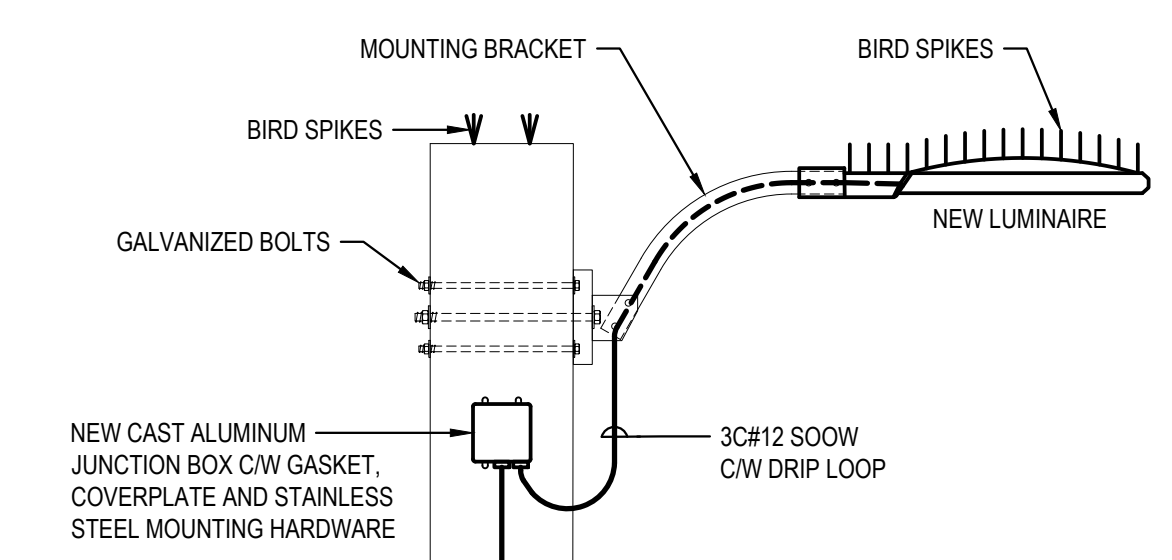
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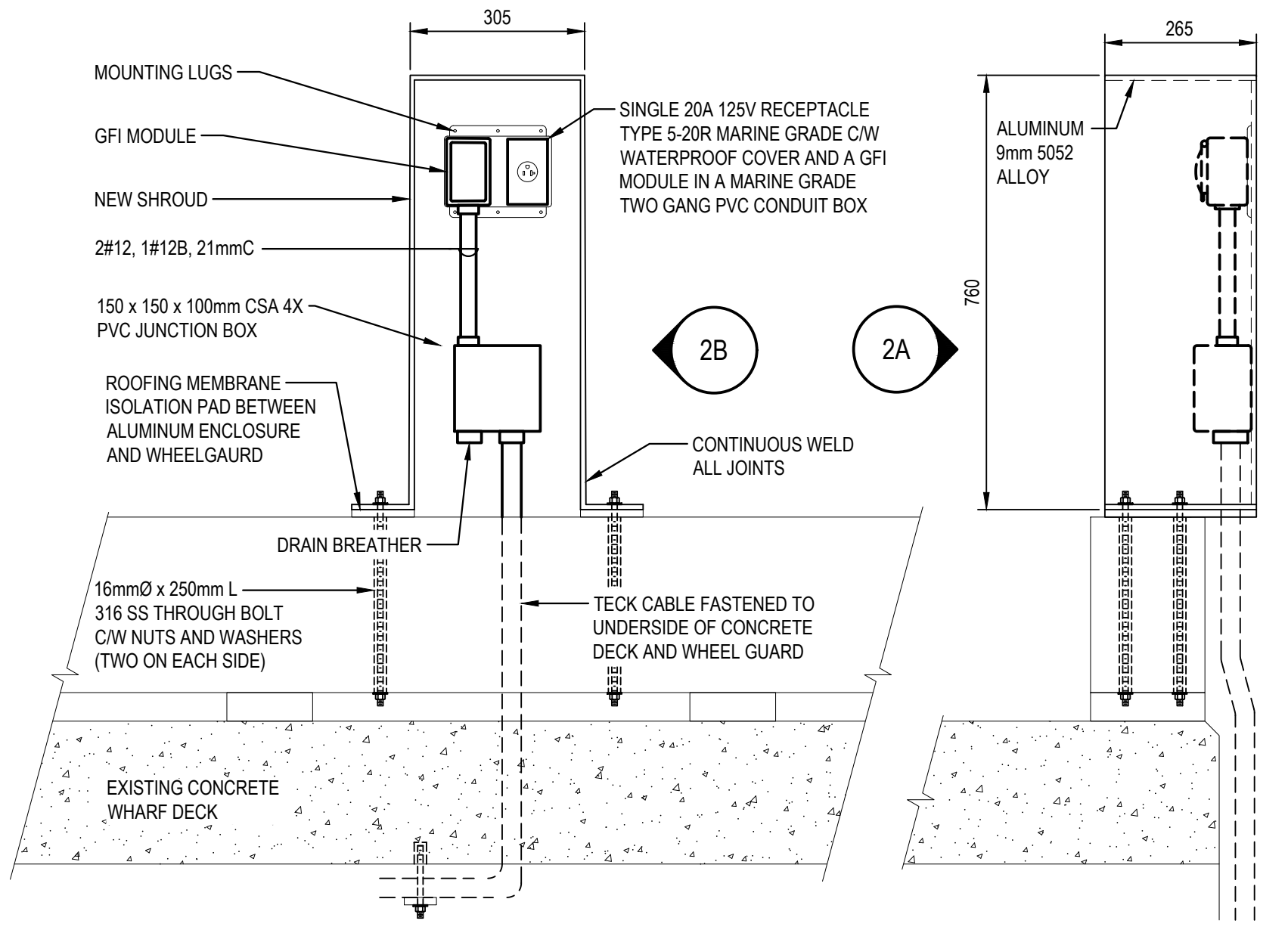
2C PLAN VIEW



3C PLAN VIEW



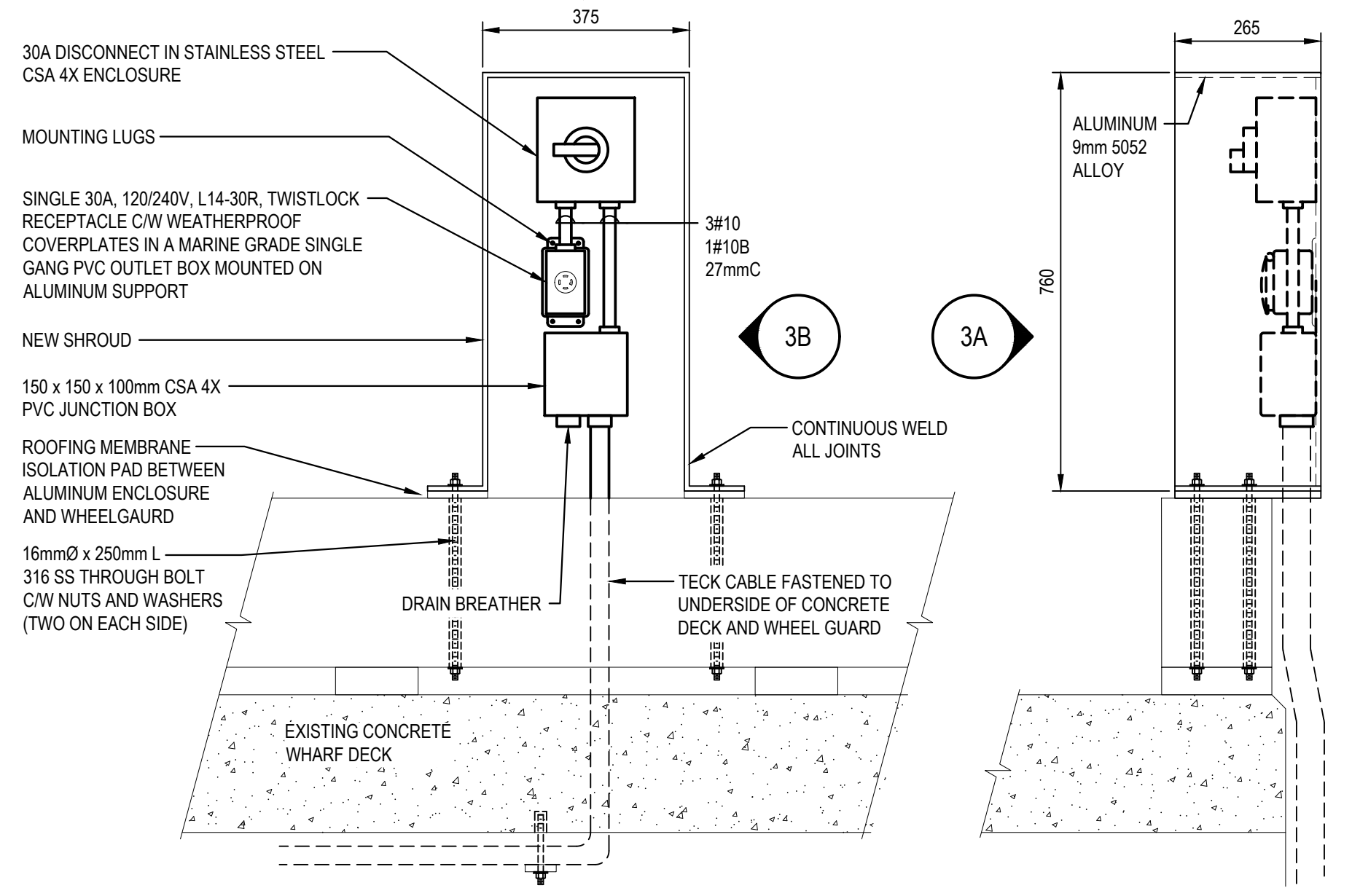
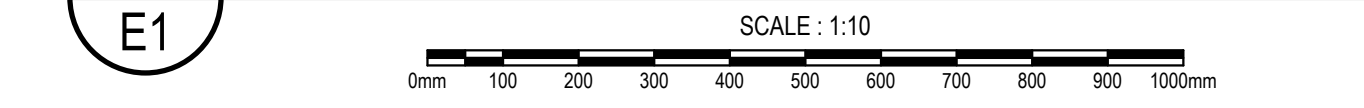
4 ELEVATION



2A ELEVATION

2B SECTION

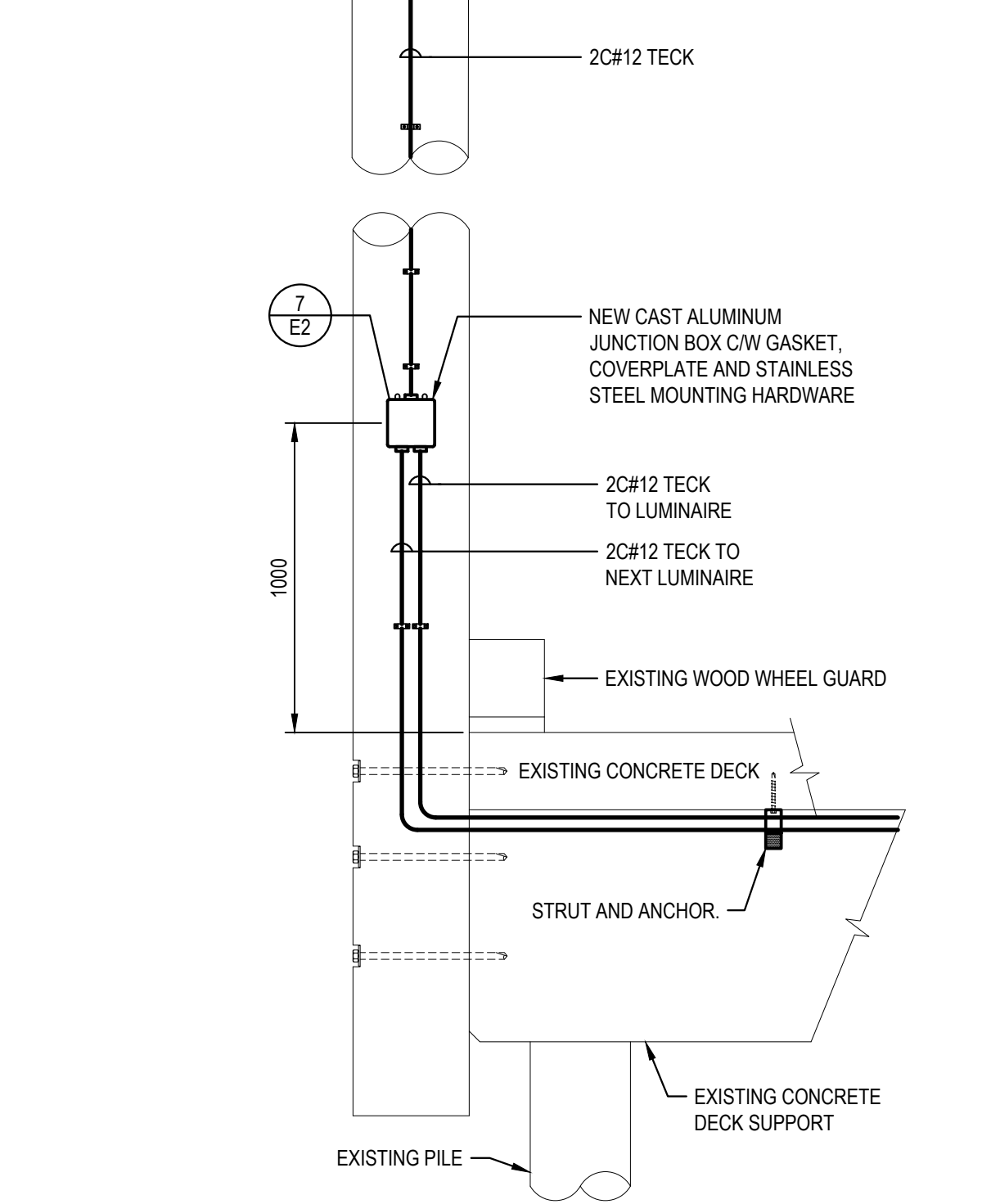
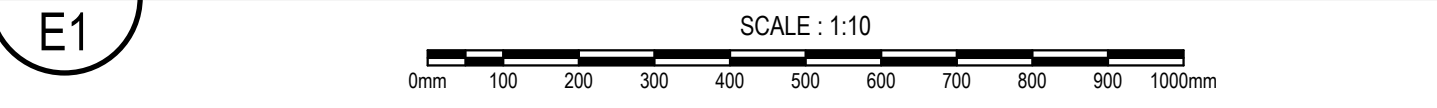
2 SERVICE MODULE ENCLOSURE MOUNTING DETAIL



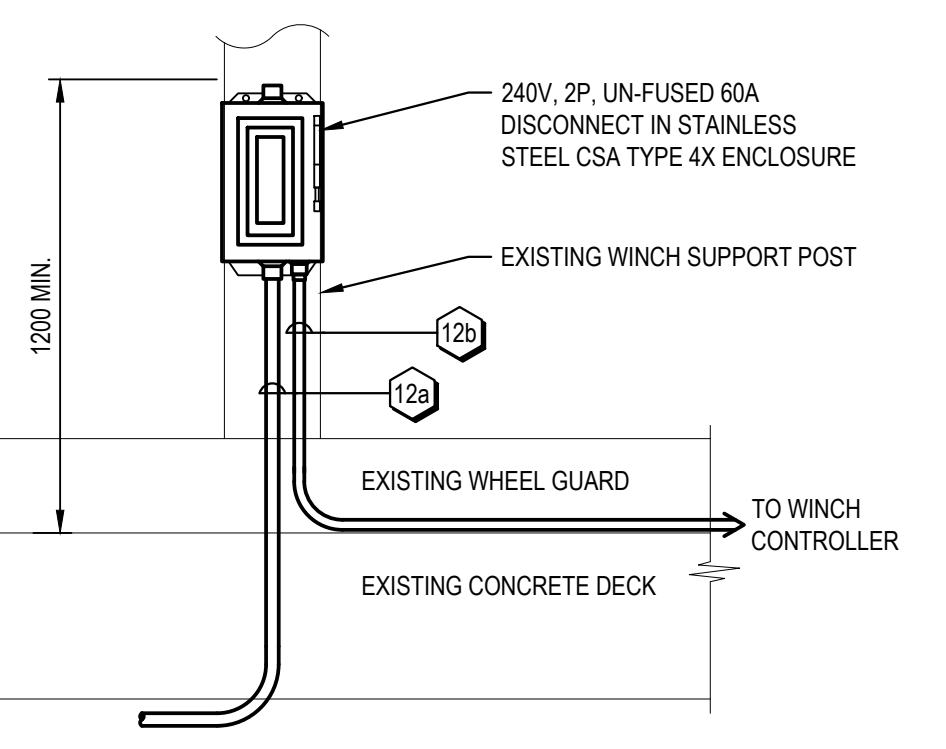
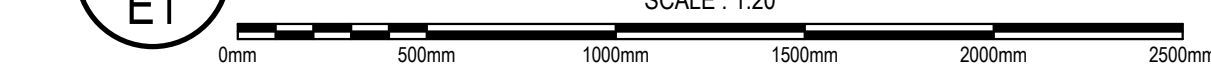
3A ELEVATION

3B SECTION

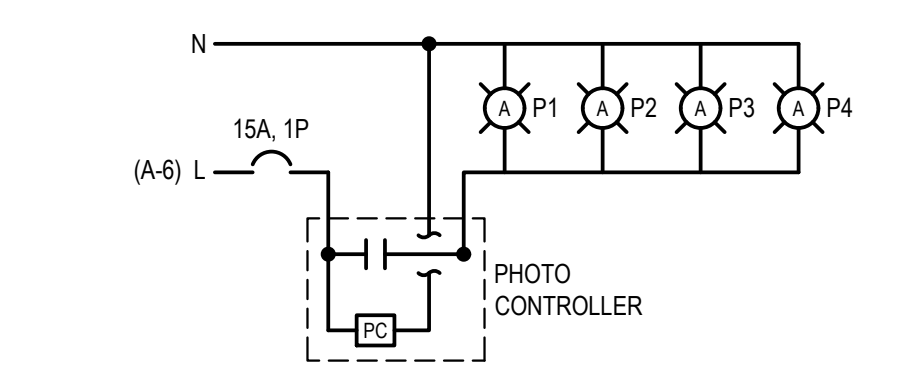
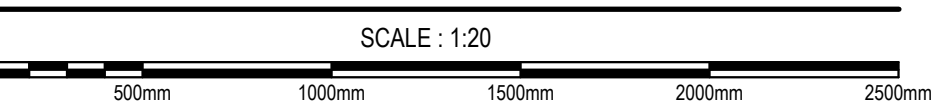
3 PRIVATE SERVICE MODULE ENCLOSURE MOUNTING DETAIL



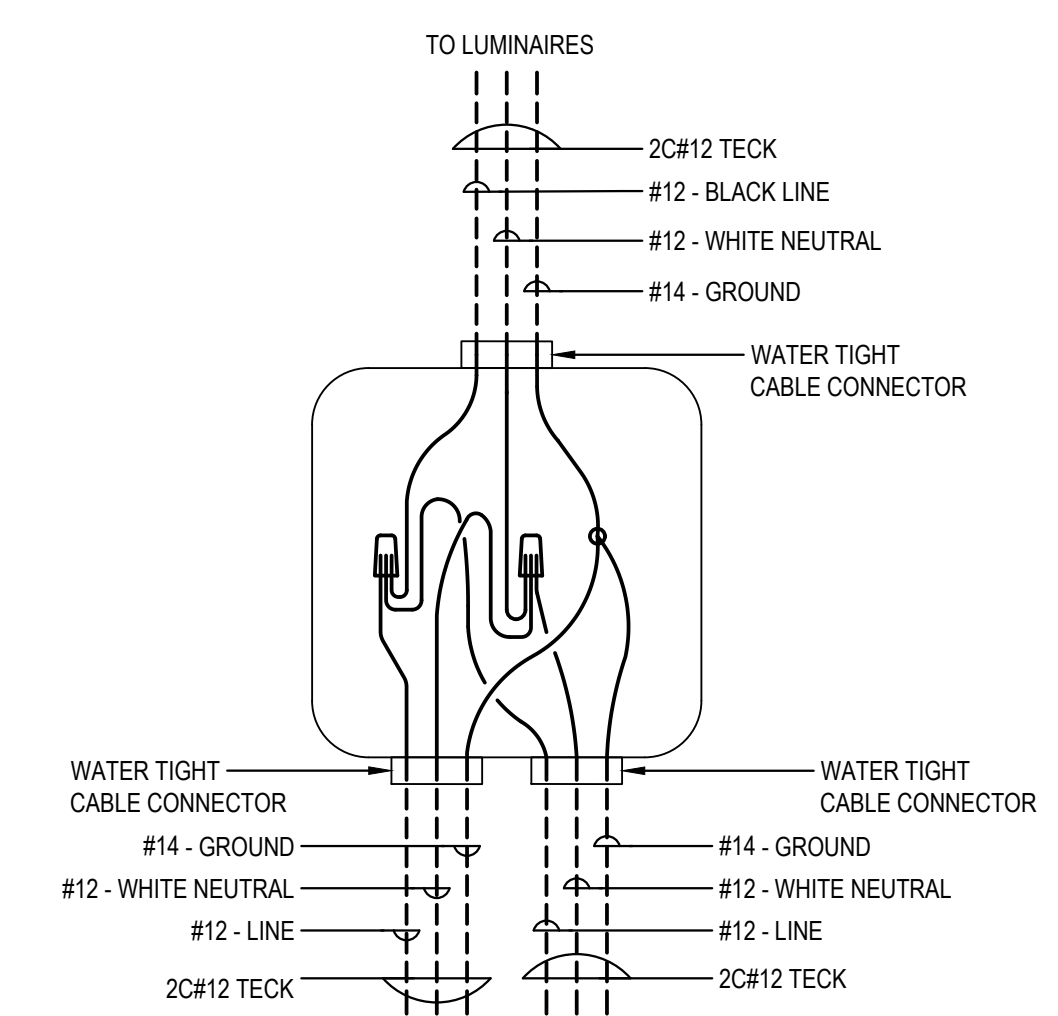
4 LIGHTING MOUNTING DETAIL



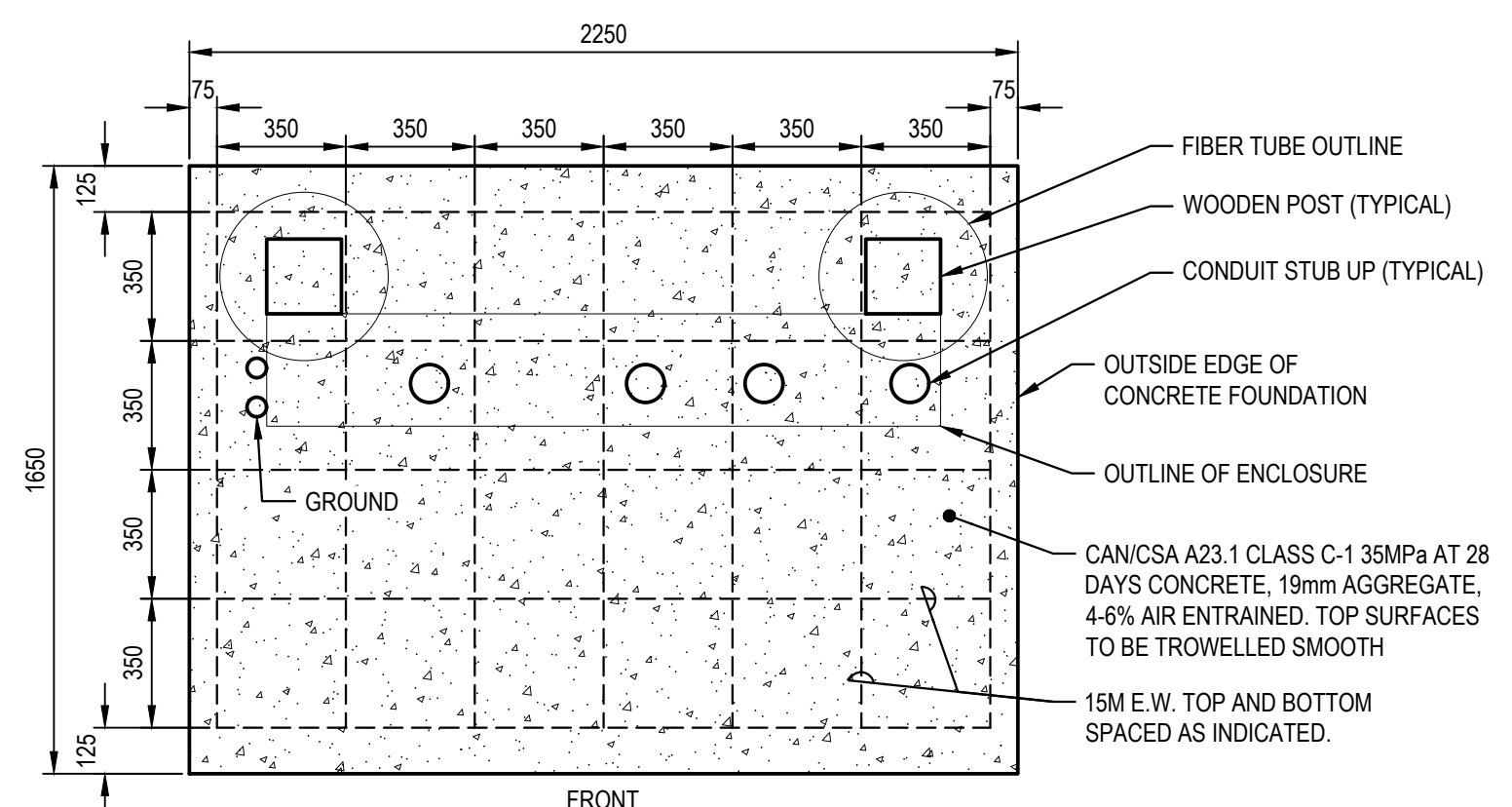
5 WINCH DISCONNECT DETAIL



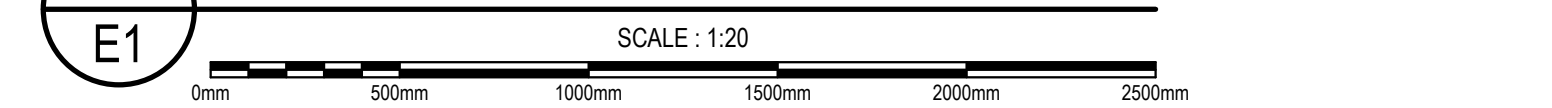
6 LIGHTING CONTROL SCHEMATIC



7 LIGHT POLE JUNCTION BOX DETAIL



8 CONCRETE FOUNDATION PLAN VIEW



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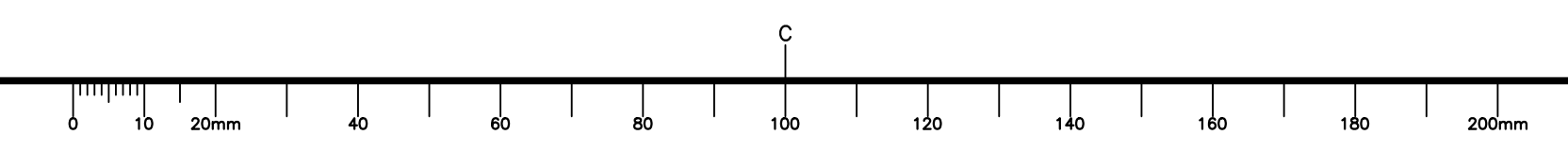
project FAIRHAVEN WHARF DEER ISLAND
 CHARLOTTE CO. N.B.

drawing E1
 design
ELECTRICAL DETAILS

designed R.M.B./T.M.L. conq
 date MARCH 2022
 drawn D.J.L. dessin
 date MARCH 2022

approved B.E.T. approuv
 date MARCH 2022
 Tender Soumission
 Project Manager Administrateur de projets

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 drawing no. E2 OF 4



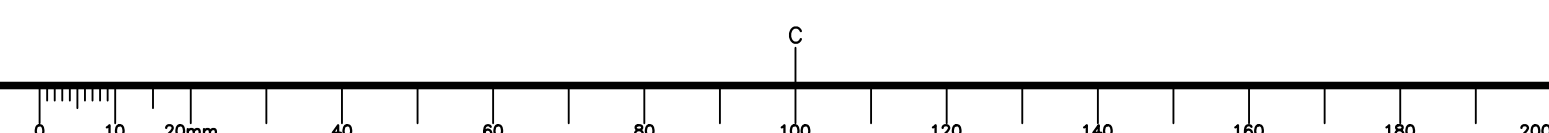
CABLE SCHEDULE							
ITEM NO.	FROM	TO	NO. OF CONDUCTORS AND SIZE	CABLE TYPE	DUCT SIZE	REMARKS	CIRCUIT
1	UTILITY SERVICE POLE	MAIN SERVICE ENTRANCE BREAKER	3C#4/0	RW90	53mmC		
2	MAIN SERVICE ENTRANCE BREAKER	SERVICE GROUND RODS	#1 CU	BARE	N/A	DIRECT BURIED 300mm	
3	MAIN SERVICE ENTRANCE BREAKER	METER STACK	3C#4/0 + 1#4#	RW90	53mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
4a	METER #1	PRIVATE SERVICE #1 BKR	3C#6 + 1#6B	RW90	27mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
4b	PRIVATE SERVICE #1 BKR	PRIVATE SERVICE #1 JB	3C#10 + 1#10B	RW90	27mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
4c	PRIVATE SERVICE #1 JB	PRIVATE SERVICE #1 JB @ DISCONNECT	3C#6	TECK	103mmC	TECK IN CONDUIT FROM PULLBOX THEN INSTALLED ON UNISTRUT HANGERS ON UNDERSIDE OF CONCRETE DECK	
4d	PRIVATE SERVICE #1 JB @ DISCONNECT	PRIVATE SERVICE #1 DISCONNECT	3C#10 + 1#10B	RW90	27mmC	TECK FROM DISCONNECT TO WINCH	
4e	PRIVATE SERVICE #1 DISCONNECT	PRIVATE SERVICE #1 RECEPTACLE	3C#10 + 1#10B	RW90	27mmC		
5a	METER #2	PRIVATE SERVICE #2 BKR	3C#6 + 1#6B	RW90	27mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
5b	PRIVATE SERVICE #2 BKR	PRIVATE SERVICE #2 PULL BOX	3C#10 + 1#10B	RW90	27mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
5c	PRIVATE SERVICE #2 JB	PRIVATE SERVICE #2 JB AT SWITCH	3C#6	TECK	103mmC	TECK IN CONDUIT FROM PULLBOX THEN INSTALLED ON UNISTRUT HANGERS ON UNDERSIDE OF CONCRETE DECK	
5d	PRIVATE SERVICE #2 JB (SWITCH)	PRIVATE SERVICE #2 DISCONNECT	3C#10 + 1#10B	RW90	27mmC		
5e	PRIVATE SERVICE #2 DISCONNECT	PRIVATE SERVICE #2 RECEPTACLE	3C#10 + 1#10B	RW90	27mmC		
6a	METER #3	PRIVATE SERVICE #3 BKR	3C#6 + 1#6B	RW90	27mmC	FUTURE INSTALLATION	
6b	PRIVATE SERVICE #3 BKR	PRIVATE SERVICE #3 PULL BOX	3C#10	RW90	27mmC	FUTURE INSTALLATION	
6c	PRIVATE SERVICE #3 PULL BOX	PRIVATE SERVICE #3	3C#3 + 1#6B	TECK	103mmC	FUTURE INSTALLATION	
7	METER #5	PANEL 'A'	3C#3 + 1#6B	RW90	35mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
8	PANEL 'A'	SERVICE MODULE #1	2C#6	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-1
9	PANEL 'A'	SERVICE MODULE #2	2C#4	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-3
10	PANEL 'A'	SERVICE MODULE #3	2C#4	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-5
11a	PANEL 'A'	GANGWAY PULL BOX	2C#6	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-7
11b	GANGWAY PULL BOX	GANGWAY RECEPTACLE	2C#10	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-7
12a	PANEL 'A'	WINCH DISCONNECT	3C#6	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-2.4
12b	WINCH DISCONNECT	WINCH	3C#8	TECK	N/A	TECK FROM DISCONNECT TO WINCH	
13a	PANEL 'A'	LIGHTING PHOTOCELL	2C#12 + 1#12B	RW90	27mmC	SURFACE IN SERVICE ENTRANCE ENCLOSURE	
13b	PHOTOCELL	LIGHT POLE P1	2C#12	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE THEN INSTALLED ON UNISTRUT HANGERS ON UNDERSIDE OF CONCRETE DECK	
13c	LIGHT POLE P1	LIGHT POLE P2	2C#12	TECK		WIRE TO FIRST POLE IN CCT THEN REUSE EXISTING PATHWAYS FOR REMAINING POLES	
13d	LIGHT POLE P2	LIGHT POLE P3	2C#12	TECK		WIRE TO FIRST POLE IN CCT THEN REUSE EXISTING PATHWAYS FOR REMAINING POLES	
13e	LIGHT POLE P3	LIGHT POLE P4	2C#12	TECK		WIRE TO FIRST POLE IN CCT THEN REUSE EXISTING PATHWAYS FOR REMAINING POLES	
14	PANEL 'A'	SERVICE MODULE #4	2C#8	TECK	103mmC	TECK IN CONDUIT FROM SERVICE ENCLOSURE TO UIS OF WHARF THEN INSTALLED ON UNISTRUT HANGERS ON UIS OF CONCRETE DECK	CCT A-8

POWER SUPPLY: 120/240V, 1ø, 3w		PANEL 'A'		MOUNTING: SURFACE				
MAIN BREAKER: 100A		LOCATION: METERING CENTER		REMARKS:				
NUMBER OF CCTS: 24								
DESCRIPTION	WATTAGE	#	BKR	CIRCUIT	BKR	#	WATTAGE	DESCRIPTION
SERVICE MODULE #1 RECEPTACLE	1920	1	*20	1 a 2	*40	2	3360	WINCH
SERVICE MODULE #2 RECEPTACLE	1920	1	*20	3 b 4			3360	WHARF LIGHTING
SERVICE MODULE #3 RECEPTACLE	1920	1	*20	5 a 6	*15	1	400	SERVICE MODULE #4 RECEPTACLE
FLOATING DOCK GANGWAY RECEPTACLE		1	*20	7 b 8	*20	1	1920	SPARE
SPARE		1	*20	9 a 10	*15	1		
				11 b 12				
				13 a 14				
				15 b 16				
PHASE LOADS:	3840	3840					3760	5280
TOTAL LOAD:	16720							
TOTAL PHASE LOADS	7600	9120						(*)- INDICATES 30mA GFCI BREAKER
CURRENT (A) @ 240V:	70							

VOLTAGE DROP/WIRE SIZE CALCULATIONS							
LOAD	RATING	VOLTS	CIRCUIT	RATED CURRENT	DISTANCE (METERS)	VOLTAGE DROP	CABLE
SERVICE #1 PULLBOX TO DISCONNECT	30A	240		24A	73	2.24%	3C#6 TECK
DISCONNECT TO WINCH (PRIVATE SERVICE #1)	30A	240			3	0.10%	3C#6 TECK
CUMULATIVE VOLTAGE DROP = 2.34%							
SERVICE #2 PULLBOX TO PRIVATE SERVICE #2	30A	240			79	2.42%	3C#6 TECK
PANEL 'A' TO SERVICE MODULE #1	20A	120	A-1	16A	58	2.37%	2C#6 TECK
PANEL 'A' TO SERVICE MODULE #2	20A	120	A-3	16A	74	1.90%	2C#4 TECK
PANEL 'A' TO SERVICE MODULE #3	20A	120	A-5	16A	82	2.10%	2C#4 TECK
PANEL 'A' TO GANGWAY RECEPTACLE PULL BOX	20A	120	A-7	16A	33	1.35%	2C#6 TECK
PULL BOX TO GANGWAY RECEPTACLE	20A	120	A-7	16A	15	1.55%	2C#10 TECK
CUMULATIVE VOLTAGE DROP = 2.90%							
PANEL 'A' TO SERVICE MODULE #4	20A	120	A-8	16A	37	2.40%	2C#8 TECK
PANEL 'A' TO WINCH DISCONNECT	40A	240	A-2.4	28A	73	2.61%	3C#6 TECK
WINCH DISCONNECT TO WINCH	50A	240			3	0.10%	3C#6 TECK
CUMULATIVE VOLTAGE DROP = 2.71%							

LUMINAIRE SCHEDULE			
TYPE	DESCRIPTION	LAMP	REMARKS
A	LED FIXTURES -PUREFORM AREA LED P26 - MEDIUM 64 LED'S (4 MODULES), WARM WHITE, GENERATION 2 TYPE SW DISTRIBUTION, 600 mA, 120V, 114W, MEDIUM GRAY, SUITABLE FOR MARINE ENVIRONMENT, 3G VIBRATION RATED, METAL BIRD DETERRANT SPIKES, C/W SLIP FITTER MOUNTING.	LED 15000 LUMEN 3000K 70 CRI	SLIP FITTER MOUNT TO EXISTING ARM.
	GARDCO: P26-64L-600-NW-G2-SF-5W-120-MGY		

DEMAND CALCULATIONS CEC RULE 78-054 - SERVICE			
FACTORS STEP	DEMAND	LOADS	
FIRST 4 RECEPTACLES	100%	4 x	7200 W = 28,800 W
NEXT 4 RECEPTACLES	65%	4 x	2400 W = 6,240 W
NEXT 5 RECEPTACLES	50%	1 x	2400 W = 1,200 W
WINCH	50%	1 x	6,720 W = 3,360 W
SITE LIGHTING	100%	x	460 W
TOTALS		Watts	= 40,060 W
		Amps @ 240V, 1ø	= 166.9 A



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project		projet

**FAIRHAVEN WHARF
DEER ISLAND**

CHARLOTTE CO. N.B.

drawing design

**ELECTRICAL
SCHEDULES**

designed R.M.B./T.M.L. conçu

date MARCH 2022

drawn D.J.L. dessiné

date MARCH 2022

approved B.E.T. approuvé

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Tender Soumission

Project Manager Administrateur de projets

project number no. du projet

C2-00329

drawing no. no. du dessin

E3 OF 4

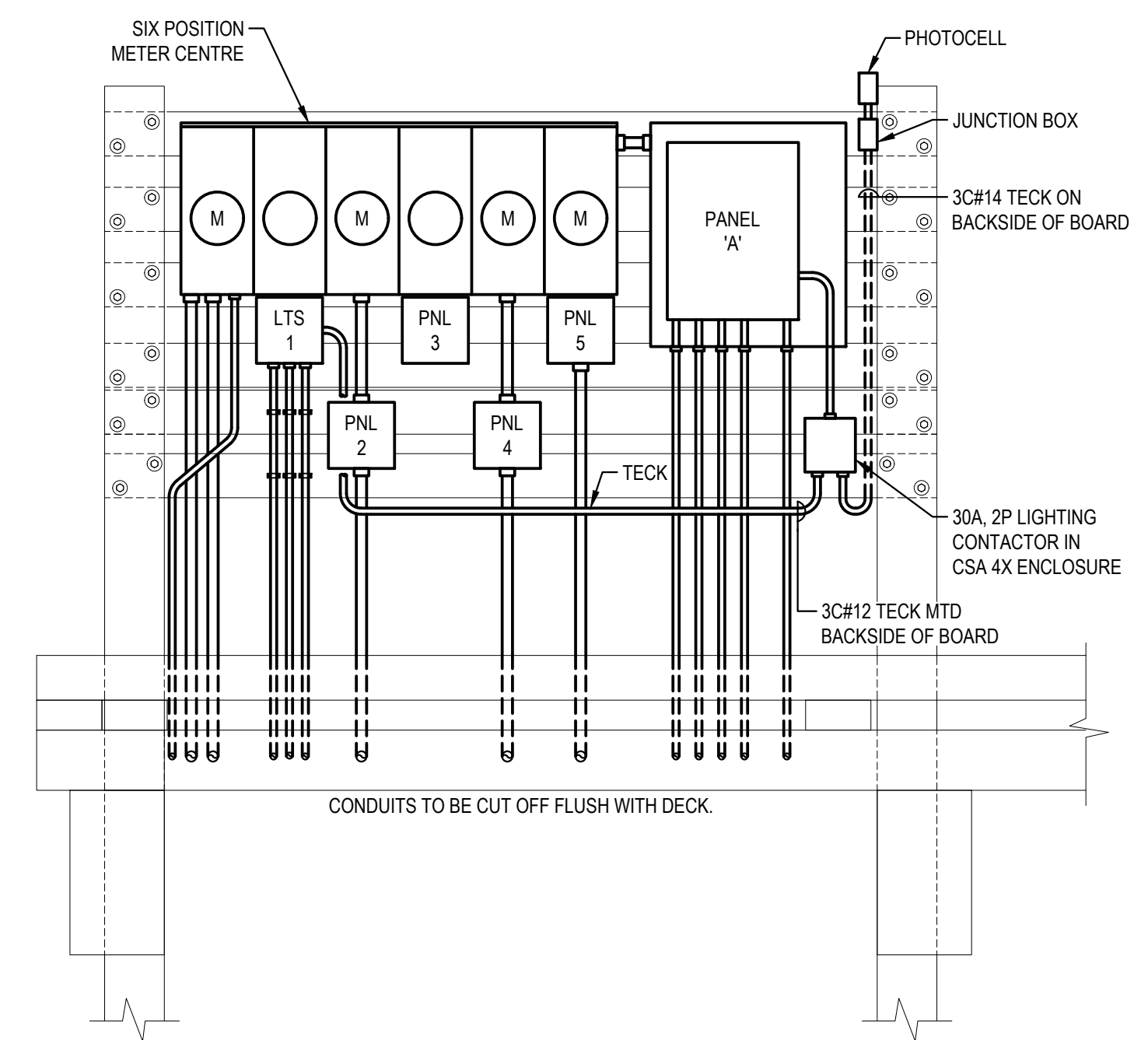
NOTES

- APPROXIMATE LOCATION OF EXISTING UNDERGROUND DISTRIBUTION AND NAVIGATION LIGHT FEEDER. TRACE EXISTING FEEDERS PRIOR TO EXCAVATION.
- EXISTING CONDUITS EMBEDDED IN CONCRETE WHARF

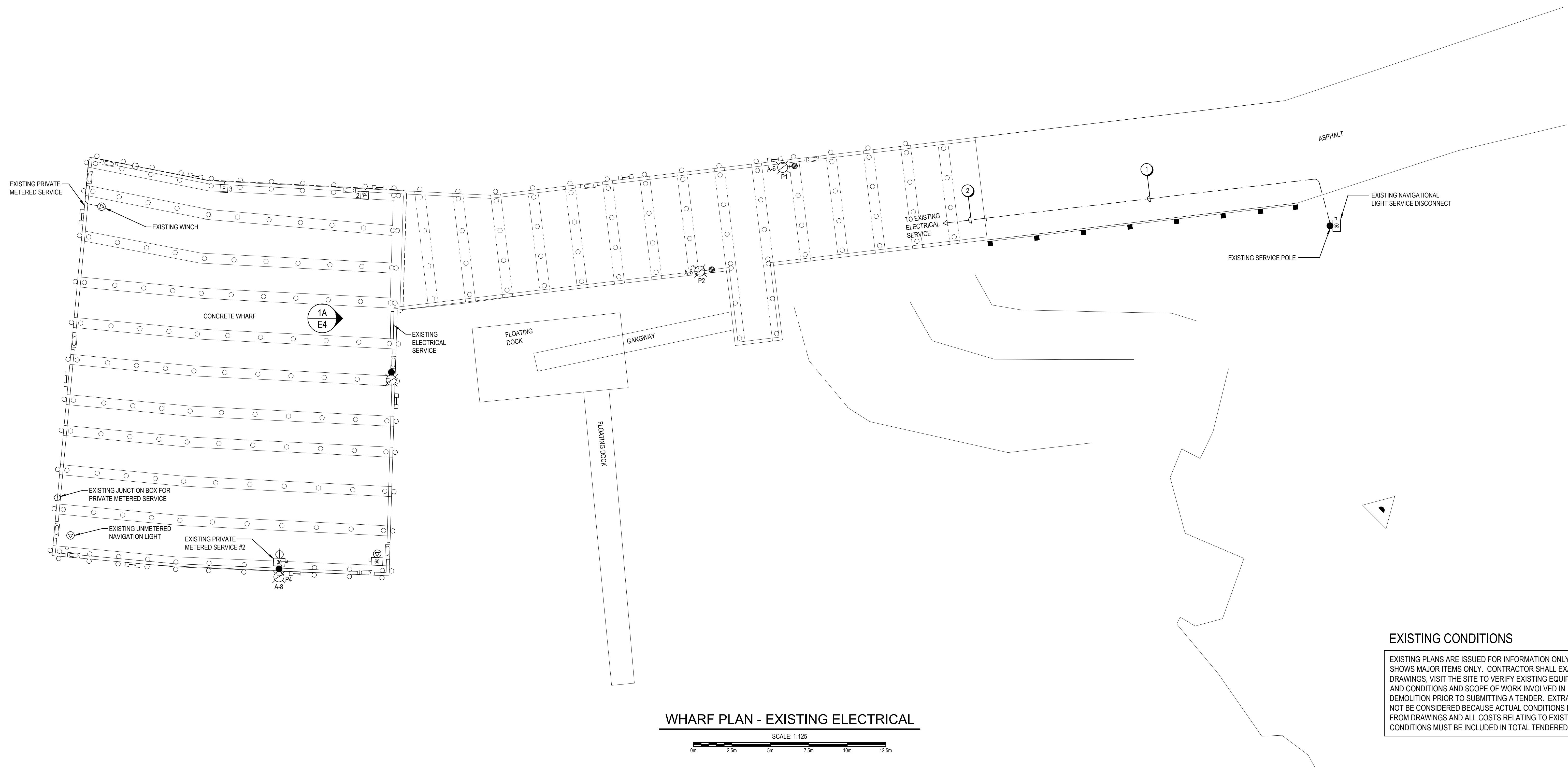
TEK CONSULTANTS LIMITED
 CONSULTING ELECTRICAL ENGINEERS

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1A
E4 EXISTING METER CENTRE DETAIL ELEVATION
 SCALE: 1:20
 0mm 50mm 100mm 150mm 200mm 250mm



WHARF PLAN - EXISTING ELECTRICAL
 SCALE: 1:125
 0m 2.5m 5m 7.5m 10m 12.5m

EXISTING CONDITIONS

EXISTING PLANS ARE ISSUED FOR INFORMATION ONLY AND SHOWS MAJOR ITEMS ONLY. CONTRACTOR SHALL EXAMINE DRAWINGS, VISIT THE SITE TO VERIFY EXISTING EQUIPMENT AND CONDITIONS AND SCOPE OF WORK INVOLVED IN DEMOLITION PRIOR TO SUBMITTING A TENDER. EXTRAS WILL NOT BE CONSIDERED BECAUSE ACTUAL CONDITIONS DIFFER FROM DRAWINGS AND ALL COSTS RELATING TO EXISTING SITE CONDITIONS MUST BE INCLUDED IN TOTAL TENDERED PRICE.

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project		project

FAIRHAVEN WHARF DEER ISLAND
 CHARLOTTE CO. N.B.

drawing design
WHARF PLAN EXISTING ELECTRICAL
 designed R.M.B./T.M.L. conçu
 date MARCH 2022
 drawn R.Z./D.J.L. dessiné
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