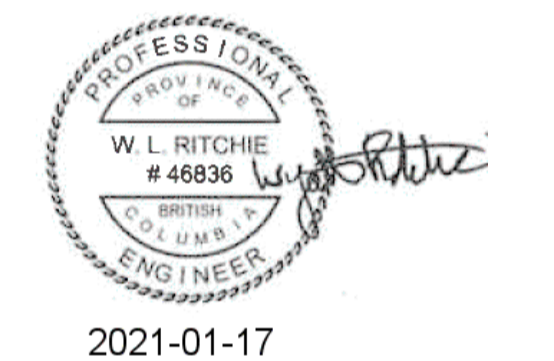


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2	RE-ISSUED FOR TENDER	21/01/18
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FISHERIES AND OCEANS
SMALL CRAFT HARBOURS
401 BURRARD STREET, SUITE 200
VANCOUVER, B.C.

Project title/Titre du projet
PORT CLEMENTS, HAIDA GWAI, B.C.

PORT CLEMENTS
RELOCATION OF OVERHEAD
SUPPLY LINE

Approved by/Approve par

Designed by/Concept par
W.L.R.

Drawn by/Dessine par
W.L.R./P.P.

PWGSC Project Manager/Administrateur de Projets TPFGC
R.C.

PWGSC, Architectural and Engineering Resources Manager/
Ressources Architectural et de Directeur d'ingénierie, TPFGC

Client/client
DFO - SCH

Drawing title/Titre du dessin

SITE PLAN - EXISTING AND
PROPOSED AND GENERAL
ELECTRICAL LAYOUT

Project No./No. du projet
191-15692-00

Sheet/Fauille
E001
1 OF 4

Revision no./
La Révision
no.
1

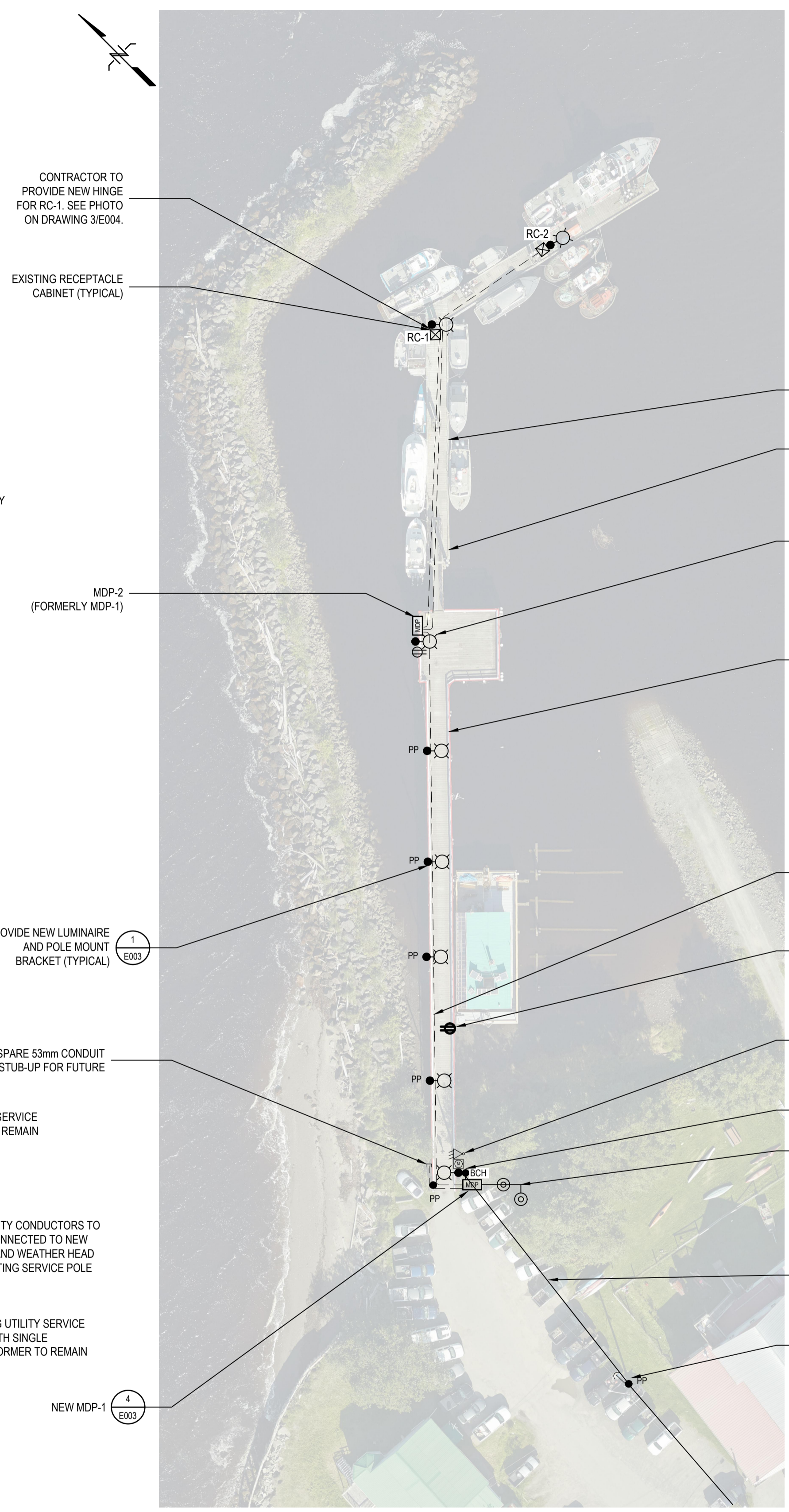
DRAWING LIST	
DRAWING NUMBER	DRAWING TITLE
E001	SITE PLAN - EXISTING AND PROPOSED AND GENERAL ELECTRICAL LAYOUT
E002	ELECTRICAL SINGLE LINE DIAGRAM, PANEL SCHEDULES AND CALCULATIONS
E003	ELECTRICAL DETAILS
E004	RECEPTACLE CABINET (RC) AND FLOAT DETAILS

ABBREVIATIONS	
AHJ	AUTHORITY HAVING JURISDICTION
XXF	CB FRAME RATING (AMPS)
XXT	CB TRIP SETTINGS (AMPS)
BCH	B.C. HYDRO
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
CCT	CIRCUIT
CEC	CANADIAN ELECTRICAL CODE
DFO	DEPARTMENT OF FISHERIES AND OCEANS
ER	EXISTING TO BE REMOVED
EX	EXISTING TO REMAIN
MDP	MAIN DISTRIBUTION PANEL
NIC	NOT IN CONTRACT
P	POLE
PH	PHASE
RC	RECEPTACLE CABINET (C/W RCP & RECEPTACLE OUTLETS)
RCP	RC PANEL
SCH	SMALL CRAFT HARBOUR
SEE	SERVICE ENTRANCE ENCLOSURE
TRC	TRANSFORMER RECEPTACLE CABINET (C/W TRCP, TRF and RCP)
TRF	TRANSFORMER
TRCP	TRANSFORMER RECEPTACLE CABINET PANEL
WP	WEATHERPROOF OUTLET
2P	TWO POLE CB (1 PHASE USE)
3P	THREE POLE CB (3 PHASE USE)

ELECTRICAL SYMBOL SCHEDULE AND ANNOTATIONS	
	SURFACE CEILING MOUNTED LUMINAIRE
	WALL MOUNTED LUMINAIRE
	EXTERIOR LUMINAIRE WITH POLE ASSEMBLY
	POWER POLE
	OVERHEAD UTILITY SERVICE MAST
	JUNCTION BOX
	PANELBOARD
	MAIN DISTRIBUTION PANEL
	RECEPTACLE CABINET No.1
	DOWNHAUL GUY WITH ANCHOR AND GUARD
	LV CIRCUIT BREAKER
	DISCONNECT SWITCH
	UTILITY POWER METER
	CONNECTION POINT
	CABINET RECEPTACLES
	REFERENCE NOTE (1 DENOTES SEE NOTE 1)
	PANEL IDENTIFICATION TAG
	NEW EQUIPMENT
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE REMOVED

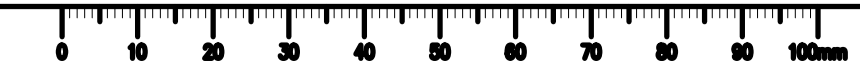


1 EXISTING SITE PLAN: GENERAL ELECTRICAL LAYOUT
E001 SCALE: 1:500



2 PROPOSED NEW SITE PLAN: GENERAL ELECTRICAL LAYOUT
E001 SCALE: 1:500

Project No.: 191-15692-00
 Drawing Title: PORT CLEMENTS, HAIDA GWAI, B.C. - RELOCATION OF OVERHEAD SUPPLY LINE
 Date: 2021-01-17
 File Name: 191-15692-00-E001-PORT CLEMENTS, HAIDA GWAI, B.C. - RELOCATION OF OVERHEAD SUPPLY LINE - ELECTRICAL LAYOUT.dwg



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Project title/Titre du projet
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**PORT CLEMENTS
RELOCATION OF OVERHEAD
SUPPLY LINE**

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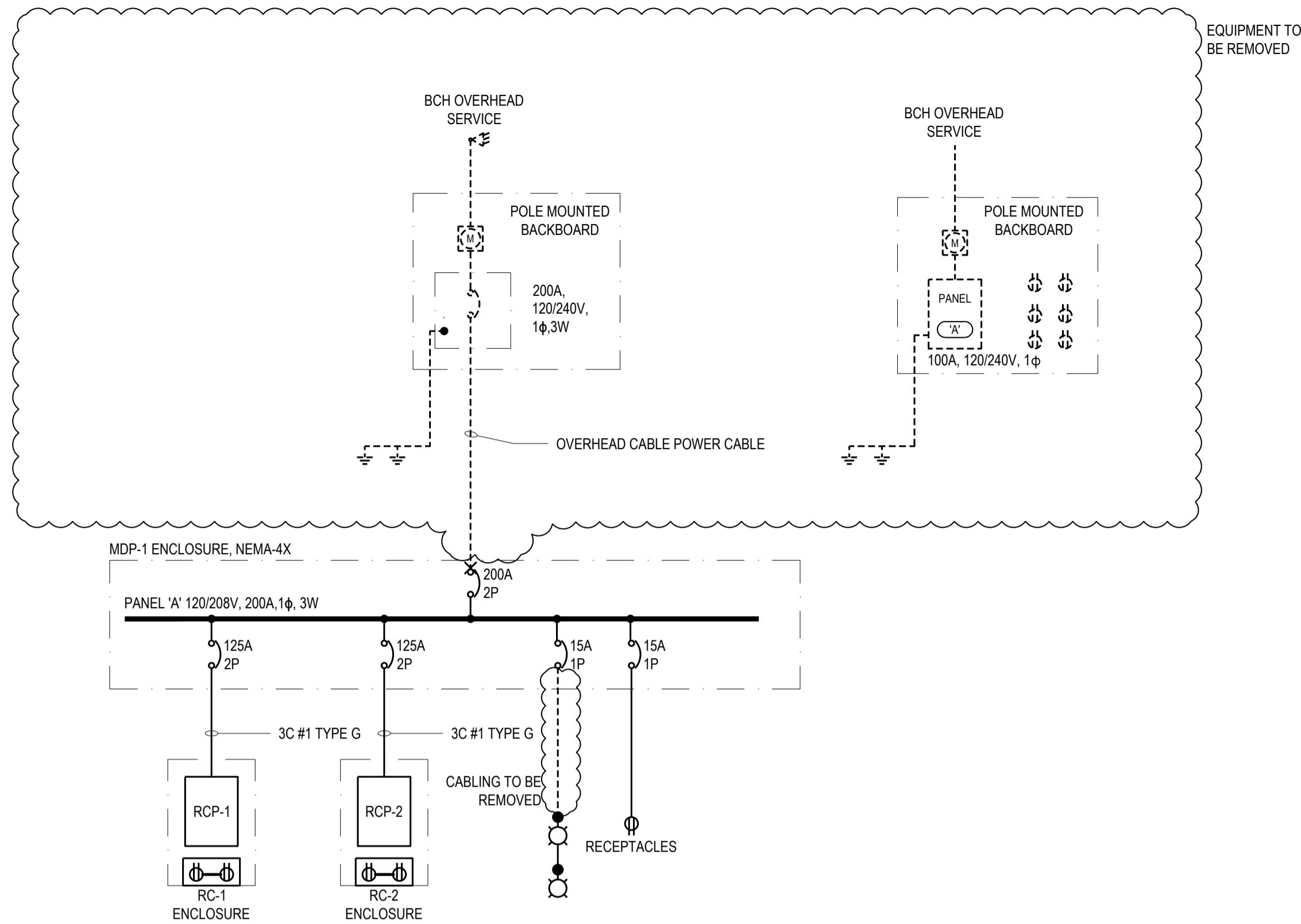
Drawing title/Titre du dessin

**ELECTRICAL SINGLE LINE
DIAGRAM, PANEL SCHEDULES AND
CALCULATIONS**

Project No./No. du projet
191-15692-00

Sheet/Fauille
E002
2 OF 4

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La Révision
no.
1



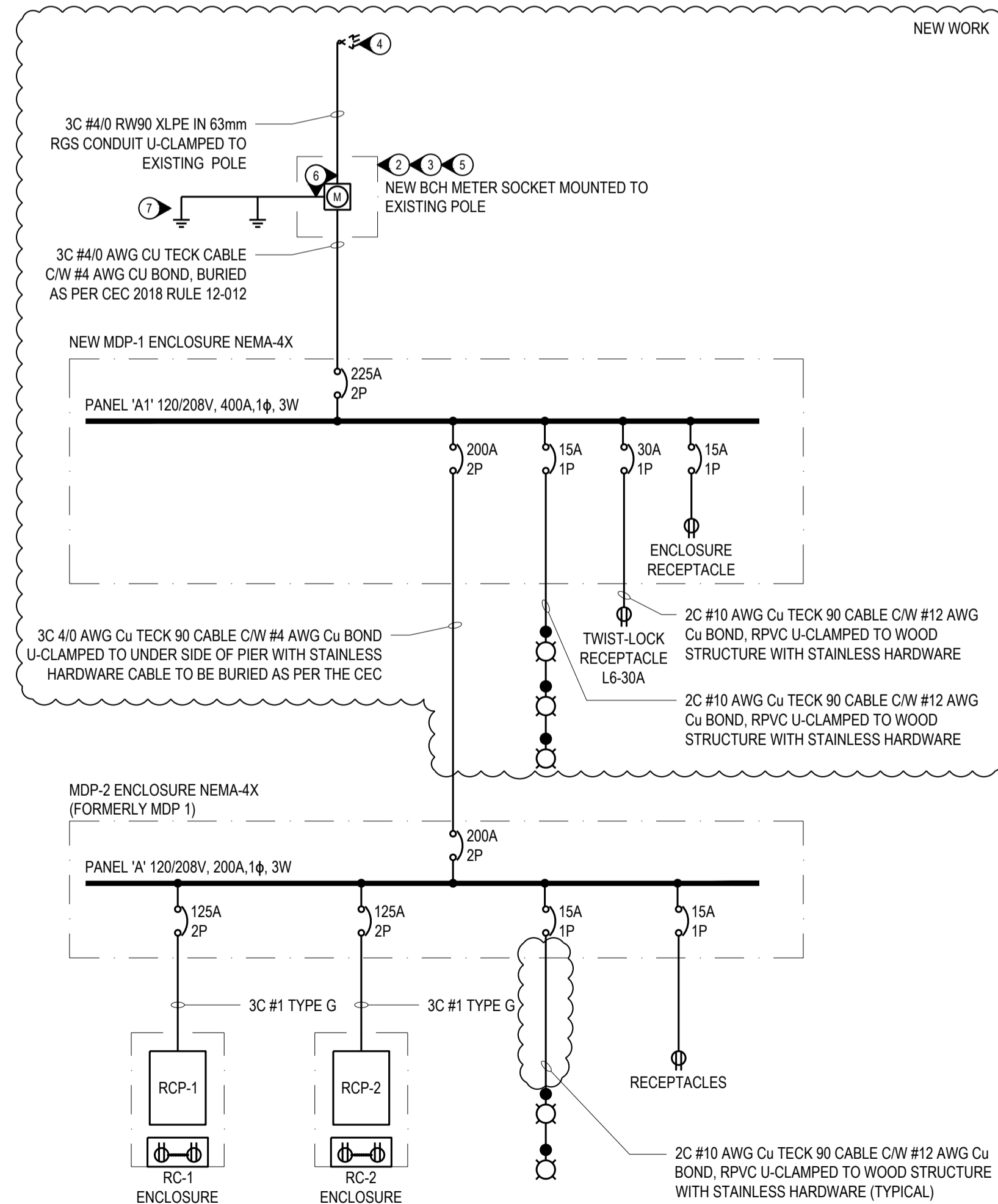
1 EXISTING SINGLE LINE DIAGRAM
SCALE: N.T.S.

Factored Load Calculations: 1PH 240V NEW SUPPLY

Load at Service Entrance

Receptacle count	rec'pt	qty	amps	volts	ph	kW	mult	Total kW
1st 4 highest rated		1	50	240	1	12.0	1.00	12.0
		2	30	240	1	14.4	1.00	14.4
Next 4 highest rated		1	30	120	1	3.6	1.00	3.6
		2	30	120	1	7.2	0.65	4.7
Next 5 highest rated		2	20	120	1	4.8	0.65	3.1
Next 16 highest rated		5	20	120	1	12.0	0.50	6.0
Next 20 highest rated		5	20	120	1	12.0	0.25	3.0
Next 20 highest rated		6	15	120	1	10.8	0.20	2.2
Next 20 highest rated		0	0	120	1	0.0	0.15	0.0
Remaining receptacles		0	0	120	1	0.0	0.10	0.0
Total plug/receptacles		24						49.0
Cabinet Lighting Fixtures (2)	56W	2				0.1	0.50	0.1
Pier Lighting Fixtures (6)	56W	6				0.1	0.50	0.2
Estimated MDP load (24 rec'pts)								49.2
Feeder ampacity:	Volts	PH	Amps					
From BCH to MDP	240	1	205					

3 MDP FACTORED LOADS
SCALE: N.T.S.

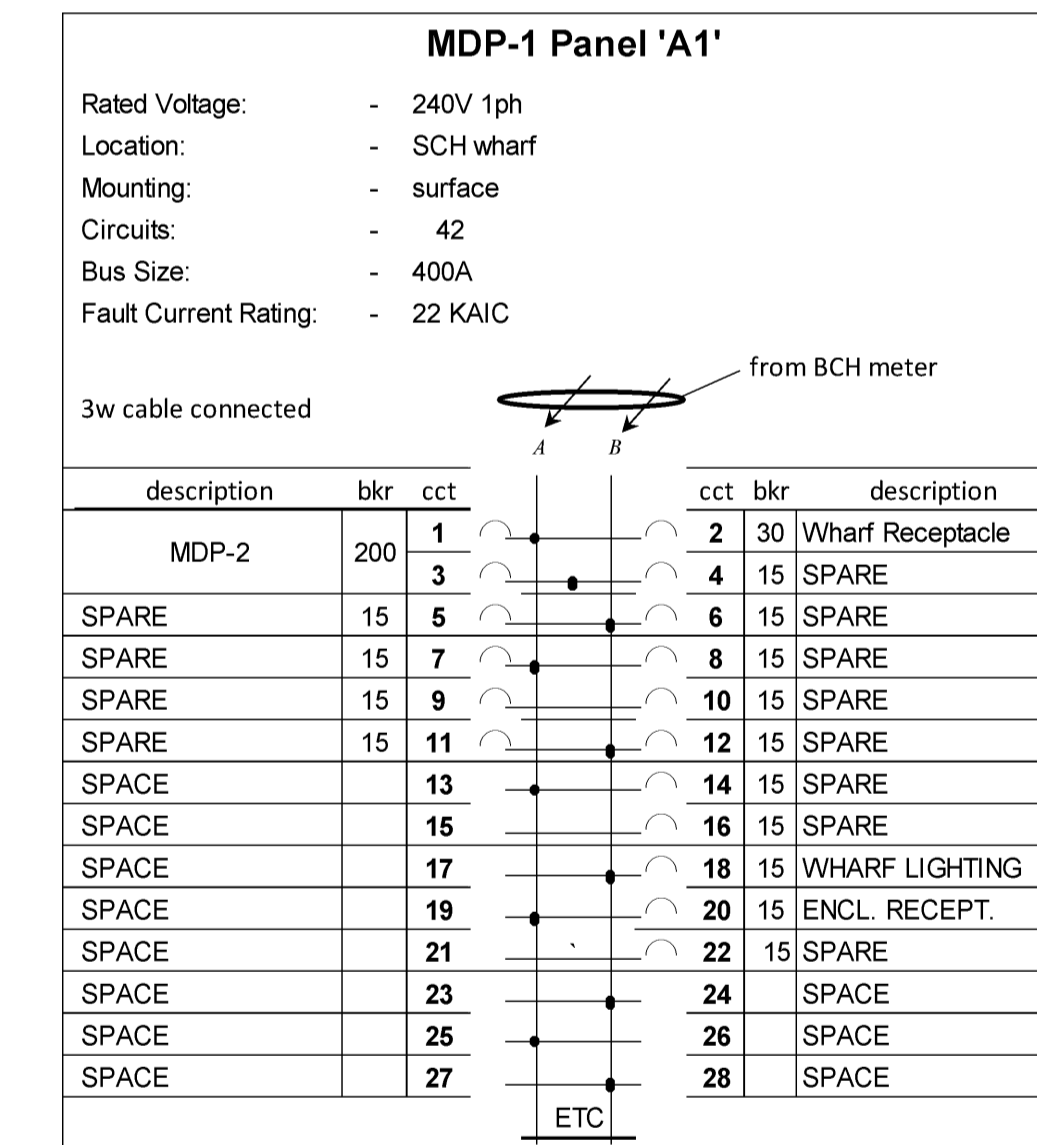


2 NEW SINGLE LINE DIAGRAM
SCALE: N.T.S.

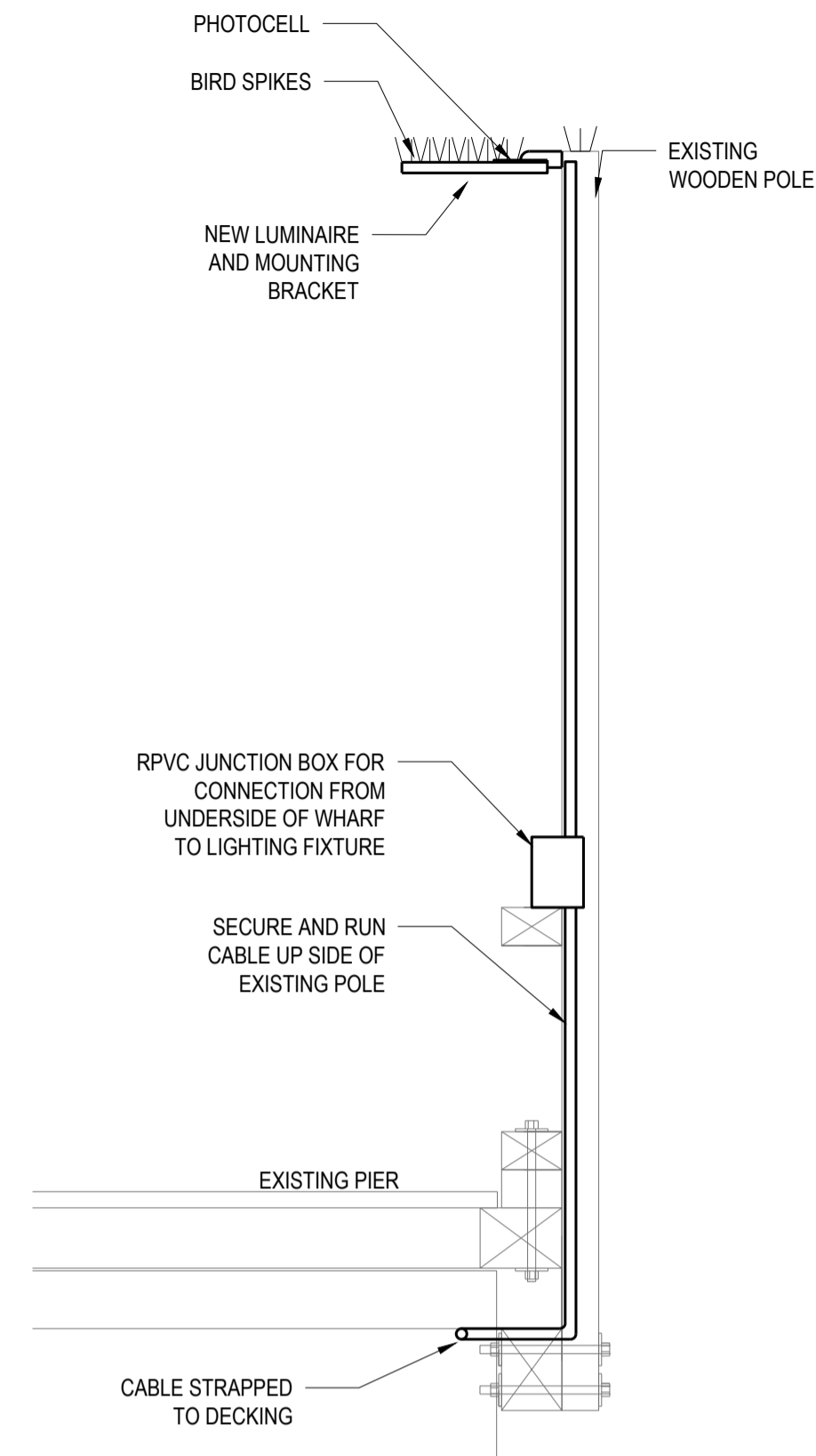
- SLD - GENERAL NOTES:**
- ALL BCH WORK IS TO BE COORDINATED BY THE CONTRACTOR.
 - PROVIDE MEANS FOR THE PURCHASE, DELIVERY, INSTALLATION, CONNECTION, COMMISSIONING AND MISCELLANEOUS WORK REQUIRED FOR A FULLY FUNCTIONING AND SAFE OPERATING SYSTEM.
 - PROVIDE ALL EQUIPMENT UNLESS NOTED OTHERWISE.
 - PROVIDE BONDING TO GROUND AND EARTH GROUND TEST RESULTS TO DFO REPRESENTATIVE FOR APPROVAL PRIOR TO ENERGIZATION.
 - ALL EQUIPMENT RATED, CONNECTED, AND OPERATED AS 1 PHASE, 3 WIRE.
 - PROVIDE NEW LABELLING AS REQUIRED TO MATCH NEW SINGLE LINE DIAGRAM

- SLD - KEYNOTES:**
- NOT USED.
 - METER POLE, ASSEMBLY, AND LOCATION TO BE APPROVED BY BCH AND DFO. COORDINATE ON SITE.
 - MOUNT METER SOCKET ENCLOSURE ON EXISTING POLE BETWEEN 1500mm AND 1800mm, NOT FACING VEHICLE TRAFFIC.
 - BC HYDRO 225A SERVICE. COORDINATE WITH BC HYDRO AND PROVIDE SECONDARY CABLES, CONDUIT, MISCELLANEOUS AS REQUIRED UPSTREAM OF SAFETY SWITCH TO WEATHERHEAD AT TOP OF POLE FOR BCH TO CONNECT AS REQUIRED. CONTRACTOR SHALL SUBMIT A NEW ELECTRICAL SERVICE INFORMATION FORM TO BC HYDRO FOR NEW EQUIPMENT AND 225A SERVICE DISCONNECT.
 - PROVIDE METER SOCKET WITH TEST SWITCH COMPARTMENT AND METER ENCLOSURE AS PER BCH REQUIREMENTS.
 - PROVIDE NEUTRAL FROM METER SOCKET TO WEATHERHEAD. CONNECT METER SOCKET NEUTRAL TO GROUND ROD.
 - PROVIDE #6 AWG BARE CU GROUND CONDUCTOR CONNECTED TO TWO GROUND RODS AND REQUIRED CONNECTIONS ADJACENT TO POLE. RUN CONDUCTOR IN 27mm RPVC CONDUIT TO GROUND FOR MECHANICAL PROTECTION.

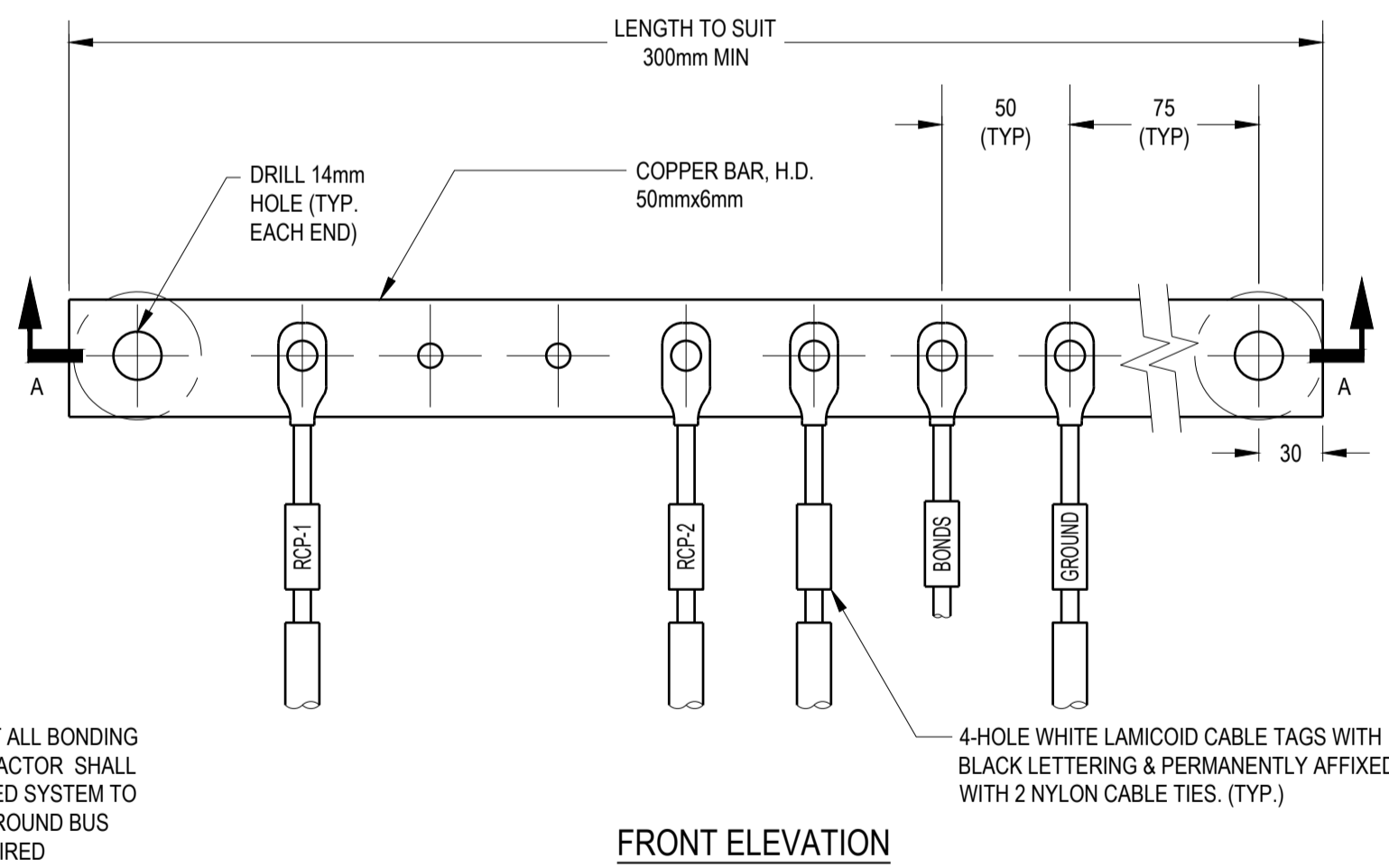
**SEE DETAIL 3/E003 FOR 3 LINE
GROUNDING AND BONDING DIAGRAM**



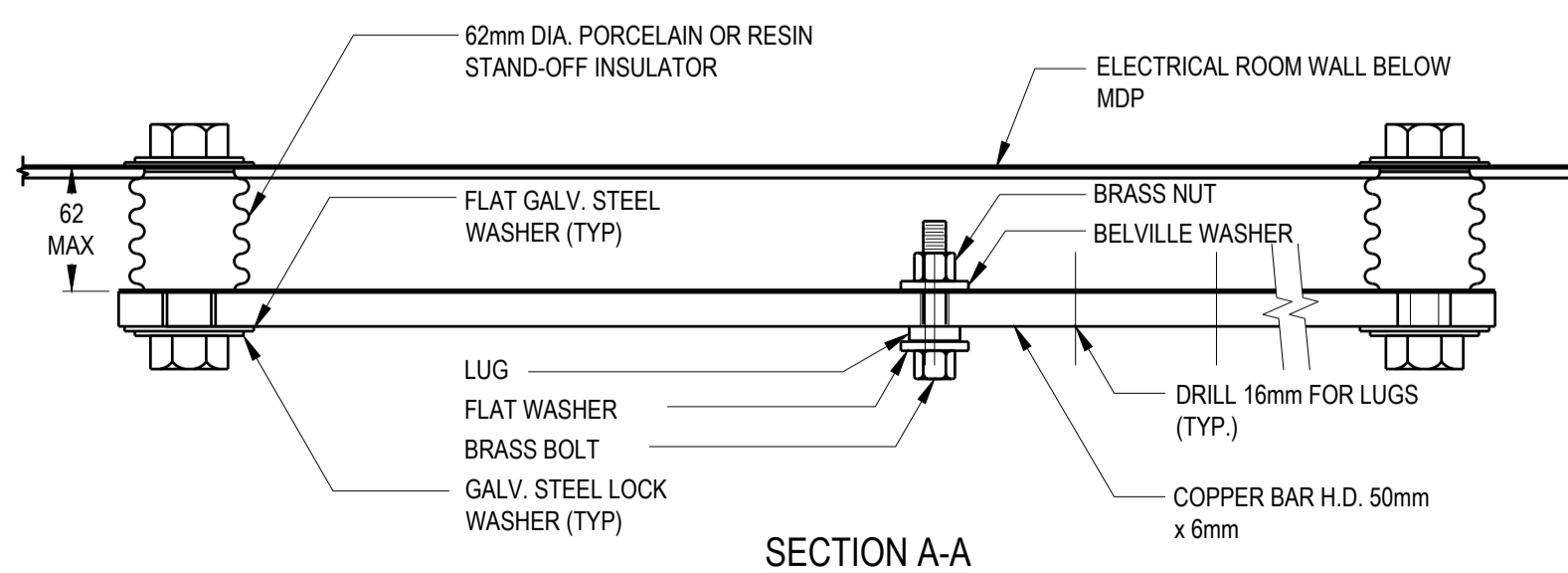
4 PANEL SCHEDULES
SCALE: N.T.S.



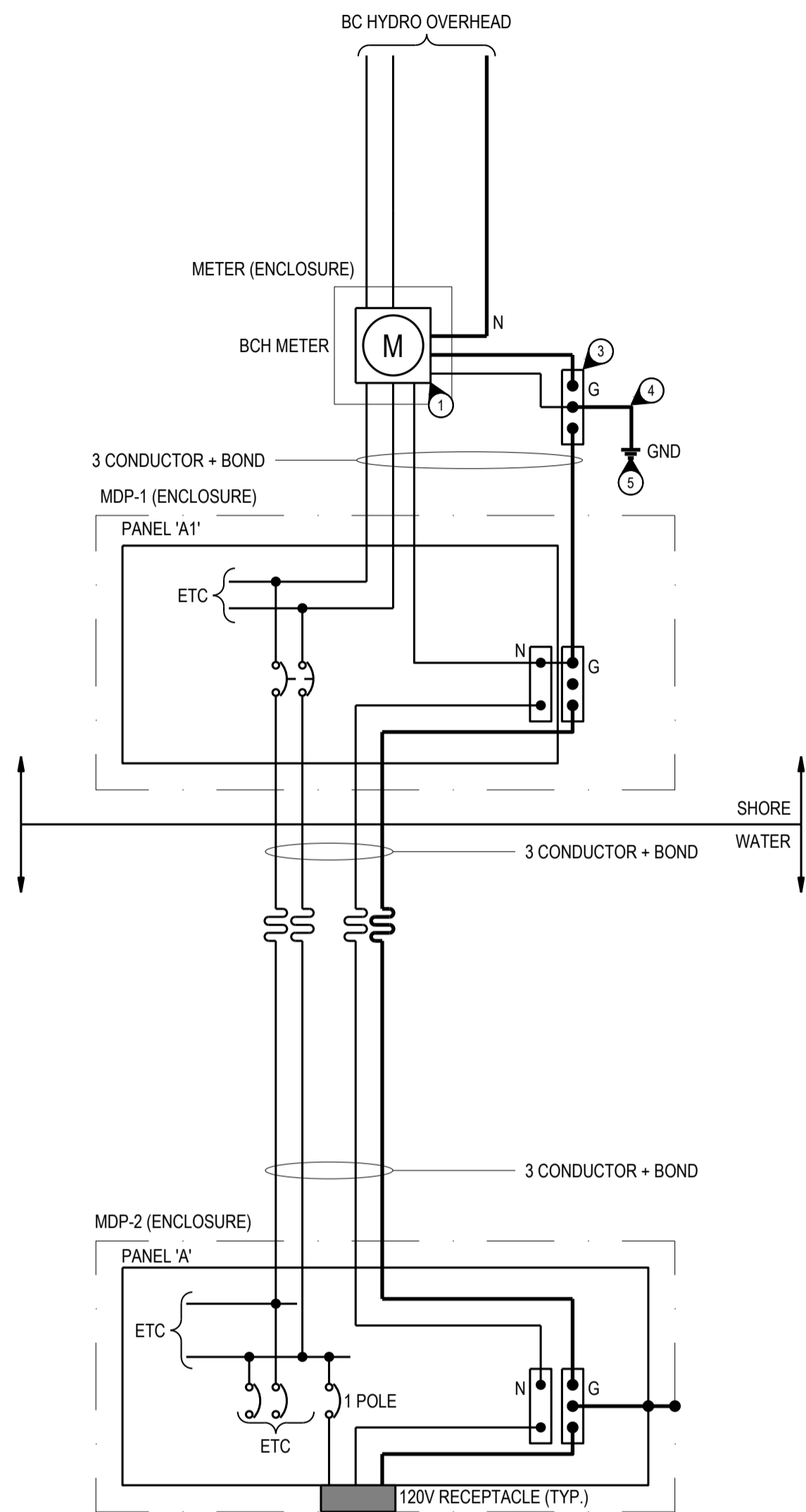
1 LUMINAIRE POLE DETAIL
SCALE: N.T.S.



GROUND BUS NOTE: NOT ALL BONDING CABLES SHOWN. CONTRACTOR SHALL PROVIDE A FULLY BONDED SYSTEM TO CEC STANDARDS AND GROUND BUS TERMINATIONS AS REQUIRED

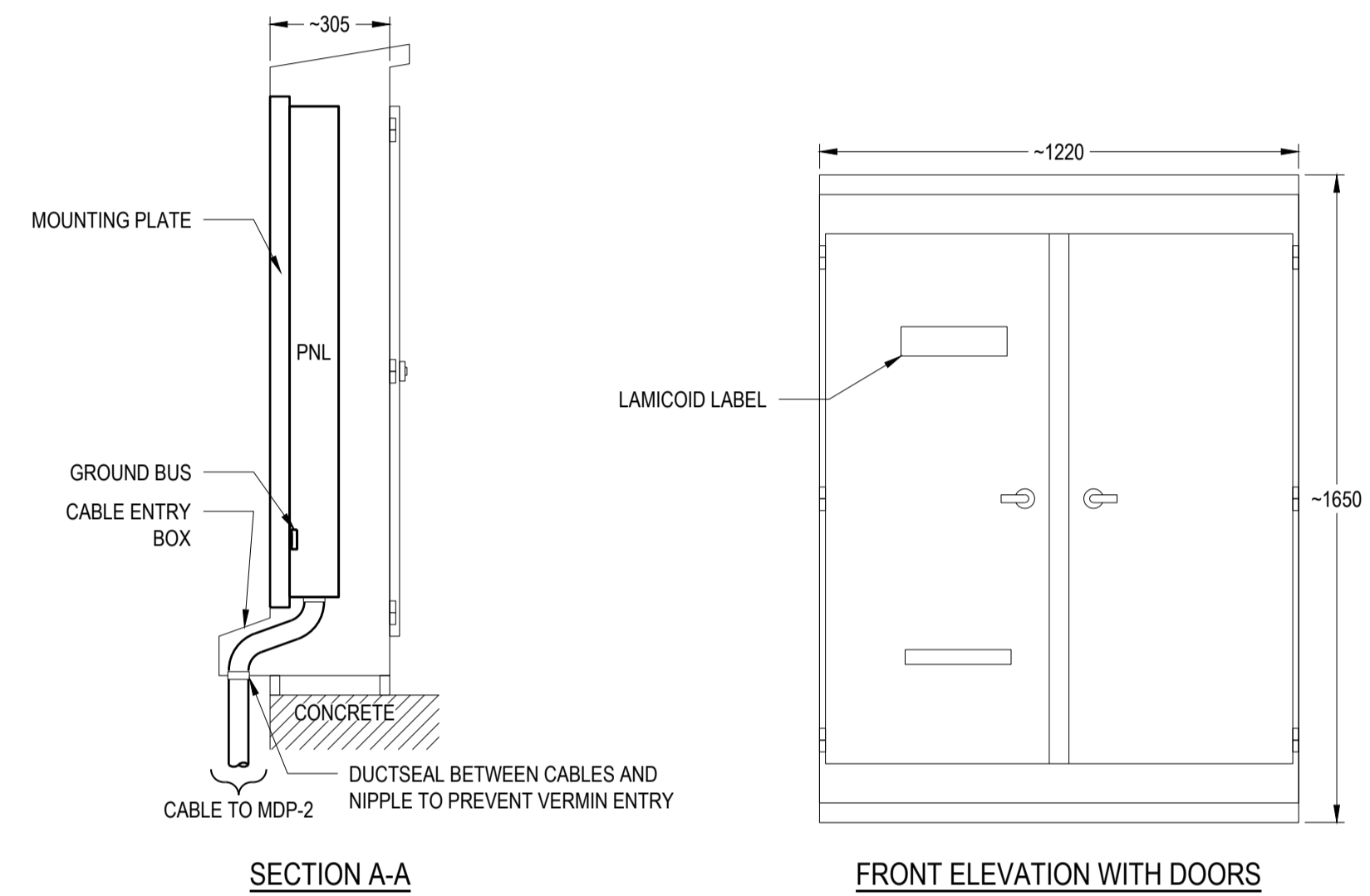


2 GROUND BUS
SCALE: N.T.S.



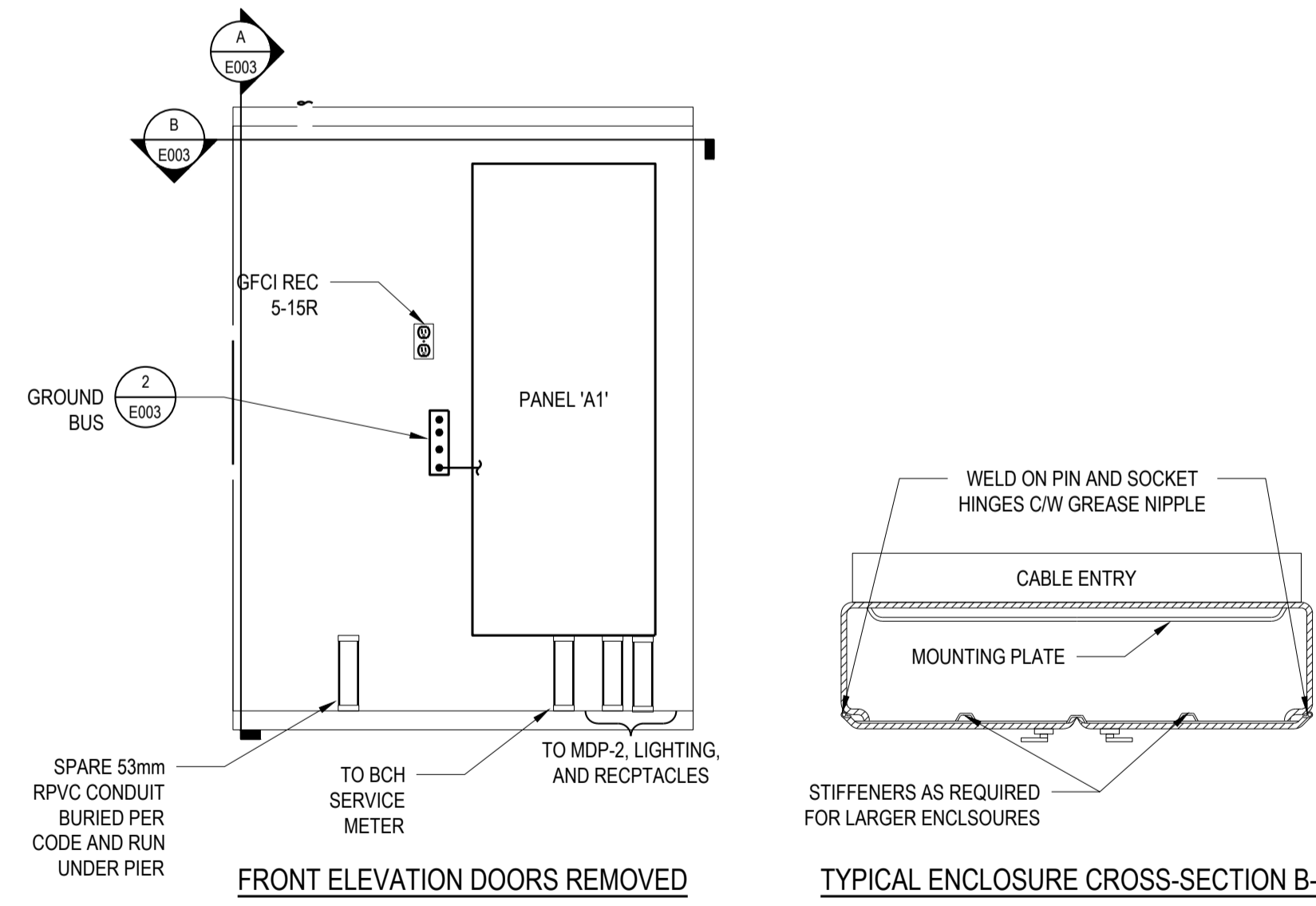
- KEYNOTES: GROUNDING AND BONDING**
- 1 INSTALLATION AND CONNECTIONS TO BE IN ACCORDANCE WITH LATEST EDITION OF BC HYDRO REQUIREMENTS FOR SECONDARY VOLTAGE REVENUE METERING.
 - 2 ALL GROUNDING AND BONDING TO BE COMPLETED AS PER CSA C22-1-06 (CEC) INCLUDING BC AMENDMENTS. BOND ALL EXPOSED NON-CURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT AND METAL SHEATHS OF ARMoured CABLE TO EACH OTHER AND CONNECT TO GROUND BUS.
 - 3 GROUND BUS MOUNTED ON INSULATED STANDOFFS INSIDE SERVICE ENTRANCE ENCLOSURE.
 - 4 GROUND CABLE FROM GROUND BUS TO GROUND ELECTRODE TO BE BARE STRANDED COPPER SIZE AS INDICATED.
 - 5 EARTH GROUND RESISTANCE TEST AT EXISTING SHORE GROUND ELECTRODE TO BE COMPLETED AND RESULTS SUBMITTED. INSTALL NEW GROUND ELECTRODES FOR ACCEPTABLE RESULTS.

3 3 LINE DIAGRAM GROUNDING AND BONDING (N.I.C.)
SCALE: N.T.S.



SECTION A-A

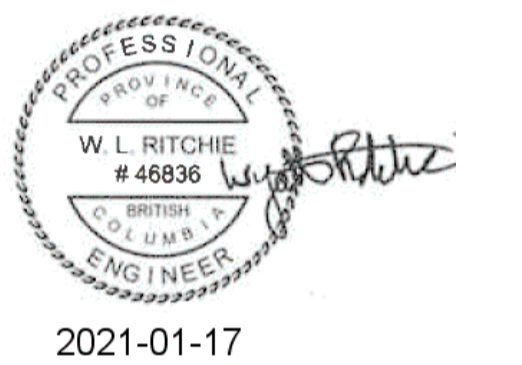
FRONT ELEVATION WITH DOORS



FRONT ELEVATION DOORS REMOVED

TYPICAL ENCLOSURE CROSS-SECTION B-B

4 MDP LAYOUT
SCALE: N.T.S.



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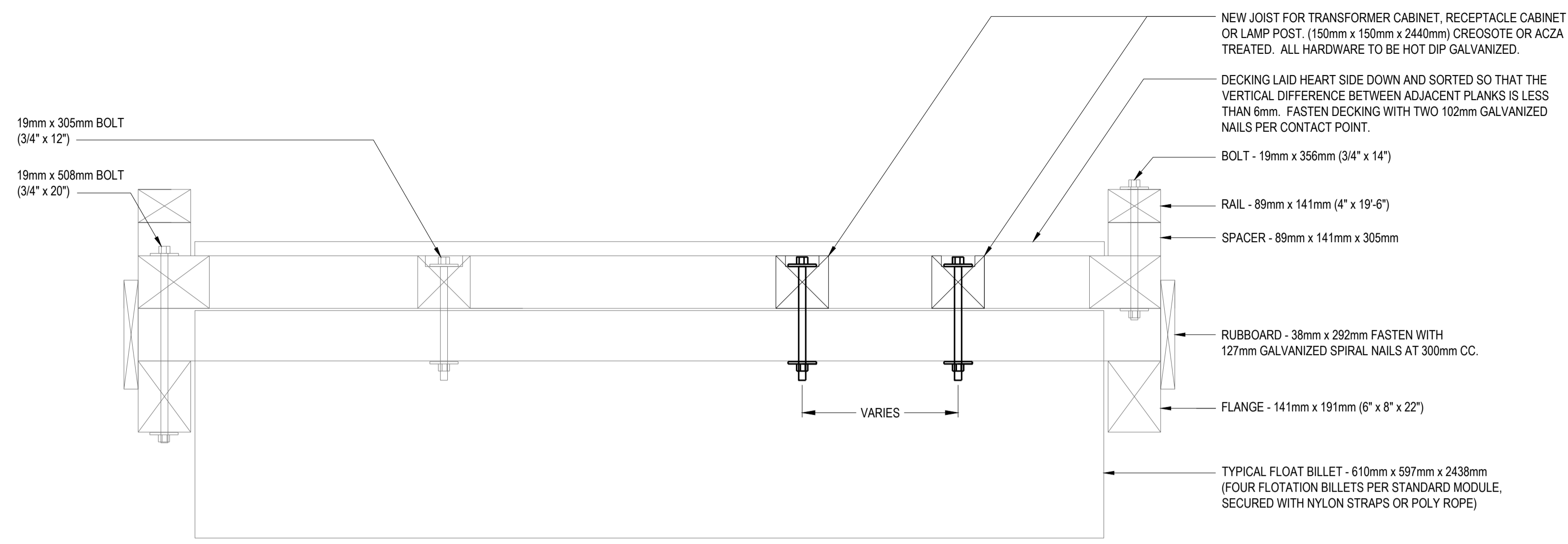
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ELECTRICAL DETAILS

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191-15692-00	E003	1



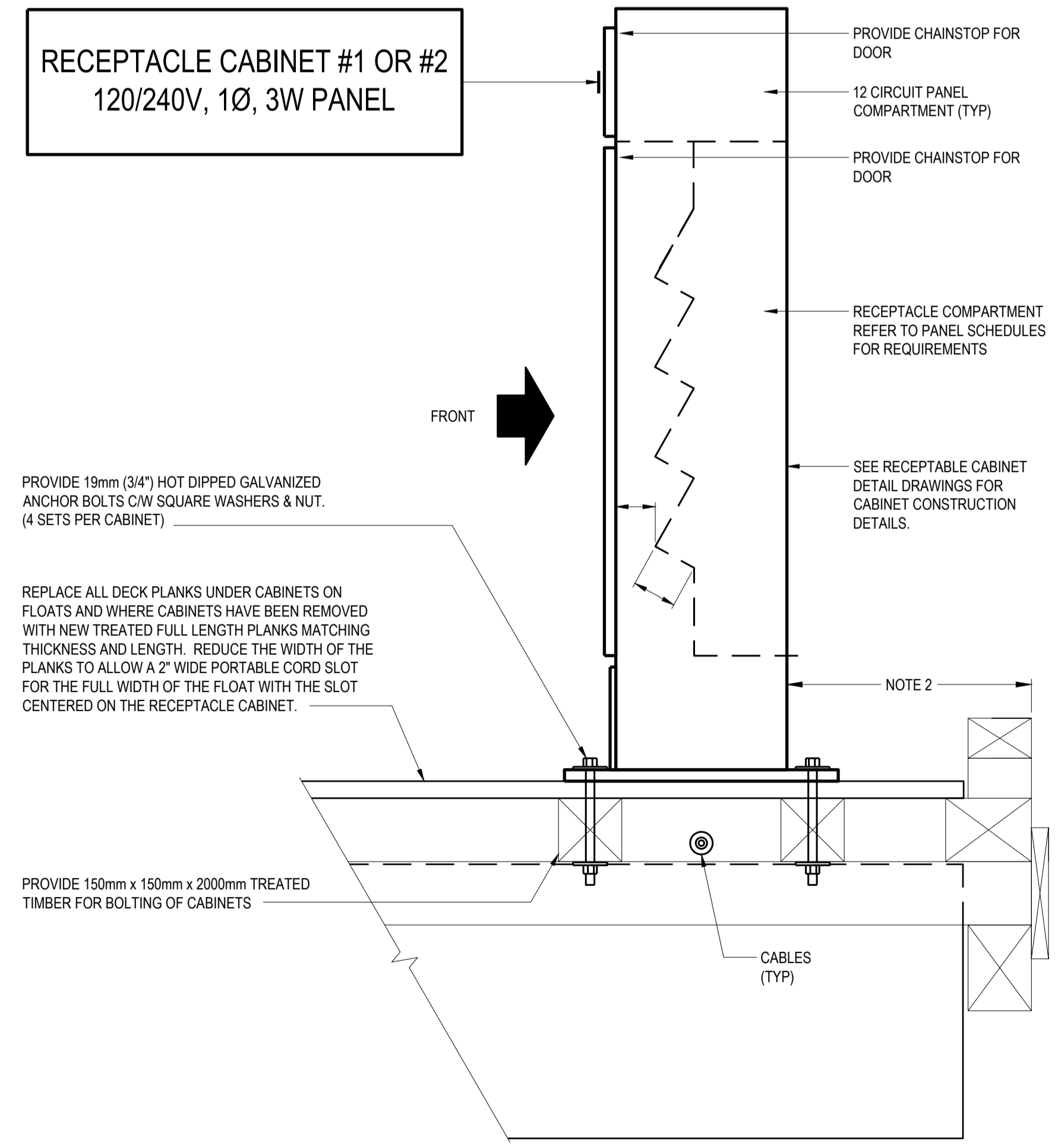
1 TYPICAL CROSS-SECTION OF EXISTING 2743mm (9'-0") WIDE FLOAT
E004 SCALE: N.T.S.

GENERAL NOTES:

- TIGHTEN ALL ANCHOR BOLTS TO 80 FOOT POUNDS.
- OBTAIN REQUIRED CLEARANCES FROM HARBOUR MASTER FOR EACH CABINET ON EACH FLOAT PRIOR TO INSTALLATION.

KEYNOTES:

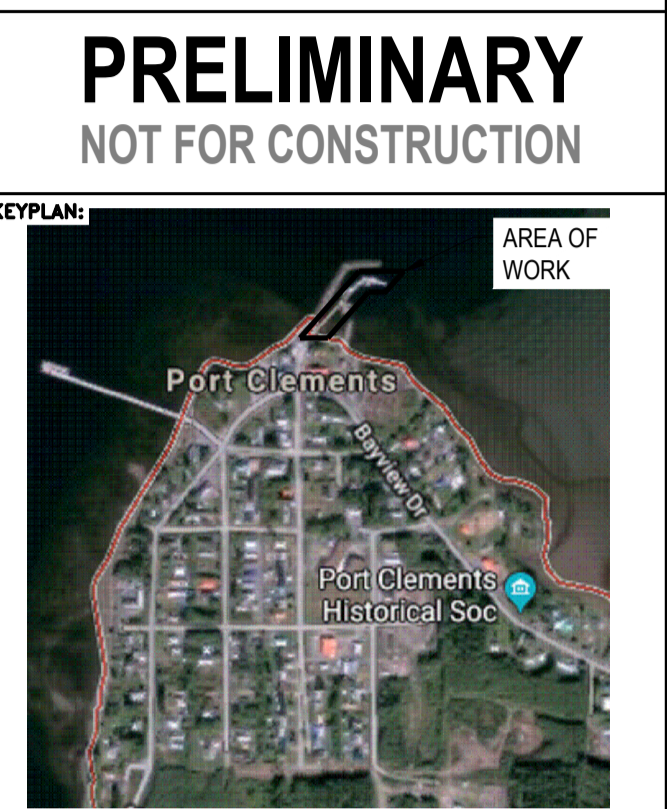
- MODIFY RECEPTACLE MOUNTING PLATE LOCATION AND DIMENSIONS TO ACCOMMODATE ALL RECEPTACLES AND THEIR CORRESPONDING PLUG AND CABLE ASSEMBLIES.
- RECEPTACLE SHALL BE SINGLE, TWIST LOCK MARINE GRADE, WITH MELAMINE BODY AND NYLON.
- REPLACE CABTYRE SUPPORT KELLEMS GRIPS, RE-ARRANGE AND TIDY UP CABLES AS NECESSARY. KELLEMS GRIPS - DOUBLE EYE, DOUBLE WEAVE, STAINLESS STEEL.
- REPLACE SUPPORT HARDWARE WITH STAINLESS STEEL HARDWARE AS NECESSARY. RE-ARRANGE AND TIDY UP CABLES AS NECESSARY.



2 EXISTING RECEPTACLE CABINET (RC) DETAIL ON A FLOAT
E004 SCALE: N.T.S.



3 EXISTING HINGE DETAIL
E004 SCALE: N.T.S.



PROFESSIONAL ENGINEER
W. L. RITCHIE
46836
BRITISH COLUMBIA
2021-01-17

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PORT CLEMENTS RELOCATION OF OVERHEAD SUPPLY LINE

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DFO - SCH
Drawing title/Titre du dessin
RECEPTACLE CABINET (RC) AND FLOAT DETAILS

Project No./No. du projet 191-15692-00	Sheet/Fauille E004 4 OF 4	Revision no./La Révision no. 1
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 Per Date: January 16, 2021 11:17 PM
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