

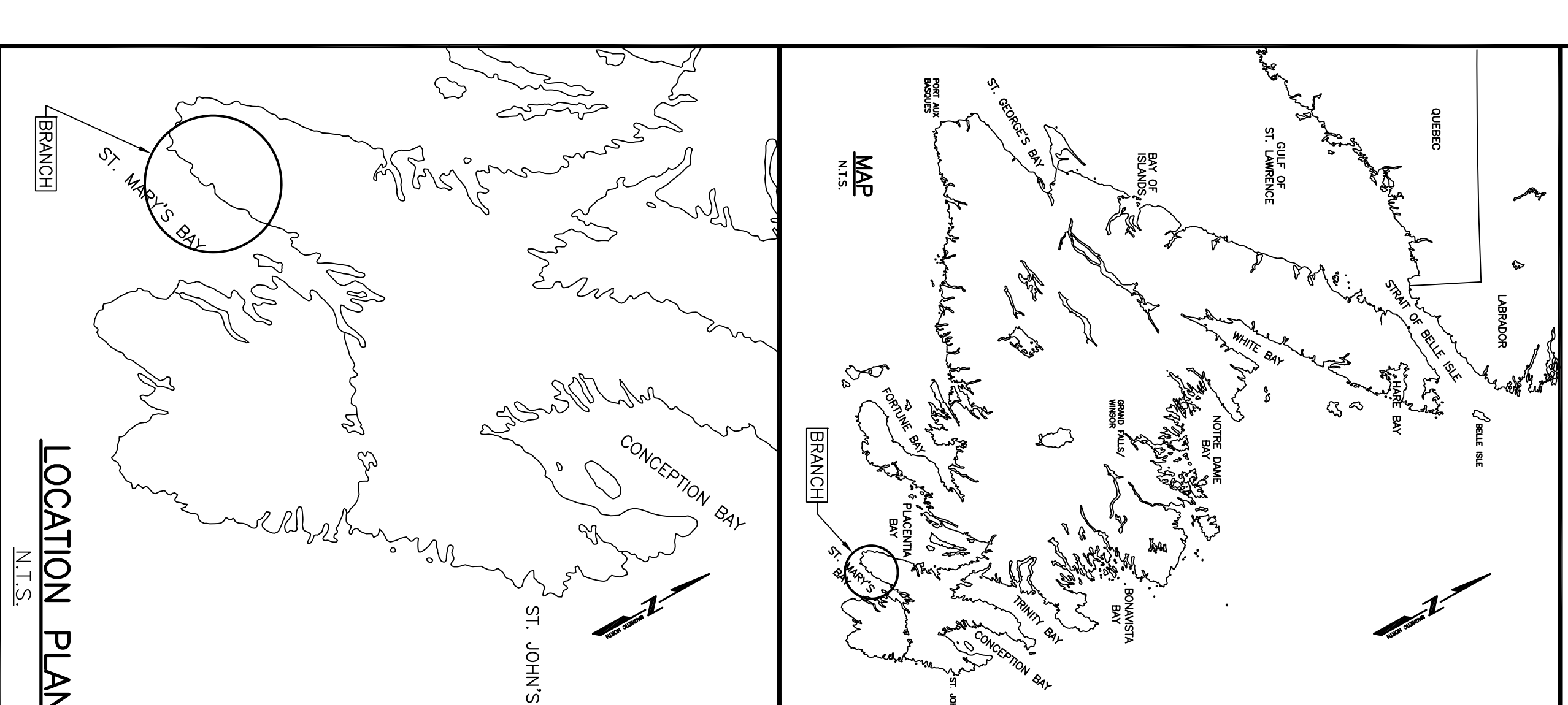
FISHERIES AND OCEANS  
CANADA



SMALL CRAFT HARBOURS

# ELECTRICAL SYSTEM CONSTRUCTION BRANCH NEWFOUNDLAND AND LABRADOR

PROJECT No. 721911



LIST OF DRAWINGS:

E1 OF 6	DEMOLITION SITE PLAN
E2 OF 6	NEW SITE PLAN
E3 OF 6	PARTIAL WHARF LAYOUT AND PEDESTAL DETAILS
E4 OF 6	NEW ELECTRICAL SHED LAYOUT AND DETAILS
E5 OF 6	LIGHT POLE AND TRENCH DETAILS
E6 OF 6	EXISTING ELECTRICAL SHED LAYOUT AND DETAILS
C1 OF 1	ELECTRICAL SHED AND TRENCHING DETAILS



SMALL CRAFT HARBOURS



NOTES:  
 1. ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.  
 2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

ELECTRICAL LEGEND

- EXISTING LIGHT POLE, WIRING AND CONDUIT TO REMAIN FOR REUSE IN NEW LAYOUT. LIGHTING FIXTURES TO BE REMOVED AND REPLACED WITH NEW LED LIGHTING FIXTURES. SEE LIGHT POLE DETAIL ON DRAWING E5.
- EXISTING JIB CRANE TO REMAIN.
- EXISTING ELECTRICAL PEDESTAL TO BE REPLACED WITH NEW. SEE DETAILS ON DRAWING E3.

DRAWING NOTES:

1. WITHIN EXISTING ELECTRICAL SHED, SUPPLY AND INSTALL LAMICOID LABELS (24 SUCH) TO EACH EXISTING METER WITHIN METER STACKS TO PROPERLY IDENTIFY EACH METER TO ITS ASSOCIATED PEDESTAL RECEPTACLE. EACH LABEL SHALL IDENTIFY THE RECEPTACLE'S PEDESTAL NUMBER, RECEPTACLE NUMBER, AMPERAGE, AND VOLTAGE. CONTRACTOR IS RESPONSIBLE TO IDENTIFY EACH METER WITH ITS ASSOCIATED PEDESTAL RECEPTACLE. COORDINATE ON SITE.
2. WITHIN EXISTING ELECTRICAL SHED, SUPPLY AND INSTALL NEW CALIBRATED AND MEASUREMENT CANADA CERTIFIED UTILITY METERS (24 SUCH) WITHIN METER STACKS. EACH NEW METER TO MATCH EXISTING AMPERAGE AND VOLTAGE. COORDINATE ON SITE PRIOR TO ORDERING MATERIALS.
3. WITHIN EXISTING ELECTRICAL SHED, SUPPLY AND INSTALL NEW GFCI CIRCUIT BREAKERS WITH GROUND FAULT SETTING AT 30mA (20 SUCH) WITHIN METER STACKS TO REPLACE EXISTING CIRCUIT BREAKERS THAT FEED PEDESTAL RECEPTACLES THAT ARE NOT RATED AT 120 VOLT, 15 AMP, NOR 120 VOLT, 20 AMP. NEW CIRCUIT BREAKERS SHALL BE C/W MOUNTING HARDWARE, IC RATING TO MATCH. EACH NEW CIRCUIT BREAKER TO MATCH EXISTING AMPERAGE AND VOLTAGE. COORDINATE ON SITE PRIOR TO ORDERING MATERIALS.
4. SUPPLY AND INSTALL NEW ELECTRIC BASEBOARD HEATER WITHIN EXISTING ELECTRICAL SHED TO REPLACE THE EXISTING HEATER. NEW ELECTRIC BASEBOARD HEATER SHALL BE 208/240 VOLT, 1 PHASE, 1000 WATT. CONNECT TO EXISTING CIRCUIT. EXTEND WIRING AND CONDUIT AS REQUIRED. COORDINATE ON SITE.

STAMP

REGISTERED PROFESSIONAL ENGINEER

PEGL

KENNETH P. NEIL

June 12/19

NEWBRAND & LEBLANC

PROVINCE OF NEWFOUNDLAND  
 PEPPER HOUSE  
 The Pepper House  
 ENGINEERING LIMITED  
 11400 Highway 100 West of Highway 100  
 St. John's, NL A1B 4X6  
 which is valid for the year 2019.

0	ISSUED FOR TENDER	06/12/19
A	ISSUED FOR REVIEW	05/08/19
revisions		date
project		project

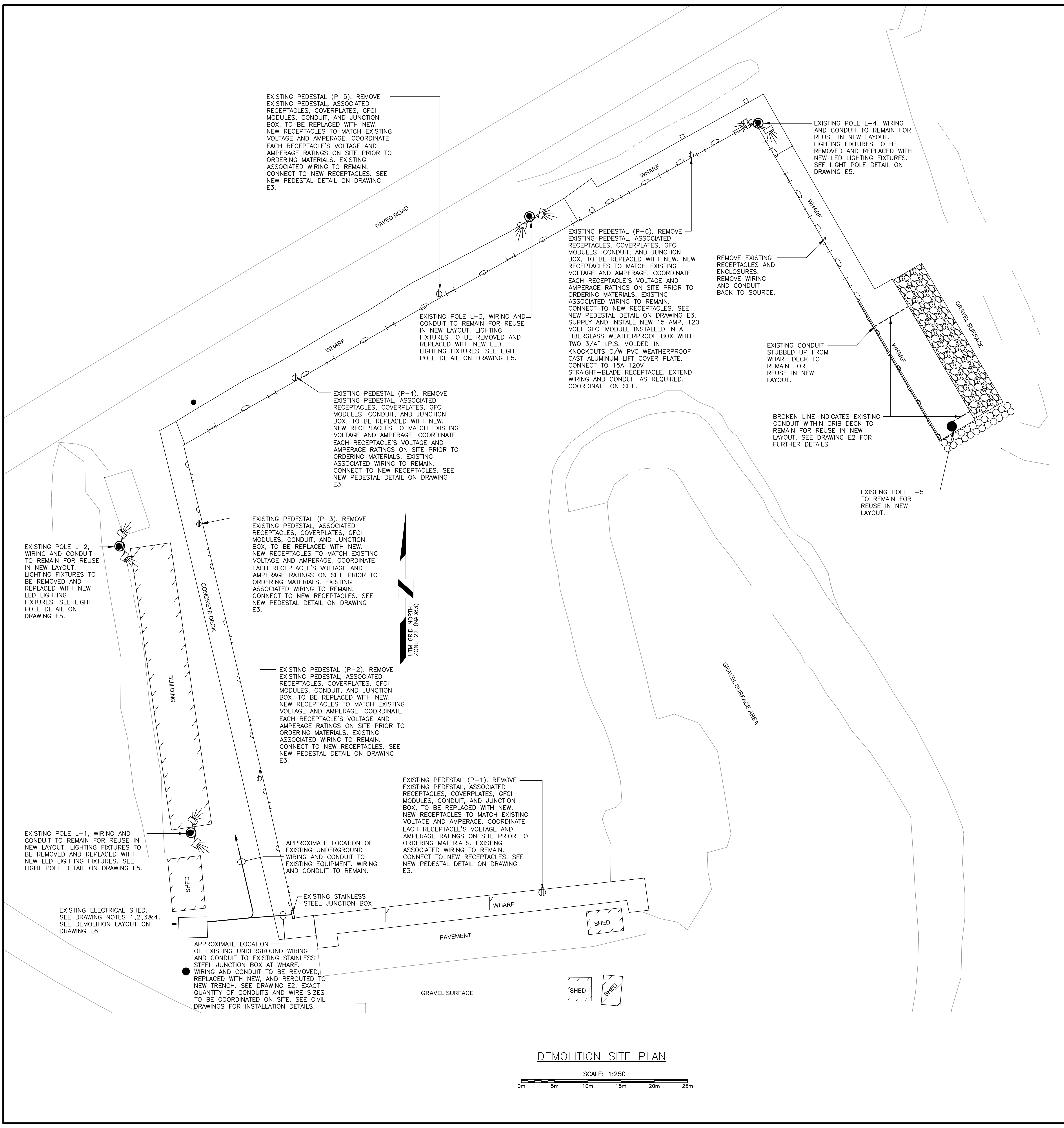
ELECTRICAL SYSTEM CONSTRUCTION BRANCH, NL

drawing design

DEMOLITION SITE PLAN

designed KN	concu
date JUNE 2019	
drawn KN	dessine
date JUNE 2019	
approved	approve
Tender	Submission
DFO Project Manager	

721911  
 drawing no. no. du dessin  
 E1



DEMOLITION SITE PLAN  
 SCALE: 1:250  
 0m 5m 10m 15m 20m 25m







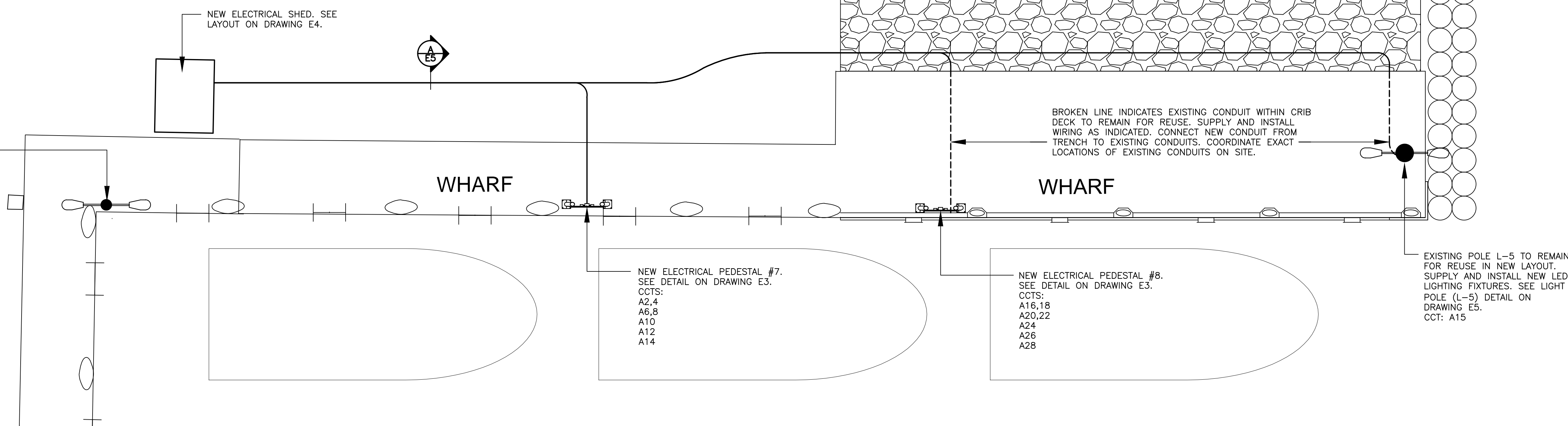
SMALL CRAFT HARBOURS



NOTES:  
 1. ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.  
 2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

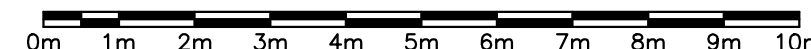
NEW ELECTRICAL SHED. SEE LAYOUT ON DRAWING E4.

EXISTING POLE L-4. WIRING AND CONDUIT TO REMAIN FOR REUSE IN NEW LAYOUT. LIGHTING FIXTURES TO BE REMOVED AND REPLACED WITH NEW LED LIGHTING FIXTURES. SEE LIGHT POLE DETAIL ON DRAWING E5.



NEW WHARF PLAN

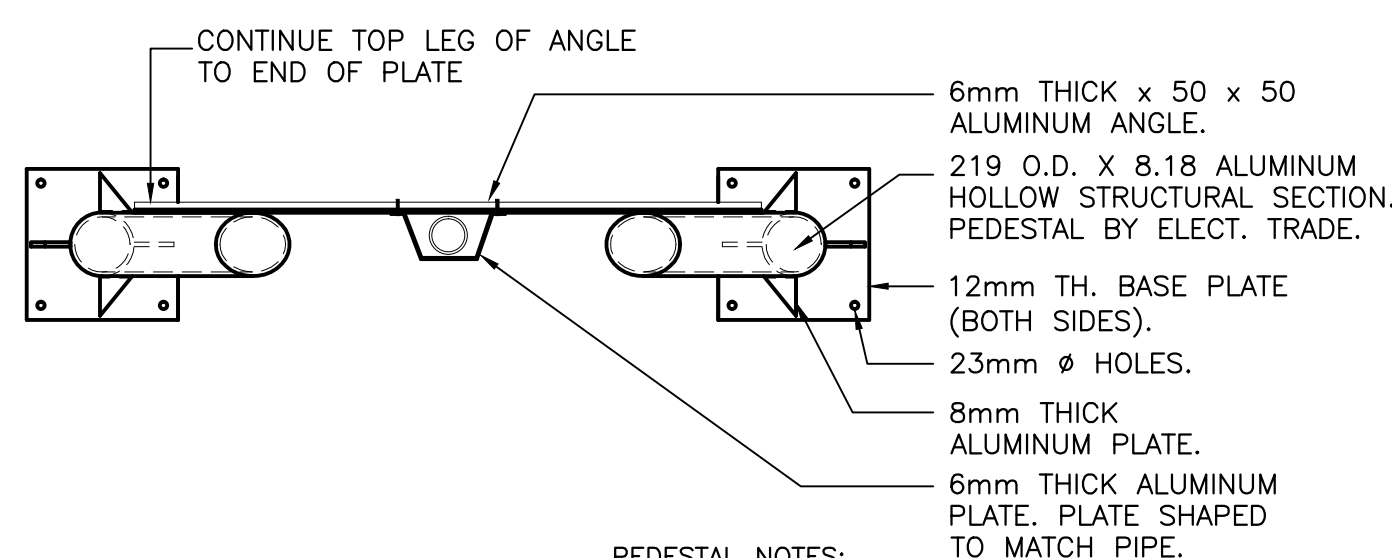
SCALE : 1:100



PEDESTALS 1-6:

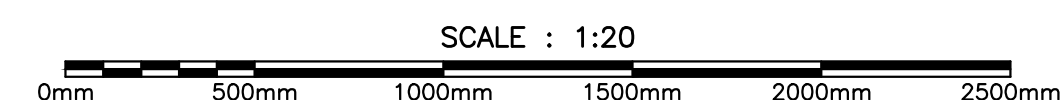
RECEPTACLES TO MATCH EXISTING. COORDINATE EACH RECEPTACLE'S VOLTAGE AND AMPERAGE RATINGS ON SITE PRIOR TO ORDERING MATERIALS. EXISTING WIRING TO REMAIN. CONNECT TO NEW RECEPTACLES.

COORDINATE EXACT MOUNTING HEIGHT OF JUNCTION BOX AND DIN RAIL ON SITE SUCH THAT EXISTING WIRING SHALL CONNECT TO NEW BOX LOCATION. DO NOT SPLICE CONDUCTORS.

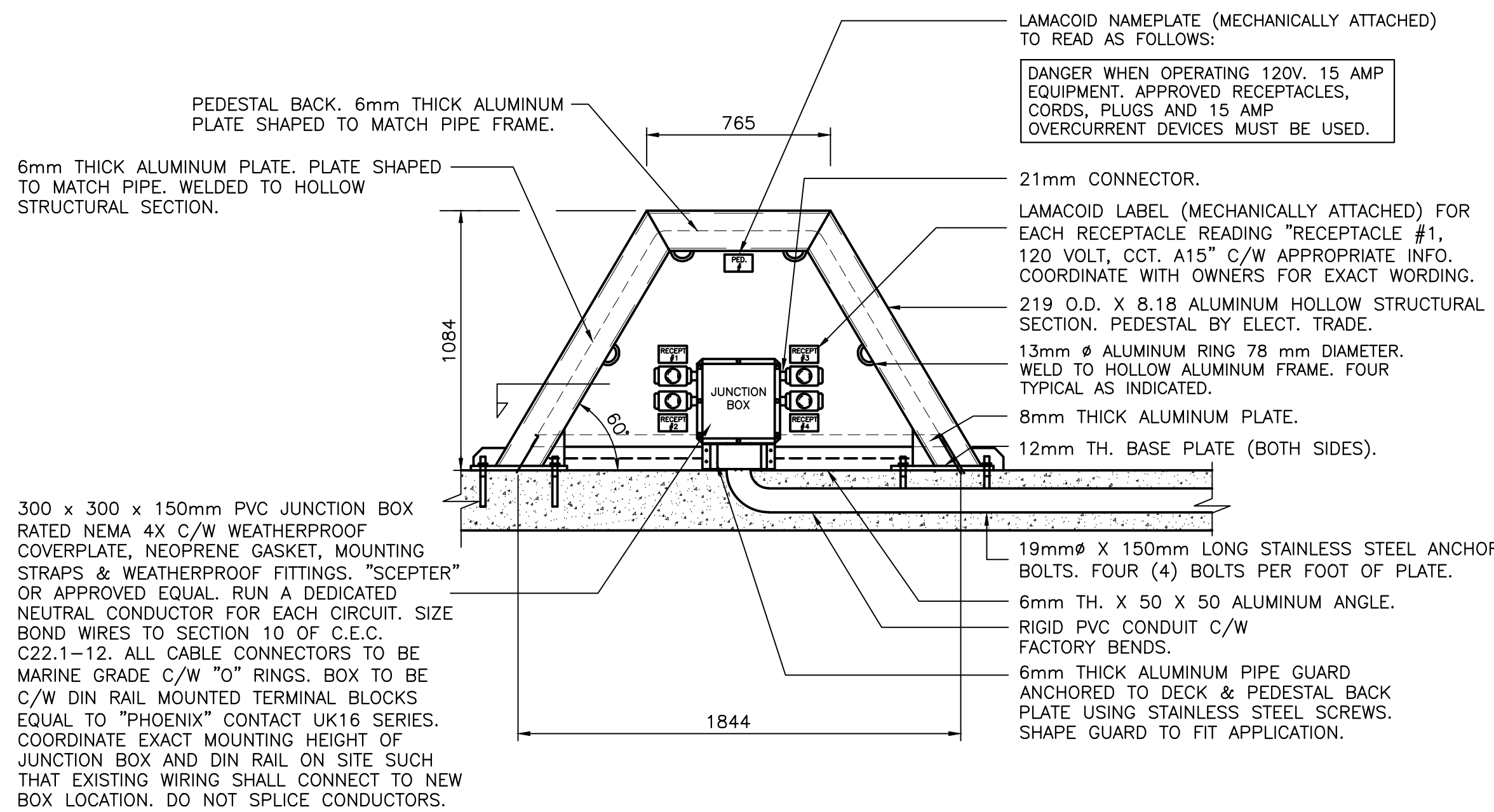


PEDESTAL BY ELECTRICAL TRADE. SUBMIT SHOP DRAWINGS PRIOR TO MANUFACTURE.

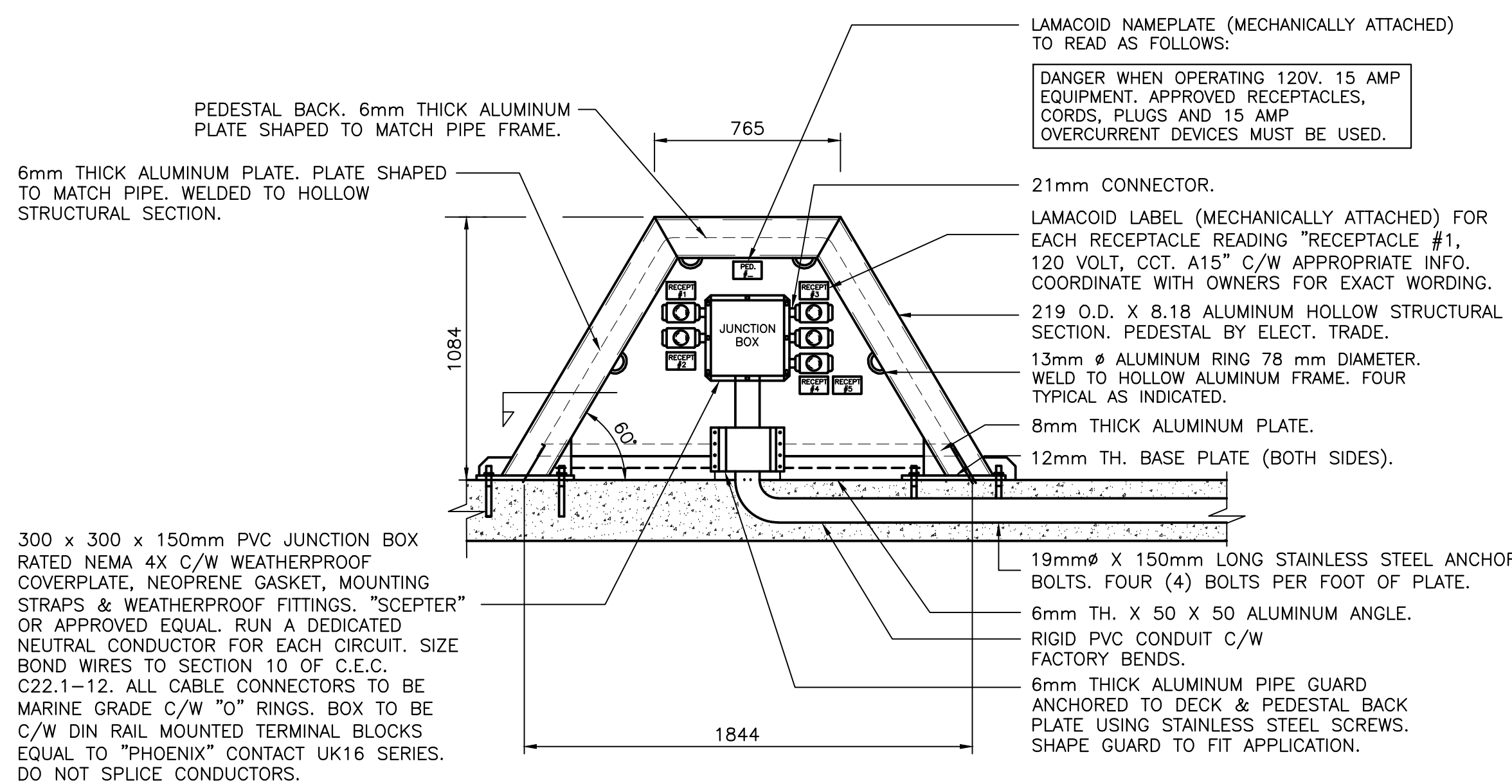
TYPICAL ELECTRICAL PEDESTAL DETAIL



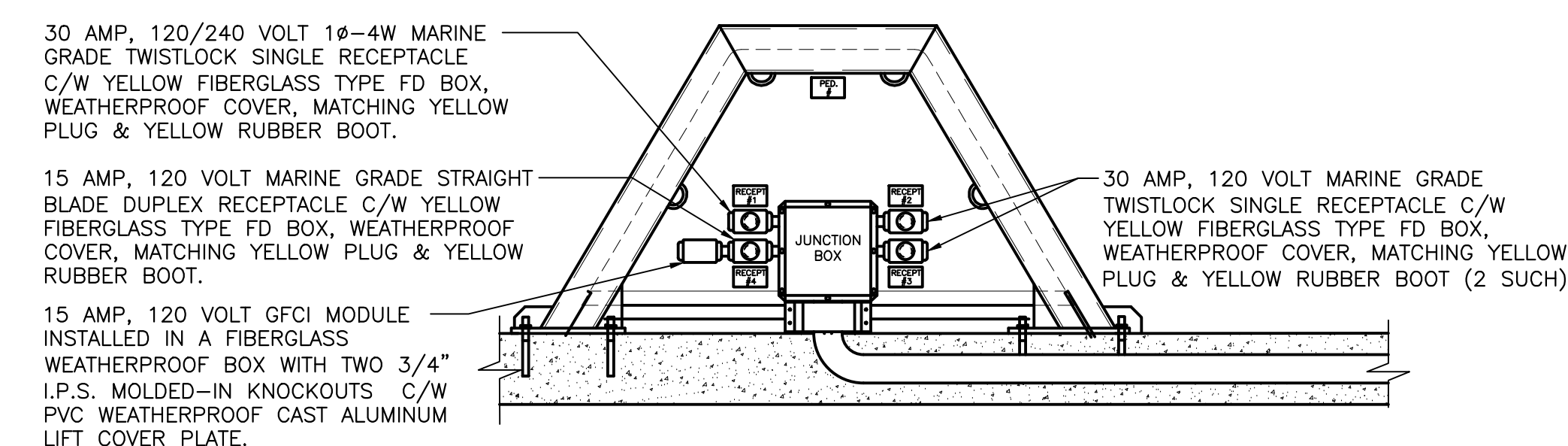
- PEDESTAL NOTES:
- REINFORCING OMITTED FOR CLARITY.
  - MOUNT RECEPTACLES IN PVC FD TYPE OUTLET BOX. COVER, GASKET & MOUNTING LUGS. HUBS, WEATHER PROOF FITTINGS, CAST "CROUSE HINDS" OR EQUAL, C/W 20mm
  - UTILIZE RIGID PVC CONDUIT C/W MARINE GRADE FITTINGS. SECURE TO PEDESTAL USING 2 HOLE STRAPS & S.S. SCREWS. TYPICAL.



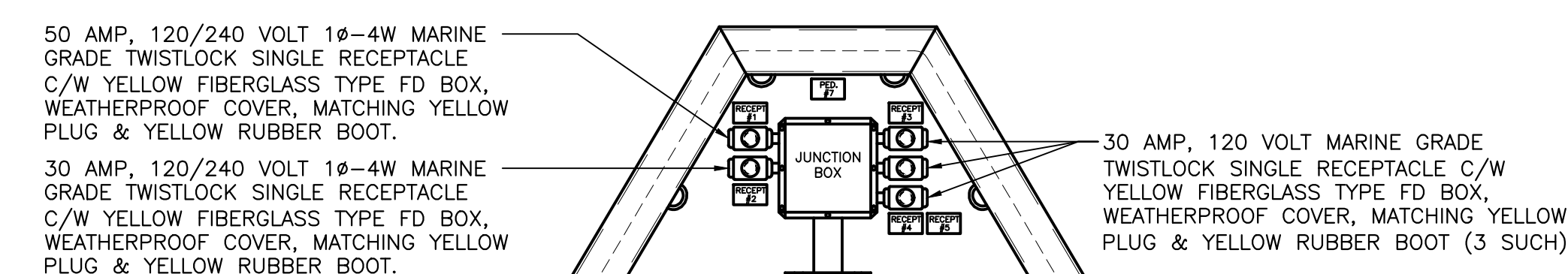
ELEVATION PEDESTALS 1 - 6



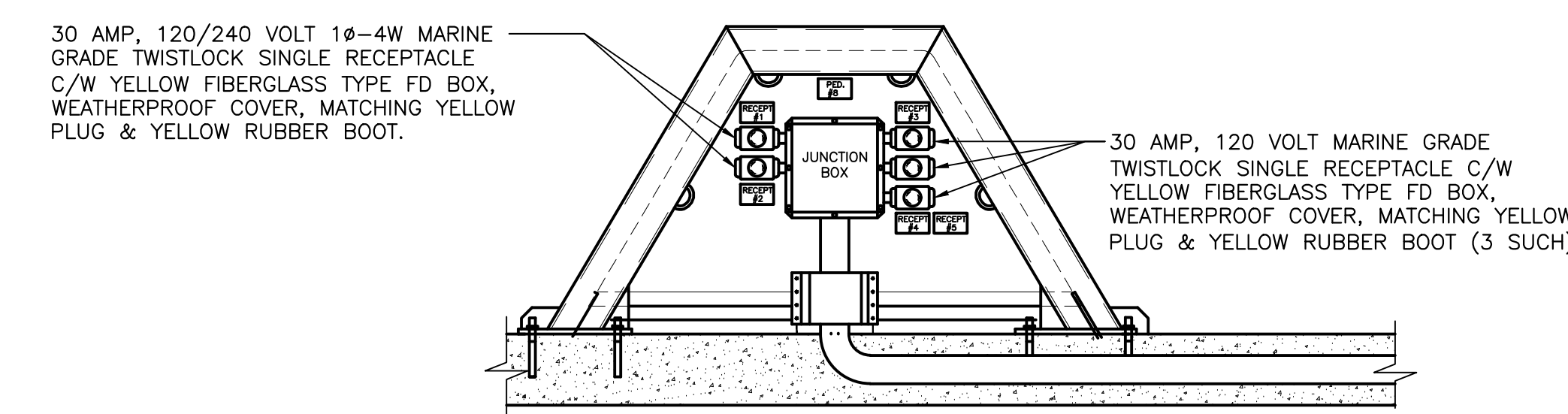
ELEVATION PEDESTALS 7 & 8



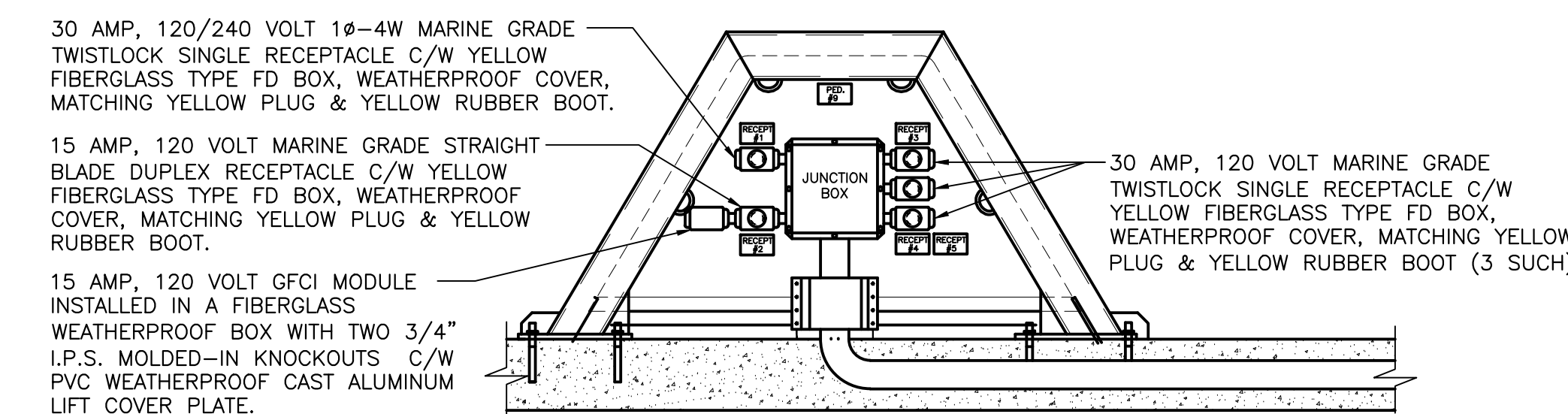
ELECTRICAL PEDESTAL #1 - #6  
N.T.S.



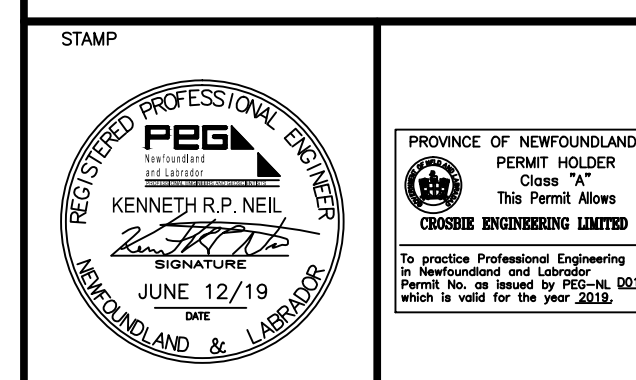
ELECTRICAL PEDESTAL #7  
N.T.S.



ELECTRICAL PEDESTAL #8  
N.T.S.



ELECTRICAL PEDESTAL #9  
N.T.S.



Q	ISSUED FOR TENDER	06/12/19
A	ISSUED FOR REVIEW	05/08/19
revisions		date

ELECTRICAL SYSTEM CONSTRUCTION BRANCH, NL

PARTIAL WHARF LAYOUT AND PEDESTAL DETAILS

designed	KN	concu
date	JUNE 2019	
drawn	KN	desine
date	JUNE 2019	
approved		approve
Tender		Submission
DFO Project Manager		

721911

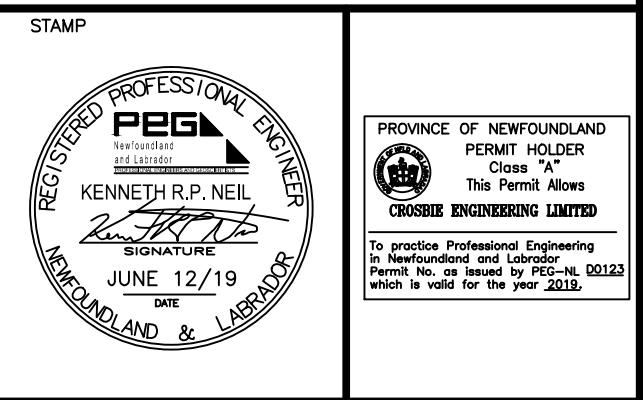
drawing no. E3



SMALL CRAFT HARBOURS



NOTES:  
 1. ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.  
 2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.



0	ISSUED FOR TENDER	06/12/19
A	ISSUED FOR REVIEW	05/08/19
revisions		date
project		project

ELECTRICAL SYSTEM CONSTRUCTION BRANCH, NL

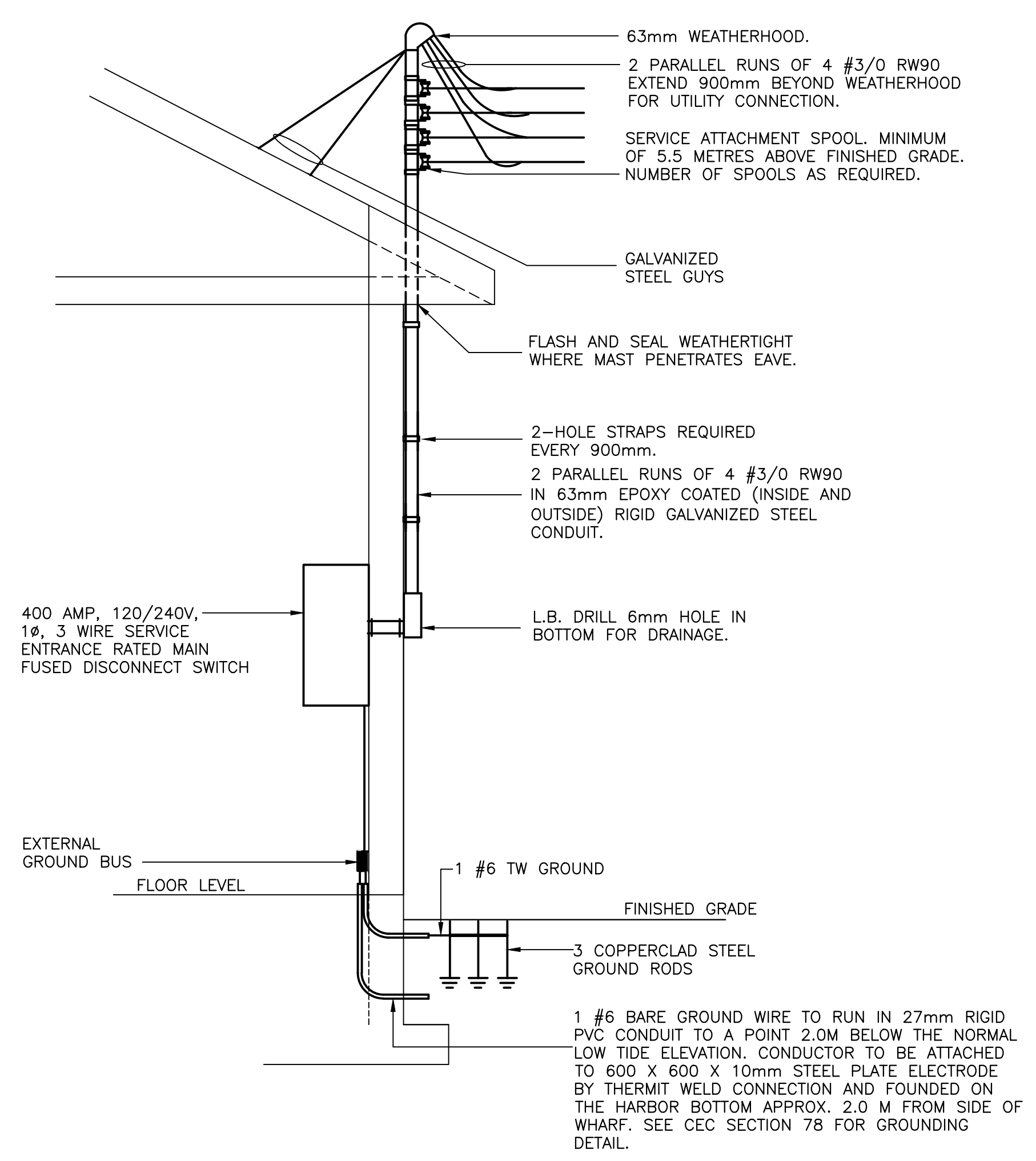
NEW ELECTRICAL SHED LAYOUT AND DETAILS

designed	KN	concu
date	JUNE 2019	
drawn	KN	dessine
date	JUNE 2019	
approved		approve
Tender		Submission
DFO Project Manager		

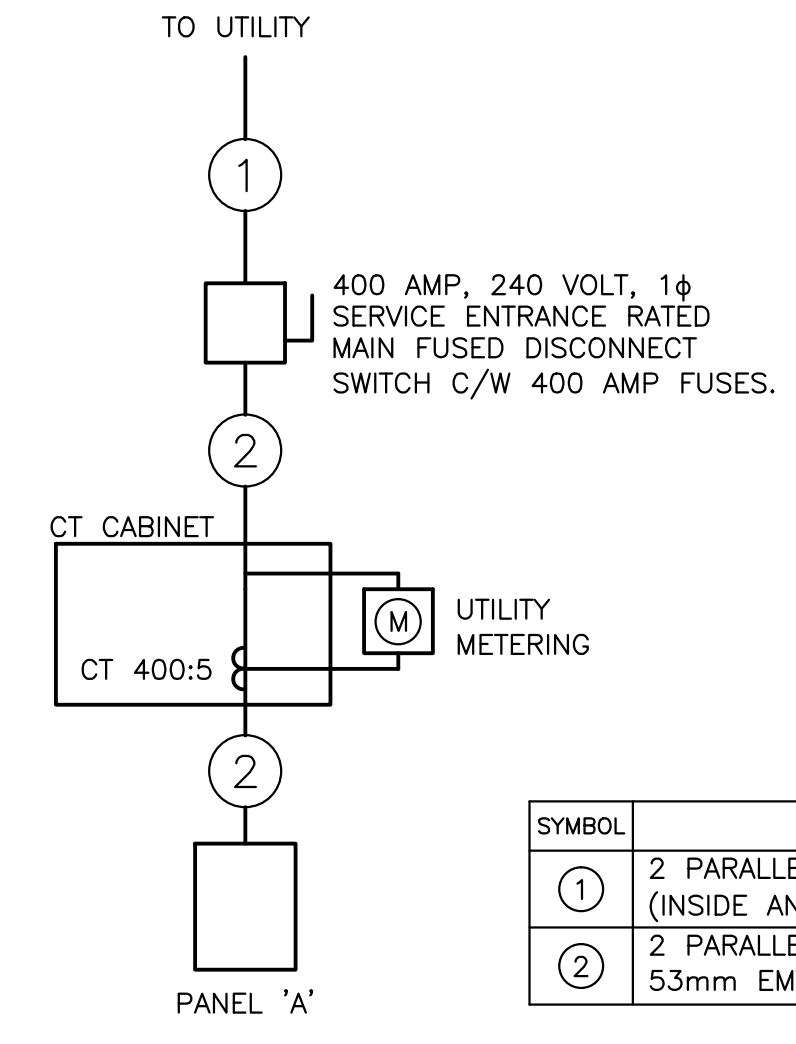
721911  
 drawing no. / no. du dessin  
 E4

- NEW ELECTRICAL SHED
- NEW MULTI-CIRCUIT ENERGY METER NOTES:**
- NEW MULTI-CIRCUIT ENERGY METER ENCLOSURES C/W DISPLAYS AND CT'S. SHALL MONITOR ALL RECEPTACLE CIRCUITS (5 SUCH) OF NEW ELECTRICAL PEDESTALS (2 SUCH). CAPACITY FOR MONITORING 30 CIRCUITS MINIMUM. MEASURE AMPERAGE, VOLTAGE, KW, KVA, KVAR, PF, HZ, KWH. INTELLIMETER OR APPROVED EQUAL. ALL METERS TO BE FACTORY SEALED AND REGISTERED WITH MEASUREMENT CANADA. COORDINATE WITH HARBOUR AUTHORITY.
  - CONTRACTOR TO SUPPLY AND INSTALL TEST BLOCK EQUAL TO MESURINA 4 POLE TEST SWITCH C/W COVER. TEST BLOCK TO BE TIED INTO NEW MULTI-METERING SYSTEM TO MEASURE VOLTAGE REFERENCE. PROVIDE LABEL TO READ "VOLTAGE TEST BLOCK".
  - CONTRACTOR TO INSTALL MULTI-METERING SYSTEM IN COMPLIANCE WITH MEASUREMENT CANADA. REFER TO THE FOLLOWING MEASUREMENT CANADA DOCUMENTS:
    - S-E-04--INSTALLATION REQUIREMENTS FOR MULTIPLE CUSTOMER METERING SYSTEMS <https://www.ic.gc.ca/eic/site/mc-mcnsf/eng/1m00586.html>
    - S-E-05--SPECIFICATION FOR THE INSTALLATION AND USE OF ELECTRICITY METERS -- INPUT CONNECTIONS AND RATINGS. <https://www.ic.gc.ca/eic/site/mc-mcnsf/eng/1m00172.html>
    - S-E-08--SPECIFICATIONS FOR THE INSTALLATION AND USE OF ELECTRICITY METERS -- MEASUREMENT CANADA STANDARD DRAWINGS FOR ELECTRICITY METERING INSTALLATIONS <https://www.ic.gc.ca/eic/site/mc-mcnsf/eng/1m04068.html>
  - CONTRACTOR SHALL ARRANGE FOR SUPPLIERS, EQUIPMENT MANUFACTURERS, AND/OR OTHERS AS REQUIRED FOR ALL COMMISSIONING ACTIVITIES OF THIS SYSTEM. ENSURE PROPER OPERATION OF EQUIPMENT AND ON SITE TRAINING, MAKING NECESSARY CORRECTIONS AS REQUIRED. PROVIDE COMMISSIONING REPORT INCLUDING LIST OF ATTENDEES AND DATE OF ON SITE COMMISSIONING. ALL COSTS ASSOCIATED WITH COMMISSIONING REQUIREMENTS SHALL BE INCLUDED WITHIN TENDER PRICE.

CONTRACTOR TO COORDINATE WITH UTILITY COMPANY NEW SERVICE REQUIREMENTS. ACTUAL MOUNTING HEIGHT OF SERVICE MAST TO BE COORDINATED WITH UTILITY COMPANY. ADJUST CONDUCTOR AND CONDUIT LENGTHS ON THIS DETAIL AS REQUIRED.



SERVICE ELEVATION DETAIL NEW ELECTRICAL SHED  
 N.T.S.



SYMBOL	WIRE AND CONDUIT SIZE
①	2 PARALLEL RUNS OF (4 #3/0 RW90 IN 63mm EPOXY COATED (INSIDE AND OUTSIDE) RIGID GALVANIZED STEEL CONDUIT).
②	2 PARALLEL RUNS OF (4 #3/0 RW90 + 1 #4 TW GROUND IN 53mm EMT CONDUIT).

SINGLE LINE DIAGRAM - NEW ELECTRICAL SHED  
 N.T.S.

NEW PANEL

VOLTS	120/240	PANEL NAME	"A"	MAINS RATED	400 AMP
PHASE	1	LOCATION	NEW ELECTRICAL SHED	MOUNTING SURFACE	
WIRE	3	FED FROM	UTILITY	MIN. CIRCUITS	48

DESIGNATION	WATTAGE		WIRE	BKR	CCT	A	B	CCT	BKR	WIRE	WATTAGE		DESIGNATION
	Ø A	Ø B									Ø A	Ø B	
LIGHTING (SHED)	100		12	15	1			2	50	4	4200		PEDESTAL #7 (RECEPT. #1)
EXTERIOR LIGHTING (SHED)		40	12	15	3			4	2	4	4200		PEDESTAL #7 (RECEPT. #1)
EXTERIOR RECEPTACLE (SHED)	120		12	15	5			6	30	2	2520		PEDESTAL #7 (RECEPT. #2)
SPARE			12	15	7			8	2	8	2520		PEDESTAL #7 (RECEPT. #3)
RECEPTACLES (SHED)	360		12	15	9			10	30	8	2520		PEDESTAL #7 (RECEPT. #4)
HEATER		500	12	15	11			12	30	8	2520		PEDESTAL #7 (RECEPT. #5)
POLE LIGHTING (L-5)	500		12	15	13			14	30	8	2520		PEDESTAL #7 (RECEPT. #5)
SPARE			12	15	15			16	30	8	2520		PEDESTAL #8 (RECEPT. #1)
SPARE			12	15	17			18	2	2	2520		PEDESTAL #8 (RECEPT. #2)
SPARE			15	19				20	30	8	2520		PEDESTAL #8 (RECEPT. #3)
SPARE			15	21				22	2	2	2520		PEDESTAL #8 (RECEPT. #4)
SPARE			15	23				24	30	6	2520		PEDESTAL #8 (RECEPT. #5)
SPARE			15	25				26	30	6	2520		PEDESTAL #8 (RECEPT. #5)
SPARE			15	27				28	30	6	2520		PEDESTAL #8 (RECEPT. #5)
SPARE			15	29				30					
SPARE			15	31				32					
SPARE			15	33				34					
SPARE			15	35				36					
SPARE			15	37				38					
SPARE			15	39				40					
SPARE			15	41				42					
SPARE			15	43				44	30				SPARE
SPARE			15	45				46	30				SPARE
SPARE			15	47				48	30				SPARE

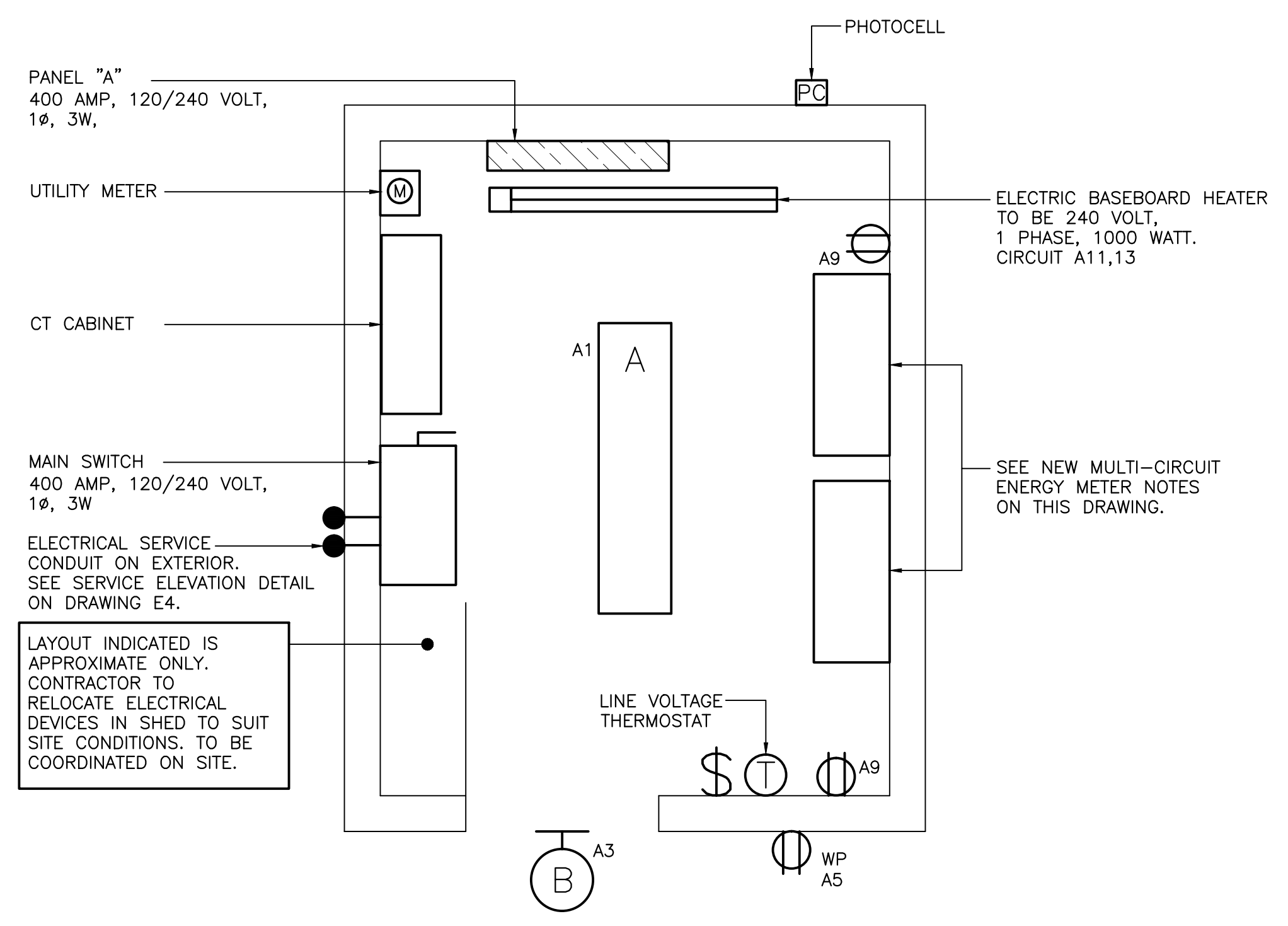
\* - INDICATES CLASS A GFCI CIRCUIT BREAKER  
 \*\* - INDICATES GFCI CIRCUIT BREAKER WITH GROUND FAULT SETTING AT 30mA.

SERVICE DEMAND 49.04 KW 205 AMP @ 240 VOLT, 1Ø

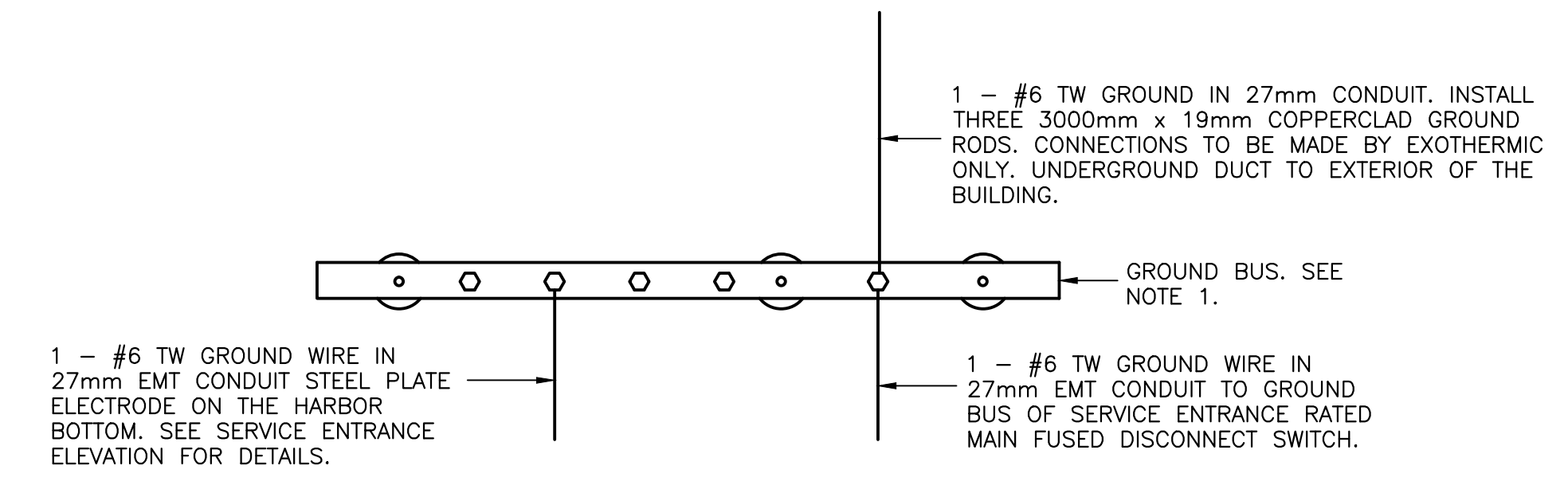
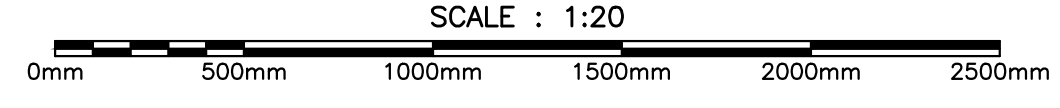
PANEL TUB FOR PANEL 'A' SHALL BE MINIMUM 710mm (28") WIDE TO ACCOMMODATE MULTI-CIRCUIT METERING SYSTEM CT'S & LARGE BRANCH CIRCUIT WIRING.

ELECTRICAL LEGEND

- LED LIGHTING FIXTURE C/W PHOTOCELL. TO BE PHILIPS #313LED16704K120 OR APPROVED EQUAL. SEE SPEC.
- LED LIGHTING FIXTURE. TO BE PHILIPS #DWA43L940-4 C/W ACRYLIC LENS OR APPROVED EQUAL. SEE SPEC.



NEW ELECTRICAL SHED PLAN  
 SCALE : 1:20



- NOTES:
- GROUND BUS TO BE 600mm x 50mm x 6mm COPPER. WALL MOUNT 450mm A.F.F. ON PORCELAIN STAND-OFF TYPE INSULATORS. MOUNT NEAR SERVICE ENTRANCE BOARD.
  - RESISTANCE TO GROUND SHALL NOT EXCEED 10 OHMS. TEST AND PROVIDE ENGINEER WITH RESULTS.
  - BOND ALL MECHANICAL EQUIPMENT SUCH AS DUCTWORK, PIPING, TANKS, ETC.

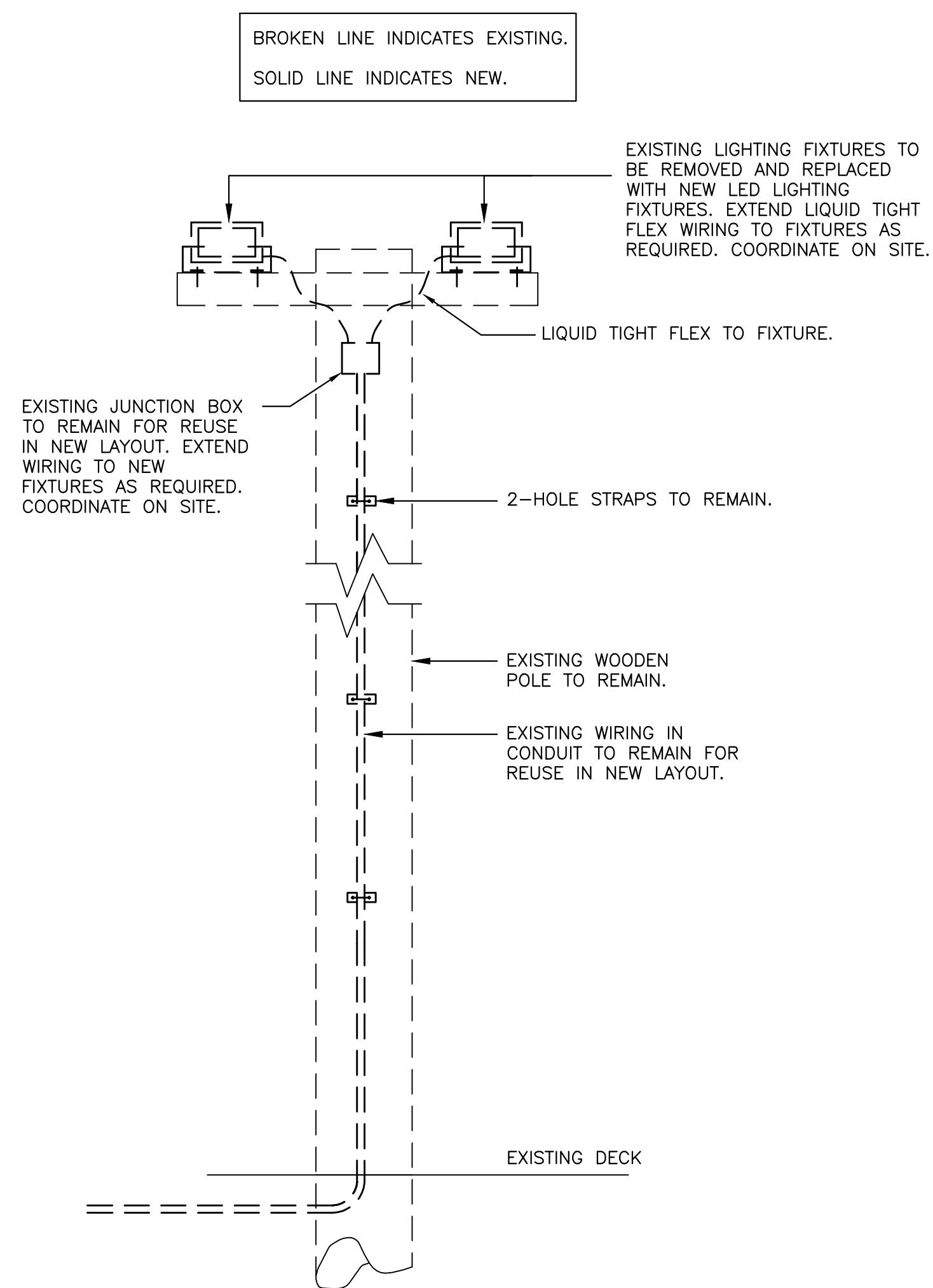
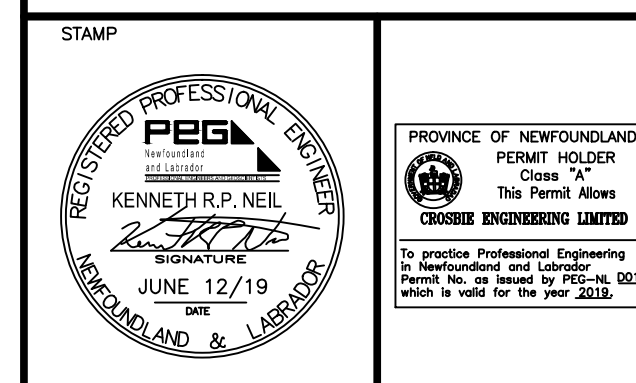
GROUND BUS DETAIL - NEW ELECTRICAL SHED  
 N.T.S.



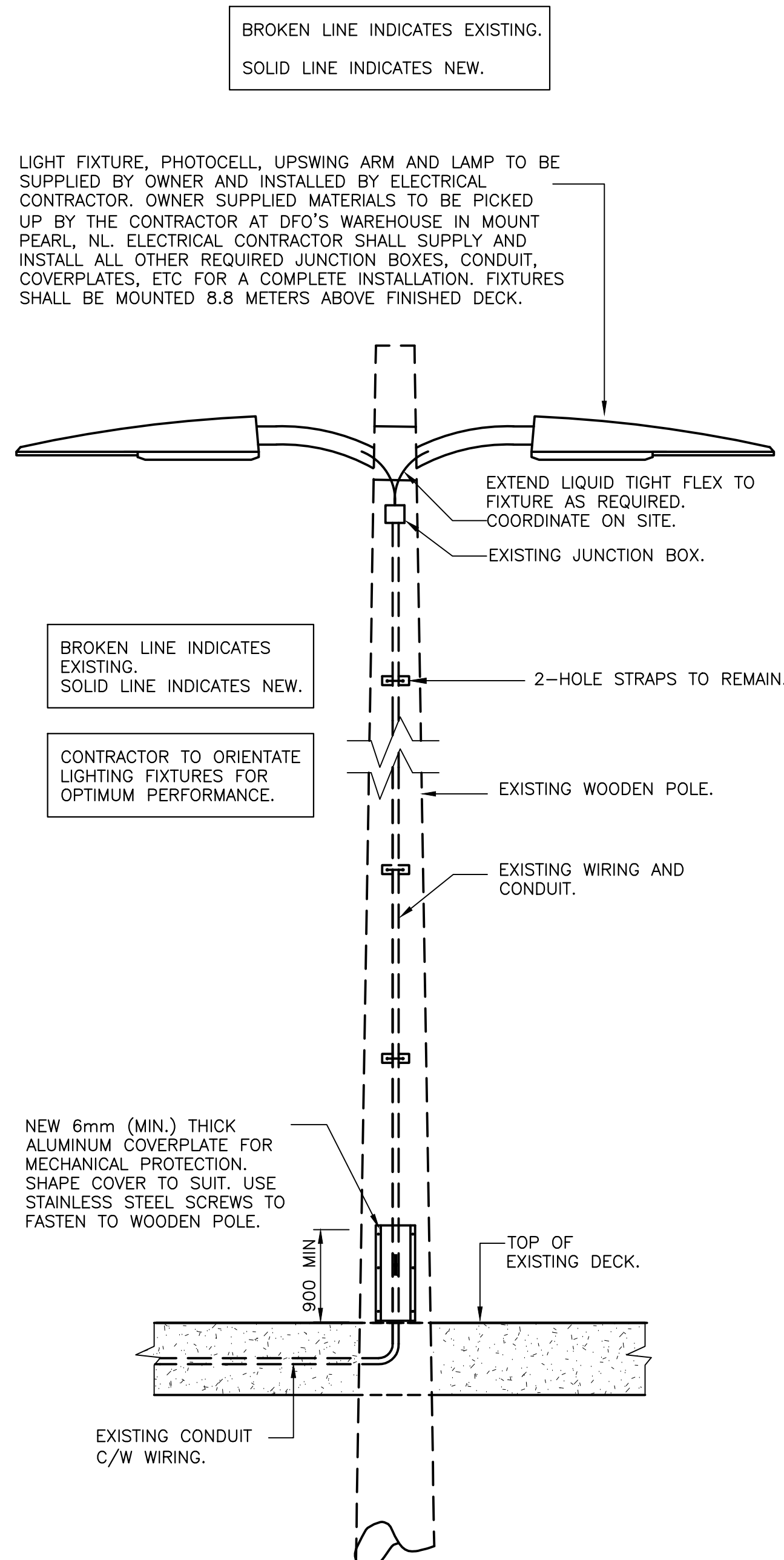
SMALL CRAFT HARBOURS



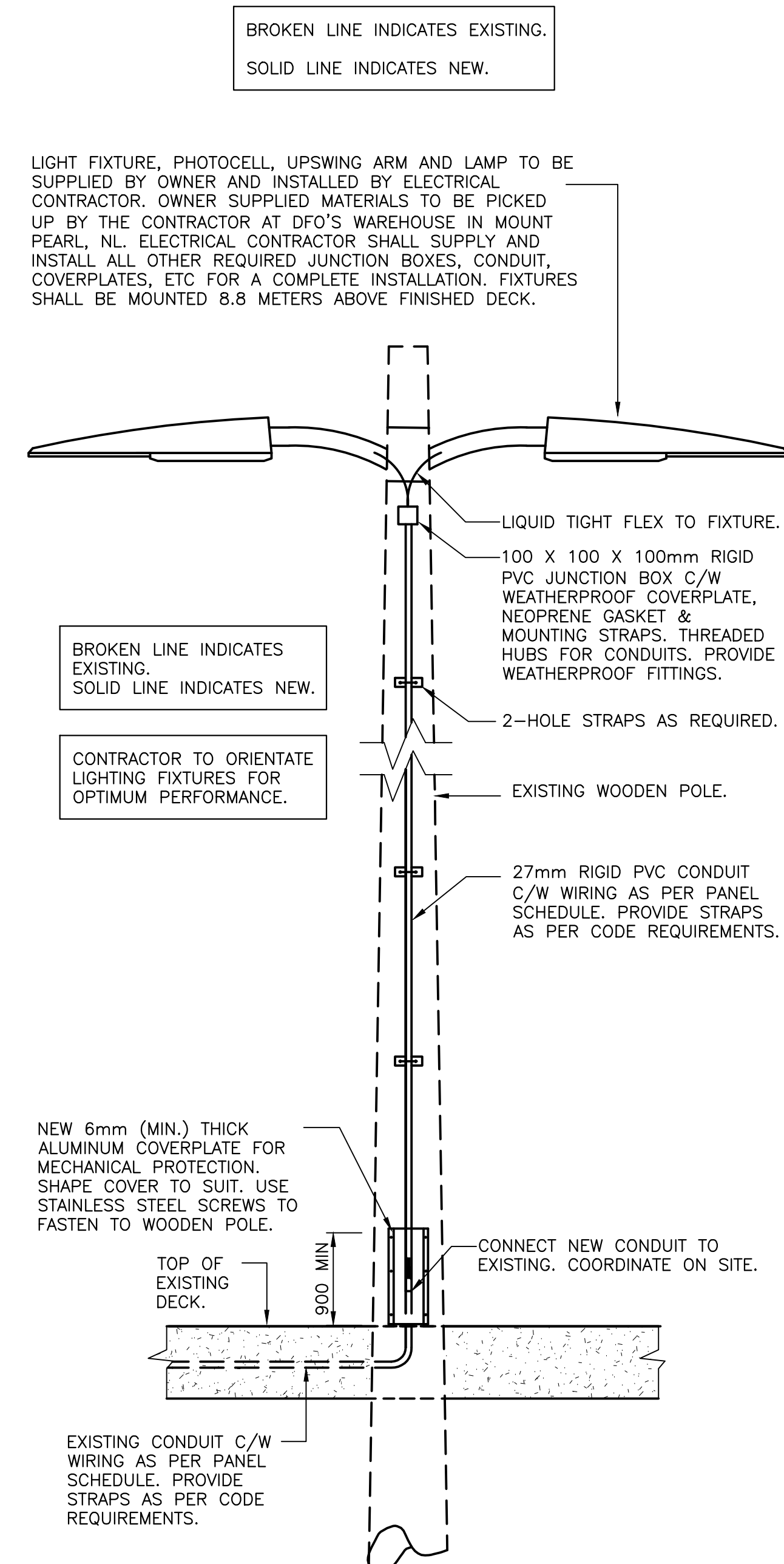
- NOTES:
1. ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.



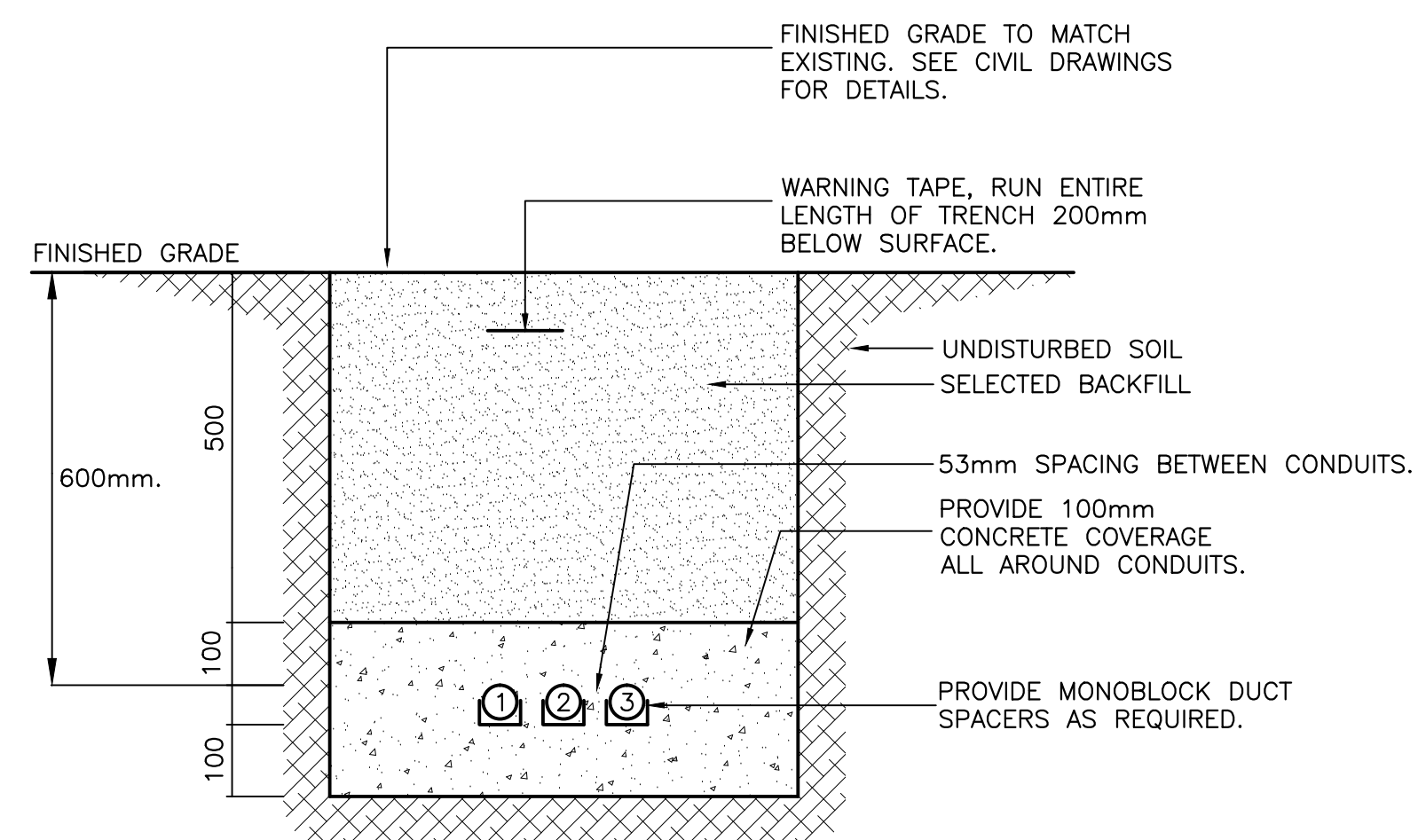
EXISTING LIGHT POLES (L1-L4)  
DETAIL - DEMOLITION  
N.T.S.



EXISTING LIGHT POLES (L1-L4)  
DETAIL - NEW LAYOUT  
N.T.S.



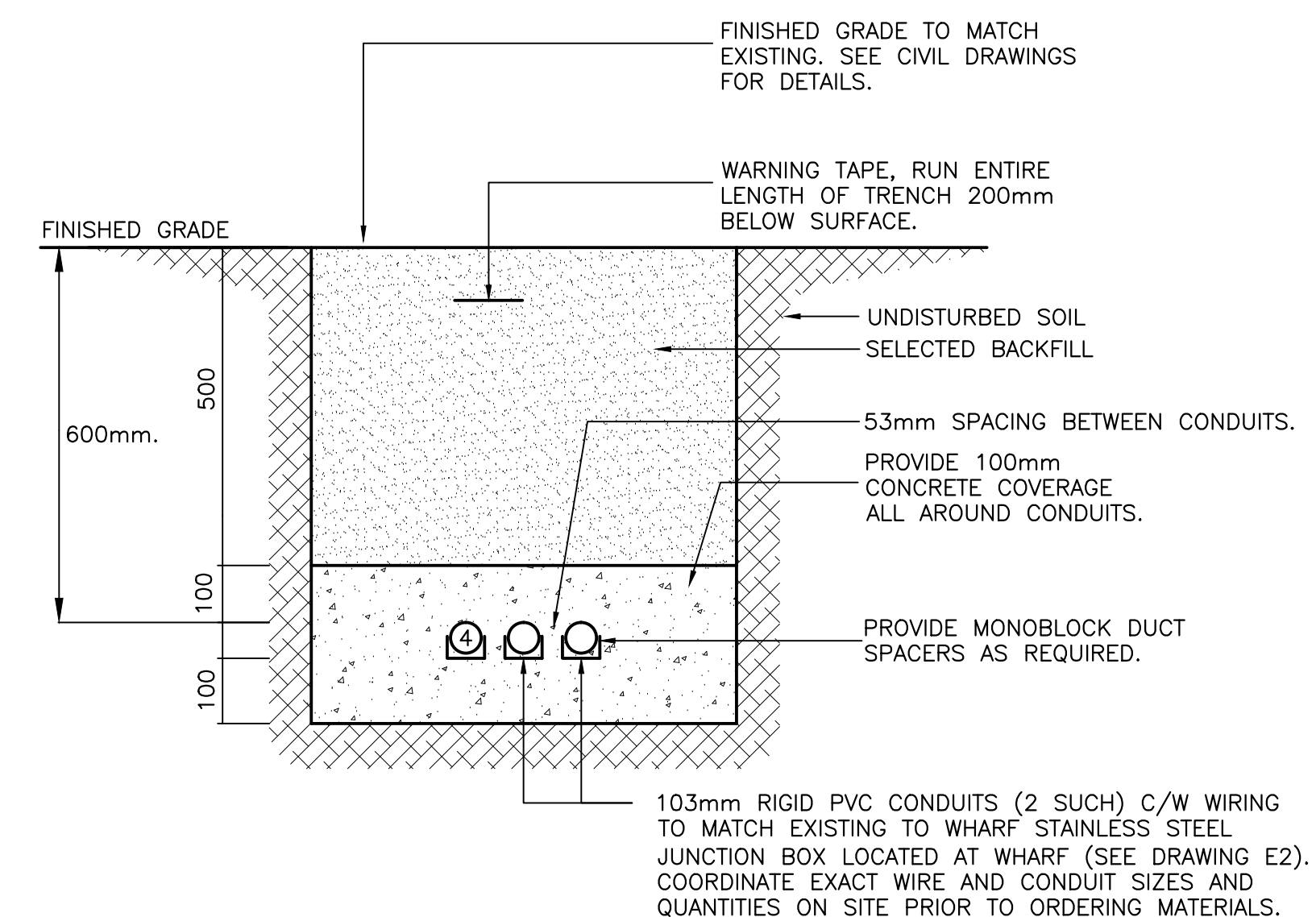
EXISTING LIGHT POLE (L5)  
DETAIL - NEW LAYOUT  
N.T.S.



TRENCH DETAIL A  
N.T.S. (E2,E3)

- TRENCHING NOTES:
1. ALL TRENCHES SHALL BE BACKFILLED WITH SELECTED BACKFILL AND TAMPED IN 300mm LAYERS. EXCEPT AT ROAD CROSSINGS WHERE THE BACKFILL SHALL BE THE SAME MATERIAL AS THE ROAD BED AND TAMPED IN 150mm LAYERS. EXCESS FILL SHALL BE PLACED ON TOP TO ALLOW FOR SETTLING.
  2. THE DUCTS SHALL BE SUPPORTED BY APPROVED SPACERS. NO WIRE OR METAL TIES TO BE USED.
  3. COPPER FISH WIRE MINIMUM #8 MUST BE INSTALLED IN ALL DUCTS.
  4. ELECTRICAL DUCT MUST BE RIGID PVC OR APPROVED EQUIVALENT.
  5. ALL DUCTS AND FITTINGS MUST BE CSA APPROVED.
  6. ALL DUCTS ARE TO BE SECURELY CAPPED AT BOTH ENDS.
  7. ALL FITTINGS, COUPLINGS AND ADAPTERS ARE TO BE SOLVENT WELD.

SYMBOL	UNDERGROUND WIRE AND CONDUIT SIZE
①	9 #8 RWU90 + 3 #4 RWU90 + 1 #4 TW GROUND IN 53mm RIGID PVC CONDUIT (PEDESTAL #7)
②	6 #8 RWU90 + 6 #6 RWU90 + 1 #6 TW GROUND IN 53mm RIGID PVC CONDUIT (PEDESTAL #8)
③	2 #10 RWU90 + 1 #12 TW GROUND IN 27mm RIGID PVC CONDUIT (LIGHT POLE #1)
④	2 #12 RWU90 + 9 #8 RWU90 + 1 #8 TW GROUND IN 53mm RIGID PVC CONDUIT (PEDESTAL #9)



TRENCH DETAIL B  
N.T.S. (E2)

Q	ISSUED FOR TENDER	06/12/19
A	ISSUED FOR REVIEW	05/08/19
revisions		date
project		projct

ELECTRICAL SYSTEM CONSTRUCTION BRANCH, NL

LIGHT POLE AND TRENCH DETAILS

designed KN	concu
date JUNE 2019	
drawn KN	dessine
date JUNE 2019	
approved	approve
Tender	Submission
DFO Project Manager	

721911

drawing no. no. du dessin  
E5



SMALL CRAFT HARBOURS



NOTES:  
 1. ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.  
 2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

CONTRACTOR TO CLEARLY INDICATE WITH LAMICOID LABEL ON FRONT OF PANEL THAT THIS PANEL HAS A WILD LEG.

NEW PANEL		PANEL NAME "B"		MAINS RATED 100 AMP	
VOLTS 120/240 (WILD LEG)		LOCATION EXISTING ELECTRICAL SHED		MOUNTING SURFACE	
PHASE 3		FED FROM PANEL "A" (EX.SHED)		MIN.CIRCUITS 24	
WIRE 4					

DESIGNATION	WATTAGE			CCT	A B C	CCT	BKR	WATTAGE			DESIGNATION
	Ø A	Ø B	Ø C					Ø A	Ø B	Ø C	
SPARE				15	1	2	30	8	2184	2184	PEDESTAL #9 (RECEPT. #1)
SPARE				15	3	4	2				~ SPACE ~
~ SPACE ~				5		6					~ SPACE ~
SPARE				15	7	8	30	8	2520	2520	PEDESTAL #9 (RECEPT. #2)
SPARE				15	9	10	30	8	2520	2520	PEDESTAL #9 (RECEPT. #3)
~ SPACE ~				11		12					~ SPACE ~
SPARE				15	13	14	30	8	2520	2520	PEDESTAL #9 (RECEPT. #4)
SPARE				15	15	16	15	12	1260	1260	PEDESTAL #9 (RECEPT. #5)
~ SPACE ~				17		18					~ SPACE ~
SPARE				15	19	20	15				SPARE
SPARE				15	21	22	15				SPARE
~ SPACE ~				23		24					~ SPACE ~

\* - INDICATES CLASS A GFCI CIRCUIT BREAKER  
 \*\* - INDICATES GFCI CIRCUIT BREAKER WITH GROUND FAULT SETTING AT 30mA.

SERVICE DEMAND 18.21 KW 44 AMP @ 240 VOLT, 3Ø

PANEL TUB FOR PANEL 'B' SHALL BE MINIMUM 710mm (28") WIDE TO ACCOMMODATE MULTI-CIRCUIT METERING SYSTEM CT'S & LARGE BRANCH CIRCUIT WIRING.

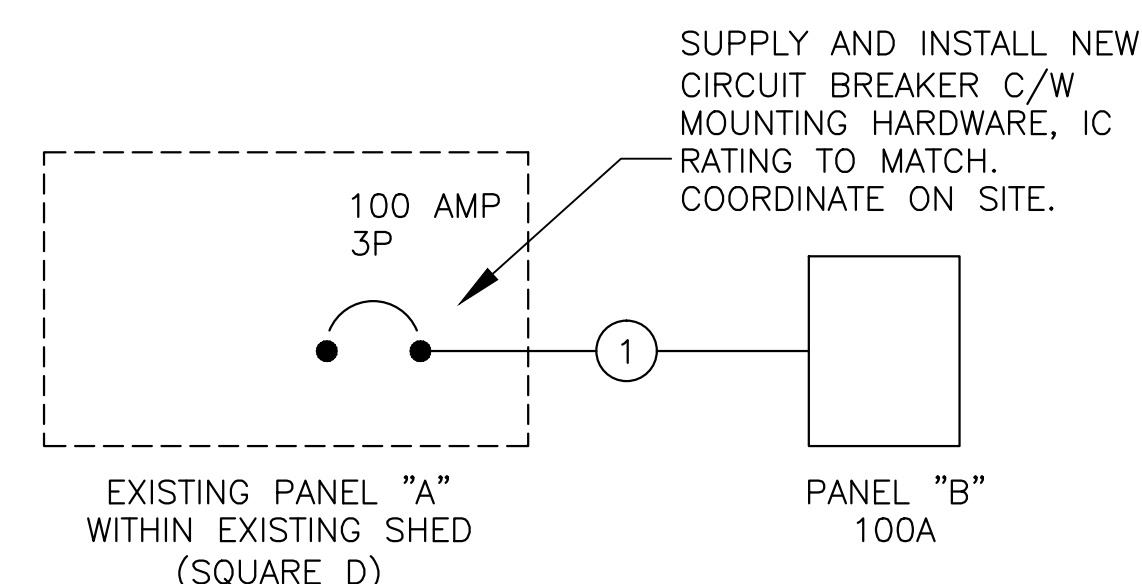
EXISTING ELECTRICAL SHED

NEW MULTI-CIRCUIT ENERGY METER NOTES:

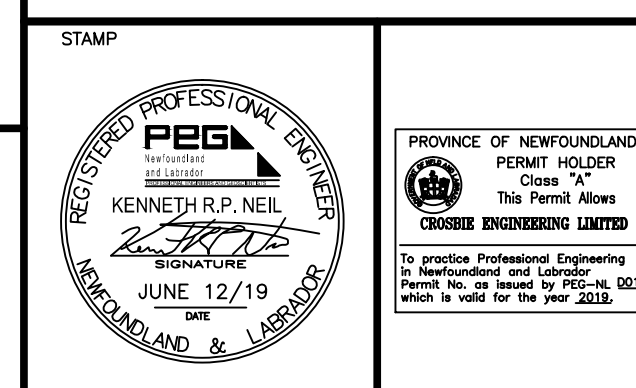
- NEW MULTI-CIRCUIT ENERGY METER ENCLOSURES C/W DISPLAYS AND CT'S. SHALL MONITOR ALL RECEPTACLE CIRCUITS (5 SUCH) OF NEW ELECTRICAL PEDESTAL. CAPACITY FOR MONITORING 30 CIRCUITS MINIMUM. MEASURE AMPERAGE, VOLTAGE, KW, KVA, KVAR, PF, HZ, KWH. INTELLIMETER OR APPROVED EQUAL. ALL METERS TO BE FACTORY SEALED AND REGISTERED WITH MEASUREMENT CANADA. COORDINATE WITH HARBOUR AUTHORITY.
- CONTRACTOR TO SUPPLY AND INSTALL TEST BLOCK EQUAL TO MESURINA 4 POLE TEST SWITCH C/W COVER. TEST BLOCK TO BE TIED INTO NEW MULTI-METERING SYSTEM TO MEASURE VOLTAGE REFERENCE. PROVIDE LABEL TO READ "VOLTAGE TEST BLOCK".
- CONTRACTOR TO INSTALL MULTI-METERING SYSTEM IN COMPLIANCE WITH MEASUREMENT CANADA. REFER TO THE FOLLOWING MEASUREMENT CANADA DOCUMENTS:  
 3.1. S-E-04--INSTALLATION REQUIREMENTS FOR MULTIPLE CUSTOMER METERING SYSTEMS <https://www.ic.gc.ca/eic/site/mc-mc.nsf/eng/1m00560.html>  
 3.2. S-E-03--SPECIFICATION FOR THE INSTALLATION AND USE OF ELECTRICITY METERS -- INPUT CONNECTIONS AND RATINGS. <https://www.ic.gc.ca/eic/site/mc-mc.nsf/eng/1m00172.html>  
 3.3. S-E-08--SPECIFICATIONS FOR THE INSTALLATION AND USE OF ELECTRICITY METERS -- MEASUREMENT CANADA STANDARD DRAWINGS FOR ELECTRICITY METERING INSTALLATIONS <https://www.ic.gc.ca/eic/site/mc-mc.nsf/eng/1m04068.html>
- CONTRACTOR SHALL ARRANGE FOR SUPPLIERS, EQUIPMENT MANUFACTURERS, AND/OR OTHERS AS REQUIRED FOR ALL COMMISSIONING ACTIVITIES OF THIS SYSTEM. ENSURE PROPER OPERATION OF EQUIPMENT AND ON SITE TRAINING, MAKING NECESSARY CORRECTIONS AS REQUIRED. PROVIDE COMMISSIONING REPORT INCLUDING LIST OF ATTENDEES AND DATE OF ON SITE COMMISSIONING. ALL COSTS ASSOCIATED WITH COMMISSIONING REQUIREMENTS SHALL BE INCLUDED WITHIN TENDER PRICE.

SYMBOL	WIRE AND CONDUIT SIZE
①	4 #3 RW90 + 1 #6 TW GROUND IN 35mm EMT CONDUIT

BROKEN LINE INDICATES EXISTING. SOLID LINE INDICATES NEW.

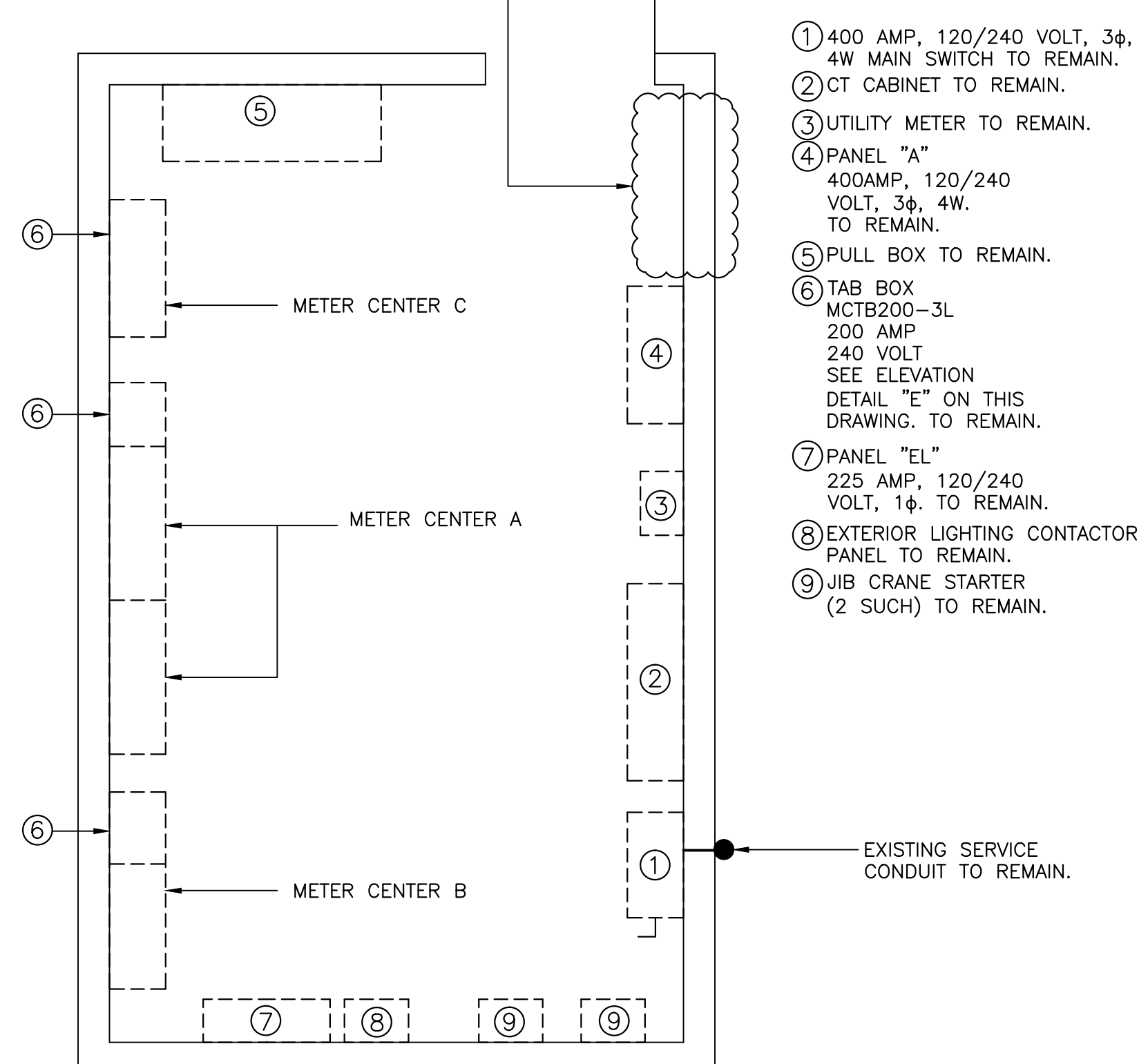


PARTIAL SINGLE LINE DIAGRAM - EXISTING ELECTRICAL SHED  
N.T.S.

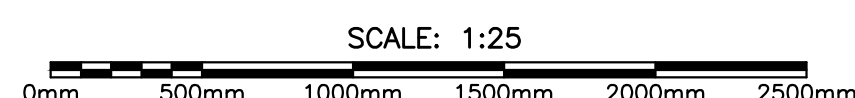


RELOCATED EXISTING RECEPTACLE AND CONDUITS IN THIS AREA TO SUIT NEW LAYOUT. EXTEND WIRING AND CONDUIT AS REQUIRED. COORDINATE ON SITE.

BROKEN LINE INDICATES EXISTING. SOLID LINE INDICATES NEW.

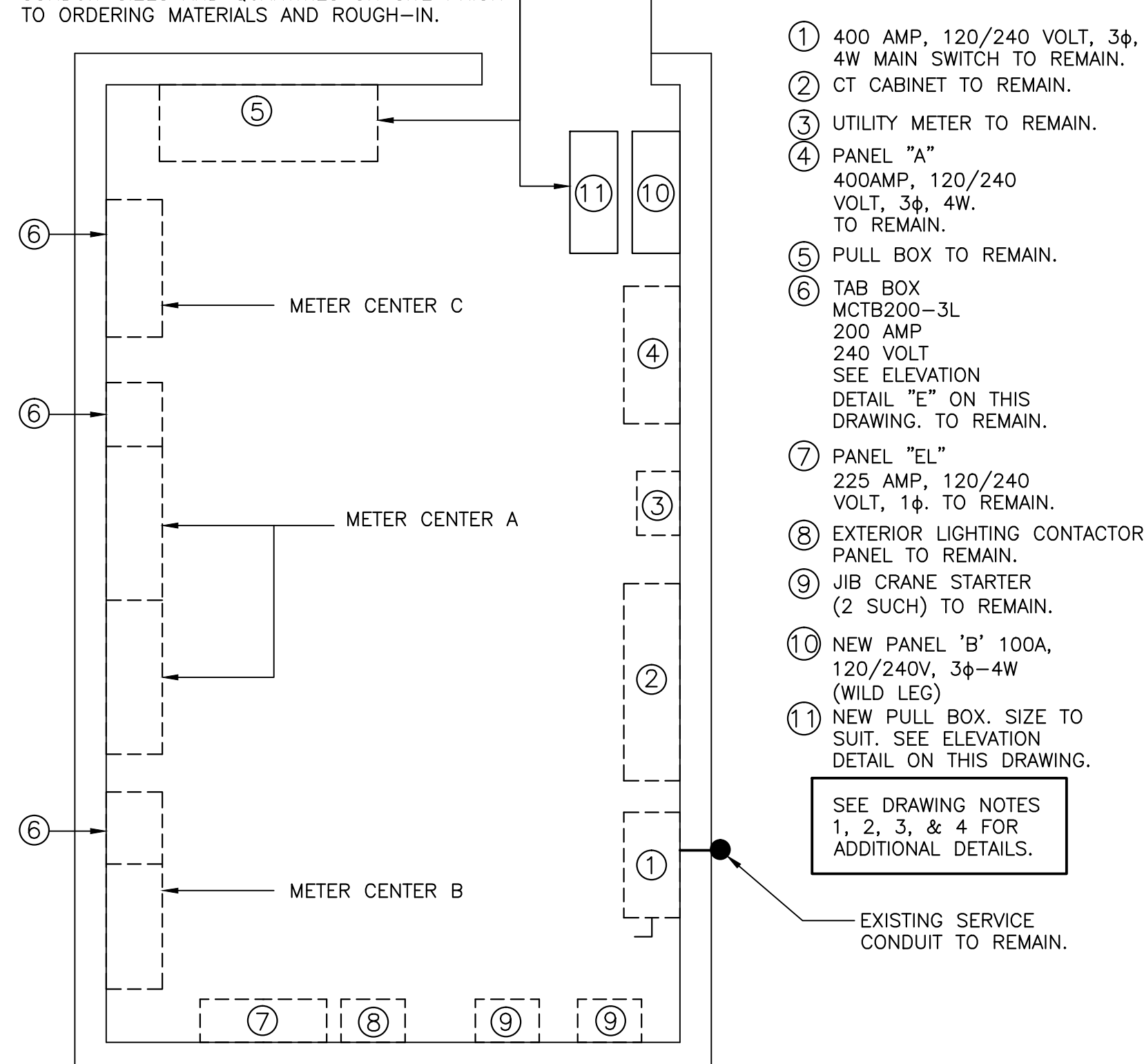


EXISTING ELECTRICAL SHED - DEMOLITION

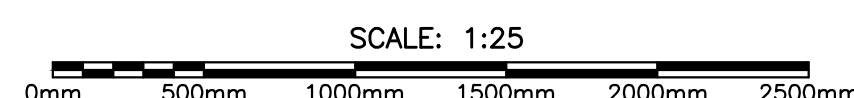


SUPPLY AND INSTALL NEW WIRING AND CONDUIT TO MATCH EXISTING TO RE-ROUTE WIRING AND CONDUIT FROM EXISTING PULL BOX TO NEW PULL BOX AND ON TO WHARF STAINLESS STEEL JUNCTION BOX LOCATED AT WHARF (SEE DRAWING E2). COORDINATE EXACT WIRE AND CONDUIT SIZES AND QUANTITIES ON SITE PRIOR TO ORDERING MATERIALS AND ROUGH-IN.

BROKEN LINE INDICATES EXISTING. SOLID LINE INDICATES NEW.

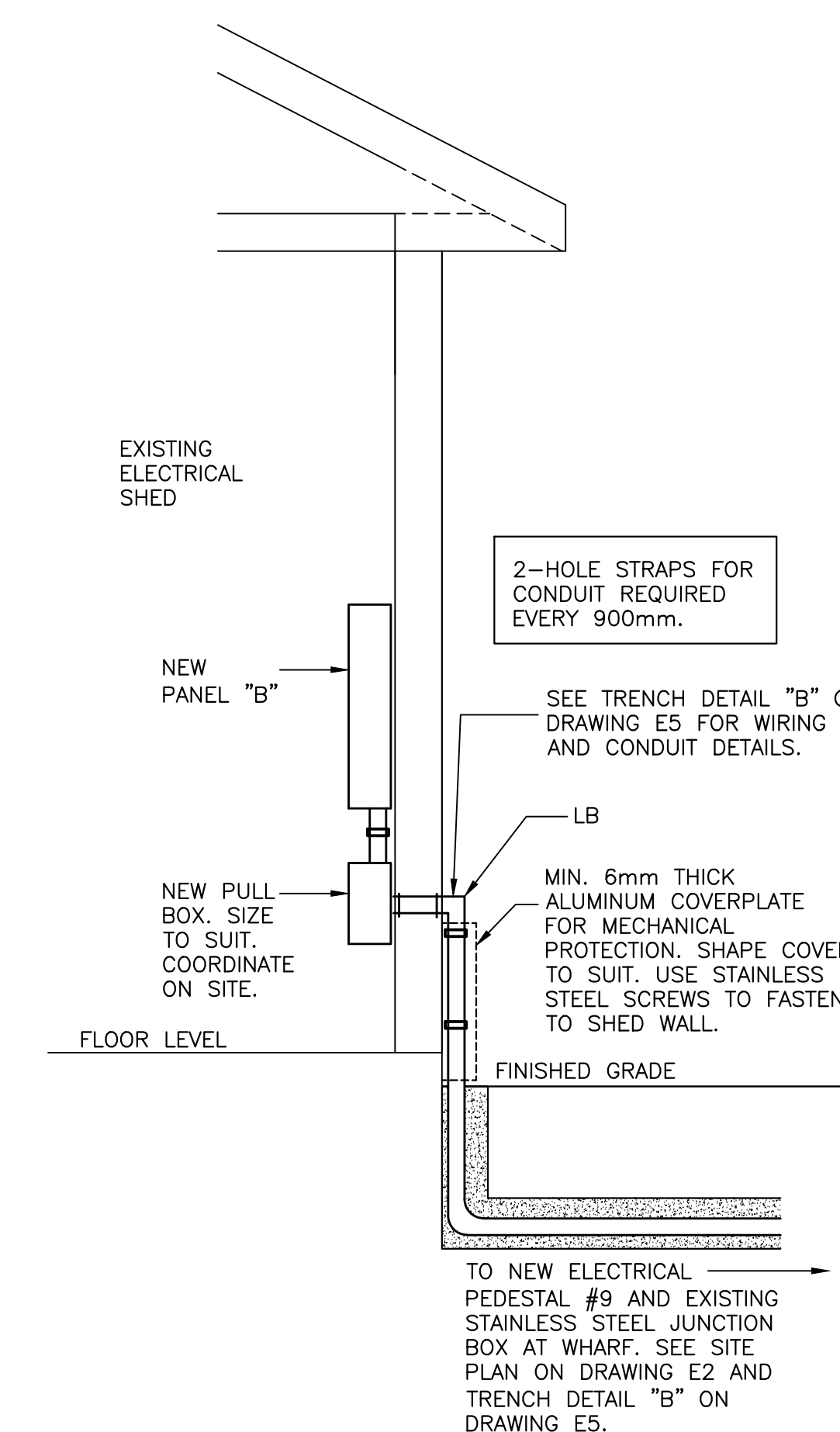


EXISTING ELECTRICAL SHED - NEW LAYOUT



DRAWING NOTES:

- SUPPLY AND INSTALL LAMICOID LABELS (24 SUCH) TO EACH EXISTING METER WITHIN METER STACKS TO PROPERLY IDENTIFY EACH METER TO ITS ASSOCIATED PEDESTAL RECEPTACLE. EACH LABEL SHALL IDENTIFY THE RECEPTACLE'S PEDESTAL NUMBER, RECEPTACLE NUMBER, AMPERAGE, AND VOLTAGE. CONTRACTOR IS RESPONSIBLE TO IDENTIFY EACH METER WITH ITS ASSOCIATED PEDESTAL RECEPTACLE. COORDINATE ON SITE PRIOR TO ORDERING MATERIALS.
- SUPPLY AND INSTALL NEW CALIBRATED AND MEASUREMENT CANADA CERTIFIED UTILITY METERS (24 SUCH) WITHIN METER STACKS. EACH NEW METER TO MATCH EXISTING AMPERAGE AND VOLTAGE. COORDINATE ON SITE PRIOR TO ORDERING MATERIALS.
- SUPPLY AND INSTALL NEW GFCI CIRCUIT BREAKERS WITH GROUND FAULT SETTING AT 30mA (20 SUCH) WITHIN METER STACKS TO REPLACE EXISTING CIRCUIT BREAKERS THAT FEED PEDESTAL RECEPTACLES THAT ARE NOT RATED AT 120 VOLT, 15 AMP, NOR 120 VOLT, 20 AMP. NEW CIRCUIT BREAKERS SHALL BE C/W MOUNTING HARDWARE, IC RATING TO MATCH. EACH NEW CIRCUIT BREAKER TO MATCH EXISTING AMPERAGE AND VOLTAGE. COORDINATE ON SITE.
- SUPPLY AND INSTALL NEW ELECTRIC BASEBOARD HEATER WITHIN EXISTING ELECTRICAL SHED TO REPLACE THE EXISTING HEATER. NEW ELECTRIC BASEBOARD HEATER SHALL BE 208/240 VOLT, 1 PHASE, 1000 WATT. CONNECT TO EXISTING CIRCUIT. EXTEND WIRING AND CONDUIT AS REQUIRED. COORDINATE ON SITE.



EXISTING ELECTRICAL SHED ELEVATION  
N.T.S.

Q	ISSUED FOR TENDER	06/12/19
A	ISSUED FOR REVIEW	05/08/19
revisions		date
project		project

ELECTRICAL SYSTEM CONSTRUCTION BRANCH, NL

EXISTING ELECTRICAL SHED LAYOUT AND DETAILS

designed	KN	concu
date	JUNE 2019	
drawn	KN	desine
date	JUNE 2019	
approved		approve

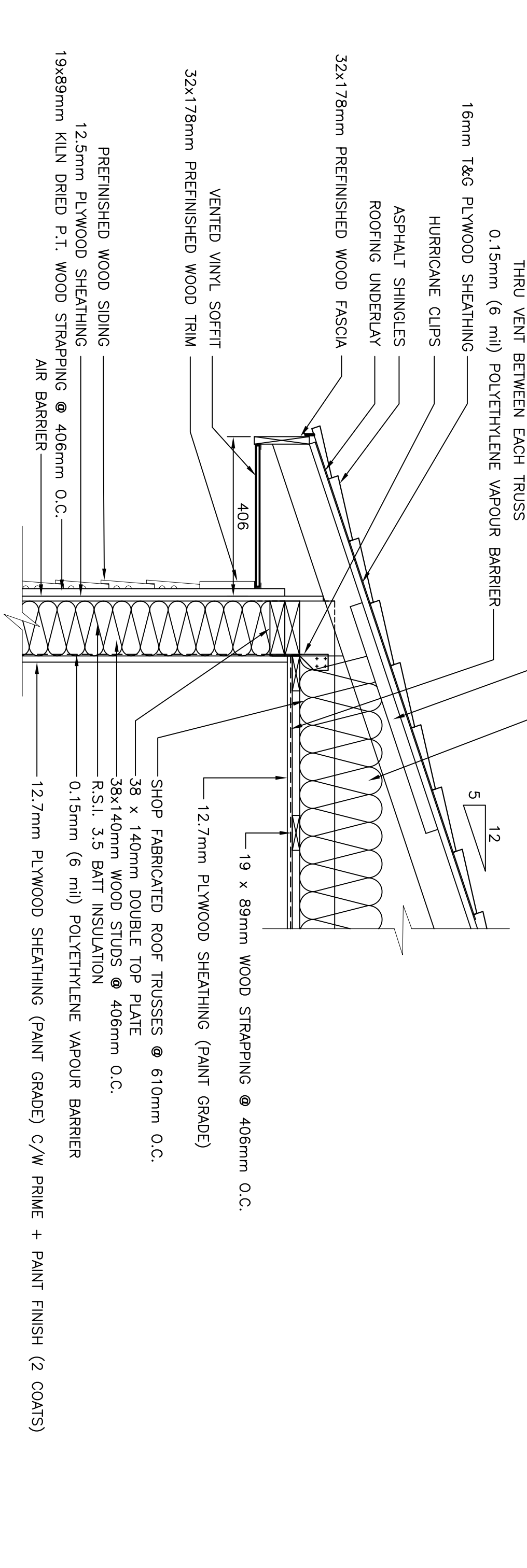
Tender Submission

721911

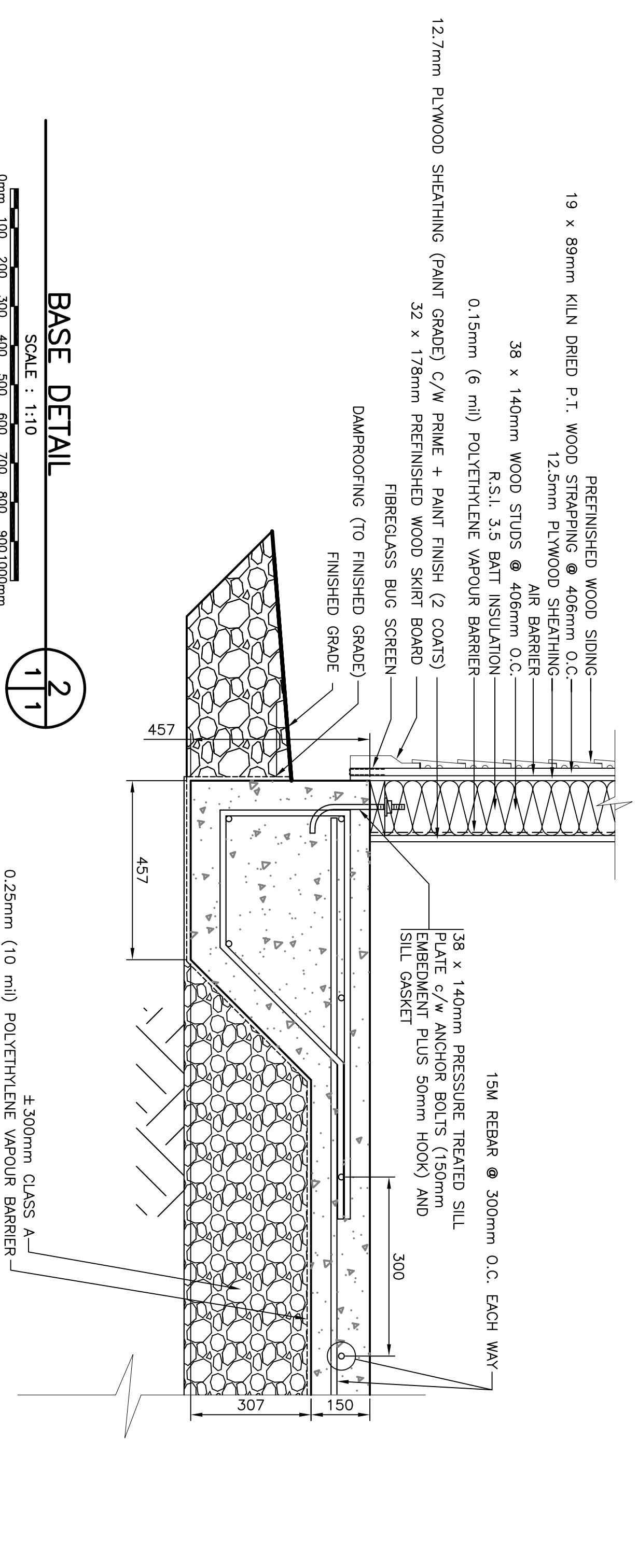
drawing no. no. du dessin  
E6



R.S.I. 7.0 BATT INSULATION (2 LAYERS R.S.I. 3.5, OPPOSITE DIRECTIONS)  
 1220 LONG x 610mm WIDE POLYSTYRENE TRIM (6mm) PEN BETWEEN EACH CROSS  
 0.15mm (6 mil) POLYETHYLENE VAPOUR BARRIER  
 16mm T&G PLYWOOD SHEATHING  
 HURRICANE CLIPS  
 ASPHALT SHINGLES  
 ROOFING UNDERLAY  
 32x178mm PREFINISHED WOOD FASCIA  
 32x178mm PREFINISHED WOOD TRIM  
 VENTED VINYL SOFFIT  
 32x178mm PREFINISHED WOOD TRIM  
 12.7mm PLYWOOD SHEATHING (PAINT GRADE)  
 19 x 89mm WOOD STRAPPING @ 406mm O.C.  
 PREFINISHED WOOD SIDING  
 12.5mm PLYWOOD SHEATHING  
 0.15mm (6 mil) POLYETHYLENE VAPOUR BARRIER  
 AIR BARRIER  
 12.7mm PLYWOOD SHEATHING (PAINT GRADE) C/W PRIME + PAINT FINISH (2 COATS)

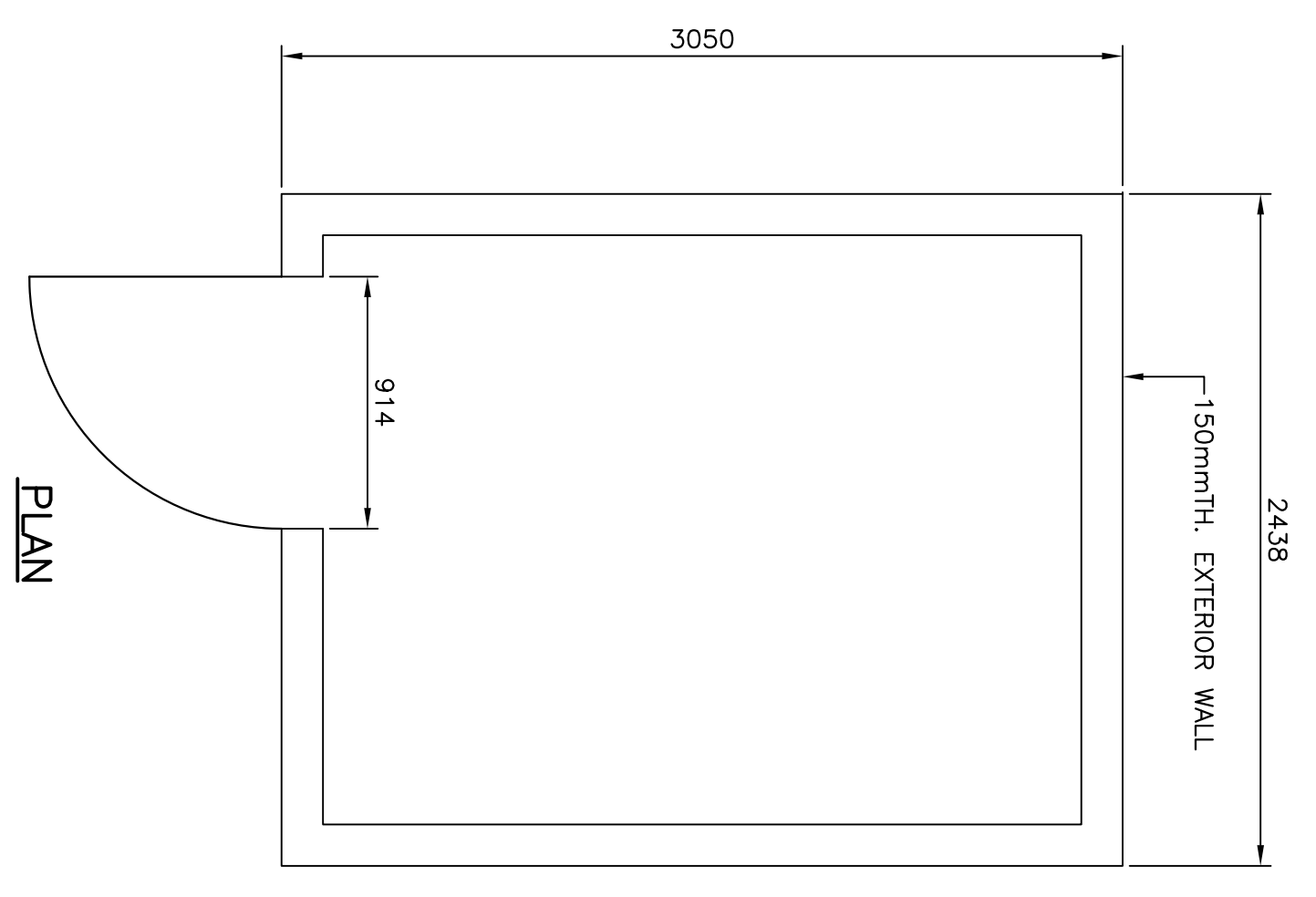


**EAVE DETAIL**  
 SCALE : 1:10  
 1

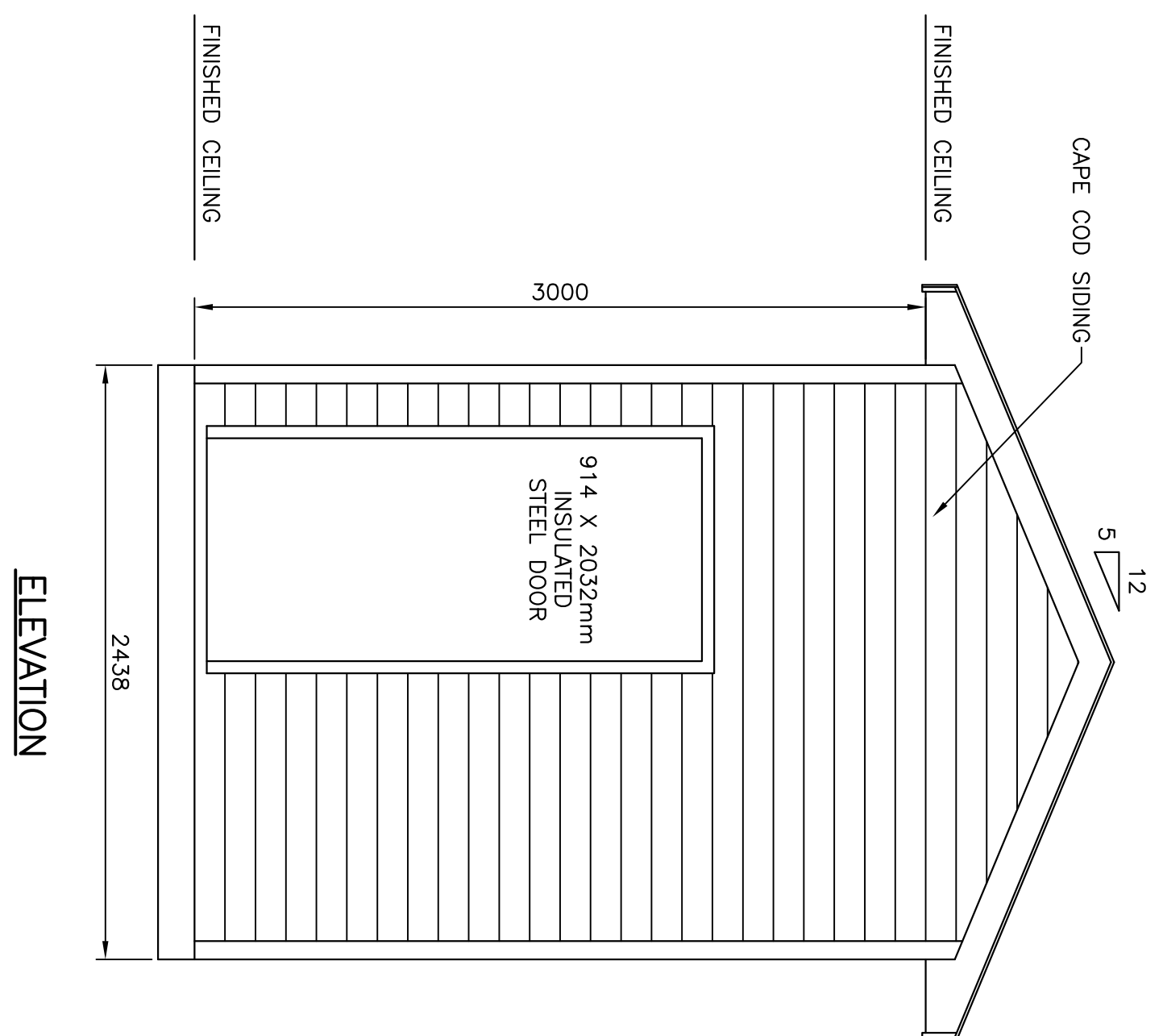


**BASE DETAIL**  
 SCALE : 1:10  
 2

- NEW DOOR (OUTSWING) AND HARDWARE SCHEDULE**
- DOOR SIZE = 914 X 2032 X 45 (PAINTED RED)
  - DOOR TYPE = HOLLOW METAL
  - FRAME TYPE = 40mm PREFINISHED STEEL FRAME
  - 1 CONTINUOUS HINGE CH-951 X SIZE REQUIRED (630)
  - 1 EXIT DEVICE 9300B-01-476-TV/SNB (630)
  - 1 DOOR CLOSER 8901DS-TB/SNB (689)
  - 1 SET WEATHER STRIPPING 1500N X SIZE REQUIRED (AN)
  - 1 WATER DRIP-BOTTOM-4M7 X SIZE REQUIRED (AN)
  - 1 WATER DRIP-BOTTOM-4M7 X SIZE REQUIRED (AN)
  - 1 DOOR LOCK COBRIN WITH EXTERIOR KEY

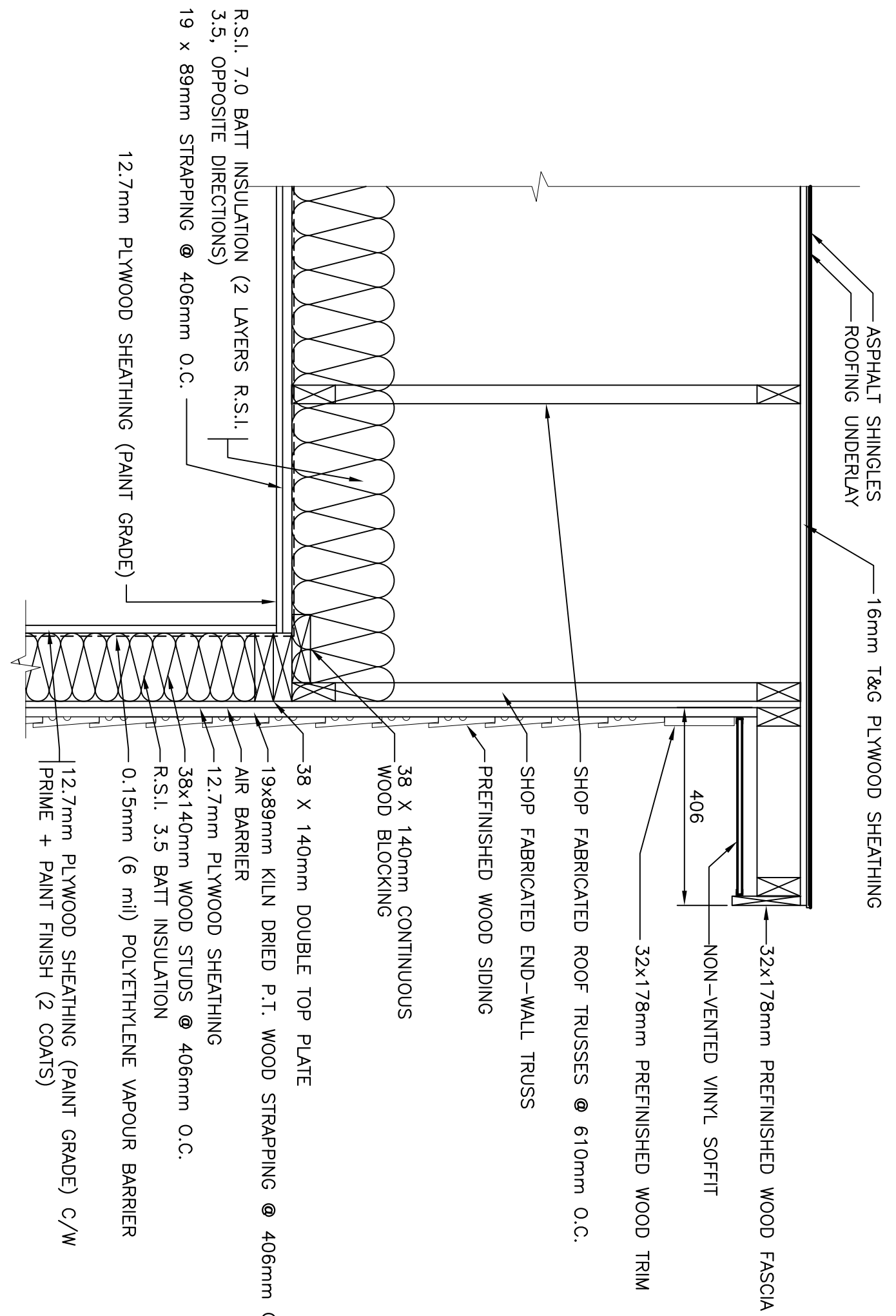
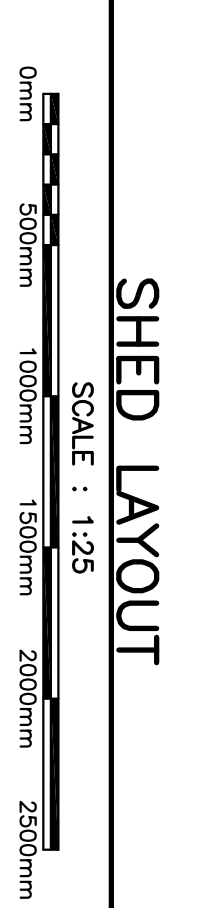


**PLAN**

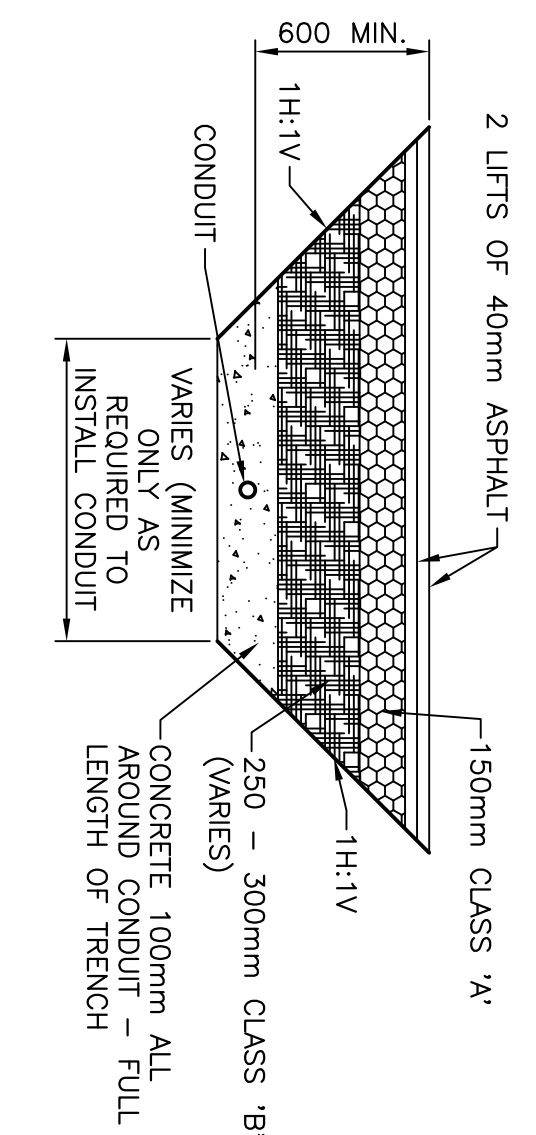


**ELEVATION**

**SHED LAYOUT**  
 SCALE : 1:25



**GABLE END DETAIL**  
 SCALE : 1:10  
 4



**TRENCH DETAIL IN ASPHALT**  
 SCALE: N.T.S.  
 5

- DETAIL WHERE CONDUIT IS TO BE INSTALLED IN TRENCH THROUGH EXISTING CONCRETE DECK**  
 SCALE : N.T.S.
- 
- DRILL AND GROUT 600mm dia. 20W BARS @ 200mm C.C. (SPUNCE TO EXISTING)
- EXISTING LONGITUDINAL STEEL TO REMAIN IN REPAIR AREA
- NEW REPAIRED CONCRETE AREA
- SAW CUT
- NEW CONCRETE SLAB
- ±700
- EXISTING LONGITUDINAL STEEL (TO REMAIN)
- EXISTING TRANSVERSE STEEL
- APPLY BONDING TO ALL INTERFACE SURFACES PRIOR TO NEW CONCRETE PLACEMENT. BONDING TO BE WELDORITE OR APPROVED EQUAL.
- CUT DOWN EXISTING DECK AND PLACE NEW CONDUIT BELOW LOWER MAT OF STEEL
- LONGITUDINAL STEEL (ALLOW FOR 1 MM OF 15M TRANSVERSE STEEL @ 150mm C.C. IN REPAIR AREA - COORDINATE PLACEMENT IN THE FIELD)
- NOTES:
- EXISTING DECK DETAILS ARE UNKNOWN AND IN THIS REGARD CONSIDER DETAILS SHOWN TO BE ON LOCATION FOR PROPOSED INSTALLATION USING GROUND PENETRATING RADAR. AS-BUILT INFORMATION IS LIMITED SO CONTRACTOR TAKES ALL RISKS ASSOCIATED WITH DAMAGING EXISTING CONDUIT. CARRY COSTS ASSOCIATED WITH THIS RISK IN BID PRICE. ANY DAMAGES ARE TO BE REPAIRED AT CONTRACTOR'S EXPENSE.
  - EXISTING DECK DETAILS ARE UNKNOWN AND IN THIS REGARD CONSIDER DETAILS SHOWN TO BE ON LOCATION FOR PROPOSED INSTALLATION USING GROUND PENETRATING RADAR. AS-BUILT INFORMATION IS LIMITED SO CONTRACTOR TAKES ALL RISKS ASSOCIATED WITH DAMAGING EXISTING CONDUIT. CARRY COSTS ASSOCIATED WITH THIS RISK IN BID PRICE. ANY DAMAGES ARE TO BE REPAIRED AT CONTRACTOR'S EXPENSE.

**DETAIL WHERE CONDUIT IS TO BE INSTALLED IN TRENCH THROUGH EXISTING CONCRETE DECK**  
 SCALE : N.T.S.  
 6

**ELECTRICAL SHED AND TRENCHING DETAILS**

designed N.H.	checked
date JUNE 11, 2019	date
drawn P.H.	designed
date JUNE 11, 2019	date
approved	approved
Project Manager	Designer
721911	no. du projet
C1	no. du dessin

**SMALL CRAFT HARBOURS**



NOTES:  
 1. ALL ELEVATIONS ARE IN METRES  
 2. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

PROVINCE OF NEWFOUNDLAND  
**PERMIT HOLDER**  
 This Permit Allows  
 APN ENGINEERING INC.

