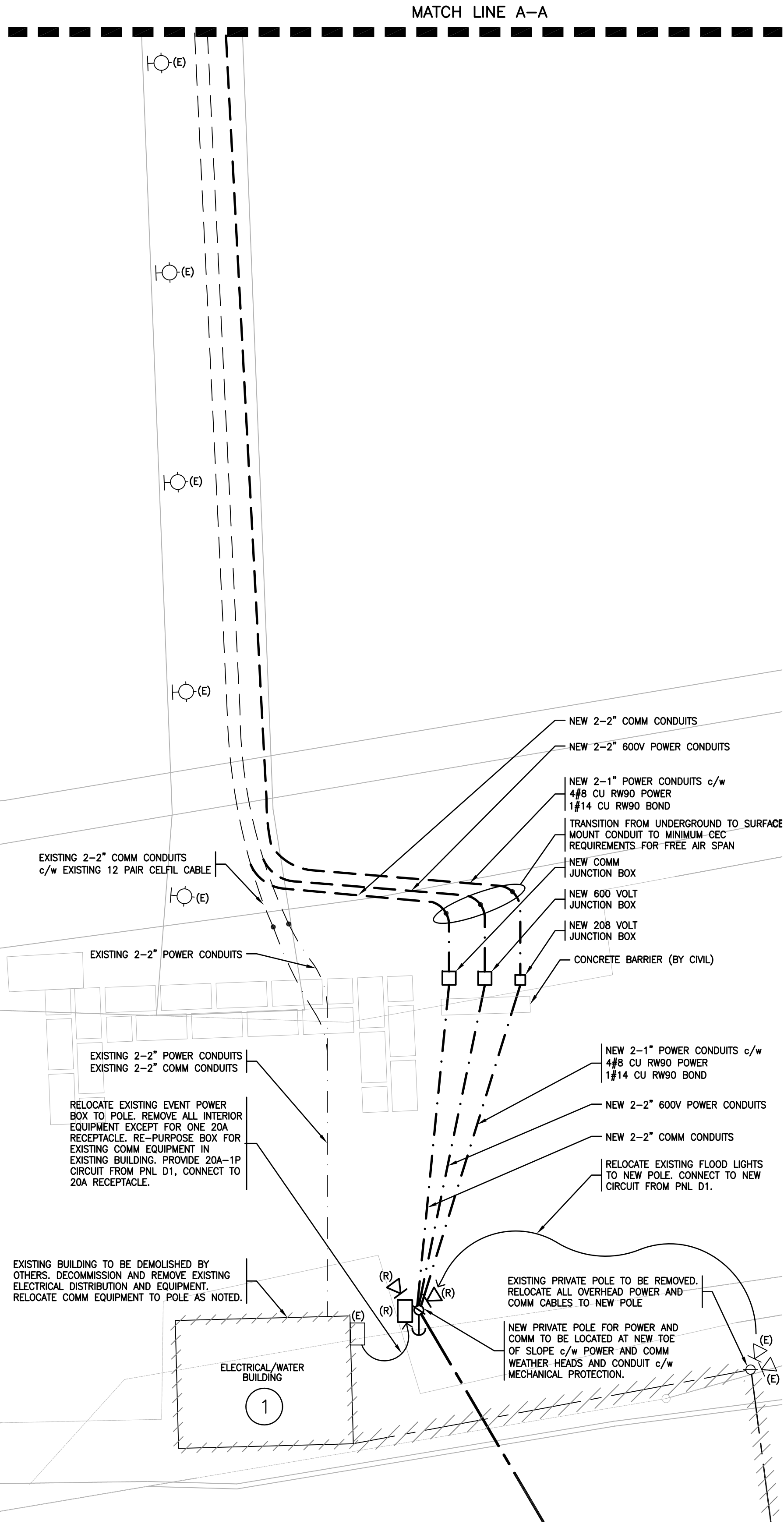


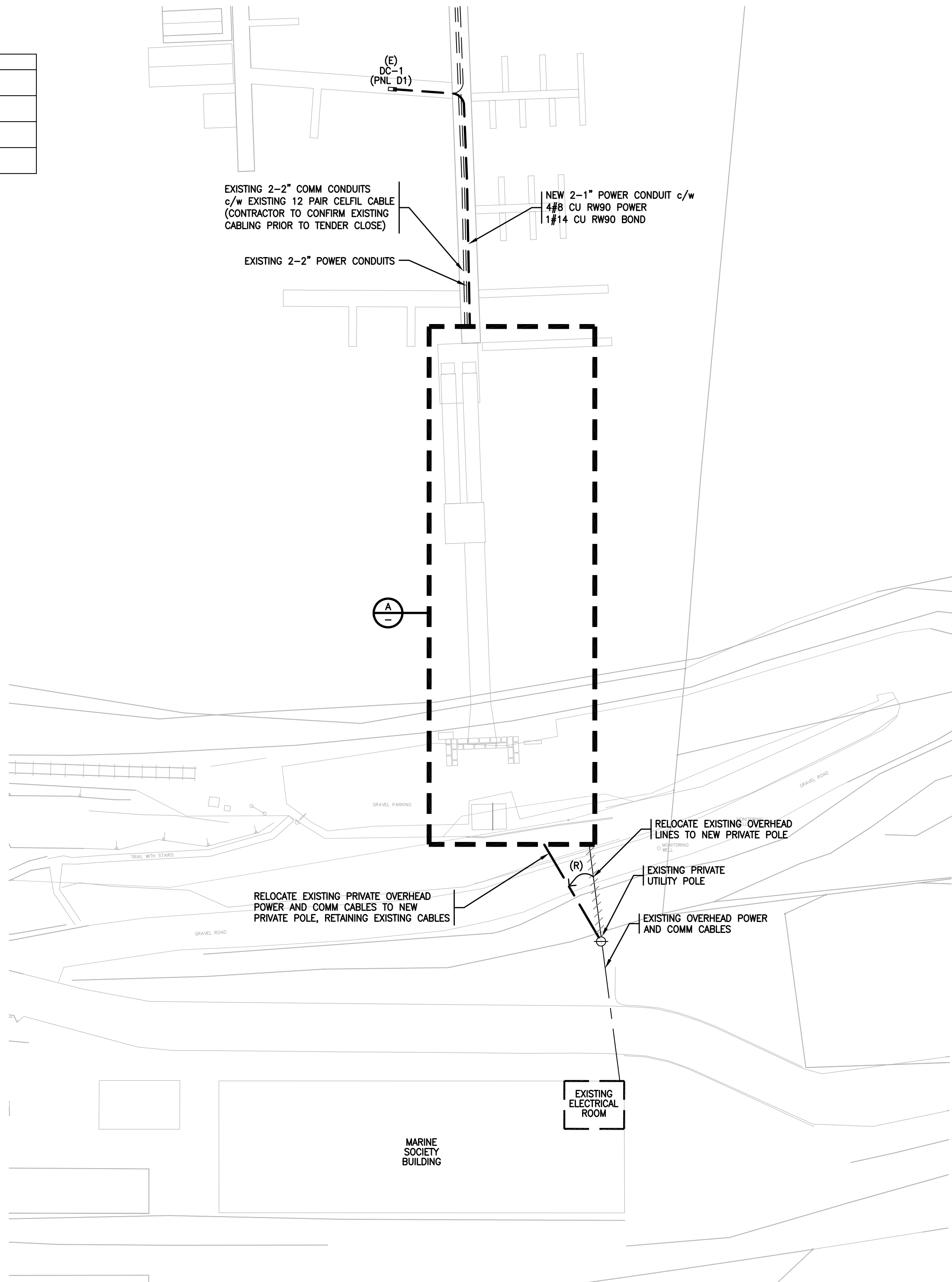
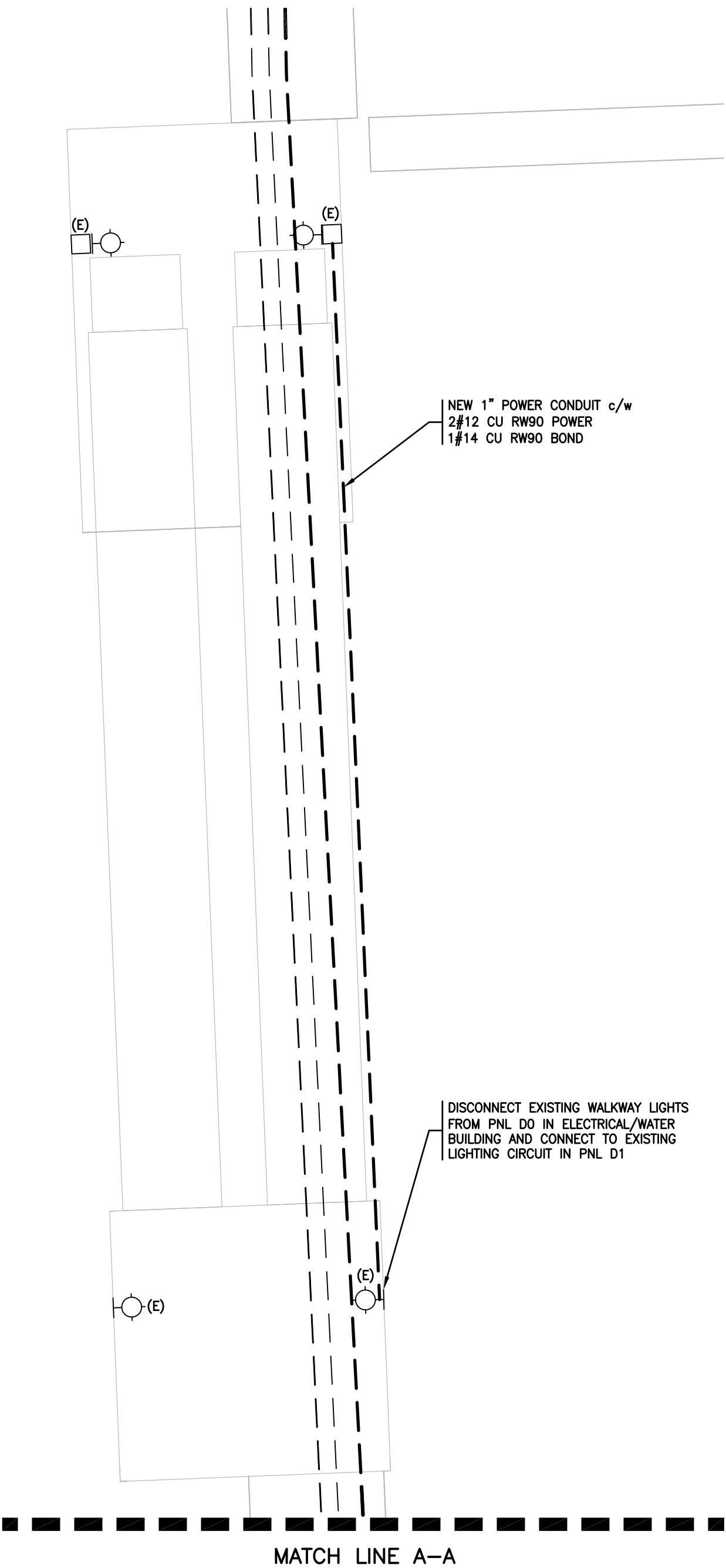
SYMBOL LEGEND

SYMBOL	MOUNTING	DESCRIPTION
	POLE	FLOOD LIGHT
	SURFACE	CONDUIT, SURFACE MOUNT
	GROUND	CONDUIT, BURIED
	AS REQUIRED	WIRE, OVERHEAD

ABBREVIATIONS:
(E) = EXISTING ELECTRICAL DEVICE
(R) = RELOCATE EXISTING ELECTRICAL DEVICE



AREA ENLARGEMENT
SCALE: 1:100



SITE PLAN
SCALE: 1:500



ELECTRICAL/WATER BUILDING
SCALE: N.T.S.

GENERAL NOTES:

- COORDINATE WITH TOWN OF LADYSMITH FOR ELECTRICAL EQUIPMENT RECLAMATION REQUIREMENTS FOR ELECTRICAL/WATER BUILDING.

NO.	DATE	TITLE
2	JUNE 01 2022	ISSUED FOR TENDER
1	APR 25 2022	ISSUED FOR REVIEW
REVISION		

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PROJECT
OYSTER BAY MARINA
LADYSMITH, B.C.

TITLE
SITE PLAN
ELECTRICAL LAYOUT

PROJECT NO. 21-3863	SEAL
DATE NOVEMBER, 2021	
SCALE AS SHOWN	

DRAWING NO.
E-1

SCOPE OF WORK

- EXISTING ELECTRICAL/WATER BUILDING TO BE REMOVED. RELOCATE EXISTING ELECTRICAL DEVICES AS SHOWN.
- EXISTING MARINE POWER AND COMMUNICATION SERVICES TO BE RE-ROUTED VIA NEW POLE TO FACILITATE REMOVAL OF BUILDING.
- CONNECT EXISTING WALKWAY LIGHTS TO EXISTING MARINE FLOAT LIGHT CIRCUIT.
- EXTEND EXISTING POWER AND COMMUNICATION CABLES FROM MARINE FLOAT TO NEW POLE.

REFERENCE STANDARDS

- MATERIAL SHALL CARRY CSA OR CUL APPROVAL AND CONFORM WITH EEMAC STANDARDS.
- EQUIPMENT WIRING AND WIRING DEVICES SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE 22.1, PART 1.

GENERAL REQUIREMENTS

- THE ELECTRICAL CONTRACTOR SHALL SUPPLY ALL LABOUR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION REQUIRED FOR THE COMPLETE INSTALLATION, WIRING AND TESTING OF THE SYSTEM SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN AND IS RESPONSIBLE TO REVIEW ARCHITECTURAL, MECHANICAL, STRUCTURAL, CIVIL DRAWINGS FOR DISCREPANCIES AND REPORT TO THE ENGINEER.
- THE ELECTRICAL DRAWINGS INDICATE THE GENERAL LOCATION AND ROUTE. CONDUIT AND/OR WIRING SHALL BE INSTALLED TO PROVIDE A COMPLETE OPERATING SYSTEM AND SHALL BE INSTALLED PHYSICALLY TO CONSERVE HEADROOM, FURRING SPACES ETC.
- THE WORK TO BE DONE AS DESCRIBED IN THE DRAWINGS.
- THE DRAWINGS AND SPECIFICATIONS COMPLEMENT EACH OTHER AND WHAT IS CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH. IF THERE IS ANY DOUBT AS TO THE MEANING OR TRUE INTENT DUE TO A DISCREPANCY BETWEEN THE DRAWINGS AND SPECIFICATIONS, OBTAIN RULING FROM ENGINEER PRIOR TO TENDER CLOSING. FAILING THIS, ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL CONDUIT, WIRE, CABLE, ETC., THE ELECTRICAL CONTRACTOR IS TO PROVIDE CONDUIT, WIRE, CABLE, ETC. FOR A COMPLETE OPERATING JOB TO MEET IN ALL RESPECTS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. ELECTRICAL DRAWINGS DO NOT SHOW ALL ARCHITECTURAL, STRUCTURAL AND MECHANICAL DETAILS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AS TO WHICH TRADE PROVIDES SPECIFIC LABOUR AND MATERIALS. EXTRAS WILL NOT BE CONSIDERED BASED ON DIFFERENCES IN INTERPRETATION AS TO WHICH TRADE IS TO PROVIDE CERTAIN ITEMS.

SHOP DRAWINGS

- PRIOR TO ORDERING OF ANY EQUIPMENT, THIS CONTRACTOR SHALL SUBMIT DIGITAL COPIES OF SHOP DRAWINGS AND DETAIL DRAWINGS FOR REVIEW BY THE ENGINEER. THE ENGINEER SHALL THEN RETURN COPIES OF THE REVIEWED SHOP DRAWINGS TO THE CONTRACTOR. SHOP DRAWINGS SHALL BE SUBMITTED ON ALL MAJOR EQUIPMENT.
- ALL SHOP DRAWINGS SUBMITTED TO THE ENGINEER MUST BEAR THE CONTRACTORS APPROVALS.
- ALL SHOP DRAWINGS SHALL BEAR THE NAME OF THE MANUFACTURER AND/OR MANUFACTURER'S REPRESENTATIVE.

MAINTENANCE AND OPERATION MANUAL

- CONTRACTOR TO SUBMIT ONE COPY OF MAINTENANCE AND OPERATION MANUALS IN THREE RING BINDER TO ENGINEER FOR APPROVAL AT TIME OF SUBSTANTIAL COMPLETION.
- MANUALS TO INCLUDE THE FOLLOWING:
 - PROJECT CONTACT INFORMATION
 - APPROVED SHOP DRAWINGS
 - WARRANTIES AND GUARANTEES
 - TEST RESULTS
 - AS BUILT DRAWINGS
- ON APPROVAL CONTRACTOR TO PROVIDE THREE COPIES OF THE MAINTENANCE AND OPERATION MANUALS IN THREE RING BINDERS c/w CD OF ALL DOCUMENTS IN PDF FORMAT.

PERMITS, CERTIFICATES, AND FEES

- ON COMPLETION OF THE WORK, SUBMIT CERTIFICATE OF ACCEPTANCE FROM INSPECTION AUTHORITY TO THE ENGINEER.
- PRIOR TO COMMENCEMENT OF WORK, SUBMIT THE NECESSARY DRAWINGS TO THE ELECTRICAL INSPECTION DEPARTMENT AND THE ELECTRICAL SUPPLY AUTHORITY.
- PAY ALL ASSOCIATED FEES, AND OBTAIN DOCUMENTS POSTING AS REQUIRED.

INSPECTION OF WORK

- UPON COMPLETION OF THE BUILDING AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, CHECK LOAD BALANCE ON ALL FEEDERS AND AT DISTRIBUTION CENTRES, PANELS, ETC. IF LOAD EXCEEDS 10 PERCENT PHASE IMBALANCE, RECONNECT CIRCUITS TO BALANCE THE LOAD. RECORD EACH PHASE AMPERAGE AND VOLTAGE AND INCLUDE THE RESULTS IN THE MAINTENANCE AND SHOP DRAWING MANUALS.

ALTERNATIVES

- ALL MATERIALS OR EQUIPMENT AS CALLED FOR ON THE DRAWINGS AND IN THE SPECIFICATIONS BY TRADE NAMES OR BY CATALOGUE REFERENCE NUMBERS, ARE THE MATERIALS ON WHICH THIS TENDER IS TO BE BASED. ALL EQUIPMENT MUST BE INSTALLED AS SHOWN ON THE DRAWINGS OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE REQUEST FOR APPROVAL SHALL BE ACCOMPANIED BY COMPLETE SPECIFICATIONS OF PROPOSED SUBSTITUTION, SHOWING DIMENSIONS, RATINGS, PHOTOMETRICS DATA, ETC. IT SHALL BE THIS SUB-CONTRACTOR'S RESPONSIBILITY TO MAKE AND ALLOW FOR ANY CHANGES AND CHARGES WHICH WILL OCCUR IF HE WISHES TO SUBMIT ALTERNATIVE EQUIPMENT. NO SUBSTITUTION BY THIS CONTRACTOR WILL BE PERMITTED AFTER CLOSING OF THE TENDERS.
- THE ENGINEER RESERVES THE RIGHT TO ACCEPT OR REJECT ANY ALTERNATIVES PROPOSED.

GUARANTEE

- AFTER THE WORK IS COMPLETED BUT BEFORE FINAL PAYMENT, FURNISH TO THE OWNER A WRITTEN GUARANTEE THAT FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION, ANY DEFECTS IN MATERIALS OR WORKMANSHIP WILL BE CORRECTED AT NO COST TO THE OWNER, EXCEPT WHERE, IN THE OPINION OF THE ENGINEER, SUCH DEFECTS ARE DUE TO MIS-USE OR NEGLIGENCE BY THE OWNER.

MINOR FIELD CHANGES

- THE LOCATION, ARRANGEMENT AND CONNECTION OF EQUIPMENT AND MATERIAL AS SHOWN ON THE DRAWINGS REPRESENTS A CLOSE APPROXIMATION OF THE INTENT AND REQUIREMENTS OF THE CONTRACT. THE RIGHT IS RESERVED BY THE ENGINEERS TO MAKE REASONABLE CHANGES REQUIRED TO ACCOMMODATE CONDITIONS ARISING DURING THE PROGRESS OF THE WORK. SUCH CHANGES SHALL BE DONE AT NO EXTRA COST TO THE OWNER, UNLESS THE LOCATION, ARRANGEMENT OR CONNECTION IS MORE THAN TEN FEET FROM THAT SHOWN AND THE ITEM IN QUESTION HAS BEEN INSTALLED.
- CONFIRM FINAL LOCATION PRIOR TO INSTALLATION.

CONDUIT

- INSTALL CONDUIT CONCEALED IN ALL AREAS EXCLUDING MECHANICAL AND ELECTRICAL ROOMS, OR WHERE SPECIFICALLY NOTED AS BEING EXPOSED. RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- INSTALL AND ATTACH SURFACE MOUNTED CONDUIT WITH TWO HOLE STEEL STRAPS. GROUP CONDUITS WHEREVER POSSIBLE ON CHANNELS.
- DUCTS INSTALLED BELOW GRADE AND NOT UNDER A FLOOR SLAB SHALL BE RIGID P.V.C. OR DBIL. CONDUIT INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE, WHERE A CONDUIT CROSSES A FOUNDATION WALL OR EXPANSION JOINT, SLEEVING AND APPROPRIATE FITTINGS SHALL BE PROVIDED. INSTALL UNDERGROUND DUCT BANKS AS PER C.E.C. DIAGRAMS D11.
- CONDUITS 1" OR LARGER INSTALLED THROUGH FIRE SEPARATIONS TO BE NON-COMBUSTIBLE.
- FACTORY ELBOWS FOR 90 DEGREE BENDS FOR 2" OR LARGER CONDUITS.
- MAKE CONNECTIONS TO MECHANICAL MOTORS AND EQUIPMENT WITH P.V.C. JACKETED FLEXIBLE CONDUIT AND LIQUID TIGHT CONNECTORS. MINIMUM SIZE (1/2"). ALL FLEXIBLE CONDUIT OF SUFFICIENT LENGTH TO AVOID TRANSMISSION OF VIBRATION.
- DO NOT INSTALL CONDUIT LARGER THAN (1") IN POURED CONCRETE SLABS.
- A SEPARATE BONDING CONDUCTOR SHALL BE INSTALLED IN ALL CONDUITS.
- FISH CORD SHALL BE INSTALLED IN ALL EMPTY CONDUIT SYSTEMS. FISH CORD TO BE POLYPROPYLENE.

WIRE AND CABLE

- BUILDING WIRE: 98% CONDUCTIVITY COPPER, 90°C RATED 600V INSULATION, RW90 X-LINK FOR DAMP LOCATIONS. COPPER CONDUCTORS SHALL BE STRANDED WHEN LARGER THAN #8 AWG OR AS NOTED.
- BRANCH CIRCUIT WIRING: THE MINIMUM SIZE OF CONDUCTORS TO BE #12 AWG CU.
- LOW VOLTAGE SIGNAL WIRING SHALL BE SEPARATED FROM POWER WIRING AND RUN IN SEPARATE RACEWAYS. THIS INCLUDES PANEL WIREWAYS.
- COLOUR CODE TO CSA C22.1 CURRENT EDITION.
- ALUMINIUM CONDUCTORS CAN NOT BE USED UNLESS SPECIFICALLY SHOWN OR WITH SPECIAL PERMISSION.

RECEPTACLES

- RECEPTACLES: FULL GANG SIZE, U-GROUNDING TYPE, RATED AT 15A AT 125 VAC WITH PARALLEL SLOTS, SPEC GRADE.
- SPECIAL RECEPTACLES: GROUND FAULT INTERRUPTING (G.F.I.).
- COLOUR: PROVIDE WHITE RECEPTACLES IN ALL AREAS. ONE MANUFACTURER THROUGHOUT PROJECT.

NAME TAGS

- PROVIDE LAMICOID NAME TAG INDICATING AMPACITY, VOLTAGE AND PHASE OR INDICATED SYSTEM.
- LAMICOID TO BE 1/8" THICK PLASTIC ENGRAVING SHEET, BLACK FACE, WHITE CORE.
- LETTERS TO BE 1/4" HIGH UNLESS SPECIFIED OTHERWISE.
- ALLOW FOR AVERAGE OF 25 LETTERS PER NAMEPLATE.
- PROVIDE LAMICOID NAME TAG FOR BREAKERS, METERS, DISCONNECTS, MOTOR PROTECTION SWITCHES, PANEL BOARDS, ETC. NAME TAGS SHALL BE MECHANICALLY FASTENED.
- PROVIDE ADHESIVE LABELS FOR ALL COMMON AREA RECEPTACLES AND ON/OFF SWITCHES ON COVER PLATES. LABEL TO INDICATE PANEL NAME AND BRANCH CIRCUIT NUMBER.
- ALL RECESSED JUNCTION BOXES TO BE LABELED IN INDELIBLE INK. LABEL TO INDICATE FUNCTION OF JUNCTION BOX (INCLUDING EQUIPMENT NAME, FIRE ALARM, EMERGENCY, OR EXIT) AND PANEL NAME INCLUDING BRANCH CIRCUIT NUMBER.

BRANCH CIRCUIT BREAKERS

- BREAKERS TO BE RATED MINIMUM 10,000 AMPS SYM FAULT CURRENT AT THE OPERATING VOLTAGE UNLESS NOTED OTHERWISE.
- BREAKERS TO MATCH EXISTING.

AS BUILT DRAWINGS

- PROVIDE A CLEAN SET OF DRAWINGS AT THE JOB SITE, FOR AS BUILT MODIFICATIONS ONLY.
- MARK ALL MODIFICATIONS IN RED, IN A NEAT, LEGIBLE MANNER.
- SUBMIT AS BUILTS TO ENGINEER FOR APPROVAL.


EQUIPMENT REMOVALS

- REMOVE CONDUIT AND WIRE FOR ASSOCIATED ELECTRICAL EQUIPMENT. POWER WIRING TO BE REMOVED BACK TO NEAREST JUNCTION BOX OR BREAKER. COMM. WIRING TO BE REMOVED BACK TO TERMINATION POINT. LIMIT THE FOREGOING SO AS NOT TO DEMOLISH WALL OR CEILINGS THAT WOULD OTHERWISE REMAIN.
- COORDINATE WITH TOWN OF LADYSMITH TO RELOCATE RECLAIMED ITEMS OR DISPOSE OF REMOVED ITEMS OFF SITE IN ACCORDANCE WITH APPLICABLE RECYCLING AND DISPOSAL GUIDELINES.
- REPAIR AFFECTED AREAS TO MATCH SURROUNDING FINISHES.

PROJECT CLOSE OUT PROCEDURES

- PROVIDE 24 HOUR NOTICE TO THE ENGINEER FOR FINAL FIELD REVIEW FOR ELECTRICAL DISCIPLINE. ELECTRICAL CONTRACTOR TO ENSURE ALL LIFE SAFETY DEVICES ARE INSTALLED AND OPERATIONAL. ELECTRICAL CONTRACTOR TO ENSURE ALL ELECTRICAL WORKS NOT INSTALLED ARE MADE SAFE.
- THE FOLLOWING DOCUMENTS TO BE FORWARDED TO THE ENGINEER PRIOR TO FINAL FIELD REVIEW:
 - MAINTENANCE MANUALS
 - FIELD SAFETY REPRESENTATIVE (FSR) DECLARATION

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CLIENT




LADYSMITH

PROJECT

OYSTER BAY
MARINA
LADYSMITH, B.C.

TITLE

ELECTRICAL
SPECIFICATIONS

PROJECT NO. 21-3863	SEAL
DATE NOVEMBER, 2021	
SCALE N.T.S.	

DRAWING NO.

E-3