

1 SITE KEYPLAN  
E-001 SCALE: N.T.S.

### ANNOTATIONS

| DENOTE | DESCRIPTION                                       | DENOTE | DESCRIPTION              |
|--------|---|--------|--------------------------|
| BND    | BOND WIRE (AS PER SPECIFICATIONS)                 | F/A    | FIRE ALARM               |
| GND    | GROUND WIRE (#6)                                  | GFI    | GROUND FAULT INTERRUPTER |
| CW     | COMPLETE WITH                                     | SPD    | SURGE PROTECTION DEVICE  |
| DISC   | DISCONNECT  | TR     | TAMPER RESISTANT         |
| RR     | REMOVE  | WP     | WEATHERPROOF             |
| EX     | EXISTING TO REMAIN                                | WT     | WATER TIGHT              |
| ER     | EXISTING TO BE RELOCATED                          | AFB    | ABOVE FINISHED FLOOR     |
| RE     | REPLACE EXISTING WITH NEW DEVICE IN SAME LOCATION | AFG    | ABOVE FINISHED GRADE     |
| RL     | EXISTING DEVICE IN RELOCATED LOCATION             |        |                          |

| SYMBOL | DESCRIPTION                           |
|--------|---------------------------------------|
|        | MECHANICAL EQUIPMENT TAG              |
|        | REFERENCE NOTE (1 DENOTES SEE NOTE 1) |
|        | ELECTRICAL CONDUCTOR AND CONDUIT TAG  |
|        | REVISION IDENTIFICATION TAG           |
|        | PANEL IDENTIFICATION TAG              |
|        | NEW EQUIPMENT                         |
|        | EXISTING EQUIPMENT TO REMAIN          |
|        | EXISTING EQUIPMENT TO BE REMOVED      |

### SINGLE LINE DIAGRAM SYMBOLS

| SYMBOL | DESCRIPTION  |
|--------|--|
|        | AUTOMATIC TRANSFER SWITCH WITHOUT MANUAL BYPASS                                      |
|        | GENERATOR  |
|        | MOLDED CASE CIRCUIT BREAKER<br>"L" WHERE SHOWN, DENOTES DEVICE WITH CURRENT LIMITERS |
|        | BREAKER DISCONNECT SWITCH  |
|        | METER  |
|        | BUSBAR   |
|        | H.V. POT HEAD  |
|        | CONNECTION POINT   |
|        | SURGE PROTECTION DEVICE  |
|        | PANELBOARD   |
|        | PANELBOARD AND BREAKER   |

### POWER SYMBOLS

| SYMBOL | DESCRIPTION  |
|--------|--|
|        | DUPLEX I-GROUND 15A, 125 VOLT, 2 POLE, 3 WIRE GROUNDING RECEPTACLE<br>"EM" WHERE SHOWN, DENOTES CONNECTION TO EMERGENCY POWER<br>"WP" WHERE SHOWN, DENOTES DEVICE MOUNTED IN WEATHERPROOF P.S. BOX WITH WEATHERPROOF COVER<br>"GFI" WHERE SHOWN, DENOTES GROUND FAULT INTERRUPTER TYPE DUPLEX RECEPTACLE<br>"NF" WHERE SHOWN, DENOTES DEVICE DEDICATED TO "HOUSEKEEPING" SERVICE, PROVIDE ENGRAVED NAMEPLATE<br>"TL" WHERE SHOWN, DENOTES TWISTLOCK<br>"SW" WHERE SHOWN, DENOTES SWITCHED RECEPTACLE<br>"TL" WHERE SHOWN, DENOTES TWISTLOCK<br>"TL" WHERE SHOWN, DENOTES TWISTLOCK |
|        | DUPLEX I-GROUND 15A, 125V, 2P, 3 WIRE GROUNDING RECEPTACLE PROTECTED BY G.F.C.I. BREAKER AT PANELBOARD, MOUNTED APPROXIMATELY 2' (1650 mm) ABOVE FINISHED FLOOR  |
|        | SPECIAL PURPOSE RECEPTACLE AS DENOTED  |
|        | HARDWIRED EQUIPMENT CONNECTION   |
|        | SINGLE SURFACE MOUNTED / FLUSH MOUNTED PANELBOARD<br>"PP" DENOTES POWER PANEL, "LP" DENOTES LIGHTING AND POWER PANEL   |
|        | SINGLE SURFACE MOUNTED / FLUSH MOUNTED LOW VOLTAGE<br>"LV" DENOTES LOW VOLTAGE PANEL   |
|        | JUNCTION BOX   |
|        | DISCONNECT SWITCH UNLESS NOTED OTHERWISE   |
|        | ELECTRIC BASEBOARD HEATER  |
|        | GROUND ROD   |

### LIGHTING SYMBOLS

| SYMBOL | DESCRIPTION  |
|--------|--|
|        | STRIP SURFACE LUMINAIRE, LETTER "A" INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE   |
|        | ONE, TWO, THREE LINE VOLTAGE TOGGLE SWITCH AND LOW VOLTAGE SWITCH MOUNTED 4'-0" (1.2m) ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.   |
|        | EMERGENCY BATTERY PACK ON RECEPTACLE   |
|        | REMOTE DUAL HEAD EMERGENCY LIGHTS CONNECTED TO EMERGENCY BATTERY PACK WALL MOUNTED. REFER TO SPECIFICATIONS FOR DETAILS. "E2" DENOTES REMOTE BATTERY HEADS FED FROM BATTERY UNIT "E2". |

### SITE SYMBOL

| SYMBOL | DESCRIPTION                       |
|--------|-----------------------------------|
|        | POWER POLE                        |
|        | OVERHEAD COMMUNICATIONS CABLE     |
|        | UNDERGROUND COMMUNICATIONS CABLE  |
|        | OVERHEAD SERVICE CONDUCTORS       |
|        | UNDERGROUND SERVICE CONDUCTORS    |
|        | PULL BOX (FIBRE GLASS, PVC, ETC.) |
|        | OVERHEAD UTILITY SERVICE MAST     |

### LEGAL DESCRIPTION

LOT 1, DISTRICT LOT 7, RANGE 5, COAST DISTRICT, PLAN 8965

### CODE LOAD CALCULATION:

BASIC  
 MAIN FLOOR OFFICE (178 sq. m. @ 50W/sq. m.) = 8,900 W  
 MAIN FLR CELLS/STORAGE/GARAGE (163 sq. m. @ 25W/sq. m.) = 4,075 W  
 MECHANICAL LOADS = 19,200 W  
**TOTAL = 29,630 W**  
 MIN. MAIN BREAKER @ 120/240V, 1Ø = 29,630 / 240 = 124A  
 FULL GENERATOR STANDBY ALLOWING 30% HEADROOM  
 1.3 x 29,630W = 38,519W => 40kW STANDBY GENERATOR

### DRAWING LIST

| DRAWING NUMBER | DRAWING TITLE   |
|----------------|---|
| E-001          | ELECTRICAL LEGEND, SITE KEYPLAN AND GENERAL NOTES                     |
| E-002          | ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM                          |
| E-003          | ELECTRICAL PARTIAL PLAN AND DETAILS                                   |
| E-004          | ELECTRICAL DETAILS  |
| S-001          | STRUCTURAL GENERAL NOTES, SITE PLAN, AND TYPICAL GENERATOR PAD DETAIL |



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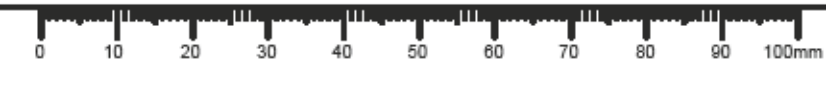
Client / client  
**ROYAL CANADIAN MOUNTED POLICE**

Project title / Titre du projet  
**PORT SIMPSON DETACHMENT GENERATOR UPGRADE**

Consultant Approval Box Only  
 Designed by / Concept par: MRO  
 Drawn by / Dessiné par: MRO  
 PWGSC, Project Manager / Administrateur de Projets GRC: MASOOD DEZFOOLI  
 Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architectural et de génie GRC: FREETIPAL PAUL

Drawing title / Titre du dessin  
**ELECTRICAL LEGEND, SITE KEYPLAN AND GENERAL NOTES**

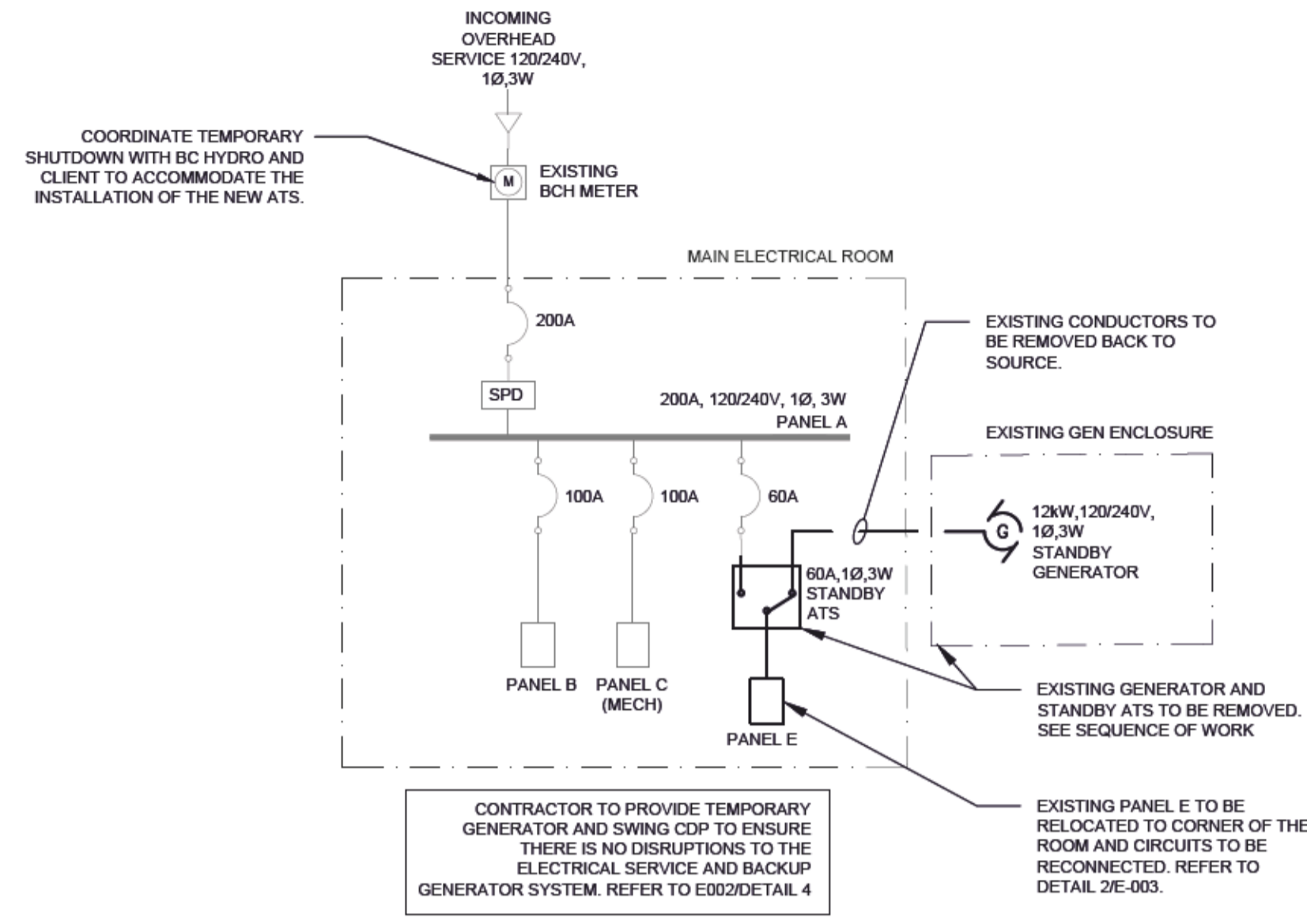
| Project No. / No. du projet | Sheet / Feuille | Revision no. / La Revision no. |
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| R.105627.001                | E-001           | 0                              |



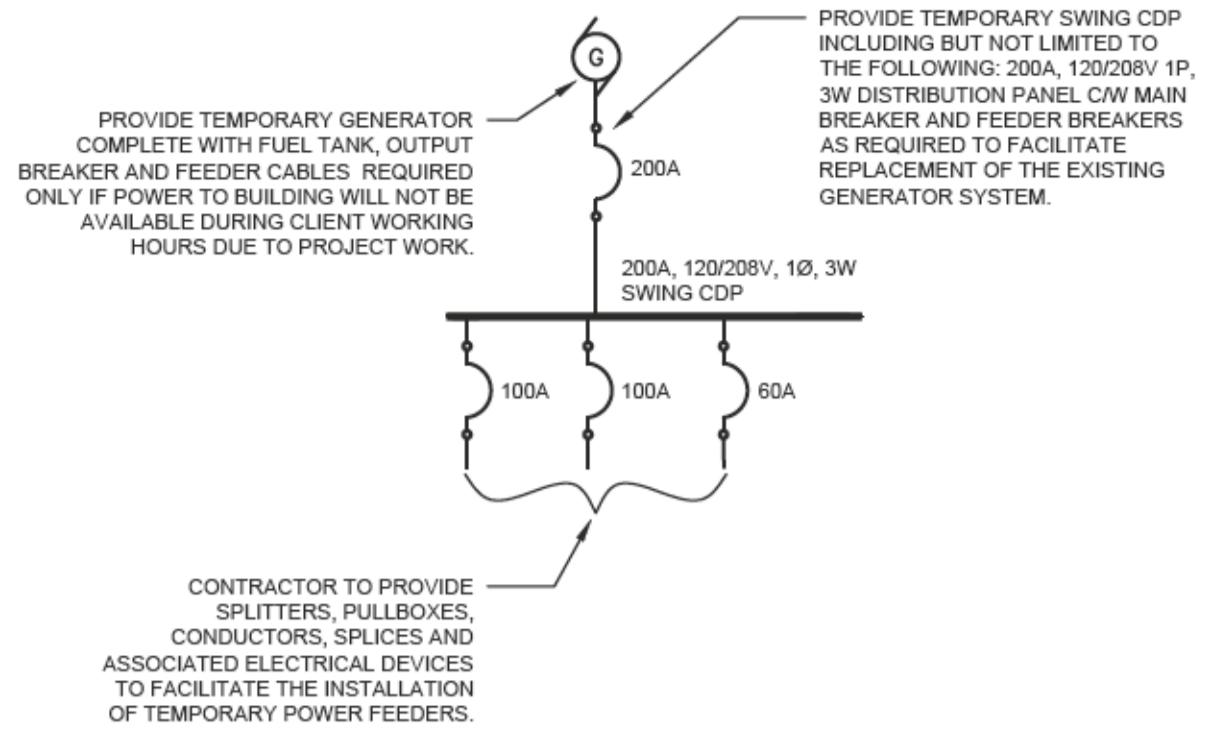


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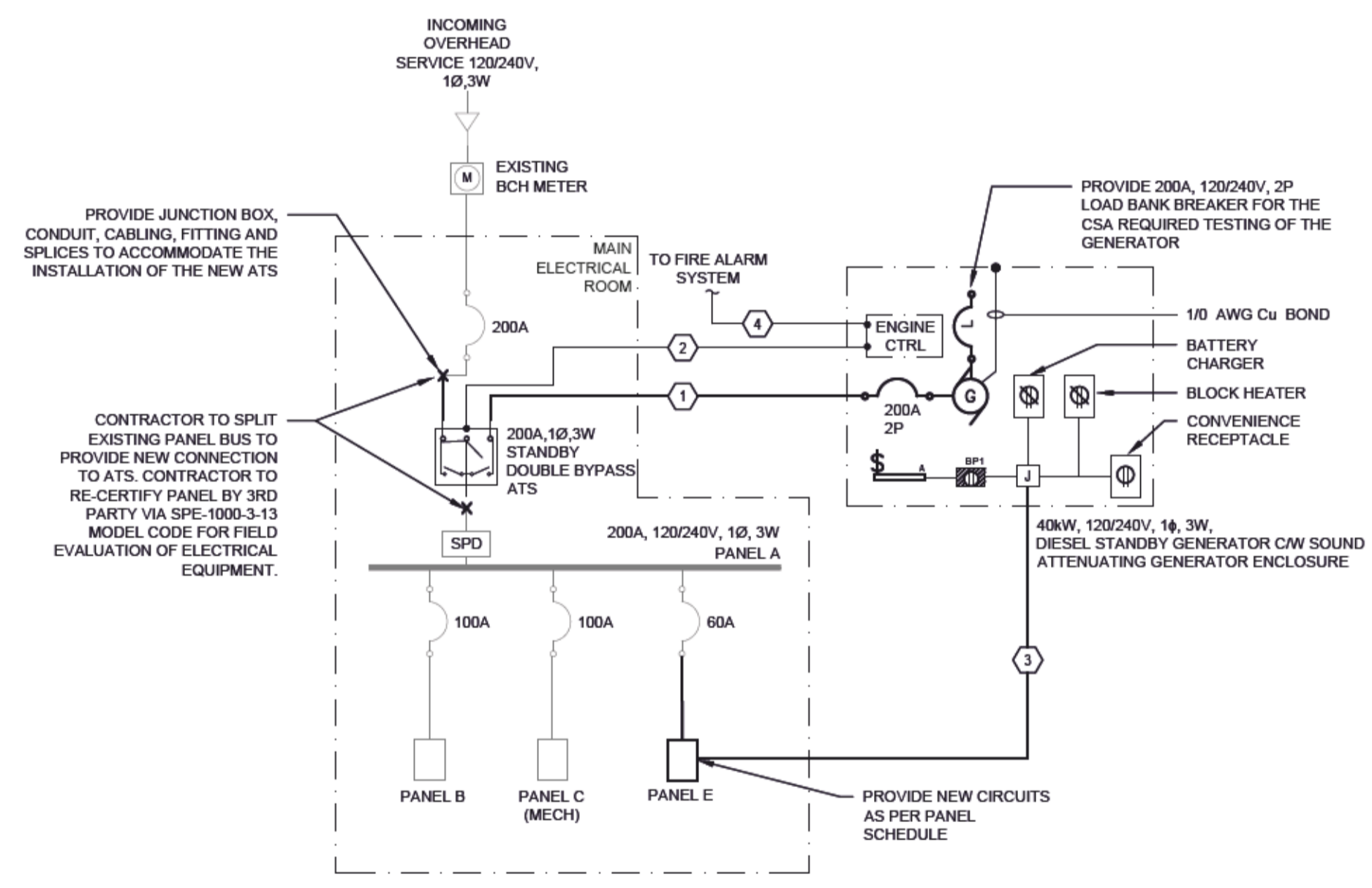
- KEYNOTES:**
- CONTRACTOR TO REMOVE EXISTING TREES AND SHRUBS TO ALLOW INSTALLATION OF NEW GENERATOR.
  - CONTRACTOR TO PROTECT EXISTING UNDERGROUND SEPTIC AND SANITARY LINES DURING CONSTRUCTION.
  - CONTRACTOR TO PROVIDE SEDIMENT AND DEBRIS CONTROL MEASURES WHERE REQUIRED TO PROTECT EXISTING CREEK LOCATED APPROXIMATELY 25m EAST OF PROPOSED GENERATOR LOCATION. CONTRACTOR TO FOLLOW BEST PRACTICE GUIDELINES AS PER PROVINCIAL STANDARDS.



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



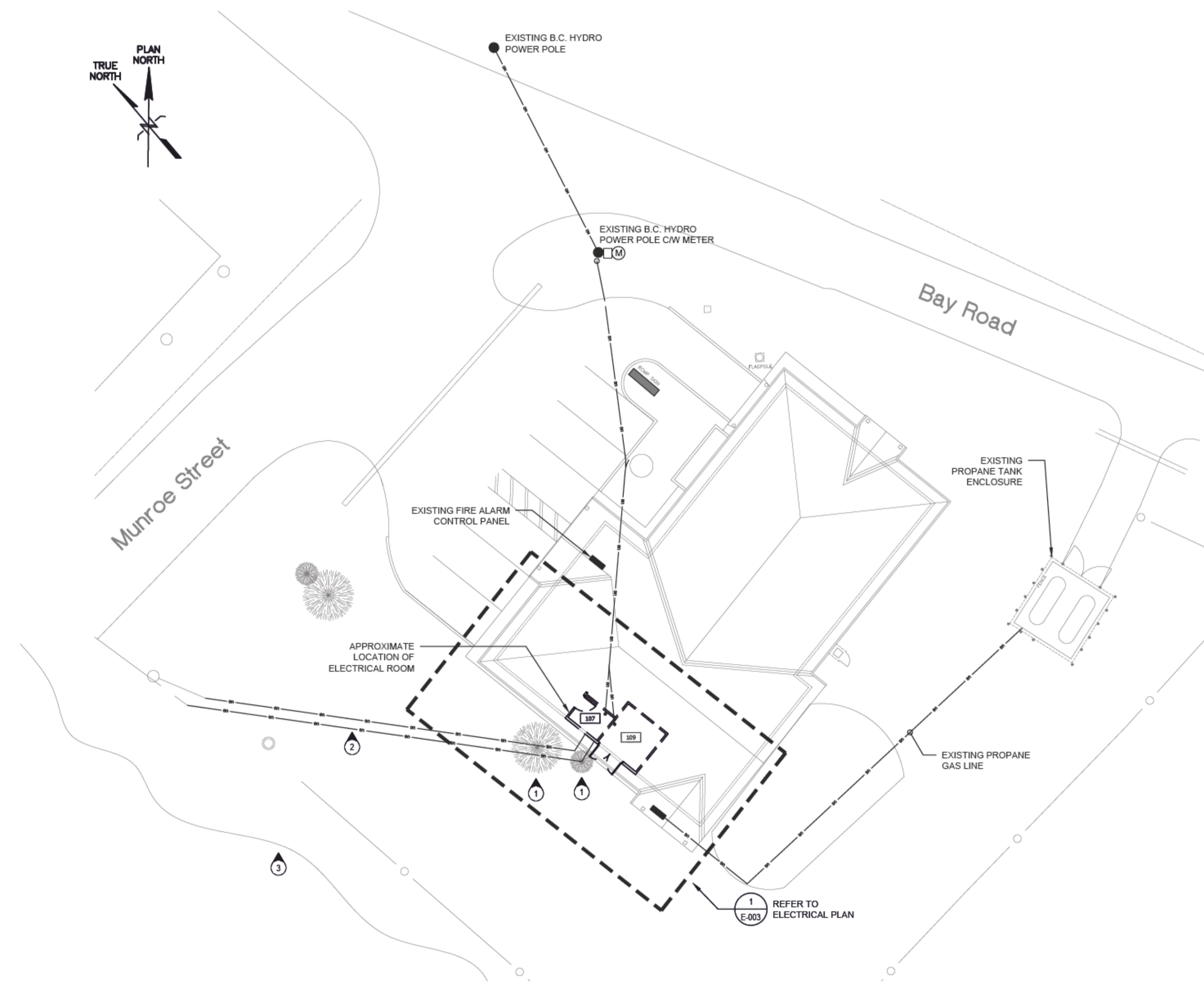
**4 TEMPORARY POWER SINGLE LINE DIAGRAM**  
SCALE: N.T.S.



**FEEDER SCHEDULE:**

|   |   |
|---|---|
| 1 | 3C 3/Ø AWG Cu + BOND IN 78mmC EMT/RIGID PVC.  |
| 2 | MULTICONDUCTOR CONTROL CABLING IN 27mm CONDUIT  |
| 3 | 3 x 2C#12 AWG Cu + BOND IN 53mmC FOR BLOCK HEATER, BATTERY CHARGER, LIGHTING AND RECEPTACLES. |
| 4 | 2#14 AWG Cu IN 27mmC CONDUIT FOR FIRE ALARM.  |

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



**3 ELECTRICAL SITE PLAN**  
SCALE: 1:150

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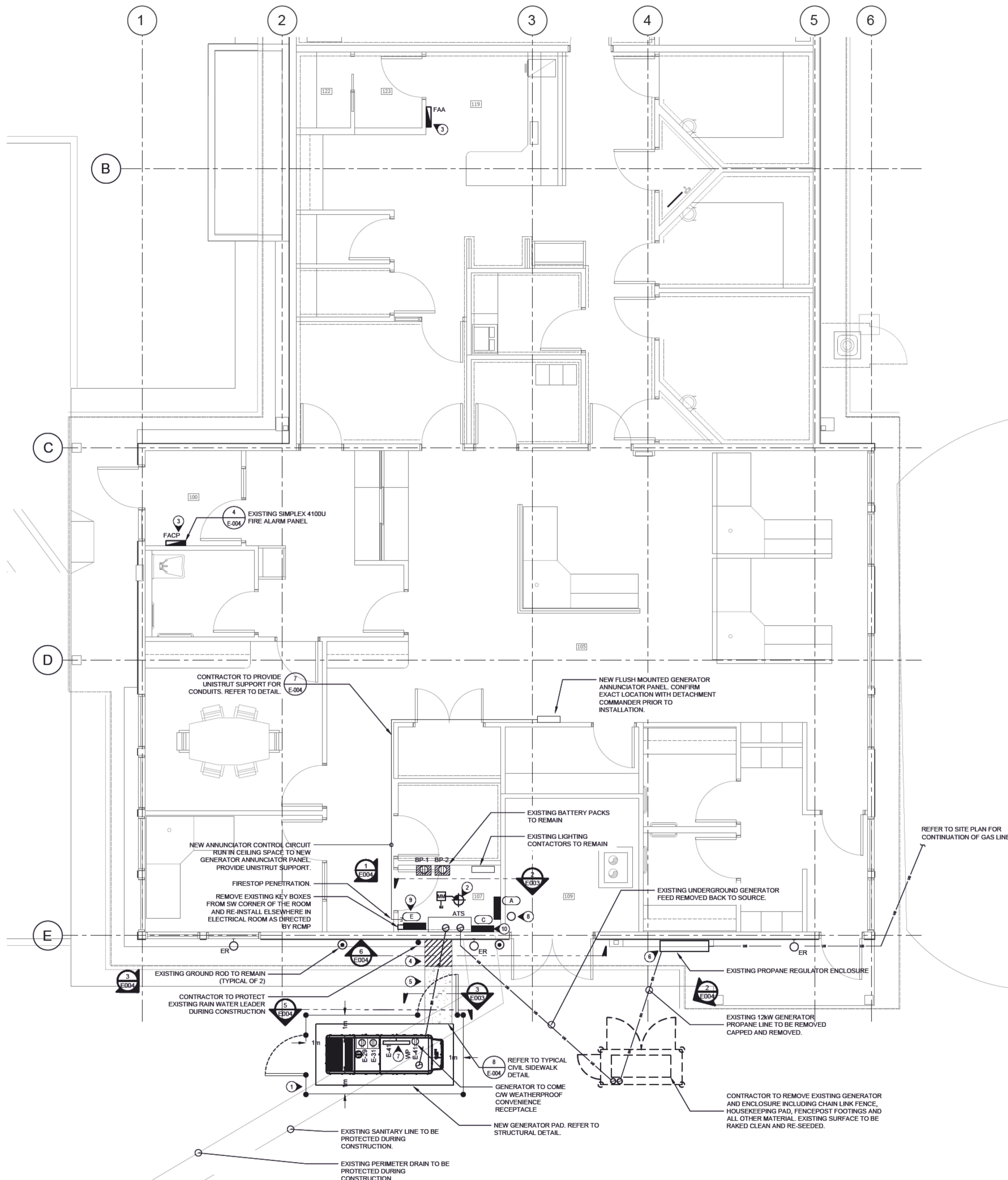
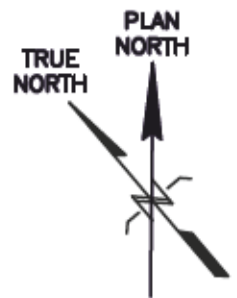
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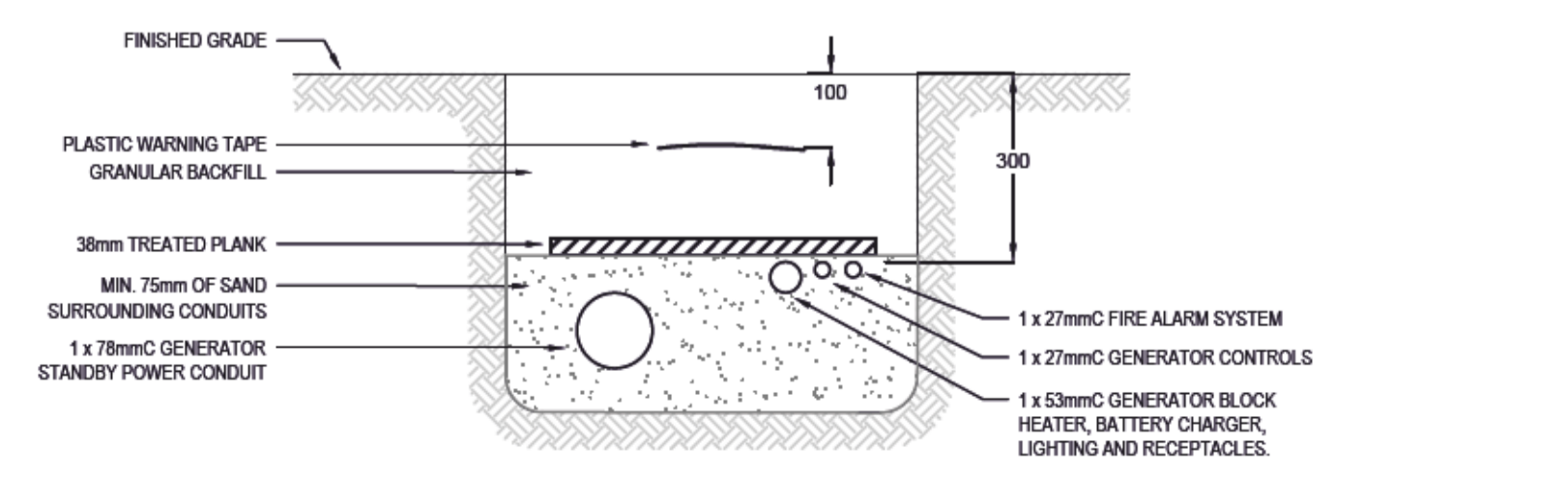
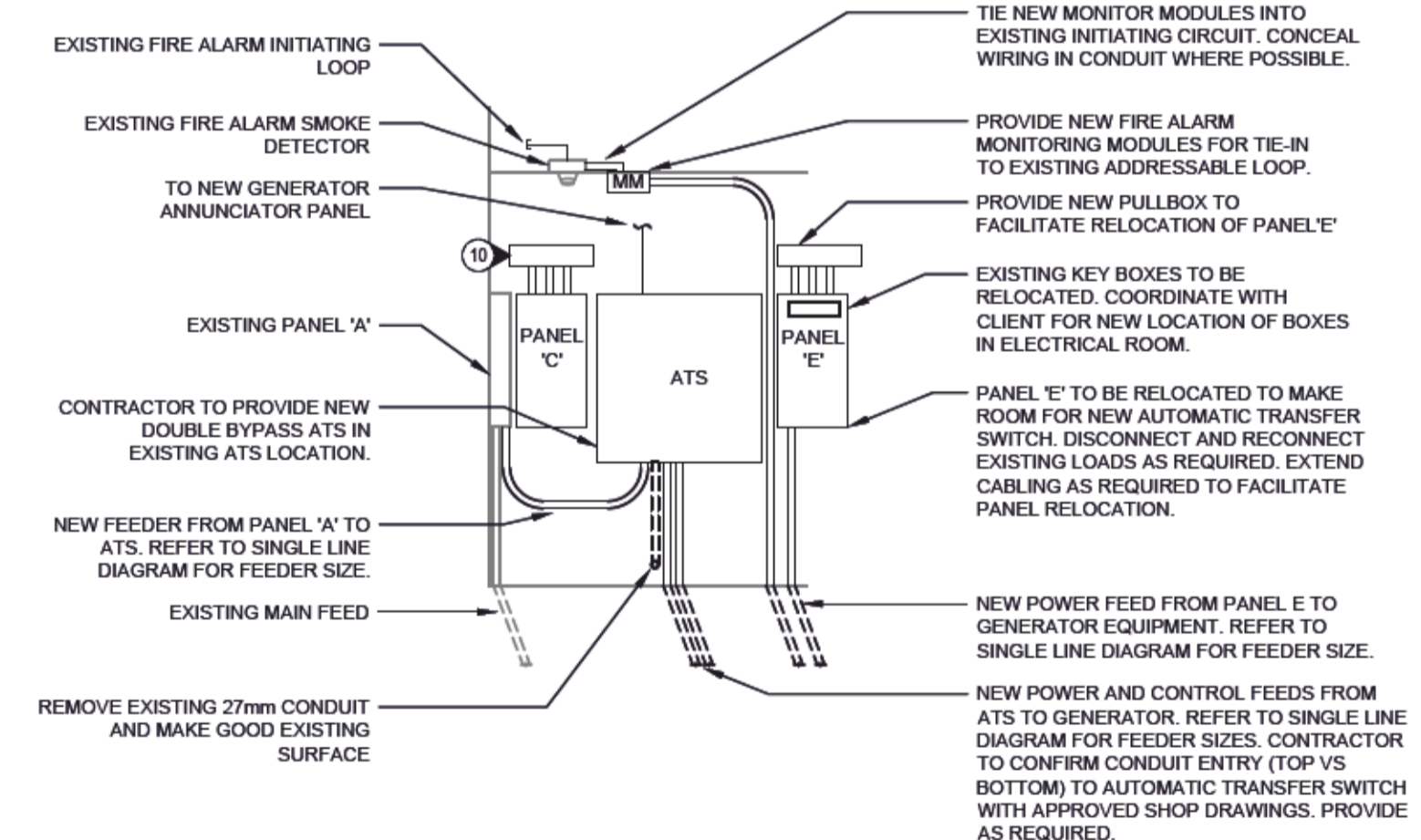
Drawing title / Titre du dessin  
**ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM**

|  |                                 |   |
|--|---------------------------------|---|
| Project No. / No. du projet<br><b>R.105627.001</b> | Sheet / Feuille<br><b>E-002</b> | Revision no. /<br>La<br>Revision<br>no.<br><b>0</b> |
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- KEYNOTES:**
- 1 CONTRACTOR TO PROVIDE NEW SECURITY FENCING AROUND NEW GENERATOR ENCLOSURE. REFER TO ELEVATION DETAIL.
  - 2 CONTRACTOR TO INTERCEPT EXISTING FIRE ALARM INITIATING LOOP FOR NEW GENERATOR TROUBLE AND RUN ALARM CIRCUITS. CONTRACTOR TO UPDATE FIRE ALARM PANEL ZONES AND RE-VERIFY SYSTEM.
  - 3 CONTRACTOR TO UPDATE FIRE ALARM PANEL ZONES AND RE-VERIFY ALARM PANEL. REFER TO DETAIL.
  - 4 CONTRACTOR TO SAW CUT EXISTING CONCRETE PATHWAY AND HAND DIG NEW CONDUCTOR TRENCH. PROVIDE GROUND PENETRATING RADAR SURVEY TO IDENTIFY ALL BURIED SYSTEMS PRIOR TO STARTING WORK.
  - 5 CONTRACTOR TO PROVIDE NEW CONCRETE PATHWAY TO NEW GENERATOR ENCLOSURE. PROVIDE BROOM FINISH. REFER TO MMCD STANDARD DRAWING C2.
  - 6 CONTRACTOR TO REMOVE EXISTING GENERATOR PROPANE LINE BACK TO VALVE ENCLOSURE. CAP PROPANE PIPE 50mm PAST ISOLATION VALVE. WORK TO BE PERFORMED BY CERTIFIED PROPANE GAS FITTER.
  - 7 CONTRACTOR TO PROVIDE 1" STRIP LIGHT
  - 8 CONTRACTOR TO PROVIDE A DIESEL FUEL OIL SPILL KIT
  - 9 RELOCATED PANEL 'E'. CONTRACTOR TO PROVIDE UPDATED TYPE WRITTEN PANEL SCHEDULE IN NEW PLASTIC SLEEVE.
  - 10 RELOCATED. SEE PROPOSED SEQUENCE OF WORK. ENSURE ALL REQUIRED CLEARANCES ARE MET.



Public Works and Government Services Canada

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Pacific Region  
**SERVICES IMMOBILIERS**  
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ELECTRICAL PARTIAL PLAN AND DETAILS

|   |                          |  |
|---|--------------------------|--|
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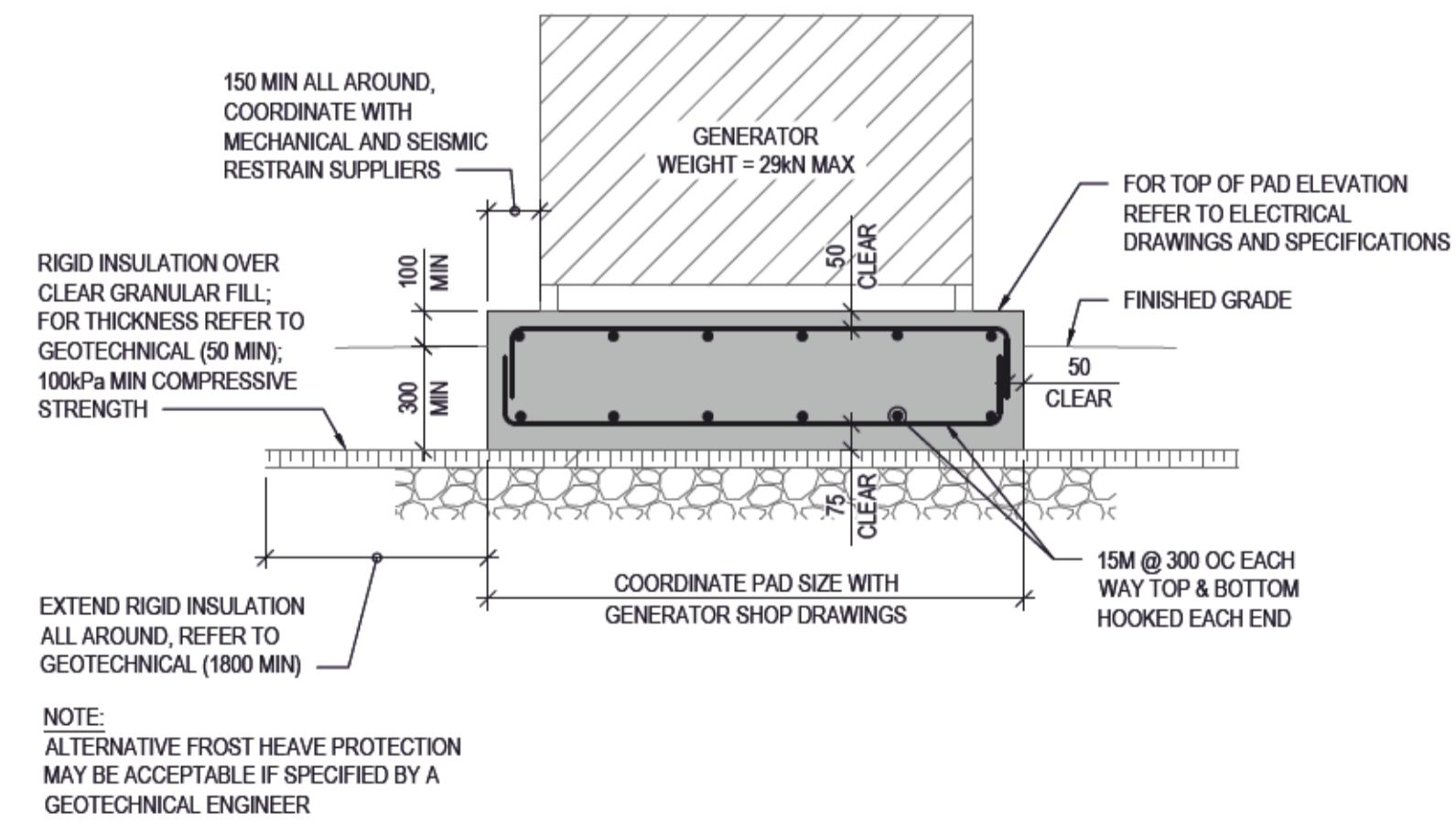
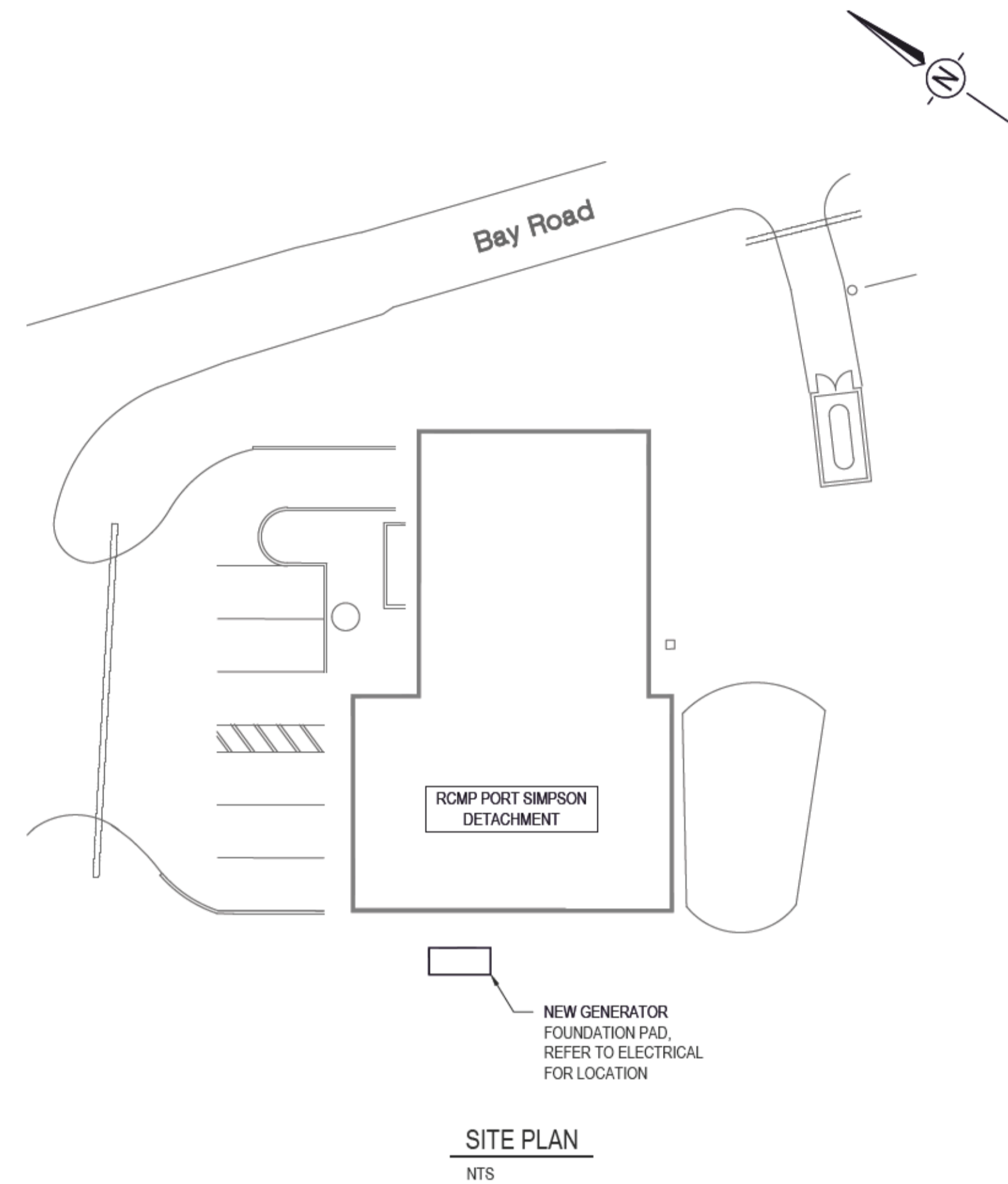


**GENERAL NOTES**

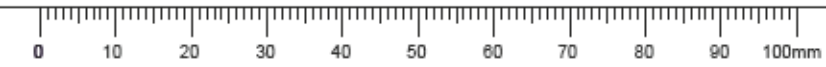
- CONTRACTOR TO VERIFY ALL DIMENSIONS FOR PROJECT PRIOR TO COMMENCEMENT OF WORK AND NOTIFY DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCIES.
- STRUCTURAL DRAWINGS SHOW THE COMPLETED PROJECT. THEY DO NOT SHOW COMPONENTS WHICH MAY BE NECESSARY FOR CONSTRUCTION SAFETY. CONTRACTOR IS RESPONSIBLE FOR SAFETY ON AND ABOUT THE JOB SITE DURING CONSTRUCTION.
- CONTRACTOR TO ENSURE THAT ALL WORK IS CARRIED OUT BY THE RULES AND CUSTOMS OF THE BEST TRADE PRACTICES AND THEIR SPECIFICATIONS BY SKILLED TRADES PEOPLE KNOWLEDGEABLE OF THE TYPE OF CONSTRUCTION. THEY ARE TO BE PROPERLY EQUIPPED AND SUPERVISED.
- NOTIFY DEPARTMENTAL REPRESENTATIVE 24 HOURS IN ADVANCE FOR CONSTRUCTION REVIEW OF THE STRUCTURAL PORTION OF THE PROJECT AS SHOWN ON THE STRUCTURAL DRAWINGS.
- SEE ELECTRICAL DRAWINGS FOR SLEEVES, INSERTS, ETC. TO BE ENCASED IN CONCRETE.
- STRUCTURAL DESIGN DATA
  - ENGINEER OF RECORD: CHELSEA PATON, P. ENG.
  - DESIGN CODE - NATIONAL BUILDING CODE OF CANADA 2015 & BRITISH COLUMBIA BUILDING CODE 2018 - PART 4.

**FOUNDATION NOTES**

- GEOTECHNICAL ENGINEER TO BE RETAINED BY THE CONTRACTOR TO PROVIDE DESIGN AND FIELD REVIEW SERVICES.
- GEOTECHNICAL ENGINEER TO PROVIDE LETTERS OF ASSURANCE SCHEDULES B AND C-B.
- FOOTINGS HAVE BEEN DESIGNED FOR THE FOLLOWING UNFACTORED BEARING PRESSURES OF 75 kN/m<sup>2</sup>. FOOTINGS TO BEAR ON SUBGRADE APPROVED BY A GEOTECHNICAL ENGINEER.
- BEARING SURFACES MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE BEING PLACED. DEPARTMENTAL REPRESENTATIVE IS NOT RESPONSIBLE FOR CONFIRMING BEARING CAPACITIES OF SOILS.
- REFER TO GEOTECHNICAL ENGINEER FOR OTHER SPECIFIC DESIGN REQUIREMENTS FOR FOOTINGS, SOIL SLOPES, FROST PROTECTION, MINIMUM COVER, ETC.
- PROTECT BEARING SURFACES FROM FREEZING BEFORE AND AFTER FOUNDATION PAD IS POURED.
- SUB-BASE DESIGN OF SOIL UNDER THE FOUNDATION PAD TO BE DESIGNED BY A GEOTECHNICAL ENGINEER.



1 FOUNDATION PAD SECTION  
S-001 1:20



WSP PROJECT NO. 191-00960-02

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**STRUCTURAL GENERAL NOTES, SITE PLAN AND TYPICAL GENERATOR PAD DETAIL**

|   |                          |                                     |
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