

# **TENDER DOCUMENT**

**Department of Family and Human Services  
Housing Services**

**Morell A and B Seniors Housing**

**Generator Upgrade**

**Department of Family and Human Services  
Housing Services**

Generator Upgrade as per attached draft contract for:

**Morell A and B Seniors Housing located at 50 and 62 Queen Elizabeth Drive,  
Morell, PEI**

The Bid form must be addressed and delivered by hand or mail, in a sealed envelope and marked:

**“Morell A and B Seniors Housing - Generator Upgrade”**

to:

Department of Family and Human Services  
Housing Services  
161 St. Peters Road  
Charlottetown, PE  
C1A 7N8

**on or before Thursday August 24, 2017 at 2:00 p.m., Atlantic Standard Time**

**Please note the following:**

- Lowest or any tender not necessarily accepted - Family and Human Services reserves the right to accept or reject any or all bids.
- Faxed submissions will not be accepted.
- Late submissions will not be accepted.
- The contract will be awarded based on the bidder whose bid provides the greatest value based on quality, service, and price.
- The successful bidder will be required to execute the attached contract, including providing appropriate certificate of insurance and certificate of good standing by the Workers Compensation Board prior to commencing work at any site.
- No site meeting is required. If questions arise, contact 902-368-5770.
- Services may not be contracted with individuals who have not attained the legal age of 18 years.
- Completion date is October31, 2017

**Bid Form for  
Department of Family and Human Services  
“Morell A and B Seniors Housing - Generator Upgrade”  
Submitted by:**

Contractor \_\_\_\_\_  
Address \_\_\_\_\_  
Telephone \_\_\_\_\_

To: Department of Family and Human Services  
Housing Services  
161 St. Peters Road  
Charlottetown, PE  
C1A 7N8

Having examined the specifications for this project as well as any addenda issued, WE HEREBY OFFER to furnish all materials and labour necessary for the full and proper completion for “**Generator Upgrade**” at the location identified above and supply and install at the location identified above. This bid shall **include all applicable taxes** in force at this date but shall not include any additional or deductible allowances or taxes which may be applicable subsequent to this date, and which shall be payable by or to the Department of Family and Human Services, in accordance with the above mentioned documents. **The bid shall also include dumpage fees.**

**TOTAL COST** \_\_\_\_\_ **Dollars**

in lawful money of Canada (\$\_\_\_\_\_).

In submitting this tender, we recognize the necessity to complete the information requested by any appendices, as well as the right of the Department of Family and Human Services to accept any tender at price submitted on the condition that revised tenders will not be called for if minor changes are made.

In the event of this tender being accepted, we are prepared to commence work on:

\_\_\_\_\_ and complete our work by: \_\_\_\_\_.

If we are notified of the acceptance of this tender within the specified time, we will:

- 1) Enter into a formal contract agreement with the Department of Family and Human Services.
- 2) Complete the entire work on or before the dates stated.

This tender includes the following addenda(s):

<u>Addendum #</u>	<u>Date</u>	<u>Initial</u>
_____	_____	_____
_____	_____	_____

Date

**(To be signed by an Officer of the Company or Sole Owner)**

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 2017

BETWEEN: **GOVERNMENT OF PRINCE EDWARD ISLAND**, as represented by  
the Minister of Family and Human Services

(hereinafter referred to as the "Government")

OF THE FIRST PART

AND: a body corporate, duly incorporated under the laws of Prince Edward Island  
and having its head office at

(hereinafter referred to as the "Contractor")

OF THE SECOND PART

WHEREAS the Government wishes to engage the services of the Contractor to carry out the work  
described in Schedule "A" herein;

AND WHEREAS the Contractor has agreed to provide the Government with these services on  
certain terms and conditions;

NOW THEREFORE the parties agree that the terms and conditions of their relationship are as  
follows:

**Covenants of the Contractor and the Government**

1. The Contractor shall perform the services, assume all those responsibilities and diligently  
execute all those duties described in the attached Schedule "A" (the "work"), in a manner  
satisfactory to the Government.
2.
  - a. Subject to the termination clause, the term of this agreement shall commence on  
the \_\_\_\_\_ day of \_\_\_\_\_ and end on the \_\_\_\_ day of \_\_\_\_\_.
  - b. Subject to the termination clause of this agreement and notwithstanding the date of  
signing of this agreement, it is acknowledged by both parties that the Contractor  
commenced the performance of the duties as set out to this contract on the \_\_\_ day  
of \_\_\_\_\_. It is further agreed that the contract sum of \$\_\_\_\_\_ inclusive  
of all applicable taxes, is the maximum for the project and includes all amounts  
which may be owed for the work done since the \_\_\_ day of \_\_\_\_\_, \_\_\_\_.

**Payments, Records and Accounts**

3. The Government shall make payments to the Contractor in the following manner:
  - a. Payment for work rendered under this Agreement shall be for a fixed lump sum of  
\$\_\_\_\_\_, inclusive of all applicable taxes. The payments described herein  
shall be paid upon the basis of the submission of an invoice by the Contractor.  
Such invoice shall be submitted to the Government and the Government shall pay  
the amount owing within 30 days of receipt.
  - b. All payments are subject to a hold back of an amount equal to 15% of the amount  
billed. The hold back shall be paid upon the completion of and acceptance of the  
work. The lien period will commence upon final approval by the Government  
services of all work.

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

## **Conditions and Records of Employment**

4.
  - a. The parties agree that the Contractor shall act as an independent contractor and that it is entitled to no other benefits or payments whatsoever than those specified in paragraph 3 hereof.
  - b. The parties agree that entry into this agreement will not result in the appointment or employment of the Contractor as an officer, clerk or employee of the Government, nor shall the *Civil Service Act*, R.S.P.E.I. 1988, Cap. C-8 apply.
5.
  - a. The Contractor agrees to accept sole responsibility to submit any applications, reports, payments or contributions for Sales Taxes, Income Tax, Canada Pension Plan, Employment Insurance, Workers Compensation assessments, Harmonized Sales Tax or any other similar matter which the Contractor may be required by law to make in connection with the work to be performed under this Agreement.
  - b. The Contractor agrees to accept sole responsibility to comply with all Federal, Provincial and Municipal legislation which may have application to the work being performed under this Agreement.
  - c. The Contractor, before undertaking any work under this Agreement, shall provide a certificate of good standing by the Workers Compensation Board.
  - d. The Contractor shall comply with all provincial and federal legislation affecting conditions of work and wage rates including the *Employment Standards Act* R.S.P.E.I. 1988, Cap W-3, the *Workers Compensation Act* R.S.P.E.I. 1994 Cap 67, or any other laws that impose obligations in the nature of employers' obligations.
  - e. The Contractor agrees to accept the full cost of doing those things required under sub-paragraphs 5 (a), 5 (b), 5 (c) and 5 (d) above, and will not charge or seek reimbursement from the Government in any way; such costs having been taken into consideration and included in the rates of payment stipulated in paragraph 3 above.

## **Reports and Administration**

6. The work is to be performed at the location set forth in Schedule "A".
7. The Government shall provide such support, direction, decisions and information as it deems necessary or appropriate under this Agreement and may appoint a person to administer this agreement and direct the activities of the Contractor.

## **Termination of Agreement**

8. Notwithstanding other provisions of this Agreement, the Government may terminate this Agreement in its entirety, or any part thereof, at any time by a notice in writing, signed by or on behalf of the Government and either delivered to the Contractor or mailed to the Contractor's address at the last-known place of business. This agreement shall be determined to have ended upon the date of delivery, sending by electronic communications or mailing of such notice in which event the Contractor shall have no further claim against the Government, except for the following: The Contractor will be paid pursuant to and in accordance with paragraph 3 for the work performed up to the date of termination by written notice. Such payment shall include all firm commitments made by the Contractor prior to the receipt of the notice and for which the Contractor is liable for payment, less any sums paid by the Government or the Contractor on account.

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

9. Notice in this agreement is deemed to have been effected on the day of delivery in person, facsimile, electronic communication, or upon mailing of the notice.

**Conflict of Interest**

10. The Contractor warrants that as at the date of this Agreement, no conflict of interest, or any circumstance that might interfere with independent and objective exercise of judgment, exists or is likely to arise in relation to execution of this Agreement or its subject matter. The Contractor shall immediately notify Government, in writing, if any such actual or potential conflict of interest should arise at any time during the Term. In the event Government discovers or is notified by the Contractor of an actual or potential conflict of interest, Government, in its sole discretion, may either:
- (a) allow the Contractor to resolve the actual or potential conflict to the satisfaction of Government; or
  - (b) terminate the Agreement in accordance with the Termination section of this Agreement

**Confidentiality**

11. Any and all information, knowledge or data made available to the Contractor as a result of this Agreement shall be treated as confidential information. The Contractor will not directly or indirectly disclose or use it for purposes unrelated to the agreement at any time without first obtaining the written consent of the Government, unless the information, knowledge or data is generally available to the public.

**Freedom of Information and Protection of Privacy Act**

12. Any information provided on this contract may be subject to release under the *Freedom of Information and Protection of Privacy Act*. The Contractor may be consulted prior to release of any information.
13. Contractors whose work for government involves the collection or use of personal information are subject to the *Freedom of Information and Protection of Privacy Act*. Personal information may not be released to any third party or unauthorized individual.

**Indemnification and Assumption of Liability**

14. The Contractor shall indemnify and hold harmless the Government, its agents, representatives and employees from and against all claims, demands, losses, costs, damages, actions, suits or proceedings of every nature and kind whatsoever arising out of or resulting from the performance of work (herein called the "claims"), provided that any such claim is caused in whole or in part by any act, error or omission, including, but not limited to, those of negligence of the Contractor or anyone directly or indirectly employed by the Contractor or anyone for whom the Contractor may be liable.
- 15.
- a. The Contractor shall maintain, as a minimum, general liability insurance providing not less than Two Million Dollars (\$2,000,000) coverage and shall add the Government as an additional insured and provide whatever information the Government may require on the insurance that is available.
  - b. Automobile liability insurance with limits of at least Two Million Dollars (\$2,000,000) on all owned, leased or rented vehicles licensed to drive on a highway.

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

- c. The Contractor shall be responsible for all materials and equipment forming part of the contract until such time as they have been installed and accepted by Government in accordance with this agreement and attached schedules herein, the Contractor may, at its option and cost, protect its interests with insurance.
- d. The policy shall include, but not be limited to, bodily and personal injury, property damage, non-owned automobile liability, cross liability, blanket contractual liability and 30 days' notice of cancellation to the insured and the Government.
- e. The policy required by this Agreement shall be in a form and with insurers satisfactory to the Government. The foregoing insurance shall be primary and not require the sharing of any loss by any insurer of Government. A certificate of insurance shall be delivered to the Government prior to execution of the agreement. Default of delivery or receipt by the Government shall not be construed as acknowledgment or concurrence that there has been compliance with the terms of this agreement.

**Subcontractors**

- 16.
  - a. The Contractor agrees that the list of names of subcontractors supplied prior to the signing of the Agreement, and attached as Schedule "B" to this Agreement, is the list of subcontractors intended to be used to carry out those parts of the work noted thereon. Said list is subject to approval by the Government, which approval shall not be unreasonably withheld. The Contractor shall not employ any subcontractor to whom the Government may reasonably object.
  - b. In the event that approval is obtained, the Contractor shall be responsible for ensuring that any and all subcontractors shall have the same insurance that the Contractor is required to have under this contract.
  - c. If the change of any name on the subcontractor list is required by the Government, and the work has to be awarded to a higher bidder, the contract sum shall be increased by the difference between the two bids.
  - d. The Contractor acknowledges that this Agreement does not create any contractual relations between the Government and any subcontractor which the Contractor employs, and the Contractor shall make no such assertions or promises of that nature to any subcontractor.

**Entire Agreement**

- 17. This agreement shall not be assigned or subcontracted in whole or in part by the Contractor without the prior written consent of the Government.
- 18. This agreement shall enure to the benefit of and be binding upon the parties hereto and, subject to above assignment and subcontracting clause, their executors, administrators, successors and assigns.
- 19. This agreement shall be interpreted and applied in accordance with the laws and in the Courts of the Province of Prince Edward Island.
- 20. This agreement, including Schedules "A", "B", "C", "D", "E", and "F", constitutes and expresses the entire agreement of the parties hereto and any amendment or addition thereto shall be in writing and signed by the respective parties.

Initials \_\_\_\_\_/\_\_\_\_\_  
 Date \_\_\_\_\_/\_\_\_\_\_



21. The headings are inserted in this Agreement for reference only and shall not form part of the Agreement.

**IN WITNESS WHEREOF** the parties thereto have executed this Agreement as of the day and year above written.

**SIGNED, SEALED & DELIVERED**  
in the presence of:

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)  
)

Government of Prince Edward Island,  
as represented by the Minister of  
Family and Human Services

\_\_\_\_\_

\_\_\_\_\_

**SIGNED, SEALED & DELIVERED**  
in the presence of:

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\_\_\_\_\_

\_\_\_\_\_

**SCHEDULE "A"**

**"THE WORK"**

**To Contract between the Government of Prince Edward Island and \_\_\_\_\_ dated the  
\_\_\_\_ day of \_\_\_\_\_, 2017**

1. The Contractor shall supply all materials, labour, and equipment required to remove, dispose of, and replace the existing generator and transfer switch at Morell A and B Seniors Housing located at located 50 and 62 Queen Elizabeth Drive, Morell, PEI.
  
2. The Contractor shall carry out work as per plans and specifications attached:
  - a. Schedule C - Generator Specifications
  - b. Schedule D - Existing Generator - Electrical Schematic
  - c. Schedule E - Revised Generator - Electrical Schematic
  - d. Schedule F - Generator - Installation Details
  
3. The Contractor shall:
  - a. cover all costs for propane installation of piping, a full tank of propane and rental for the first year. A metal guard must be installed to protect propane lines connected to generator;
  - b. coordinate with propane supplier (Superior Propane) to set up installation;
  - c. submit to the electrical inspector an application for the work to be inspected and provide Government with a copy of the approval from the electrical inspector;
  - d. install 6" steel bollards, filled with concrete and painted yellow. These bollards are to be spaced 4' apart with four in the front of generator and two on the sides. Propane tank must also be protected by bollards. Bollards are to be 4' in ground and 4' above ground;
  - e. return old generator and transfer switches to Government;
  - f. mark out the location of the generator with orange stakes.
  
4. The Contractor shall:
  - a. erect temporary barricades, fencing or warning signals around the work site for the safe passage of persons to and from the buildings;
  - b. remove rubbish and debris from the site on a daily basis;
  - c. be responsible for the repair of any damage to the building, units, tenant property or grounds resulting from the work of this Agreement.

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

**SCHEDULE "B"**

**"THE SUBCONTRACTORS"**

**To Contract between the Government of Prince Edward Island and \_\_\_\_\_ dated  
the \_\_\_ day of \_\_\_\_\_, 2017**

1. The Contractor agrees that the following is the list of subcontractors intended to be used to carry out those parts of the work noted thereon. Said list is subject to approval by the Government, which approval shall not be unreasonably withheld. The Contractor shall not employ any subcontractor to whom the Government may reasonably object.

<b>Subcontractor</b>	<b>Work to be Provided</b>

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

**SCHEDULE "C"**

**"GENERATOR SPECIFICATIONS"**

To Contract between the Government of Prince Edward Island and \_\_\_\_\_ dated  
the \_\_\_ day of \_\_\_\_\_, 2017

**PEI Housing**

**STANDBY PROPANE GENERATOR  
SPECIFICATION**

**For  
Morell A & B Seniors Housing**

**Prepared for:**

**PEI Housing  
Charlottetown, PE**

Prepared by:

Richardson Associates (1993) Limited  
Consulting Engineers  
P. O. Box 1057, 565 North River Road, Suite 1  
Charlottetown, PE  
C1A 7M4

Date:

June 19, 2017

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

## Specification

### 1. Introduction

- 1.1. The Scope of Work involves the supply, delivery, testing and commissioning of a new 12 KW standby generator and 2 transfer switches at Morell A & B Seniors Housing, located at 50 and 52 Queen Elizabeth Drive, Morell, PE. In addition the contractor shall provide technical support and assistance to the Owner's Representative during the installation as outlined in this attached Specification.

### 2. General Provisions

#### 2.1. Scope of Work

- 2.1.1. It is the intent of this specification to supply and install an emergency standby generator set together with all accessories necessary for a complete installation as shown on the plans and drawings and specified herein. All equipment shall be new and of current production.
- 2.1.2. Any and all exceptions to the published specifications shall be subject to the approval of the engineer.
- 2.1.3. The generator shall be finished by a single manufacturer who shall be responsible for the design, coordination, and testing of the complete system. The entire system shall be installed in accordance to the specifications herein.
- 2.1.4. The equipment shall be provided by a manufacturer who maintains a service organization available twenty-four hours a day throughout the year.
- 2.1.5. The equipment shall be produced by a manufacturer who is ISO 9001 certified for the design, development, production, installation, and service of their complete product line.

#### 2.2. General Requirements

- 2.2.1. It is the intent of this specification to secure an emergency generator set system that has been tested during design verification, production and at the final job site. The equipment supplied and installed shall meet the requirements of the latest edition of the Canadian Electrical Code, along with all applicable local codes and regulations. All equipment shall be new and of current production by a national firm that manufactures generator set and controls and assembles the generator sets as a complete and coordinated system. There will be one source responsibility for warranty, parts, and service through a local representative with factory-trained servicemen.

#### 2.3. Submittals

- 2.3.1. The submittal shall include specification sheets showing all standard and optional accessories to be supplied, schematic wiring diagrams, dimension drawings, and interconnection diagrams identifying by terminal number, each required interconnection between the generator set, the transfer switch located in the main electrical room.
- 2.3.2. Engine-generator submittals shall include the following information:
  - 2.3.2.1. Factory published specification sheet indicating standard and optional accessories, ratings, etc.
  - 2.3.2.2. Manufacturer's catalog cut sheets of all auxiliary components such as isolators, battery charger, silencer, exhaust flex, main circuit breaker, etc.
  - 2.3.2.3. Dimensional elevation and layout drawings of the generator set and enclosure.
  - 2.3.2.4. Engine mechanical data at varying loads up to full load, including heat rejection, exhaust gas flows, combustion air and ventilation air flows, noise data, fuel consumption, etc.
  - 2.3.2.5. Generator electrical data including temperature and insulation data, cooling requirements, excitation ratings, voltage regulation, voltage regulator, efficiencies, waveform distortion and telephone influence factor.
  - 2.3.2.6. Control panel schematics.

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Date \_\_\_\_\_/\_\_\_\_\_

2.3.2.7. Oil sampling analysis, laboratory location, and information.

2.3.2.8. Manufacturer's and Dealer's written warranty.

2.3.2.9. Emissions data

2.4. Codes and Standards

The generator set shall conform to the requirements of the following codes and standards:

2.4.1. CSA C22.2, No. 14 - M91 Industrial Control Equipment.

2.4.2. UL2200. The generator set shall be listed to UL2200 or submit to an independent third party certification process to verify compliance as installed.

2.4.3. Unit shall be EPA/CARB compliant.

2.5. Related Sections

2.5.1. Division 3 – Concrete

2.5.1.1. Provide details of openings in concrete pad for General Contractor for preparation of concrete pad.

2.6. Work Included

2.6.1. Installation

2.6.1.1. The work includes supplying and installing a complete integrated emergency generator system to provide an alternate source of power to the building emergency load in the event of a utility outage. The system consists of a propane generator set, weather tight enclosure, critical grade silencer with all related component accessories required for a complete system.

2.6.2. Fuel System

2.6.2.1. Fuel shall be delivered to the unit from the owner's onsite propane storage tank. The Manufacturer shall make the final connections of the fuel line to the engine.

2.7. Requirements, Codes and Regulations

2.7.1. The equipment supplied and installed shall meet the requirements of the current Edition of the CEC and all applicable local codes and regulations. All equipment shall be of new and current production.

2.8. Factory Production Testing

2.8.1. The system manufacturer must certify that engine, generator, controls, and switchgear have been tested as complete system representative of engineering models. The manufacturer shall supply equipment that is a current factory production model.

2.8.2. The Generator Set shall be tested in accordance with the power, voltage, and frequency shown on the generator set information plate.

2.8.3. Site Tests

2.8.3.1. Site Tests: An installation check, start-up, and building load test shall be performed by the manufacturer's local representative. The regular operators and the maintenance staff shall be notified of the time and date of the site test.

2.8.3.2. Fuel and lubricating oil shall be checked for conformity to the manufacturer's recommendations, under the environmental conditions present and expected.

2.8.3.3. Accessories that normally function while the set is standing by shall be checked prior to cranking the engine. These shall include: block heaters, battery charger, alternator strip heaters, etc.

2.8.3.4. Start-up under test mode to check for exhaust leaks, path of exhaust gases outside the building, cooling air flow, movement during starting and stopping, vibration during running, normal and emergency line-to-line voltage and frequency, and phase rotation.

2.8.3.5. Automatic start-up by means of simulated power outage to test remote-automatic

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Date \_\_\_\_\_/\_\_\_\_\_

starting, transfer of the load, and automatic shutdown. Prior to this test, all transfer switch timers shall be adjusted for proper system coordination. Engine temperature, oil pressure, and battery charge level along with generator set voltage, amperes, and frequency shall be monitored throughout the test. An external load bank shall be connected to the system if sufficient building load is unavailable to load the generator set to the nameplate kW rating.

## 2.9. Warranty & Maintenance

2.9.1. A Standard 2 year for the generator set shall be included to guarantee against defective material and workmanship in accordance with the manufacturer's published warranty from date of start-up. Optional warranties shall be available upon request.

## 2.10. Parts and Service Qualifications

### 2.10.1. Service Facility

2.10.1.1. The engine-generator supplier shall have service facilities within 4 hours of the project site and maintain 24-hour parts and service capability. The distributor shall stock parts as needed to support the generator set package for this specific project.

### 2.10.2. Service Personnel

2.10.2.1. The dealer shall maintain qualified, factory trained service personnel that can respond to an emergency call within 1 hour of notification.

## 3. Products

### 3.1. Equipment

3.1.1. The generator set shall be a Winco Inc., PSS12H, 12 kW. It shall provide 12 kW/12 kVA when operating at 120/240 volts, 1.0 power factor.

### 3.2. Engine

3.2.1. The 688(cc) displacement engine with overhead valve and electronic ignition and shall deliver have a governed speed of 3600 rpm. The engine shall be equipped with the following:

- 3.2.2. A mechanical governor capable of +/- 1.8 Hz steady-state frequency regulation.
- 3.2.3. 12 Volt DC engine mounted alternator.
- 3.2.4. The engine shall be fueled with L.P gas (Propane).
- 3.2.5. Critical Grade glass packed silencer.
- 3.2.6. Low oil pressure shut down.
- 3.2.7. Hi oil temperature shutdown.

### 3.3. Alternator

3.3.1. Single phase 120/240 volt, 2 pole alternator with the following characteristics.

- 3.3.2. +/- .5 % voltage regulation
- 3.3.3. Class H insulation
- 3.3.4. 125<sup>0</sup>/50<sup>0</sup>C temperature rise.
- 3.3.5. 100% copper windings.
- 3.3.6. Weatherproof maintenance free bearings.
- 3.3.7. < 5% harmonic Distortion.
- 3.3.8. 2/3 Pitch rotor.
- 3.3.9. 100% load acceptance in a single step.
- 3.3.10. 3 stage battery charger
- 3.3.11. Group 26, 500 CCA battery.

### 3.4. Control Module

3.4.1. 2 – Wire control module to start engine upon a closure of a dry contact. The module shall provide detailed operating and diagnostic 3-position information through its digital display. Controller features shall include:

- 3.4.1.1. Fail to Start
- 3.4.1.2. Fail to Stop
- 3.4.1.3. Low Oil Pressure

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Date \_\_\_\_\_/\_\_\_\_\_

- 3.4.1.4. High Engine Oil Temperature
- 3.4.1.5. Under Frequency /Speed
- 3.4.1.6. Over Frequency / Speed
- 3.4.1.7. Low Voltage
- 3.4.1.8. High Voltage
- 3.4.1.9. Battery Over/Under Voltage
- 3.4.1.10. Digital Display (RPM, V, HZ, BAT. V)

3.5. Accessories

- 3.5.1. Circuit Breaker - 250 volt rated, molded case thermal magnetic type, generator mounted and rated for full load output of the generator.
- 3.5.2. Weather Enclosure. With Critical rated silencer and cap.

3.6. Automatic Transfer Switch

- 3.6.1. The automatic transfer switch shall be sized to the maximum capacity of the emergency generator and have an ampere rating equal or greater than the rating of the engine mounted circuit breaker.
- 3.6.2. Transfer switch shall be complete with a user friendly control interface with a 128 x 63 graphical LCD display and intuitive symbols for ease of operation
- 3.6.3. Transfer switch shall be complete with LED indicators for transfer switch status.
- 3.6.4. Transfer switch shall be UL 1008, and CSA approved.
- 3.6.5. Transfer switch shall be 2 pole with solid neutral
- 3.6.6. Transfer switch shall be supplied with "in-phase" monitor, and "engine exerciser".
- 3.6.7. Standard of Acceptance: ASCO, Series 300 complete with Accessories #11BE, and #22 and #27.

4. Execution

4.1. Installation

- 4.1.1. Install equipment in accordance with manufacturer's recommendations on the concrete pad provided. Coordinate installation with General Contractor and adhere to all applicable codes.

4.2. Start-Up and Testing

- 4.2.1. Coordinate all start-up and testing activities with the Engineer and Owner.
- 4.2.2. After installation is complete and normal power is available, the manufacturer's local dealer shall perform the following:
  - 4.2.2.1. Verify that the equipment is installed properly.
  - 4.2.2.2. Check all auxiliary devices for proper operation, including battery charger, etc.
  - 4.2.2.3. Test all alarms and safety shutdown devices for proper operation and annunciation.
  - 4.2.2.4. Check all fluid levels.
  - 4.2.2.5. Start engine and check for exhaust, oil, fuel leaks, vibrations, etc.
  - 4.2.2.6. Verify proper voltage at the transfer switch before connecting to the load.
  - 4.2.2.7. Connect the generator to building load and verify that the generator will start and run all designated loads in the plant.
  - 4.2.2.8. Program generator to perform weekly 30 minute engine test run please a monthly generator load test run for a period of 30 minutes.

4.3. Operation and Maintenance Manuals

- 4.3.1. Manuals Provided
- 4.3.2. Provide three (3) sets of operation and maintenance manuals covering the generator, switchgear, and auxiliary components. Include parts manuals, final as-built wiring interconnect diagrams and recommended preventative maintenance schedules.

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 Date \_\_\_\_\_/\_\_\_\_\_



4.4. Training

4.4.1. On-Site Training

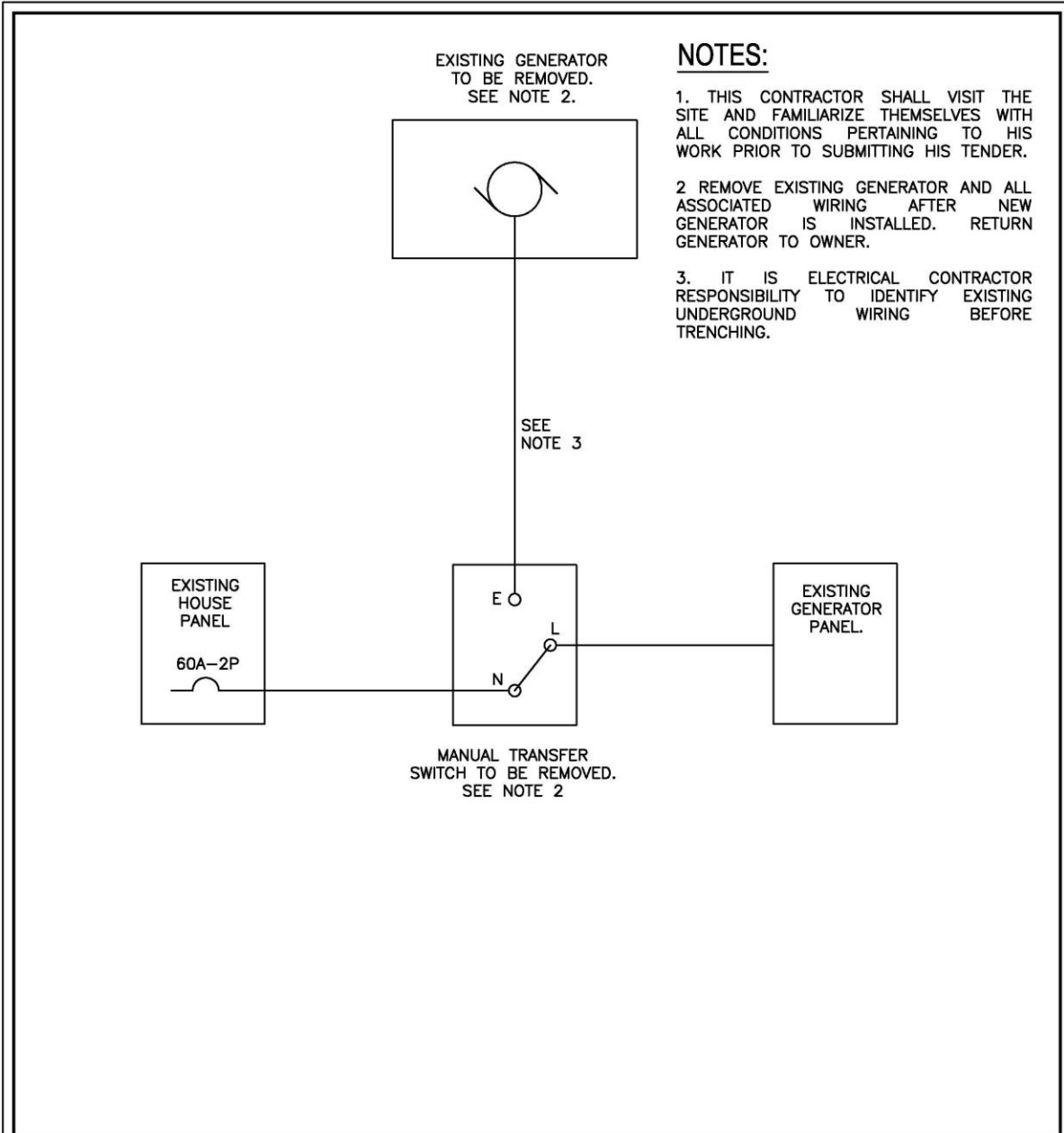
4.4.2. Provide one day of on-site training to instruct the Owner's personnel in the proper operation and maintenance of the equipment. Review operation and maintenance manuals, parts manuals, and emergency service procedures.


Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_

**SCHEDULE "D"**

**“EXISTING GENERATOR – ELECTRICAL SCHEMATIC”**

To Contract between the Government of Prince Edward Island and \_\_\_\_\_ dated  
the \_\_\_ day of \_\_\_\_\_, 2017



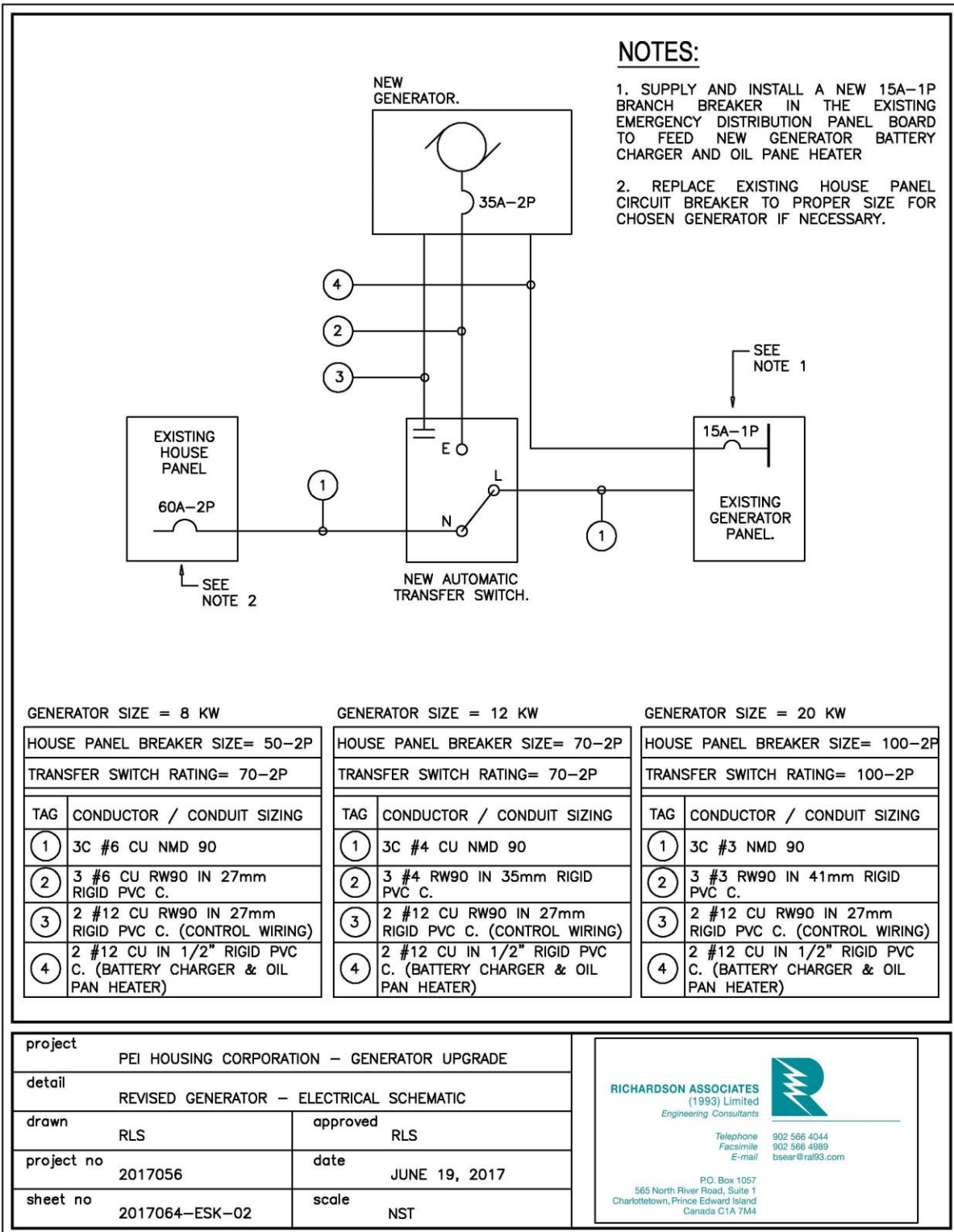
project		PEI HOUSING CORPORATION – GENERATOR UPGRADE		 <p><b>RICHARDSON ASSOCIATES</b> (1993) Limited <i>Engineering Consultants</i></p> <p>Telephone 902 566 4044 Facsimile 902 566 4989 E-mail bsear@rai93.com</p> <p>P.O. Box 1057 565 North River Road, Suite 1 Charlottetown, Prince Edward Island Canada C1A 7M4</p>
detail		EXISTING GENERATOR – ELECTRICAL SCHEMATIC		
drawn	RLS	approved	RLS	
project no	2017056	date	JUNE 19, 2017	
sheet no	2017064-ESK-01	scale	NST	

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**SCHEDULE "E"**

**"REVISED GENERATOR – ELECTRICAL SCHEMATIC"**

To Contract between the Government of Prince Edward Island and \_\_\_\_\_ dated  
the \_\_\_ day of \_\_\_\_\_, 2017



GENERATOR SIZE = 8 KW

HOUSE PANEL BREAKER SIZE= 50-2P	
TRANSFER SWITCH RATING= 70-2P	
TAG	CONDUCTOR / CONDUIT SIZING
①	3C #6 CU NMD 90
②	3 #6 CU RW90 IN 27mm RIGID PVC C.
③	2 #12 CU RW90 IN 27mm RIGID PVC C. (CONTROL WIRING)
④	2 #12 CU IN 1/2" RIGID PVC C. (BATTERY CHARGER & OIL PAN HEATER)

GENERATOR SIZE = 12 KW

HOUSE PANEL BREAKER SIZE= 70-2P	
TRANSFER SWITCH RATING= 70-2P	
TAG	CONDUCTOR / CONDUIT SIZING
①	3C #4 CU NMD 90
②	3 #4 RW90 IN 35mm RIGID PVC C.
③	2 #12 CU RW90 IN 27mm RIGID PVC C. (CONTROL WIRING)
④	2 #12 CU IN 1/2" RIGID PVC C. (BATTERY CHARGER & OIL PAN HEATER)

GENERATOR SIZE = 20 KW

HOUSE PANEL BREAKER SIZE= 100-2P	
TRANSFER SWITCH RATING= 100-2P	
TAG	CONDUCTOR / CONDUIT SIZING
①	3C #3 NMD 90
②	3 #3 RW90 IN 41mm RIGID PVC C.
③	2 #12 CU RW90 IN 27mm RIGID PVC C. (CONTROL WIRING)
④	2 #12 CU IN 1/2" RIGID PVC C. (BATTERY CHARGER & OIL PAN HEATER)

project	PEI HOUSING CORPORATION – GENERATOR UPGRADE		
detail	REVISED GENERATOR – ELECTRICAL SCHEMATIC		
drawn	RLS	approved	RLS
project no	2017056	date	JUNE 19, 2017
sheet no	2017064-ESK-02	scale	NST

**RICHARDSON ASSOCIATES**  
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Canada C1A 7M4

Initials \_\_\_\_\_/\_\_\_\_\_  
Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**SCHEDULE "F"**

**"GENERATOR – INSTALLATION DETAILS"**

To Contract between the Government of Prince Edward Island and \_\_\_\_\_ dated  
the \_\_\_ day of \_\_\_\_\_, 2017

**NOTES:**

1. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY DIMENSIONS ON SITE.
2. THIS CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS PERTAINING TO HIS WORK PRIOR TO SUBMITTING HIS TENDER.
3. CONFIRM EXACT LOCATION FOR THE GENERATOR CONCRETE PAD WITH OWNER PRIOR INSTALLATION.
4. ELECTRICAL CONTRACTOR SHALL MAKE ARRANGEMENT WITH AND COORDINATE WITH PROPANE COMPANY INSTALLATION OF CONCRETE PAD FOR PROPANE TANK, PROPANE TANK AND ALL CONNECTIONS REQUIRED BETWEEN PROPANE TANK AND GENERATOR. ALL FEES LEVIED BY PROPANE SUPPLIER TO BE PAID BY ELECTRICAL CONTRACTOR. PROPANE SUPPLIER SHALL BE SUPERIOR PROPANE LIMITED.
5. REMOVE EXISTING GENERATOR AND ALL ASSOCIATED WIRING AFTER NEW GENERATOR IS INSTALLED. RETURN GENERATOR TO OWNER.
6. ALL TRENCHING, AND GRASS REINSTATEMENT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THERE MUST BE A MIN. OF 6" OF SCREENED TOPSOIL WITH ROLLED SOD INSTALLED ON TOP AND WATERED EVERY 3 DAYS FOR 2 WEEKS.
7. IT IS ELECTRICAL CONTRACTOR RESPONSIBILITY TO IDENTIFY EXISTING UNDERGROUND WIRING BEFORE TRENCHING.
8. ALL REQUIRED CUTTING, PATCHING AND PAINTING OF EXISTING WALLS AND CEILINGS INSIDE THE BUILDING IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. SEAL ALL HOLES IN WALLS AND FLOORS FROM WATER AND WARMINTS. PAINTING TO MATCH EXISTING MATERIALS AND COLORS.
9. VERIFY OPENING IN CONCRETE PAD FOR WIRING WITH SUPPLIER OF GENERATOR BEFORE WORK BEGINS.
9. PHYSICAL DIMENSIONS OF THE PROPOSED GENERATOR ARE 927mm (L) X 756mm (W) X 895mm (H), WEIGHT 400 LBS.
10. CONCRETE PAD IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

project		PEI HOUSING CORPORATION – GENERATOR UPGRADE	
detail		GENERATOR – INSTALLATION DETAILS	
drawn	RLS	approved	RLS
project no	2017058	date	JUNE 19, 2017
sheet no	2017064-ESK-03	scale	NST

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Initials \_\_\_\_\_ / \_\_\_\_\_  
Date \_\_\_\_\_ / \_\_\_\_\_