



Contract 3472Q

Supply and Delivery of ELECTRICAL KIOSK FOR ECKERSLEY A PUMP STATION

Bidders are requested to respond to this Quotation call as instructed subject to the provisions contained herein.

Name of Bidder: _____

Address: _____

City: _____

Province: _____ Postal Code: _____

Telephone No: _____ Fax No.: _____

E-mail: _____

Contact Person: _____

Title: _____

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Instructions to Bidders

1. Sealed quotations, plainly marked on the envelope:

**CONTRACT 3472Q - SUPPLY AND DELIVERY OF ELECTRICAL KIOSK FOR
ECKERSLEY A PUMP STATION**

will be received at the Information Counter, Main Floor, Richmond City Hall, addressed to the Purchasing Section, 6911 No. 3 Road, Richmond, BC, V6Y 2C1, until 12:00 noon, Local time:

Thursday, May 21, 2009

2. Quotations received in the office of the Purchasing Section after the above-mentioned time and date will be returned unopened.
3. Quotations must be submitted on the attached Forms and be authorized by a signing officer of the Bidder's company. The entire Request for Quotation must be returned to the City.
4. This Document with completed Forms will become part of the Contract Documents between the City and the successful Bidder.
5. The City reserves the right to accept all or any part of a quotation or to waive irregularities at their own discretion. The lowest or any quotation will not necessarily be accepted.
6. In accordance with the City's Procurement Policy 3104, award of bids shall be based on:
 - (i) The lowest total cost of acquisition,
 - (ii) Experience of the bidder,
 - (iii) Bidder's references of performance on previous similar contracts,
 - (iv) The bidder's financial resources,
 - (v) Bidder's capability of supervision, staffing and use of subcontractors,
 - (vi) Bidder's ability to meet City specifications, schedule and performance criteria,
 - (vii) Any additional evaluation criteria stated in the contract document.
7. The City of Richmond estimates that this contract will be awarded within 4 – 6 weeks of the closing date. All bidders submitting Quotations for the Project will be advised as to the outcome. Please note that Bid results for those contracts posted on the City Web Site and/or BC Bid will be listed on BC Bid within two (2) weeks of the award of Contract.
8. Proprietary names, unless otherwise stated, are used solely to establish standards of materials and finish. Items of other manufacture may be accepted as equal to those specified, at the discretion of the City.
9. Alternate Quotations will be considered and should be submitted under separate cover and be marked "Alternate Quotation".

Instructions to Bidders (Cont'd)

10. Prices, in Canadian currency, shall be shown for each unit specified and shall include all packing, crating, freight, cartage, shipping charges, cost of unloading supplies at destination, and all tariffs, taxes and duties.

11. Inquires during submission of Quotation should be directed as follows:

Purchasing

Kerry Lynne Gillis
Buyer II - Contracting Specialist
Purchasing Section
City of Richmond

Telephone: 604-276-4135
E-mail: purchasing@richmond.ca

Technical

Anthony Fu, EIT
Project Manager
Engineering & Public Works
City of Richmond

Telephone: 604-247-4905
E-mail: afu@richmond.ca

12. Quotations may be withdrawn by written notice only, provided such notice is received at the office of the City's Purchasing Section prior to the date / time set as the closing time for receiving Quotations.

13. Quotations shall be open for acceptance for 60 days following the submission closing date.

14. Each Bidder shall state on the list provided to be submitted as part of his quotation, information regarding their previous Contracts. It is the intention of the City not to award the contract to any Bidder who does not furnish satisfactory evidence that he has the ability and experience to perform the various works covered under this Contract, and that he has sufficient capital and plant to enable him to execute the said works successfully, and to the satisfaction of the City, and to complete and deliver said works as quoted in his Quotation.

15. Supply and delivery of the completed kiosk shall be within sixteen (16) weeks of contract award. Bidders must provide a detailed supply and delivery schedule. Delivery will be made to the City of Richmond works yard at 5599 Lynas Lane in Richmond. Supplier to coordinate delivery to the works yard with Dermott Pitts at 604-244-1269.

16. Bidders are advised that submissions of quotes shall be in compliance to the Freedom of Information and Privacy Act (BC).

17. Any interpretation of, additions to, deletions from, or any other corrections to the Contract documents, will be issued as written addenda by the City of Richmond. It is the sole responsibility of the potential bidders to check with the City of Richmond's Website and / or BC Bid to ensure that all available information has been received prior to submitting a bid.

Instructions to Bidders (Cont'd)

18. The City, its agents and employees shall not be responsible for any information given by way of verbal or oral communication.

19. Except as expressly and specifically permitted in these Instructions to Bidders, no bidder shall have any claim for any compensation of any kind whatsoever, as a result of participating in the RFQ, and by submitting a quotation each bidder shall be deemed to have agreed that it has no claim.

Quotation Form

Purchasing Section
City of Richmond
6911 No. 3 Road
Richmond, BC V6Y 2C1

The undersigned Bidder, having carefully read and examined the Instructions to Bidders, Quotation Form, Schedule of Quantities and Prices, General Conditions of Contract, and Specifications, and having full knowledge of the work required, does hereby offer to provide all necessary materials in strict accordance with the Specifications and to do all therein called for on the terms and conditions and under the provisions therein set forth at the:

LUMP SUM TOTAL QUOTED PRICE OF \$ _____

PAYMENT TERMS _____ **EARLY PAYMENT TERMS** _____

The above price includes and covers duties, Federal, (including G.S.T.), Provincial Taxes, handling and transportation charges, and all other charges incidental to and forming part of this Quotation.

The undersigned Bidder agrees to supply the whole of the materials within _____ weeks of acceptance (**not to exceed 16 weeks**).

Name of Bidder: _____

Address: _____

Telephone No: _____

Name, Signature,
and Title of
Signing Officer: _____

Date: _____

E-mail: _____

Web Address: _____

Schedule of Quantities and Prices

The City shall pay in Lawful money of Canada the amount shown for the following items subject to the conditions of the Contract Documents.

DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION
Eckersley A. Sanitary Pump Station Kiosk	1	\$_____	\$_____

Subtotal \$_____

Provincial Sales Tax \$_____

Goods and Services Tax \$_____

TOTAL QUOTED AMOUNT \$_____
(carried forward to Quotation Form)

Initials of Signing Officer

List of Previous Contracts

The Bidder has recently undertaken and completed the Contracts described following and authorizes the City of Richmond to inquire as to the nature of the Bidders performance on these contracts.

YEAR	PROJECT TITLE	OWNER PHONE # CONTACT	SCOPE	BUDGET		SCHEDULE		ROLE OF KEY STAFF MEMBERS	OTHER RELEVANT INFO
				Original	Actual	Proposed	Actual		

(If additional space is required, attach additional)

List of Drawings

<u>Drawing No.</u>	<u>Sheet No.</u>	<u>Revision</u>	<u>Title</u>
0946-08-0C	1E through 7E of 7	A	Electrical Eckersley A Sanitary Pump Station

Note:

Full sized copies of the drawings can be obtained by calling Anthony Fu, EIT., Engineering Design and Construction, at 604-276-4905.

Specifications

The contractor must:

- Supply the Kiosk as per City design drawings, including Milltronics Multi-ranger ultrasonic level controller.
- Install the City-supplied flow meter display panel and interconnect to the City-supplied RTU. The RTU and PLC programming will be completed by others. The flow meter will be supplied and installed by others.
- The electrical kiosk shall be 600-volt class suitable for operation on a three-phase, 60-hertz system.
- The electrical kiosk shall be constructed in accordance with the latest version of the BC Electrical Safety Act, the Canadian Electrical Code and any local bylaws or rules regulating the manufacture of electrical equipment and subject to the local electrical inspector's approval.
- Supply equipment as indicated on the drawings. Other materials may be substituted by the Contractor only if such substitutions have been approved in writing by the City.
- All equipment and materials shall be new and CSA-certified. Where there is no alternative to supplying equipment which is not CSA-certified, obtain special approval from the British Columbia safety authority or authorizing equivalent. The completed electrical kiosk assembly shall be CSA-certified or approved by the British Columbia safety authority or authorizing equivalent as a completed unit.
- Upon award of the contract, two (2) sets of shop drawings with the seal of a professional Engineer registered in B.C. must be submitted for review. The City Engineer or its designate shall review the sealed shop drawings and approve or make comments for revisions as deemed necessary, within seven (7) days of receipt. Changes to the drawings, which may be necessary in the opinion of the Engineer, to make the finished product conform to the requirements and intent of the specifications shall be made without additional cost to the City. Electrical design drawings in AutoCAD format will be provided by the City to the successful bidder for use in preparation of shop drawings.
- Furnish three (3) complete bound sets of printed instructions, covering the proper method of maintaining and operating all the systems included in this contract. The manuals shall also include all shop drawings, catalogue numbers of all electrical equipment installed and manufacturer's parts lists. Shop drawings shall be updated to as-built status. Include manufacturer's O&M manuals, drawings and installation leaflets for every piece of electrical/instrumentation equipment.

- Upon completion of kiosk construction, arrange for an in-shop inspection and pre-testing of the completed kiosk by the City electrical department. Make adjustments, modifications and deficiency corrections as instructed by the City or its electrical consultant prior to delivery.
- Software programming and configuration of the following equipment in the electrical kiosk will be performed by the City:
 - Ultrasonic level controller (Milltronics "Multiranger 100")
 - Flow transmitter
 - Variable frequency drives (Allen-Bradley "Powerflex 700")
 - Programmable logic relay (Zelio)
 - Programmable logic controller (Modicon "Momentum")
 - Human-machine interface (Maple Systems)
 - Remote terminal unit (Motorola "ACE3600")
- Supply the following spare parts:
 - Fuses (5 of each size and ampacity)
- The coaxial cable & antenna will be installed by others.

1.0 GENERAL .1 All work and materials shall conform to the best industry practices and meet Canadian, Provincial and local codes.

2.0 PRODUCTS

- 2.1 Electrical Kiosks
- .1 Kiosks shall be rigid, free standing, vandal resistant cabinet, built to EEMAC 3 standards. The kiosk shall be fabricated from minimum 12 gauge cold rolled steel, with sufficient bracing to form a structure capable of withstanding wind, snow and ice loading.
 - .2 The kiosk doors are to be hinged and lockable, fully gasketed and adequately braced to prevent distortion. Doors shall be equipped with three point latching devices. The latches must be drilled with a minimum 12.7mm diameter hole to receive padlocks. Doors to have stay bars when opened.
 - .3 Ventilation (Explosion Proof Installation (Sewers): the ventilation fan section shall be separated from the power and control sections by a vapour-tight barrier. The fan is to be a supply fan blowing air out of the kiosk section into the wet well. The ventilation section

shall have suitably sized louvres in doors and external walls. All louvres shall be pressed into kiosk doors and walls during fabrication and shall be equipped with stainless steel insect screens and approved filters.

- .4 The kiosk shall be thoroughly degreased and cleaned after fabrication. All surfaces to be primed prior to assembly with chromatic primer. Two finish coats of air dried enamel shall be applied to kiosk, interior surfaces to be white and exterior surfaces to be match green colour on Cummins genset. Coordinate with Cummins to get exact green colour.

2.2 General Arrangement of Equipment in Electrical Kiosks

- .1 The kiosk manufacturer shall submit shop drawings for review (as noted above) including dimensioned physical layout, wiring diagrams with all devices, terminals and wire numbers identified, nameplate schedule, including details of their control panel and contents. Include bill of material. Do not proceed with fabrication until approved by the Owner or Owner's Engineer. All equipment within the kiosk shall be in EEMAC 1 enclosures. Wiring between components within the kiosk shall be in EMT conduit except where required otherwise by the CEC.
- .2 The power entrance compartment shall house the incoming service components, an Automatic Transfer Switch, splitter, heater and controls and station service transformer. The control compartment shall house the control panel, soft starters, instrumentation and service panel. Power and control section shall each be fitted with a light switch, fluorescent light and 15 A GFI duplex receptacle. The GFI receptacles to be on separate circuits.
- .3 Identification: Each piece of equipment in the kiosk shall have an identifying nameplate, indicating its function. Each device mounted on the control panel door and within the control panel shall have an identifying nameplates, indicating its name and/or function as shown on the drawings.
Nameplates:
 - .1 Lamicoid 3 mm thick plastic engraving sheet, 6 mm high letters unless specified otherwise, white face, black core, self adhesive.

.2 Provide a preliminary list of nameplates for review and approval by Engineer prior to manufacture and installation. Revise as directed by Engineer.

Each end of power and control wire shall be identified with a permanently attached numbered wire marker. Numbering system shall be in accordance with the manufacturer's standard and the contract drawings, and shall be indicated on the manufacturers shop drawings.

2.3 Kiosk heater:

.1 The control section shall be equipped with a Chromalox 500 watt utility heater (or approved equivalent) complete with separate thermostat and dedicated circuit breaker.

2.4 Kiosk Ventilation Louvres

.1 The control section shall be equipped with ventilation louvers as shown on the drawings.

2.5 Main Circuit Breaker

.1 The main circuit breaker shall be as specified on the drawings, 35KAIC RMS rated at 600V, 3 phase with enclosure suitable for service entrance.

2.6 Distribution Transformer

.1 Distribution transformer shall be 600:120/240V, single phase, in EEMAC 1 enclosure. Sound rating to meet latest ANSI and CSA standards.

2.7 Manual Transfer Switch

.1 The Manual Transfer Switch for diesel generator standby power shall be 100 Amp., 3 phase, 600V and shall be complete with a solid neutral kit and auxiliary contact. The switch shall be acceptable by BC Hydro and the City of Richmond.

2.8 Variable Frequency Drives (VFD's)

.1 The drives shall be microprocessor based solid state AC units, using fully digital sensorless flux vector motor control with IGBT power components. Drives shall

be rated for variable torque pumping application, shall have frequency control, V/F characteristic with IR compensation

- .2 Drive Features: VFD's shall provide the following features:
- a) 120VAC control voltage;
 - b) Self tuning with comprehensive diagnostics;
 - c) Programmable by front digital display and keypad. Display and keypad shall be remotely mounted in panel door.
 - d) Built in RS-232 port;
 - e) Input signals: 120 VAC and 4-20mA;
 - f) Analog I/O;
 - .1 Minimum 2 analog inputs;
 - .2 Minimum 2 analog outputs;
 - g) Digital I/O;
 - .1 Minimum 5 digital inputs;
 - .2 Minimum 3 form C relay outputs;
 - h) Frequency avoidance settings;
 - i) Memory feature to retain programmed settings on loss of input power.
 - J) Power outage ride-thru;
 - k) Auto restart option to allow drive to restart on power failure or other fault and either return with VFD matching the motor rotating speed or VFD to wait until rotation has stopped before starting.
 - l) -10 degrees C to +40 degrees C operating temperature range;
 - m) Adjustable carrier frequency;
 - n) Protection:
 - .1 Timed Motor Overload;
 - .2 Undervoltage;
 - .3 Overvoltage;
 - .4 Instantaneous overcurrent protection;
 - .5 Motor pullout;
 - .6 Ground fault;
 - .7 External fault;
 - .8 Short circuit;
 - o) Fully programmable PID control;
 - p) Adjustments:
 - .1 Minimum and maximum frequency;
 - .2 Switching frequency;
 - .3 Run/stop mode;
 - .4 Analogue Frequency setpoint;
 - .5 Frequency rejection points;
 - .6 Current limit;
 - .7 Overload limit;

- .8 Automatic reset and restart;
- .9 Acceleration and deceleration time c/w custom "S" curve;
- .10 Password parameter protection;
- .11 Three mode PID parameters;
- .12 Motor overload;
- q) Current Output Regulation:
 - .1 VFD to have adjustable maximum current (amps) output, above which setting the VFD will reduce frequency output (ie pump speed) to avoid pump tripping on overload.

2.9 VFD Size Constraints

- .1 Maximum physical size of VFD enclosures is shown on the drawings and VFD assemblies must fit within enclosure dimensions without exceeding manufacturers recommendations.

2.10 VFD Output Characteristics

- .1 Voltage rise: not to exceed Nema standards for general purpose motors as per NEMA MG-1
- .2 CONTINUOUS VFD OUTPUT RATING: VFDs supplied under this contract must have a continuous current output rating in rms amps at least **5 % greater than the pump motor VFD nameplate full load current** based on variable torque pump loading at the rated motor voltage.
- .3 INTERMITTENT OUTPUT RATING: intermittent rating shall be 125% of continuous output rating for minimum 60 seconds.
- .4 VFDs shall accept nominal 600 VAC, plus or minus 10% (540 to 660 VAC), 3 phase 60 Hz power and shall accommodate plus or minus 2% line frequency variations without fault.
- .5 VFDs shall present a displacement power factor of 0.98 or better to the AC input line under any load or speed.
- .6 VFD efficiency shall be not less than 97% at 60Hz at full load.

2.11 VFD Construction

- .1 VFDs shall be of modular construction containing printed circuit boards with plug in connections for ease of maintenance.
- .2 VFDs shall consist of the following major components:

- .1 Input rectifier section;
- .2 Phase to phase and phase to ground MOV protection;
- .3 Smoothing reactor for DC bus;
- .4 DC bus capacitors;
- .5 Inverter section;
- .6 Built in ground fault protection;
- .7 Remote digital display for programming, operation and diagnostic information.
- .8 Forced air ventilation adequate for the intended installation arrangement;
- .9 Line filters and external load filters and reactors and other devices as specified;

2.12 Level Monitor

- .1 The level monitor shall be Milltronics Multiranger c/w XPS-15 transducer equipped with submergence shield as available from Thos. W. MacKay & Sons Ltd. or as shown on the Contract Drawings. Transducer c/w temperature sensor and cable lengths to reach the kiosk shall be bracket mounted to manufacturers and drawing specifications by others on site. The monitor shall be configured for independent pump control.

2.13 Pilot Devices

- .1 Selector switches, pilot lights, hour meters, and pushbuttons shall be mounted on cabinet doors, neatly grouped as to function. Pilot lights shall be 24V L.E.D. type, with prismatic lens.
- .2 See electrical drawings.

2.14 Hour meters

- .1 Hour meters shall be digital, non-reset type, 999,999 hours, 6 digits.
- .2 Hour meters to be located a minimum of 1200mm above base for easy viewing.
- .3 See electrical drawings.

2.15 Voltage monitor

- .1 Voltage monitor protection relay shall be Carlo Gavazzi Model # DPA 01 C M60.
- .2 See electrical drawings.

2.16 Control Cabinet

- .1 The control cabinet shall be built integral to the kiosk as shown on the drawings, and shall incorporate the equipment shown on the drawings.
- 2.17 Programmable Logic Controller
- .1 See General Notes at start of Specifications for instructions.
- .2 See drawings for additional details.
- 2.18 Control Devices
- .1 All control devices (relays, selector switches, alarm light, etc.) Shall be heavy duty industrial type. Provide enough room between all the devices to allow for removal of any device without disturbing any other device. Spare parts shall be furnished to the Corporation for all consumable items, including:
- Five spare fuses of each rating used
 - Ten spare pilot light lamps
 - One spare control relay of each type used
- .2 Pilot lights shall be LED with prismatic lens.
- 2.24 Wet Well Ventilation Fan
- .1 Fan shall be Longley Electric Model No. LECO7AX. The fan shall be installed in the ventilation section of the kiosk as detailed on the drawings to supply air into the wet well.
- 2.20 Control Breakers
- .1 Control Breakers to be as specified on Bill of Materials in drawings.
- .2 Control Breakers to be capable of being physically turned off not just resetting the trip.

Environmental Terms and Conditions of Contract

1.0 Environmental Policy Requirements

1.1 The City of Richmond's Environmental Purchasing Policy

The City of Richmond's Environmental Purchasing Policy states:

In order to increase the development and awareness of environmentally sound products and services, City of Richmond staff will review their contracts and tender specifications for goods and services, to ensure that wherever possible and economically feasible, specifications are amended to provide for consideration of environmental characteristics. Consideration may be given to those environmental products that are certified by an independent accredited organization.

The City of Richmond as a whole will endeavour to increase its use of products and services that are more responsible to the environment in the way they are made, used, transported, stored and packaged and disposed of. It is recognized that analysis is required in order to ensure that the products are made available at competitive prices, and that the environmental benefits provided by a product or service should not significantly affect the intended use of that product or service.

- 1.1.1 The City of Richmond reserves the right to request information from bidders that will demonstrate compliance to this environmental purchasing policy.
- 1.1.2 Bidders are asked to supply information on environmentally preferable products and services that meet all specifications and performance requirements.
- 1.1.3 Placing the City of Richmond in breach of its environmental policy or environmental laws will result in the termination or suspension of an agreement, at the sole discretion of the City.

1.2 Environmental purchasing resources

- 1.2.1 The City of Richmond Environmental Purchasing Guide is available from the City of Richmond Web site at:

<http://www.richmond.ca/services/environment/policies/purchasing.htm>

General Conditions of the Contract

1. Definitions

The two parties to the contract/Purchase Order. are the Contractor and the City, defined as follows:

The Contractor: The successful bidder for the work upon receipt of a purchase order and/or written acceptance of his Quotation from the City.

The City: City of Richmond.

Acceptance of the City of Richmond Purchase Order deems acceptance of all conditions of the Supply and Delivery Contract.

2. Responsibility For Supplies

The Contractor shall be responsible for the supplies covered by this contract until they are delivered at the designated delivery point, regardless of the point of inspection; and the contractor shall bear all risks of loss or damage to rejected supplies after notice of rejection.

3. Inspection

All supplies shall be subject to inspection and test by and shall meet the approval of the Manager of Purchasing and Risk and his decision shall be final and binding upon all parties.

In case any supplies or lots of supplies are defective in material or workmanship otherwise not in conformity with the specifications of the contract, the Manager of Purchasing and Risk shall have the right either to reject them or to require their correction.

Acceptance or rejection of the supplies shall be made as promptly as practicable after delivery, but failure to inspect and accept or reject supplies shall not relieve the contractor from responsibility for such supplies as are not in accordance with the specifications.

4. Warranty

Unless otherwise specified, the contractor warrants that in the manufacture of the supplies only the best workmanship and materials have been employed and if, within a period of one (1) year from the date of acceptance of the supplies by the City, such supplies or any portion thereof are found by the City to be defective or faulty due to

General Conditions of the Contract (Cont'd)

imperfect or bad workmanship or material, the contractor agrees, to replace such defective supplies forthwith without expense to the City.

5. Payments

The contractor shall be paid within 30 Days after the submission by the contractor of properly prepared invoices to the Accounts Payable Section for supplies delivered and accepted or services rendered and accepted. However, the City may withhold an amount equal to two times the value of goods or services not provided by the Contractor from any amounts owing to the Contractor.

6. Indemnification and Insurance

The Contractor will indemnify, hold and save harmless the City from and against all claims, losses, damages, costs, actions and other proceedings, made, sustained, brought or prosecuted in manner, based upon, occasioned by attributable to any injury, including death, property damage, infringement or damage arising from any act or omission of the Contractor, his employees, officers, volunteers, servants or agents or persons from whom the Contractor has assumed responsibility in the performance or purported performance of this agreement.

7. Liens

The Contractor shall fully indemnify the City from and against any and all liability or expenses by way of legal costs or otherwise in respect of any claim which may be made for a lien or charge at law or inequity or to any claim or liability under the Builders Lien Act, or to any attachment for debt, garnishee process, or otherwise.

8. Patent Fees

The Contractor shall pay all royalties and licence fees and shall save the City harmless from loss on account of suits or claims of infringement of patents in the doing of the work.

9. Default

- (a) The City may, by notice of default to the contractor, terminate the whole or any part of this contract if the contractor fails to make delivery of the supplies within the time specified, or to perform any other provisions of this contract.
- (b) In the event the City terminates this contract in whole or in part as provided in clause (a) the City may procure supplies or services similar to those so terminated, and the contractor shall be liable to the City for any excess costs for such similar supplies or services.

General Conditions of the Contract (Cont'd)

- (c) The contractor shall not be liable for any excess costs under clause (b) if failure to perform the contract arises by reason of strikes, lockouts, acts of God or acts of the City.

10. Taxes

Unless otherwise provided herein, the Contractor shall pay all government sales or excise taxes in force at the date of the Contract/Purchase Order, provided that any increase or decrease in such taxes shall increase or decrease the amount due under the Contract accordingly. Invoices must show the appropriate amounts for Goods and Services Taxes and Provincial Sales Taxes separately.

11. Laws

The laws of British Columbia shall govern the work.

12. Time

Time shall be the essence in this Contract.

13. Assignment

Neither party to the Contract shall assign the Contract without the written consent of the other.

14. Changes

The City may make changes to the Contract and time and value shall be adjusted accordingly, except for emergencies all changes shall be made by written order.

15. No Promotion of Relationship with the City, the Olympic Oval or the 2010 Olympic and Paralympic Winter Games

The Contractor shall not disclose or promote its relationship with the City, including by means of any verbal declarations, announcements, sales, marketing or other literature, letters, client lists, press releases, brochures or other written materials (the "Communications") without the express prior written consent of the City (except as may be necessary for the Contractor to perform the Contractor's obligations under the terms of this Agreement).

Furthermore, the Contractor undertakes not to disclose or promote its relationship with the City in any Communications in a manner which could suggest or create an association, express or implied, between the Contractor and the International Olympic Committee, the 2010 Olympic and Paralympic Winter Games, the Olympic Movement or

General Conditions of the Contract (Cont'd)

the Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games (also known as "VANOC"). Without limiting the generality of the foregoing, the Contractor shall not refer to "VANOC", "Vancouver 2010", the "2010 Games", the "Games", "Venue City", "Olympic", "Olympic Oval" or "Olympics", and shall not use any official emblem, logo or mascot of the 2010 Games, the City or the Richmond Olympic Oval in any Communications, without the express prior written consent of the City, which may be withheld.

16. Notices

Any notice required to be given in this Contract shall be deemed to be duly given to the City if sent by registered mail addressed to the City's Purchasing and Risk Manager at "City Hall, 6911 No. 3 Road, Richmond, BC V6Y 2C1" and to the Contractor if sent by registered mail addressed to the Contractor at the address set forth in the Quotation.



Note: Receipt of this completed form will assist us in calling for future bids. Please complete and submit this form prior to the closing date and time as shown on the Request for Quotation/Proposal/Tender form.
Please remember to include Quotation/Proposal/Tender No. at right.

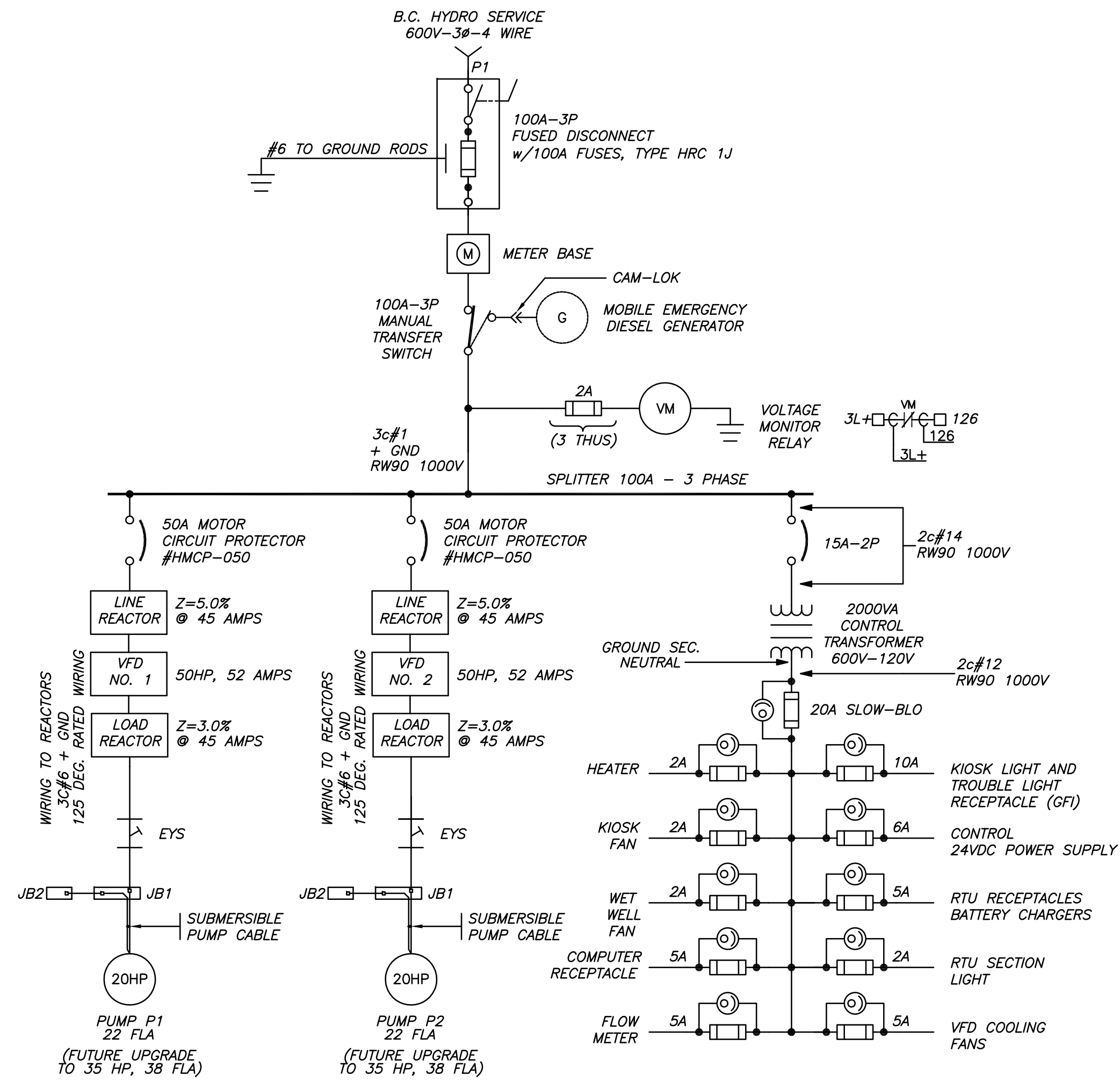
Quotation/Proposal/Tender No.

3472Q

A Quotation/Proposal/Tender is not being submitted for the following reason(s):

- | | |
|--|--|
| <input type="checkbox"/> We do not manufacture/supply the required goods/services | <input type="checkbox"/> Cannot obtain raw materials/goods in time to meet delivery requirements |
| <input type="checkbox"/> We do not manufacture/supply to stated specifications | <input type="checkbox"/> Cannot meet delivery requirements |
| <input type="checkbox"/> Specifications are not sufficiently defined | <input type="checkbox"/> Cannot quote/tender a firm price at this time |
| <input type="checkbox"/> Insufficient information to prepare quote/proposal/tender | <input type="checkbox"/> Insufficient time to prepare quote/tender. |
| <input type="checkbox"/> Quantity too small | <input type="checkbox"/> We are unable to competitively quote/tender at this time. |
| <input type="checkbox"/> Quantity too large | <input type="checkbox"/> We do not have facilities to handle this requirement |
| <input type="checkbox"/> Quantity beyond our production capacity | <input type="checkbox"/> Licensing restrictions (please explain) |
| <input type="checkbox"/> Cannot meet packaging requirements | <input type="checkbox"/> Agreements with distributors/dealers do not permit us to sell directly. |
| <input type="checkbox"/> Cannot handle due to present plant loading | <input type="checkbox"/> Other reasons or additional comments (please explain below) |

I / We wish to quote / tender on similar goods / services in future <input type="checkbox"/> Yes <input type="checkbox"/> No	Authorized Company Official – Signature and Title	Date
This space for City of Richmond Comments	Firm Name	
	Address	
	City	
	Province	Postal Code
	Telephone Number	



SINGLE LINE DIAGRAM

NOTES:

1. INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE.
2. THE CONTRACTOR SHALL CONFIRM THE EXACT SERVICE LOCATION WITH BC HYDRO PRIOR TO CONSTRUCTION. SERVICE CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH BC HYDRO STANDARDS.
3. SEE CIVIL DRAWINGS FOR DETAILS OF THE CONCRETE PAD FOR THE ELECTRICAL KIOSK.
4. SEE CIVIL DRAWINGS FOR CONDUIT / CABLE DETAILS.

N.I.C.

OMNI
ENGINEERING
INC.

#101 - 1861 Welch St.
North Vancouver B.C.
V7P 1B7
telephone: (604) 985-0508
fax: (604) 985-0536

REFERENCE DRAWINGS

PROPERTY ACQUISITION	Aq	_____
SURVEY PLAN & PROFILE	PP	_____
ROAD CONSTRUCTION	Oc	_____
STORM SEWER INSTALLATION	Lc	_____
WATERMAIN INSTALLATION	Wc	_____
ORNAMENTAL STREET LIGHTING	Tc	_____
TRAFFIC SIGNALS	Ec	_____
SANITARY SEWER INSTALLATION	_____	_____
OTHER	_____	_____

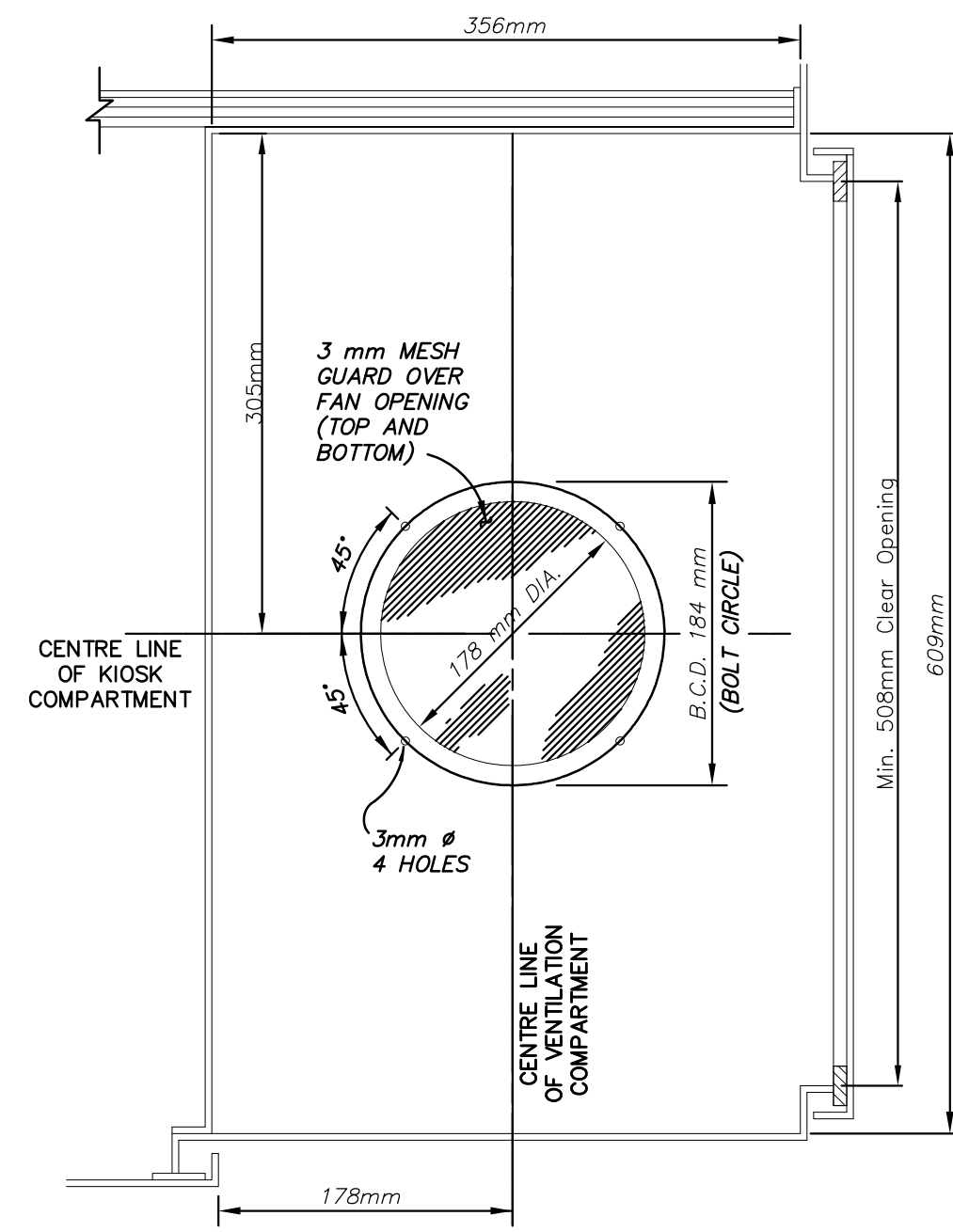
NOTE - PROVE LOCATION OF ALL UTILITIES / SERVICES BEFORE STARTING CONSTRUCTION.

Nº	DATE	BY	CHK.	DESCRIPTION
A	2009/04/14	TS	KW	ISSUED FOR TENDER - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P1	2009/03/16	TS	KW	ISSUED FOR 95% REVIEW - KIOSK PRE-PURCHASE
REVISIONS				

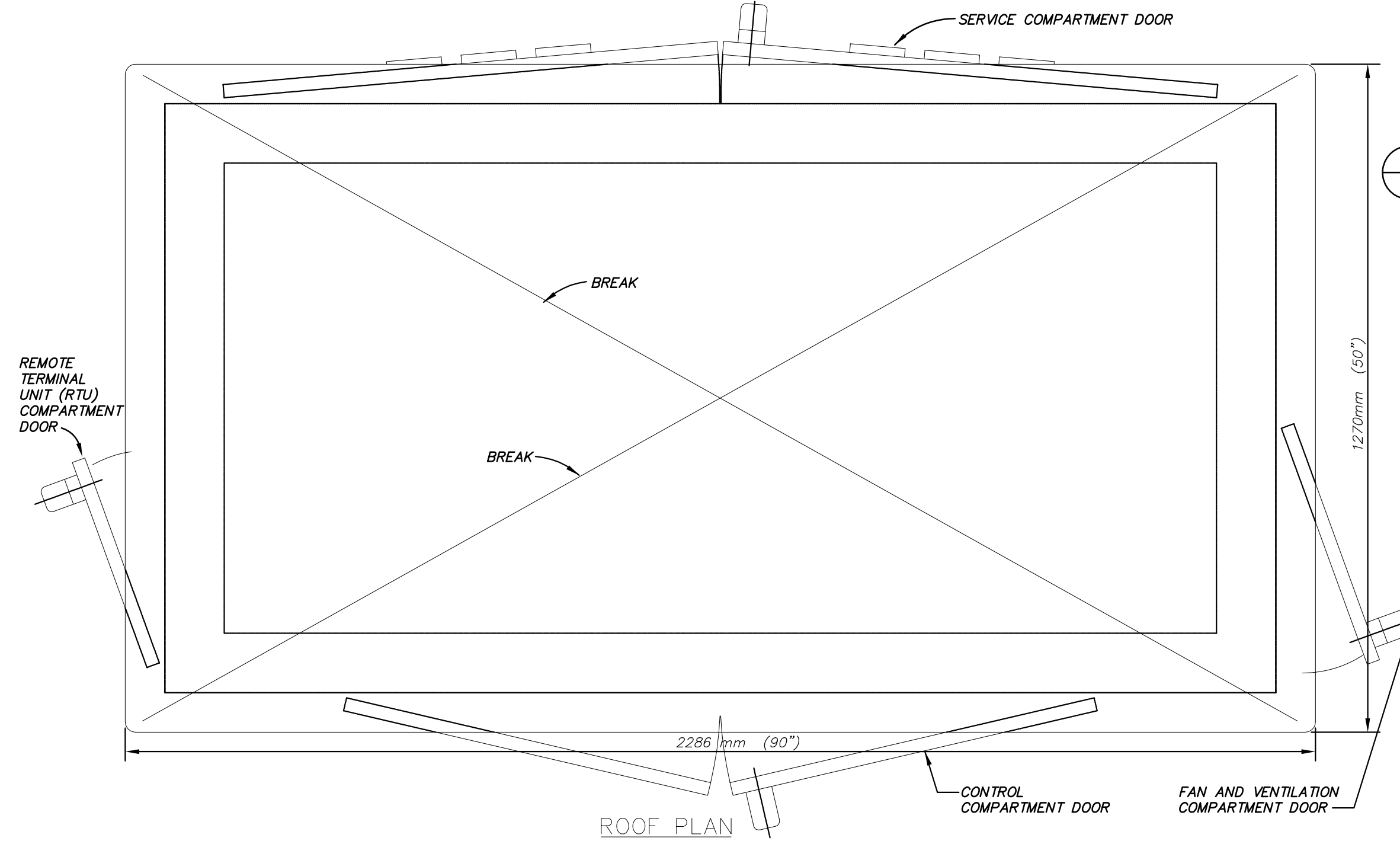
City of Richmond
6911 No. 3 Road Richmond B.C. V6Y 2C1

TITLE:
**ECKERSLEY 'A' PUMP STATION
ELECTRICAL SINGLE LINE DIAGRAM**

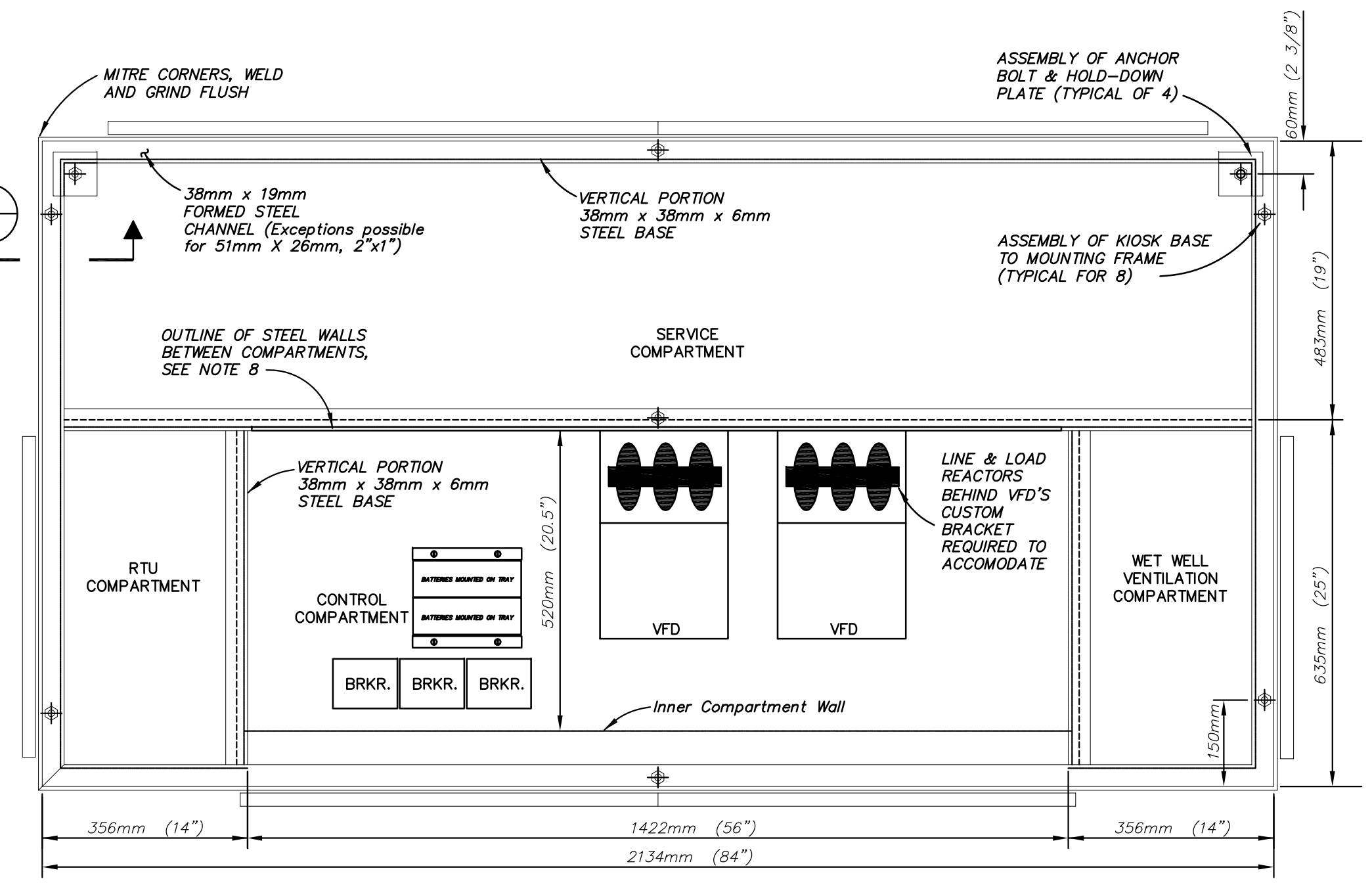
DESIGN: TS	DWG. Nº: 0946-08-0C
DRAWN: TS	SCALE: AS SHOWN
CHECKED: KW	DATE: JUNE, 2008
ENGINEER: KW	SEC. Nº: - SHT. Nº: 1E OF 7



SECTION 2
SCALE: 1:4

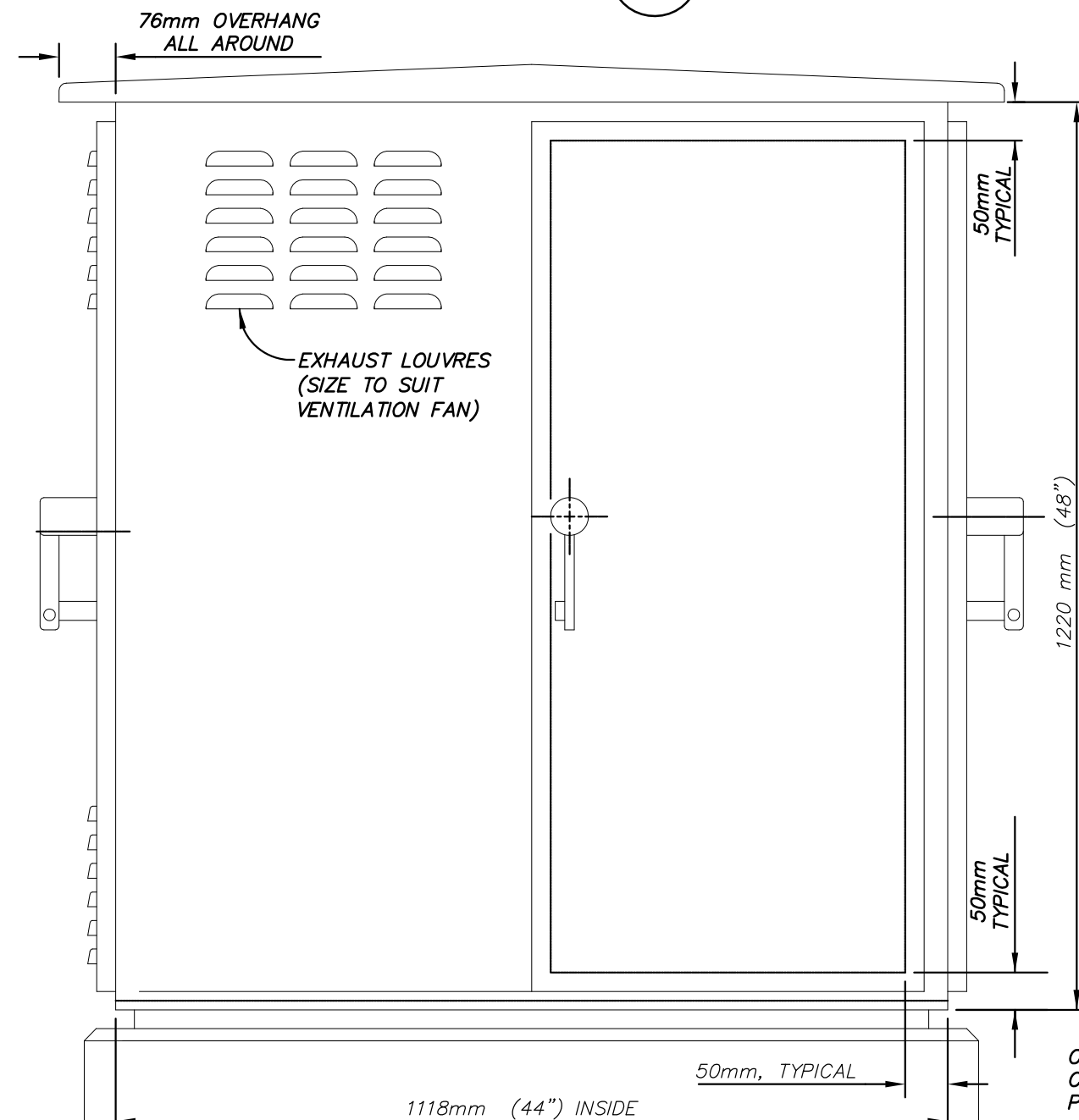


ROOF PLAN
SCALE: 1:8

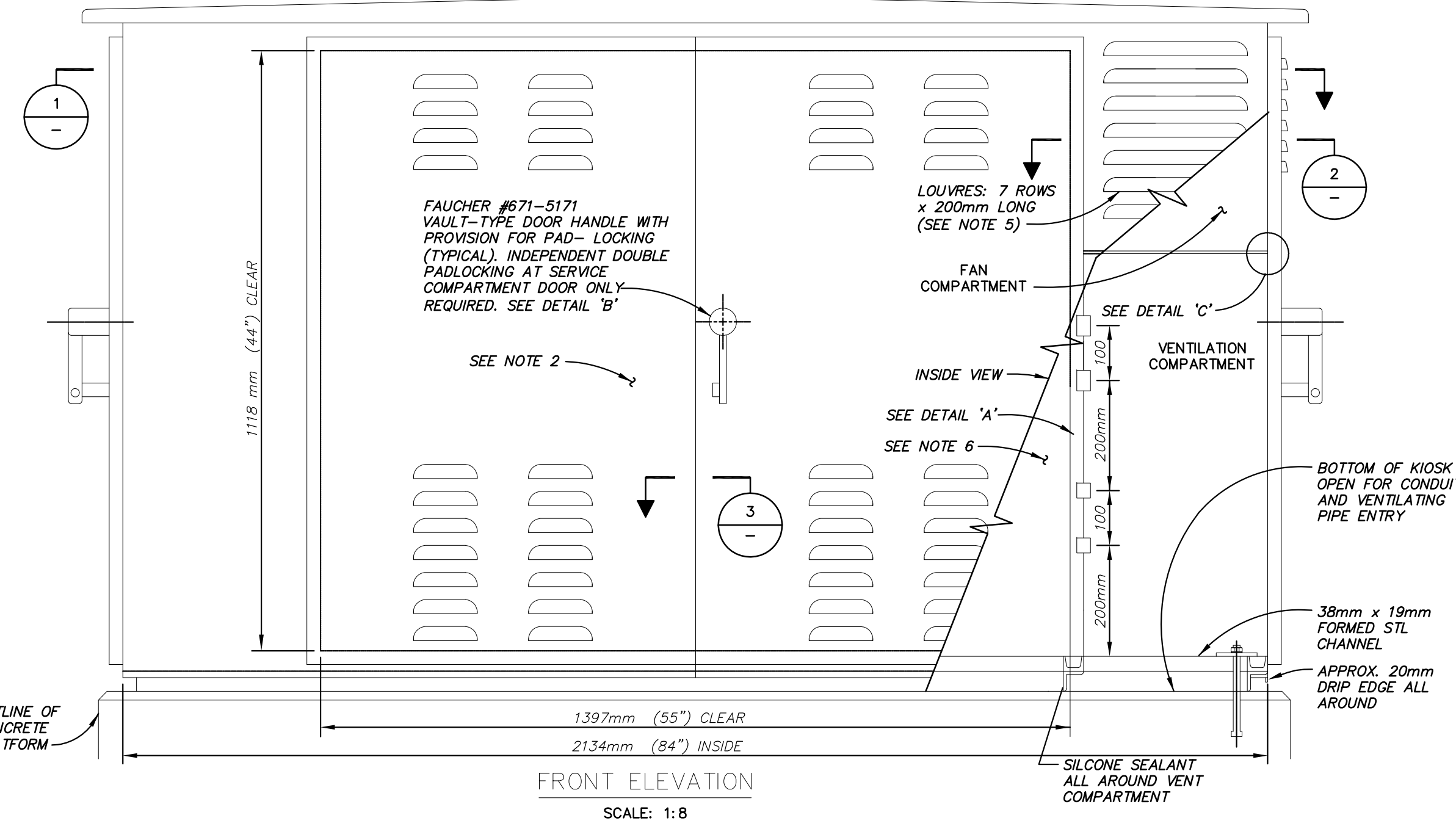


KIOSK BASE PLAN WITH MOUNTING FRAME

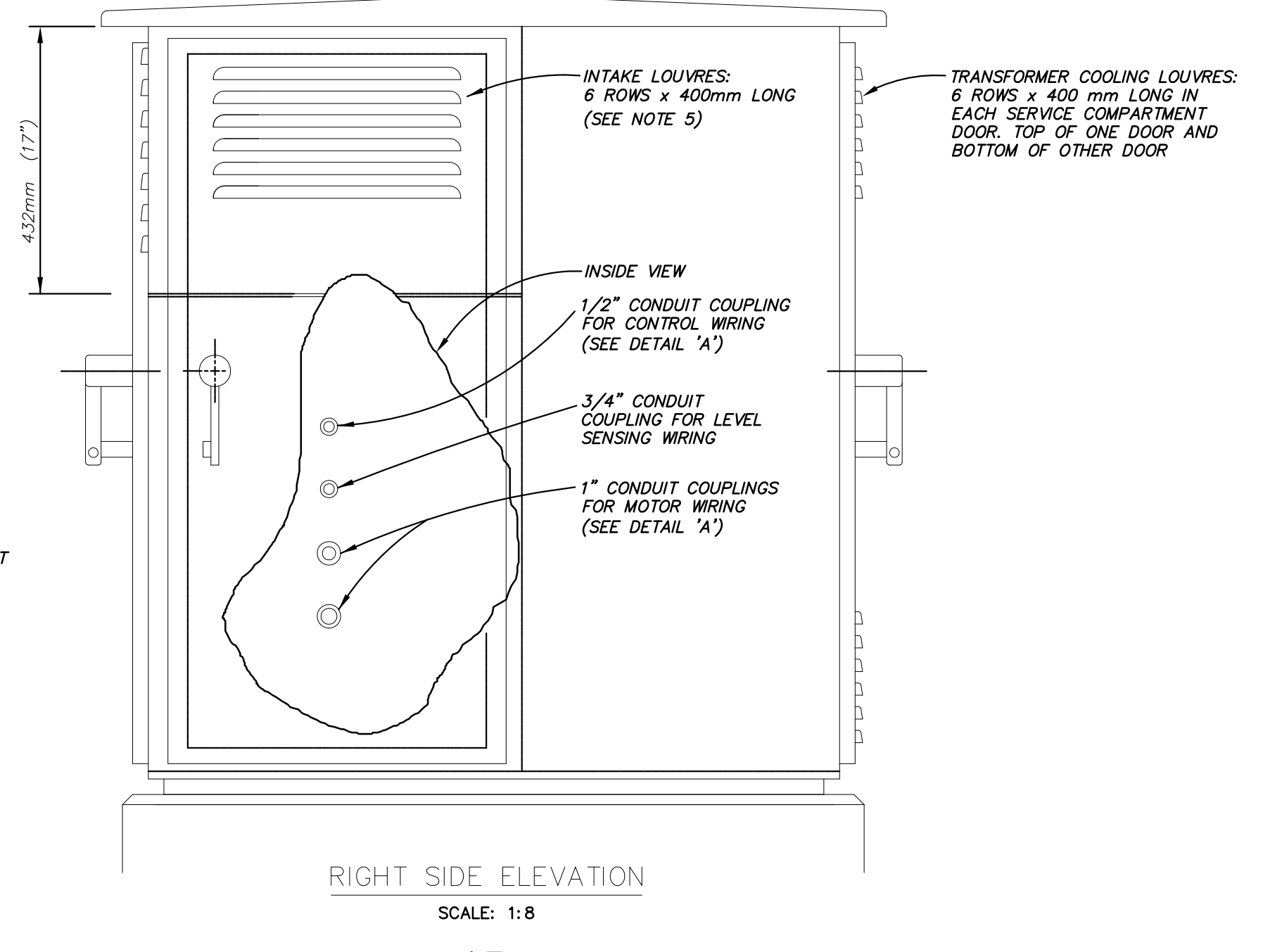
SECTION 1
SCALE: 1:8



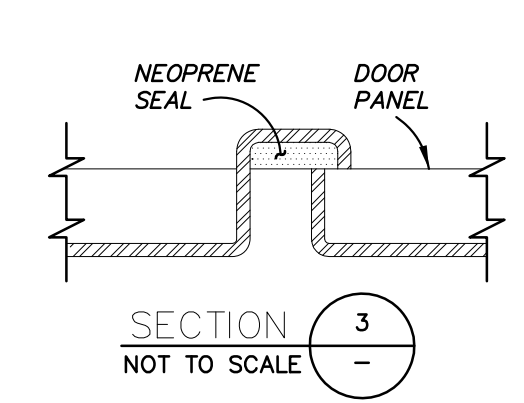
RTU COMPARTMENT LEFT SIDE ELEVATION
SCALE: 1:8



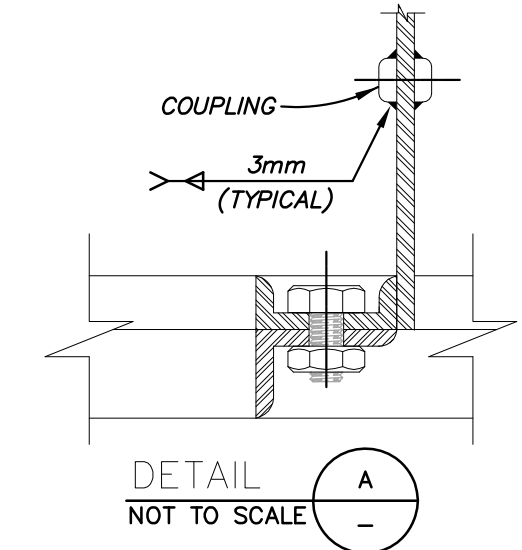
FRONT ELEVATION
SCALE: 1:8



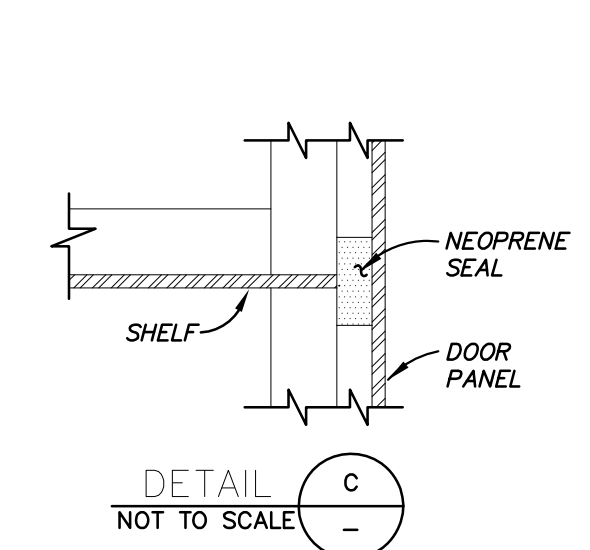
RIGHT SIDE ELEVATION
SCALE: 1:8



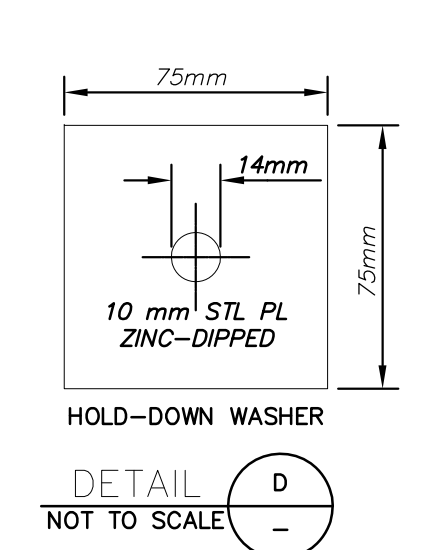
SECTION 3
NOT TO SCALE



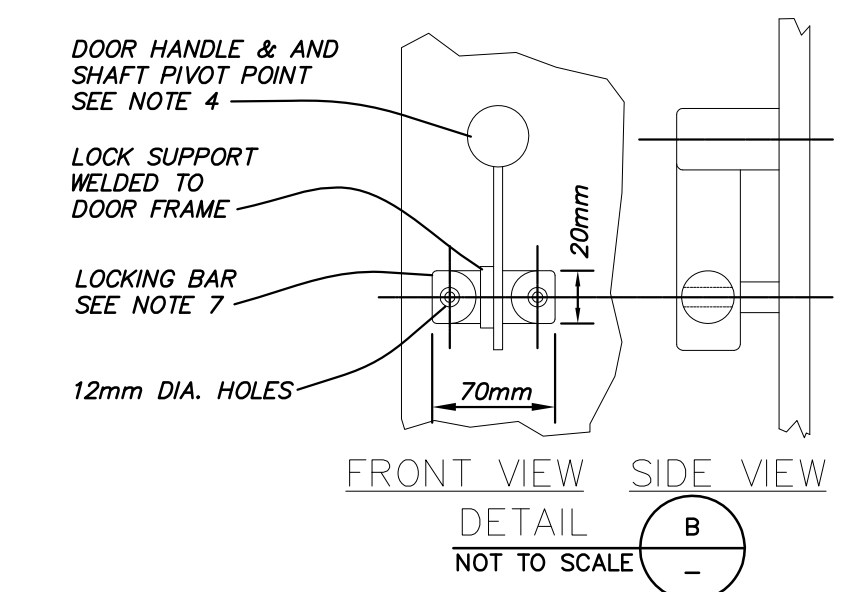
DETAIL A
NOT TO SCALE



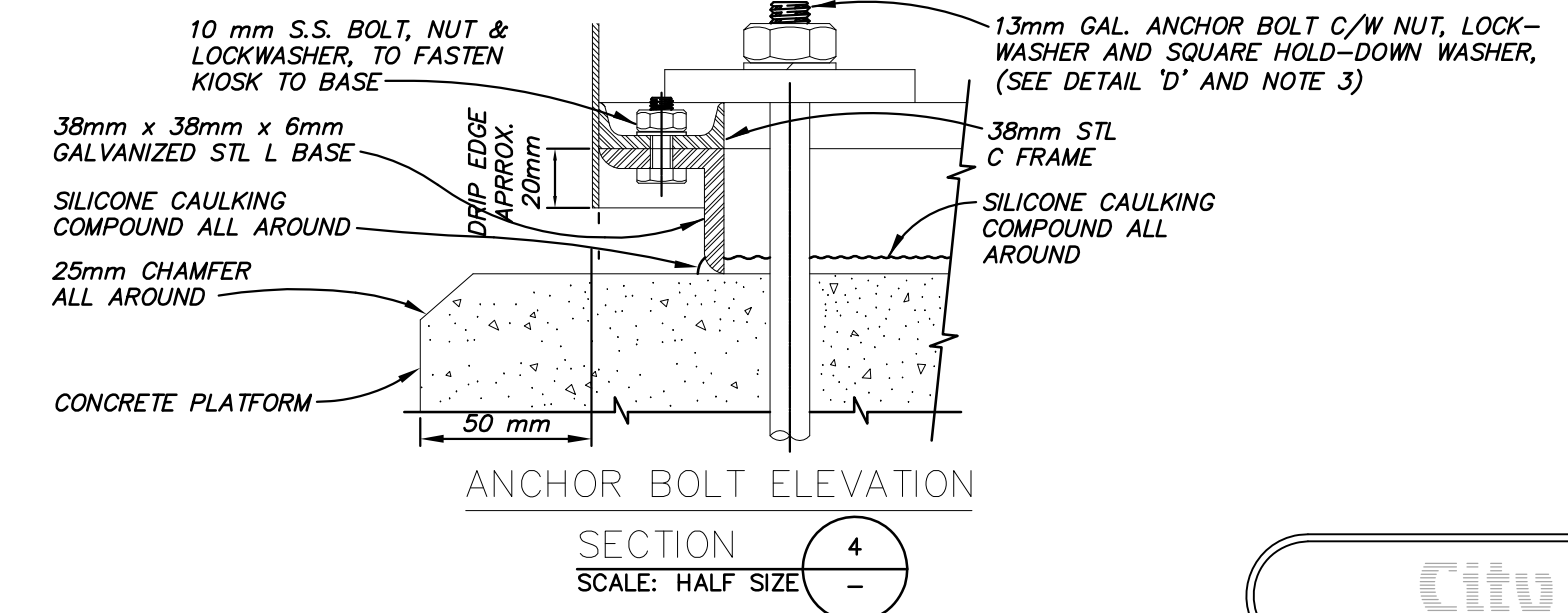
DETAIL C
NOT TO SCALE



DETAIL D
NOT TO SCALE



FRONT VIEW SIDE VIEW
DETAIL B
NOT TO SCALE



ANCHOR BOLT ELEVATION
SECTION 4
SCALE: HALF SIZE

NOTES:

- ENCLOSURE SHALL BE AN ALL-WELDED STRUCTURE FABRICATED OF 12 GAUGE EXTERIOR AND 14 GAUGE INTERIOR COLD ROLLED STEEL AND STRUCTURAL SHAPES. THE ENCLOSURE SHALL BE BOLTED TO A RIGID SUB-BASE CONSTRUCTED OF 38 x 38 x 6 (mm) STEEL ANGLE. THE SUB-BASE SHALL BE HOT DIP GALVANIZED.
- THE ENCLOSURE AND DOORS SHALL HAVE A 0.010-INCH THICK ZINC SPRAY COATING APPLIED TO ALL OUTSIDE SURFACES IN ACCORDANCE WITH C.S.A. STANDARD
- 4 ZINC-DIPPED WASHERS 75 x 75 x 10 (mm) WITH 14mm DIA. HOLE IN CENTRE, FOR USE WITH ANCHOR BOLTS.
- DOOR HANDLE SHAFTS SHALL BE MOUNTED THROUGH A BUSHED HUB. ALL DOOR HANDLE COMPONENTS SHALL BE OF 316 STAINLESS STEEL.
- ALL LOUVRES SHALL BE COVERED ON THE INSIDE WITH VINYL SCREEN, 3mm MESH.
- ALL INSIDE SURFACES SHALL BE PROTECTED WITH 1 COAT OF ZINC CHROMATE PRIMER AND 1 COAT OF A.S.A. 61 GREY FINISH PAINT.
- ONE 20mm DIA. STAINLESS STEEL LOCKING BAR WITH A 12mm HOLE AT EACH END, WITH THE ENDS TAPERED, TO ALLOW FOR DOUBLE PADLOCKING OF THE SERVICE COMPARTMENT DOOR.
- RTU AND SERVICE COMPARTMENT BACK WALLS SHALL BE FITTED WITH MOUNTING PLATES OF 20mm THICK FIR PLYWOOD PAINTED GLOSS WHITE. CONTROL COMPARTMENT SHALL HAVE A STEEL BACK PANEL PAINTED WHITE OR GREY TO MATCH.

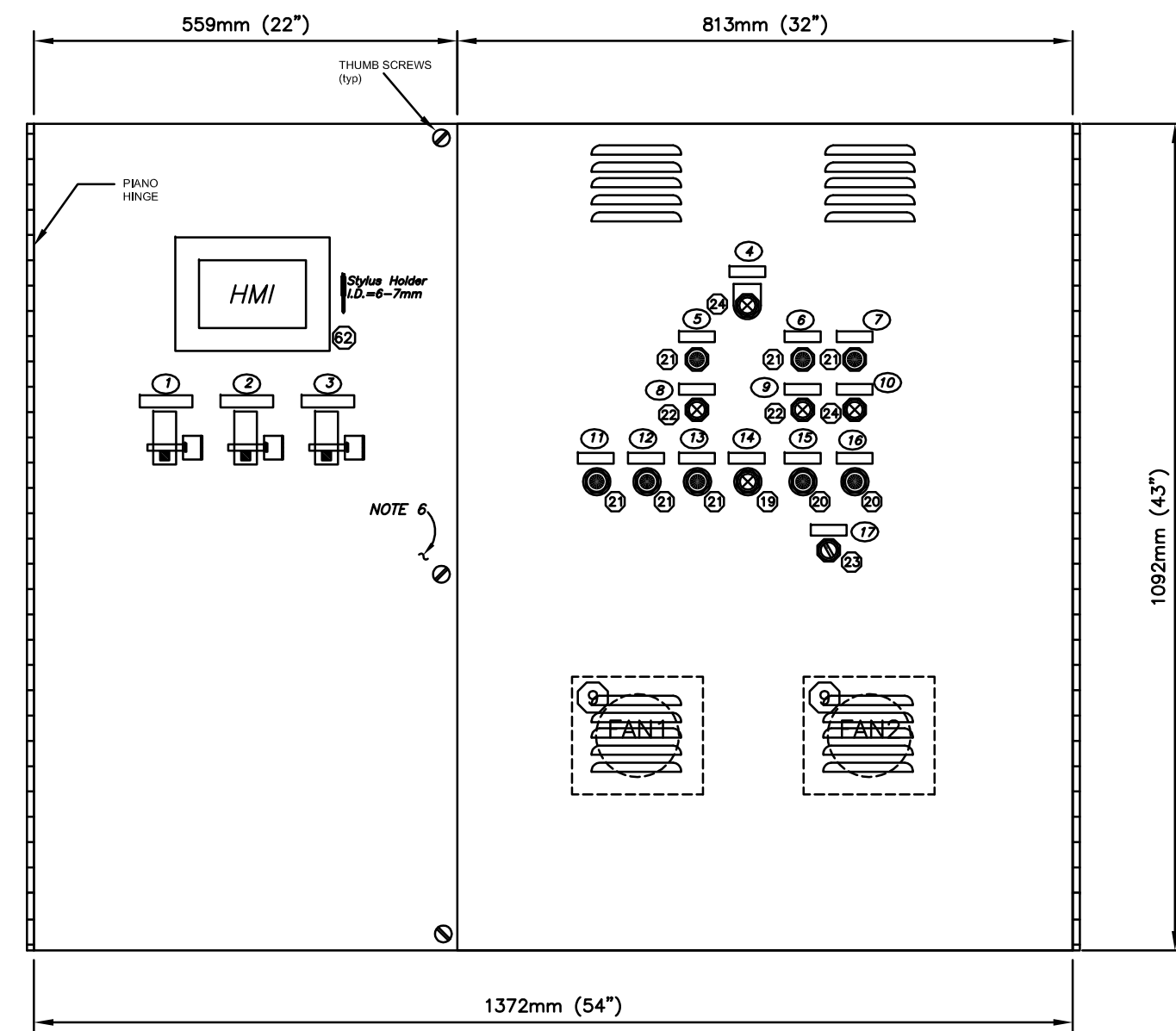
OMNI ENGINEERING INC.
#101 - 1861 Welch St.
North Vancouver B.C.
V7P 1B7
telephone: (604) 985-0508
fax: (604) 985-0536

City of Richmond
8911 NO. 3 ROAD RICHMOND B.C. V6Y 2C1

TITLE: ECKERSLEY 'A' PUMP STATION ELECTRICAL KIOSK STEEL DETAILS

DESIGN: TS	DWG. NO: 0946-08-0C
DRAWN: TS	SCALE: AS SHOWN
CHECKED: KW	DATE: MARCH, 2008
ENGINEER: KW	SEC. NO: -
	SHT. NO: 2E OF 7

NO	DATE	BY	CHK	DESCRIPTION
A	2009/04/14	TS	KW	ISSUED FOR TENDER - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P1	2009/03/16	TS	KW	ISSUED FOR 95% REVIEW - KIOSK PRE-PURCHASE



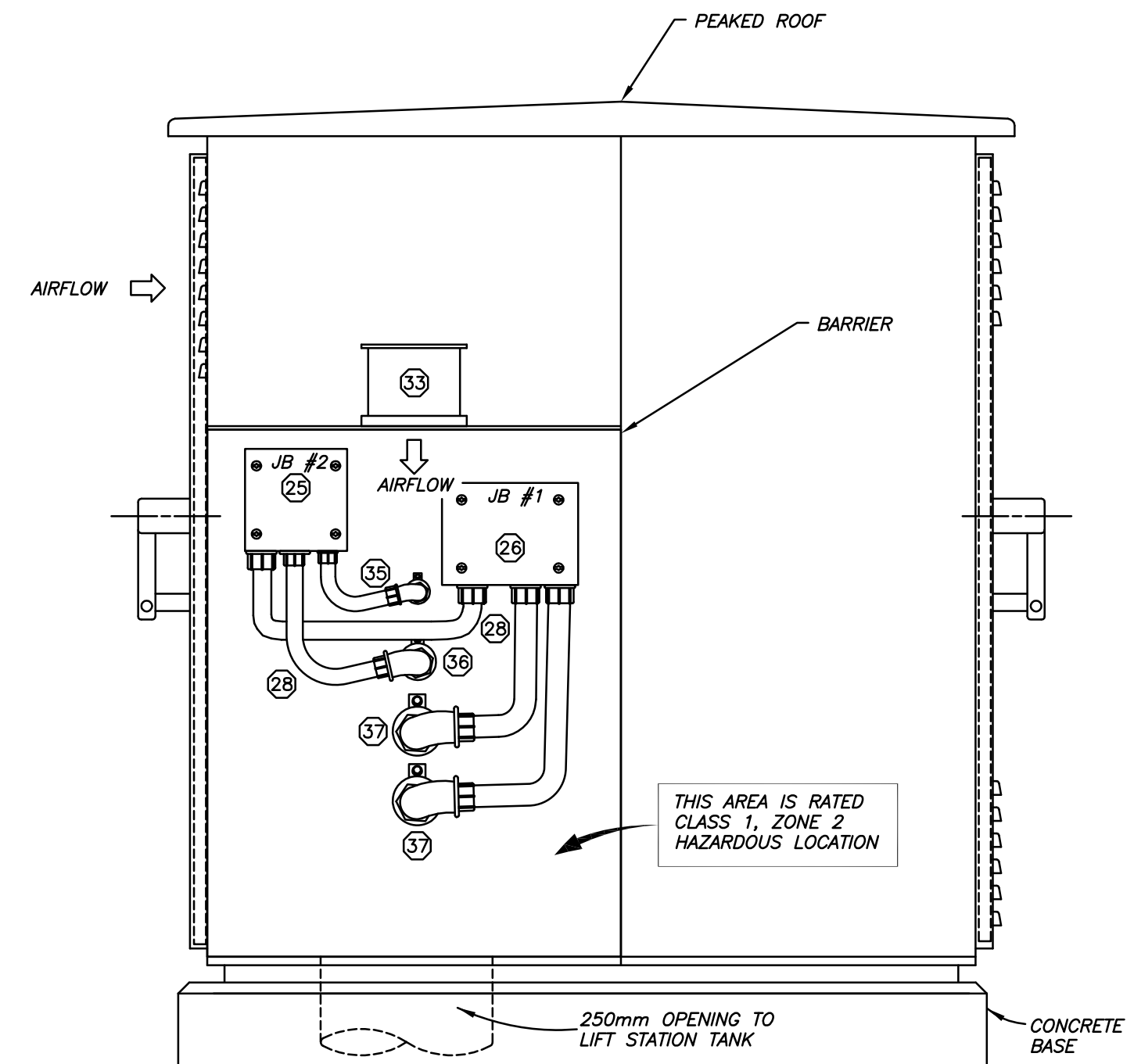
CONTROL PANEL - DOOR LAYOUT
SCALE: 1:8

120VAC FUSES	
F1	20A -Main; from CT
F2	5A -Flow Meter
F3	2A -Wet Well Fan
F4	10A -Light & Recept.[Control Sec.]
F5	2A -RTU Light
F6	2A -Kiosk Heater
F7	5A -DIN Computer Recept.
F8	2A -Kiosk Fan (Hydro Section)
F9	5A -RTU Recept./RPFR
F10	5A -VFD Fans
F11	5A -24VDC PS [PT5000C]

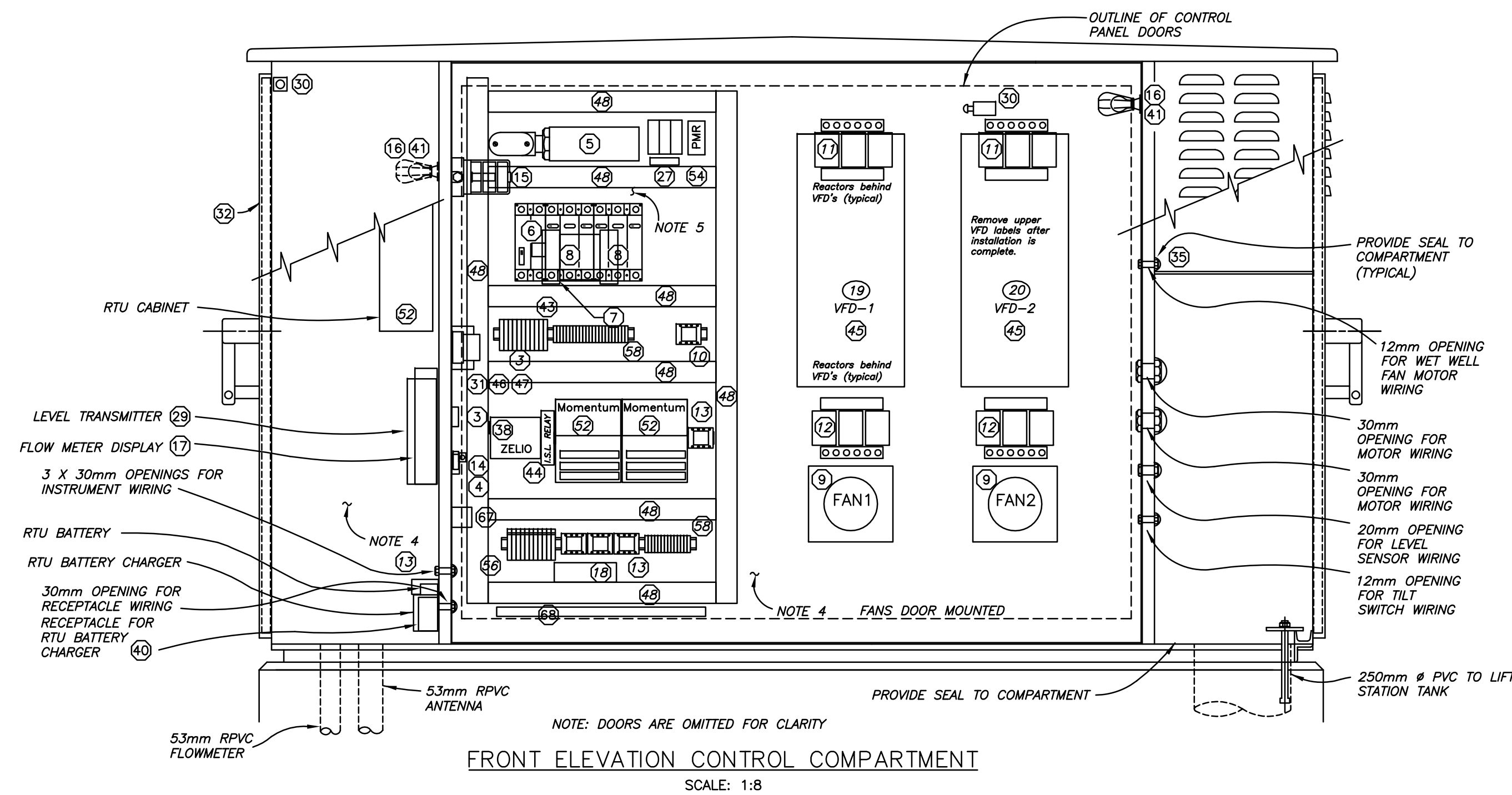
24VDC FUSES AGC (s=slow f=fast)	
F11	5A(s) -Main 24VDC from PS
F12	1A(f) -Zelio
F13	2A(s) -Multiranger
F14	2A(s) -HMI
F15	1A(f) -3L+[24VDC for I/O]
F16	1A(f) -Momentum 170ADM 350 10 1L+
F17	1A(f) -Momentum 170ADM 350 10 2L+
F18	3/8A(f) -Momentum CPU Power
F19	1/2A(f) -Momentum 170 AAI 030 00
F20	1/2A(s) -Ethernet Switch
F21	1/2A(s) -Bridge 174 CEV 300 20
---	8A(s) -24VDC Backup Batteries

- NOTES:
- NAMEPLATES SHALL BE WHITE LAMACOID WITH BLACK LETTERS AND ADHESIVE BACK. SIZE 20mm x 50mm WITH 1mm CHAMFER ON ALL EDGES. LETTERING SHALL BE 3mm HIGH, EXCEPT WHERE SPECIFIED OTHERWISE.
 - CIRCUIT BREAKERS SHALL HAVE LOCKING TABS TO ALLOW PADLOCKING IN THE 'OFF' POSITION.
 - DOOR CUTOUT SHALL EXPOSE BREAKER CONTROL HANDLES, NOT TERMINATIONS. HOLE SHALL BE SEALED ALL AROUND WITH NEOPRENE GASKET. BREAKERS SHALL BE MOUNTED ON STANDOFFS SUCH THAT FACEPLATES ARE FLUSH WITH THE DOOR.
 - INTERIOR WALLS, DOORS AND CEILINGS OF KIOSK COMPARTMENT SHALL BE COVERED WITH 25mm THICK STYROFOAM INSULATION.
 - THE 600VAC SECTION OF THE CONTROL COMPARTMENT SHALL HAVE A LEXAN FRONT AS WELL AS NON-CONDUCTIVE SIDE COVERS TO PREVENT SOMEONE FROM ACCIDENTALLY COMING INTO CONTACT WITH 600VAC. LABEL LEXAN COVER WITH "DANGER 600VAC".
 - LABEL INSIDE OF DOOR WITH FUSE LEGEND PER FUSE SCHEDULE ABOVE.

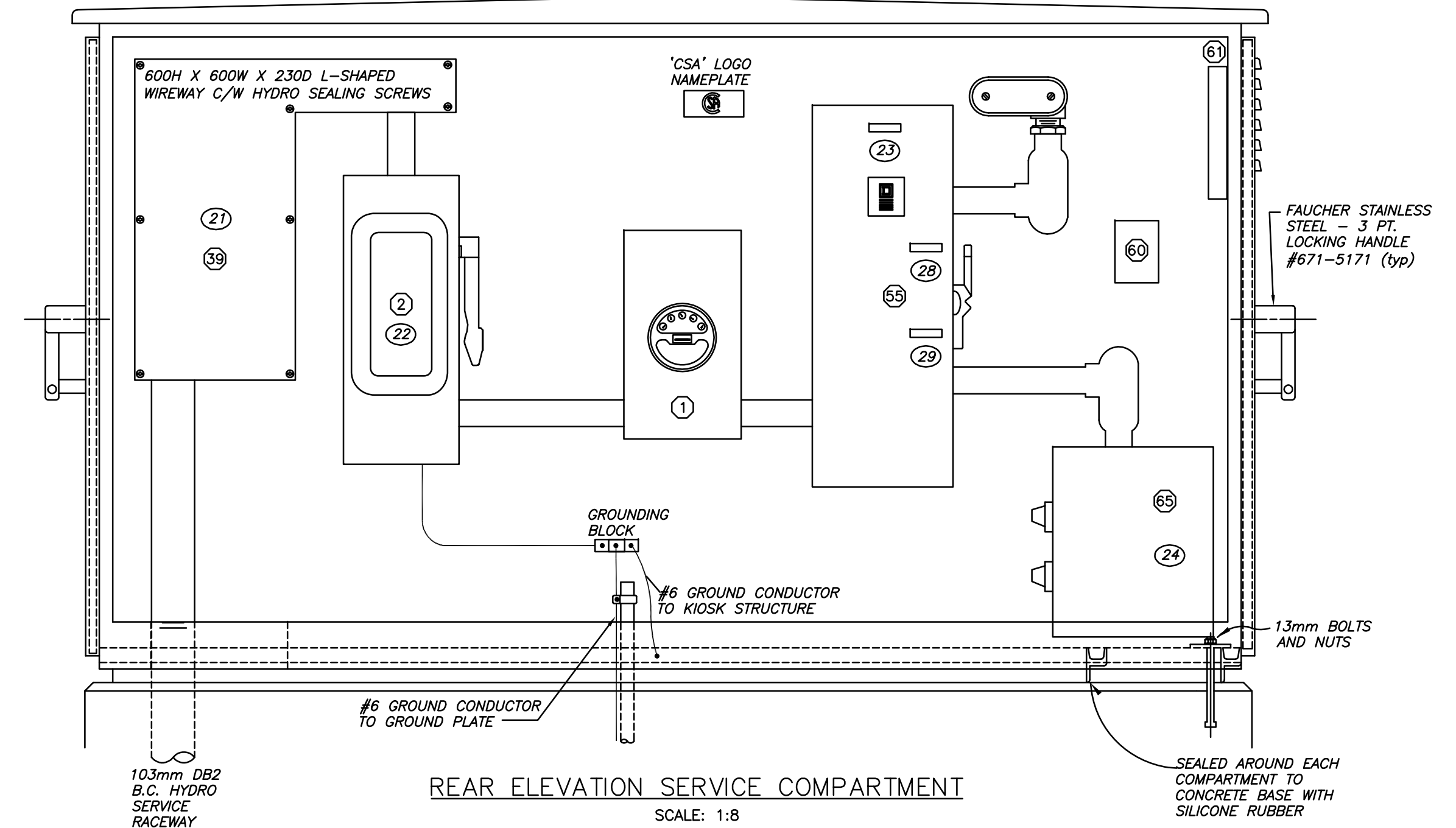
NAMEPLATE SCHEDULE		
N/P No.	ENGRAVING	1/4" LETTERS
1	CONTROL TRANSFORMER CIRCUIT BRKR.	
2	PUMP P1 CIRCUIT BREAKER	
3	PUMP P2 CIRCUIT BREAKER	
4	PUMP DOWN	
5	PUMP P1 RUN	
6	PUMP P2 RUN	
7	ALARM BYPASS	
8	P1 STOP	
9	P2 STOP	
10	ALARM BYPASS	
11	PHASE LOSS	
12	HIGH LEVEL	
13	LOW LEVEL	
14	ALARM TEST	
15	NORMAL MODE	
16	BACKUP MODE	
17	NORMAL / BACKUP	
18	PMR FUSES	
19	VFD 1	
20	VFD 2	
21	HYDRO SUPPLY	
22	MAIN FUSED 600V.	
23	TRANSFER SWITCH	
24	GENERATOR SUPPLY	



RIGHT SIDE ELEVATION VENTILATION COMPARTMENT
SCALE: 1:8
(CABLES NOT SHOWN FOR CLARITY)



FRONT ELEVATION CONTROL COMPARTMENT
SCALE: 1:8



REAR ELEVATION SERVICE COMPARTMENT
SCALE: 1:8



#101 - 1861 Welch St.
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telephone: (604) 985-0508
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N°	DATE	BY	CHK.	DESCRIPTION
A	2009/04/14	TS	KW	ISSUED FOR TENDER - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P1	2009/03/16	TS	KW	ISSUED FOR 95% REVIEW - KIOSK PRE-PURCHASE

REVISIONS

City of Richmond
6911 No. 3 Road Richmond B.C. V6Y 2C1

TITLE:
ECKERSLEY 'A' PUMP STATION
ELECTRICAL KIOSK LAYOUT

DESIGN: KW
DRAWN: PD
CHECKED: KW
ENGINEER: KW

DWG. N°: 0946-08-0C
SCALE: AS SHOWN
DATE: JUNE, 2008
SHT. N°: 3E OF 7

○ BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	REMARKS
1	1	METER SOCKET; 100A, 600V, 3 PHASE, 4 WIRE, 7 JAW (HYDEL #SFC700PW)	SOLID NEUTRAL
2	1	HEAVY DUTY SAFETY SWITCH (FUSED) CUTLER HAMMER 1H363N C/W 100A FUSES, TYPE HRC 1J	100A SOLID NEUTRAL
3		WEIDMULLER SAKS 4 FUSED TERMINAL BLOCKS C/W FUSES 7- 2AMP, 5- 5AMP, 2- 10A, 1- 20A.	QUANTITY AS REQUIRED
4	1	CURRENT SENSOR, SSAC TCS SERIES, 3-50 VDC, NO CONTACT OUTPUT PART No. TCSG2A (Wire must loop through C.T. 3 turns)	
5	1	SPLITTER; 100A, 3 POLE	
6	1	CIRCUIT BREAKER; 600V, 2 POLE; CUTLER HAMMER No. FD 2015	NOTE 2, SHEET E06
7	1	CONTROL TRANSFORMER; 2000VA, 600V - 120V DELTA #DO-2000QH	
8	2	MOTOR CIRCUIT PROTECTOR; 600V, 3 POLE; CUTLER HAMMER TYPE HMCP-050K2C	50 AMP.
9	2	VENTILATION FANS COMAIR ROIRON MODEL PT283	SIZE 1
10	1	RELAY, 120V.DPDT; OMRON # MK2EPN-UA-AC120 C/W BASE	8-PIN PLUG-IN STYLE
11	2	LINE REACTORS, HAMMOND P/N RM0045N12	
12	2	LOAD REACTORS, HAMMOND P/N RM0045P70	
13	4	RELAY, 24Vdc; OMRON No. MK2EPN-UA-DC24 C/W BASE	8 PIN PLUG-IN STYLE
14	1	THERMOSTAT, LINE TYPE, HONEYWELL No. T498A	
15	1	HEATER; 120V, 75W; CHROMALOX No. SCB-75	
16	2	LAMPHOLDER- PORCELAIN TYPE, WESTINGHOUSE No. 1-1351	
17	1	FLOW METER REMOTE TRANSMITTER; ROSEMOUNT 8712DR12-NO-M4. SUPPLIED BY OTHERS	REMOTE DISPLAY
18	2	BATTERIES - SONNENSCHEN TYPE # A412/12 SR	LONG LIFE, 12 YEAR
19	1	PUSHBUTTON UNIT; ALLEN-BRADLEY No. 800T-A2B AND 1 EXTRA BLOCK 800T-XA	ALARM TEST
20	2	L.E.D. PILOT LIGHT, GREEN; ALLEN-BRADLEY No. 800T-QH24G	
21	6	L.E.D. PILOT LIGHT, RED; ALLEN-BRADLEY No. 800T-QH24R	

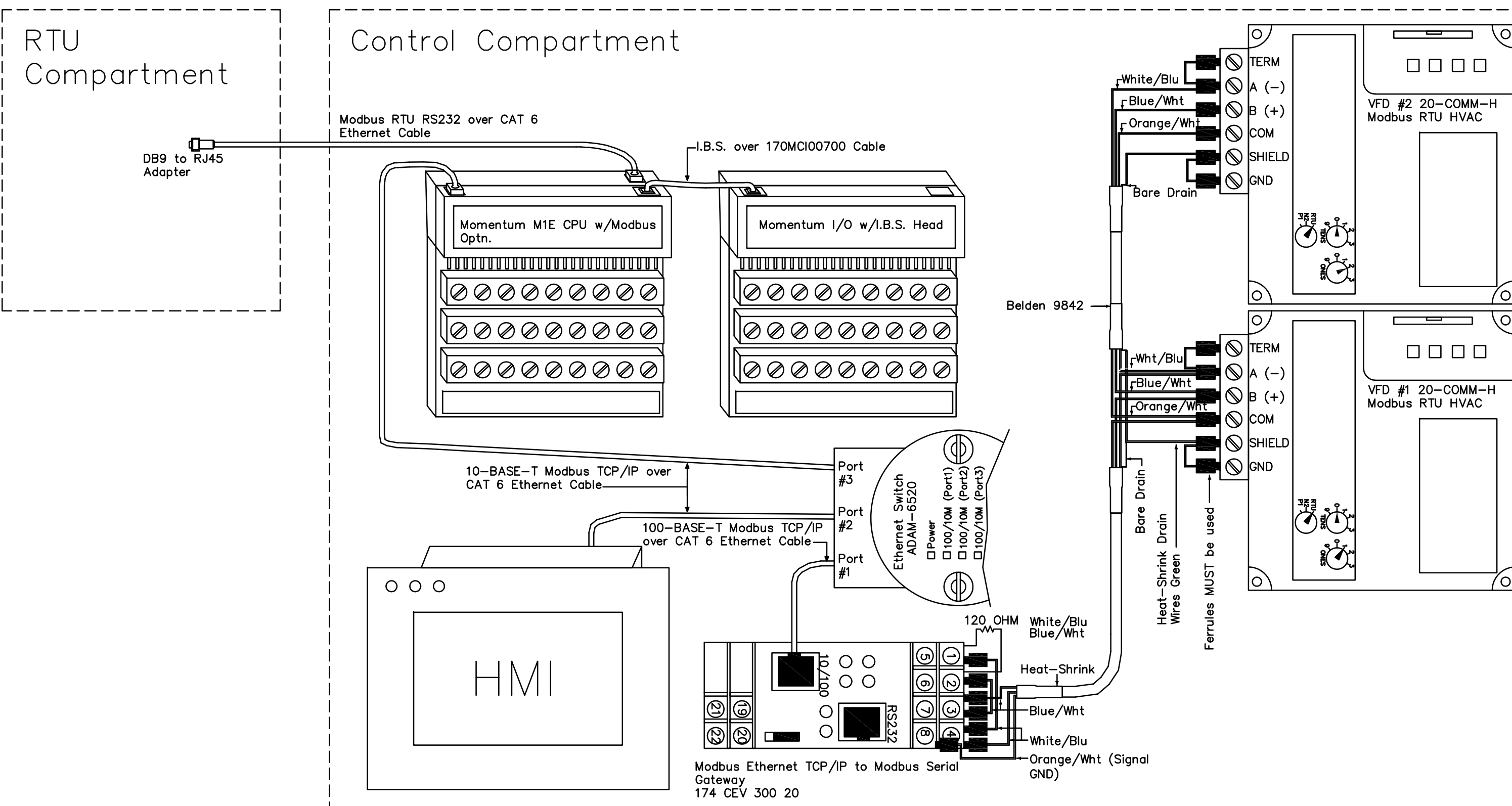
FLOW METER REMOTE DISPLAY SUPPLIED BY OTHERS, INSTALLED BY KIOSK CONSTRUCTOR

○ BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	REMARKS
22	2	PUSHBUTTON UNIT; ALLEN-BRADLEY No. 800T-A6A4 C/W LOCKING ATTACHMENT No. 800T-N10 AND NAMEPLATE TO READ "STOP", 800T-X550.	
23	2	ROTARY SELECTOR SWITCH; ALLEN-BRADLEY No. 800T-H2B C/W NAMEPLATES TO READ "NORMAL & BACKUP", "HMI - ON & OFF"	
24	2	PUSHBUTTON UNIT; ALLEN-BRADLEY No. 800T-A2A "AL BY-PASS" & "PUMP DOWN"	
25	1	150mm x 150mm JUNCTION BOX; HOFFMAN FIBREGLASS TYPE 4 ENCLOSURE PART No. A-664CHQRFQ C/W BACK PANEL PART No. A-6P6 OR EQUIVALENT	
26	1	200mm x 200mm JUNCTION BOX; HOFFMAN FIBREGLASS TYPE 4 ENCLOSURE PART No. A-864CHQRFQ C/W BACK PANEL PART No. A-8P6 OR EQUIVALENT	
27	3	PMR FUSES AND HOLDERS, 600V, GOULD SHAWMUT 3-POLE ULTRASAFE USCC FUSEHOLDERS WITH ILLUMINATED FUSE BLOWN INDICATION CAT. No. USCC31 C/W 2A CLASS CC FUSES	
28		LIQUID-TIGHT FLEXIBLE CONDUIT	QUANTITY AS REQ'D
29	1	MILLTRONICS MULTIRANGER 100 HIGH PERFORMANCE ULTRASONIC LEVEL CONTROLLER. #7ML10331AB002A (24VDC, 6 Relay, Single Point) complete with XPS-15 Transducer	C/W TRANSDUCER
30	2	OMRON DRD-2120N LIMIT SWITCH	
31	1	OMNIFLEX PT5000C (#C2177) & TEMPERATURE SENSOR (#C0003)	C/W TEMP. SENSOR
32	1	CSA ENC. 3R. KIOSK AS PER DRAWING	
33	1	VENTILATING FAN, 7" AXIAL FLOW VERTICAL MOUNT, 120V, SINGLE PHASE; LONGLEY ELECTRIC No. LECO7AX	INSTALLED FOR DOWNWARD AIRFLOW
34	1	DRAWING POCKET (300mmx230mmx75mm)	
35	2	SEALING CONDULET, 12mm; CROUSE-HINDS No. EZS16	FOR TILT SWITCH & FAN WIRING
36	1	SEALING CONDULET, 20mm; CROUSE-HINDS CAT. No. EYS26	
37	2	SEALING CONDULET, 25mm; CROUSE-HINDS CAT. No. EYS36	
38	1	ZELIO LOGIC RELAY # SR3-B261BD	

○ BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	REMARKS
39	1	L-SHAPED PULLBOX FOR B.C. HYDRO - 600H X 600W X 230D	
40	1	DUPLEX RECEPTACLE	
41	2	LAMP GUARD; WIREMESH, REMOVABLE	
42	1	SINGLE POLE SWITCH, 120V, 15A, FLUSH MOUNT	
43	11	24VDC FUSE HOLDERS & FUSES; AS PER NAMEPLATE SCHEDULE	
44	1	PEPPERL & FUCHS KFD2-SR2-EX1.W use with FLYGT float ENM-10	INTRINSIC RELAY
45	2	ALLEN-BRADLEY "POWERFLEX 700" VFD #20B-E-052-ADAYNANCO C/W 20-COMM-H comm. cards and 20-HIM-A3 displays.	ALLEN-BRADLEY VFDs
46	1	ETHERNET SWITCH ADAM-6250	
47	1	LANTRONIX MFG. PART NO. XSDRIN-U2 MODEL NO. XPRESS-DR-IAP	
48	-	PANDUIT WIRING CHANNEL (SIZE TO FIT)	QUANTITY AS REQUIRED
49	25'	BELDEN 9842 CABLE FOR GATEWAY-TO-VFD COMMUNICATIONS	QUANTITY AS REQUIRED
50	4	ETHERNET CAT 6 PATCH CABLES; 2 x 6' & 1 x 4' & 1 x 1'	
51	5	RESISTORS 1 x 120 OHM-1/2W-2% and 2 x 2.2K OHM-2W-2% and 1 x 1.2K OHM-2W-2% and 1 x 10 OHM-2W-2%	
52	-	PLC/RTU PARTS AS PER "ADDITIONAL PLC AND RTU PARTS" BELOW	QUANTITY AS SPECIFIED
53	25'	SHIELDED TWISTED PAIR COMMUNICATIONS CABLE; Belden 8760 TRANSDUCER FROM MILLTRONICS TO WET WELL J.B.	QUANTITY AS REQUIRED
54	1	3 PHASE MONITOR RELAY; CARLO GAVAZZI CAT. No. DPA01 C M60	
55	1	100A-3P MANUAL TRANSFER SWITCH; SQUARE D CAT. No. DTU363	
56		DIN RAIL	QUANTITY AS REQUIRED
57	1 SET	NAMEPLATES TO NAMEPLATE SCHEDULE (SEE SHEET 3E)	
58	-	WEIDMULLER TERMINAL BLOCKS - SIZE & QUANTITY AS REQUIRED	QUANTITY AS REQUIRED
59	-	NOT USED	
60	1	THERMOSTAT; HONEYWELL COOLING TYPE - #SKT011419NO-C	
61	1	KIOSK COOLING FAN, 120VAC C/W FINGER GUARD & FILTER	
62	1	MAPLE SYSTEMS INC. HMI, P/N HMI520TE, C/W STYLUS	
63	-	NOT USED	
64	1 LOT	CONDUITS, LB BOXES, CONNECTORS AS PER ELEVATION VIEWS	
65	1 LOT	300mmx355mm CAM-LOCK CONNECTOR ENCLOSURE, C/W 5 CHASSIS MOUNT CONNECTORS: E1016-1700, -1702, -1706, -1729, -1730.	
66	-	NOT USED	
67	2	RECEPTACLES, WEIDMULLER DIN RAIL 120V	
68	1	GROUND BAR	
69	-	GOULD USM11 FUSE HOLDERS 120 VAC C/W FUSES	QUANTITY AS REQUIRED



ADDITIONAL PLC AND RTU PARTS AS FOLLOWS:

- 1 x MODICON MOMENTUM CPU P/N: 171 CCC 960 30
- 1 x MODICON MOMENTUM OPTION ADAPTER P/N: 172 JNN 210 32
- 1 x MODICON MOMENTUM 24VDC BASE P/N: 170 ADM 350 10
- 1 x MODICON MOMENTUM ANALOG BASE P/N: 170 AAI 030 00
- 1 x MODICON MOMENTUM I.B.S. ADAPTER P/N: 170 INT 110 00
- 1 x MODICON MOMENTUM I.B.S. CABLE P/N: 170 MCI 007 00
- 2 x MODICON MOMENTUM TERMINAL BLOCK SETS P/N: 170 XTS 001 00
- 1 x MODICON MOMENTUM BUS BAR P/N: 170 XTS 006 01
- 1 x MODICON ETHERNET GATEWAY 174 CEV 300 20 (B.O.M. # 47)
- 1 x ADVANTECH ETHERNET SWITCH ADAM-6520 (B.O.M. # 46)
- RTU RJ45-TO-DB9 SERIAL CABLE ADAPTER (Convert Momentum RJ-45 pinout to standard DB-9 female)
- MOTOROLA ACE3600 RTU WITH BATTERY, CHARGER, & CABINET. Verify RTU parts prior to order.
- NEMA 4X LEXAN ENCLOSURE W/MOUNTING BRACKETS. 37cmLx28cmHx22cmD

RTU AND ACCESSORIES SUPPLIED BY OTHERS



#101 - 1861 Welch St.
North Vancouver B.C.
V7P 1B7
telephone: (604) 985-0508
fax: (604) 985-0536

REFERENCE DRAWINGS

PROPERTY ACQUISITION	Aq	
SURVEY PLAN & PROFILE	PP	
ROAD CONSTRUCTION	Oc	
STORM SEWER INSTALLATION	Lc	
WATERMAIN INSTALLATION	Wc	
ORNAMENTAL STREET LIGHTING	Tc	
TRAFFIC SIGNALS	Ec	
SANITARY SEWER INSTALLATION		
OTHER		

NOTE - PROVIDE LOCATION OF ALL UTILITIES / SERVICES BEFORE STARTING CONSTRUCTION.

Nº	DATE	BY	CHK.	DESCRIPTION
A	2009/04/14	TS	KW	ISSUED FOR TENDER - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
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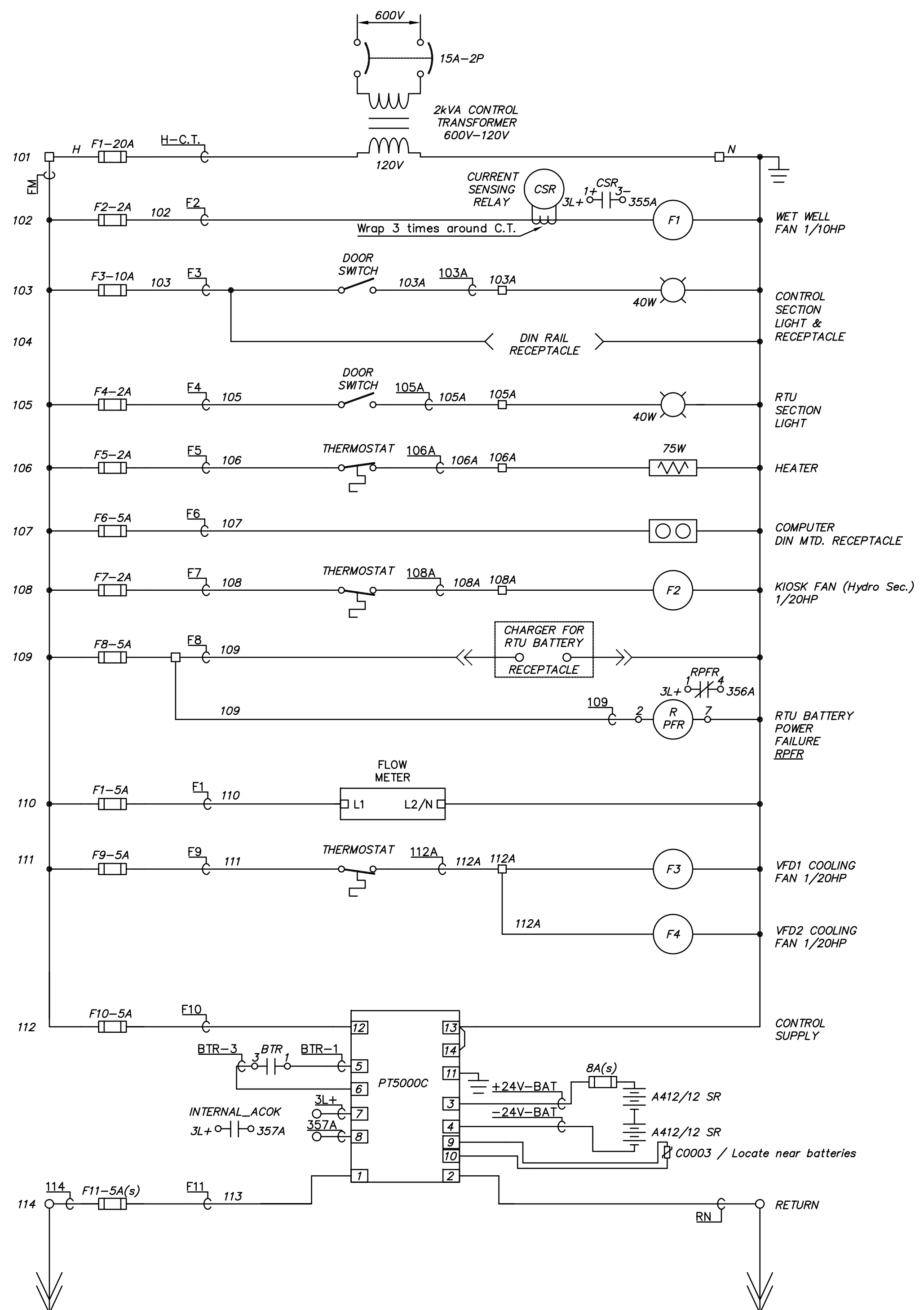
REVISIONS

City of Richmond
6911 No. 3 Road Richmond B.C. V6Y 2C1

TITLE:

ECKERSLEY 'A' PUMP STATION
ELECTRICAL BILL OF MATERIALS

DESIGN: TS	DWG. Nº: 0946-08-0C
DRAWN: TS	SCALE: AS SHOWN
CHECKED: KW	DATE: JUNE, 2008
ENGINEER: KW	SEC. Nº: -
	SHT. Nº: 4E OF 7

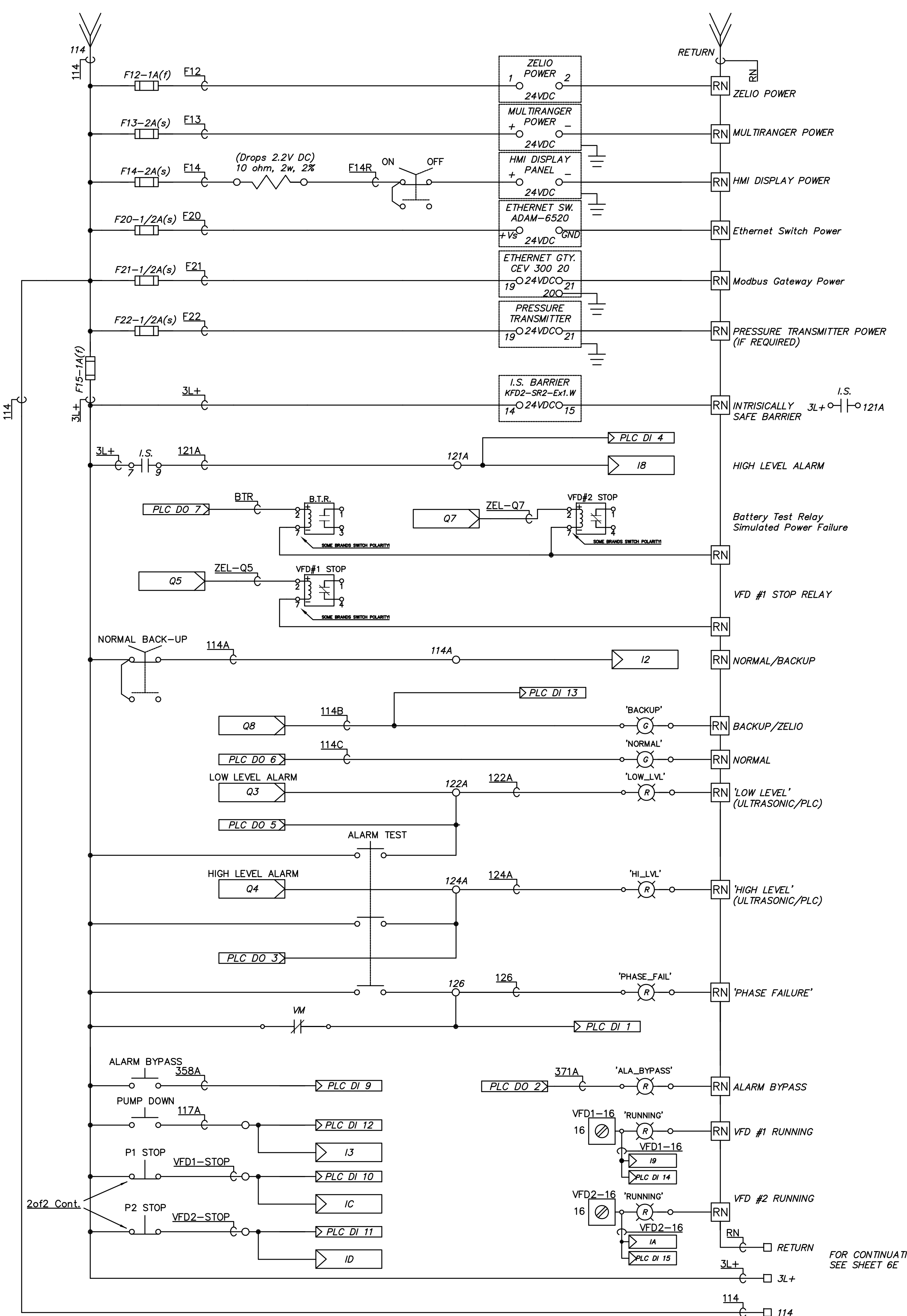


Construction Notes

- Crimp ferrules (insulated end) are to be used for wire termination wherever possible.
- Extensions to resistor legs and temperature sensors should be soldered and have heat shrink.
- No butt-splices are acceptable.
- All wires should be heat-shrink labeled at their termination points.
- All 24VDC and 120VAC fuses should be labeled per the 'Fx' marking listed on the main panel labels (dwg -5).
- The VFD's terminal blocks should only terminate one (1) wire.

Wire Color Code Legend

#16 AWG Red - +24Vdc	I/O Legend	PLC DI #	PLC Inputs	PLC Analog Inputs
#16 AWG Black - 0 VDC or 120 VAC	PLC DO #	PLC Outputs	Zelio Inputs	Wire Markings
#16 AWG White - Neutral[X2]	IX	Zelio Inputs	Zelio Outputs	
#16 AWG Green - Ground	Qx	Zelio Outputs		
#16 AWG Dark Blue - PLC or Zelio Inputs				
#16 AWG Orange - PLC or Zelio Outputs				
#16 AWG Yellow - PLC Analog Inputs[4-.20mA]				



NOTES:

- ANALOG INPUTS SCHEMATIC DIAGRAMS NOT SHOWN FOR CLARITY. SEE SHEET 6E ANALOG I/O WIRING.

FOR CONTINUATION SEE SHEET 6E

OMNI ENGINEERING INC.
 #101 - 1861 Welch St.
 North Vancouver B.C.
 V7P 1B7
 telephone: (604) 985-0508
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N°	DATE	BY	CHK.	DESCRIPTION
A	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P1	2009/03/16	TS	KW	ISSUED FOR 95% REVIEW - KIOSK PRE-PURCHASE
REVISIONS				

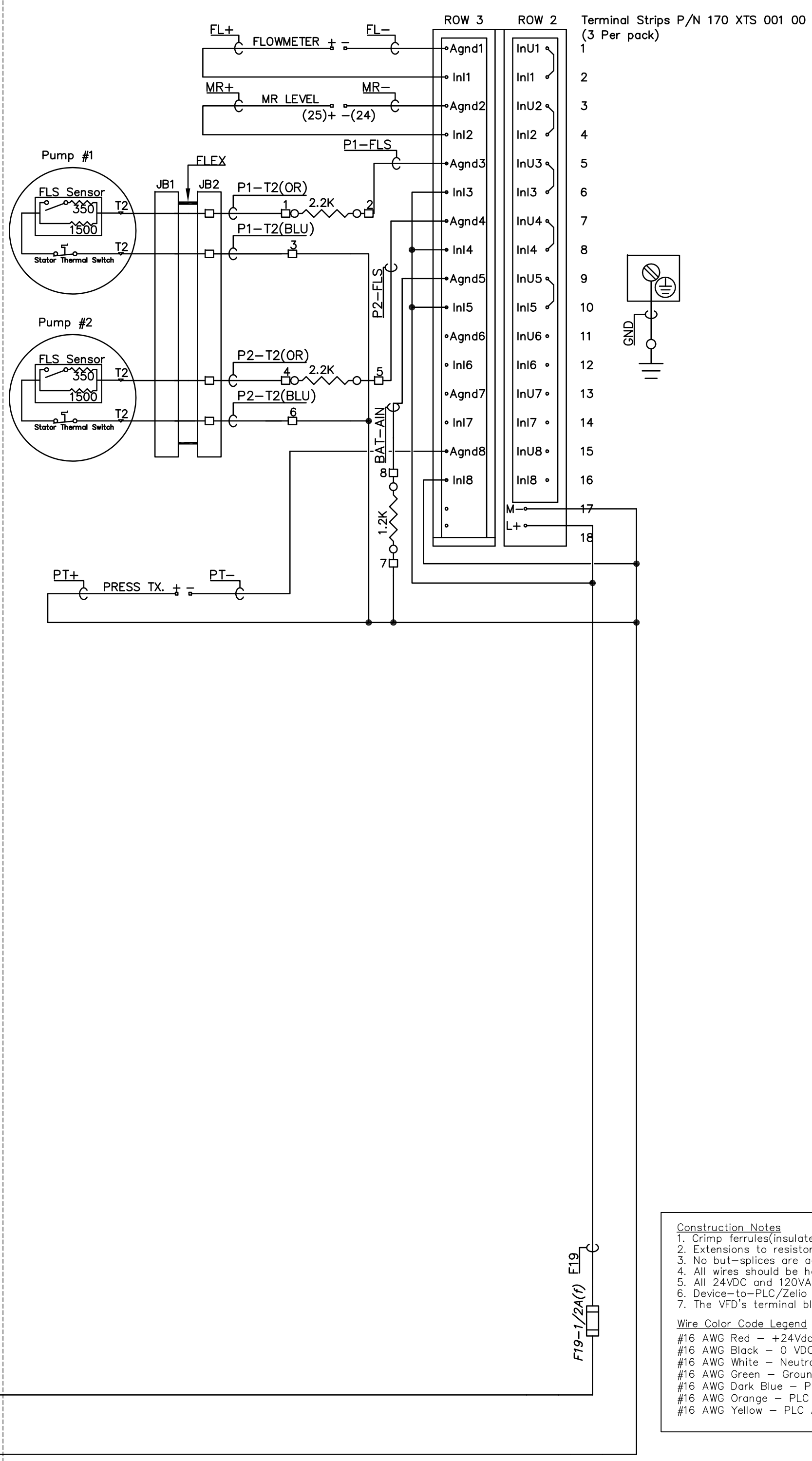
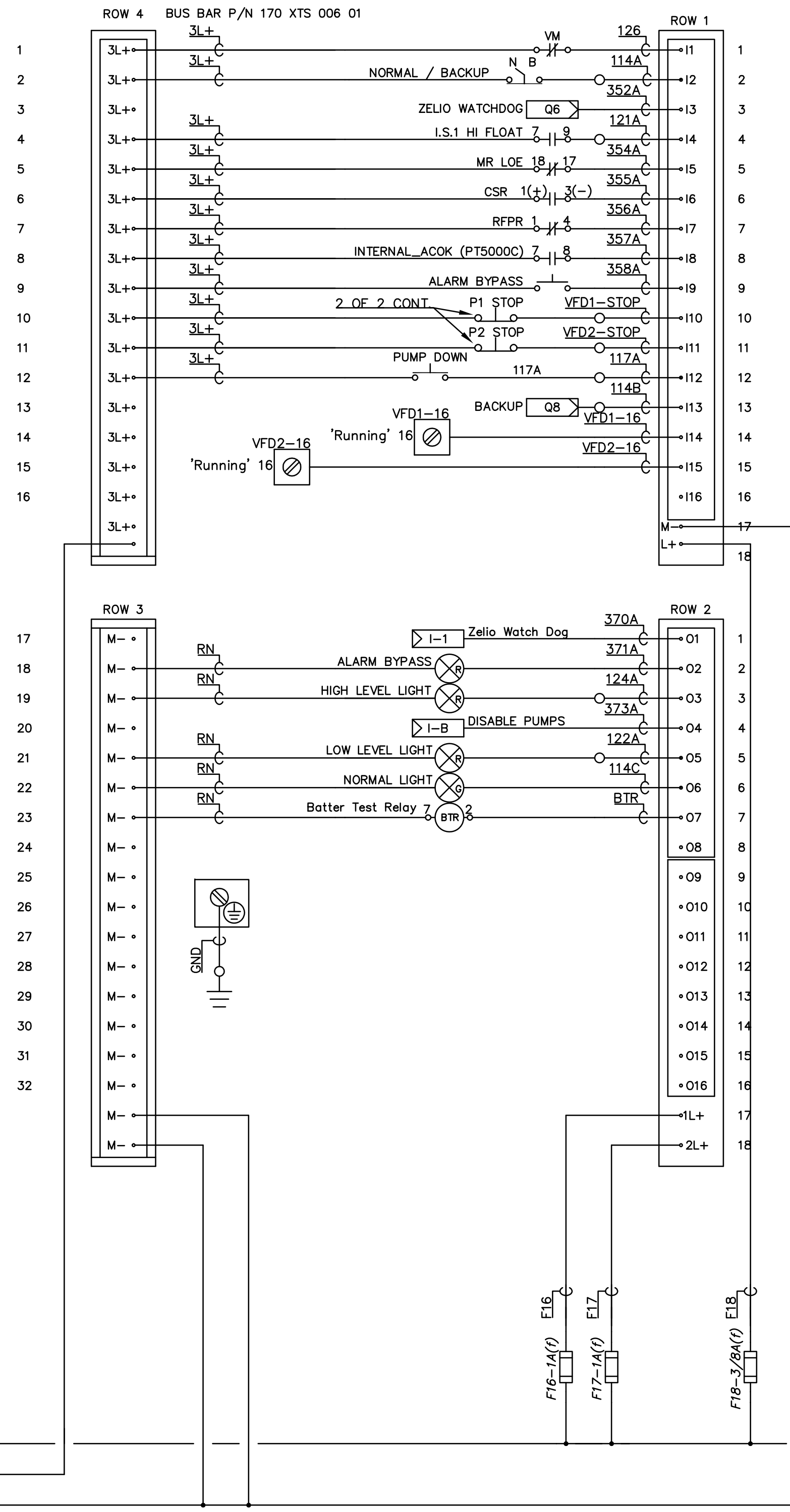
City of Richmond
 6911 No. 3 Road Richmond B.C. V6Y 2C1

TITLE:
ECKERSLEY 'A' PUMP STATION WIRING SCHEMATIC

DESIGN: TS	DWG. N°: 0946-08-0C
DRAWN: TS	SCALE: AS SHOWN
CHECKED: KW	DATE: JUNE, 2008
ENGINEER: KW	SEC. N°: - SHE. N°: 5E OF 7

170 ADM 350 10
16 INPUTS Terminal Strips P/N 170 XTS 001 00
16 OUTPUTS (3 Per pack)

170 AAI 030 00
8 ANALOG INPUTS



FOR CONTINUATION
SEE SHEET SE

Construction Notes
1. Crimp ferrules (insulated end) are to be used for wire termination wherever possible.
2. Extensions to resistor legs and temperature sensors should be soldered and have heat shrink.
3. No but-splices are acceptable.
4. All wires should be heat-shrink labeled at their termination points.
5. All 24VDC and 120VAC fuses should be labeled per the "Fx" marking listed on the main panel labels(dwg -5).
6. Device-to-PLC/Zelio wiring should be continuous where possible. Terminals should be used only for multiple connections.
7. The VFD's terminal blocks should only terminate one (1) wire.

Wire Color Code Legend
#16 AWG Red - +24Vdc
#16 AWG Black - 0 VDC or 120 VAC
#16 AWG White - Neutral[X2]
#16 AWG Green - Ground
#16 AWG Dark Blue - PLC or Zelio Inputs
#16 AWG Orange - PLC or Zelio Outputs
#16 AWG Yellow - PLC Analog Inputs(4..20mA)

I/O Legend
PLC DI # -- PLC Inputs
PLC DO # -- PLC Outputs
Ix -- Zelio Inputs
Ox -- Zelio Outputs

in# (+) # -- PLC Analog Inputs
ABC-XXXX -- Wire Markings

OMNI ENGINEERING INC.
#101 - 1861 Welch St.
North Vancouver B.C.
V7P 1B7
telephone: (604) 985-0508
fax: (604) 985-0536

NO	DATE	BY	CHK	DESCRIPTION
A	2009/04/14	TS	KW	ISSUED FOR TENDER - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P1	2009/03/16	TS	KW	ISSUED FOR 95% REVIEW - KIOSK PRE-PURCHASE

City of Richmond
6911 No. 3 Road Richmond B.C. V6Y 2C1

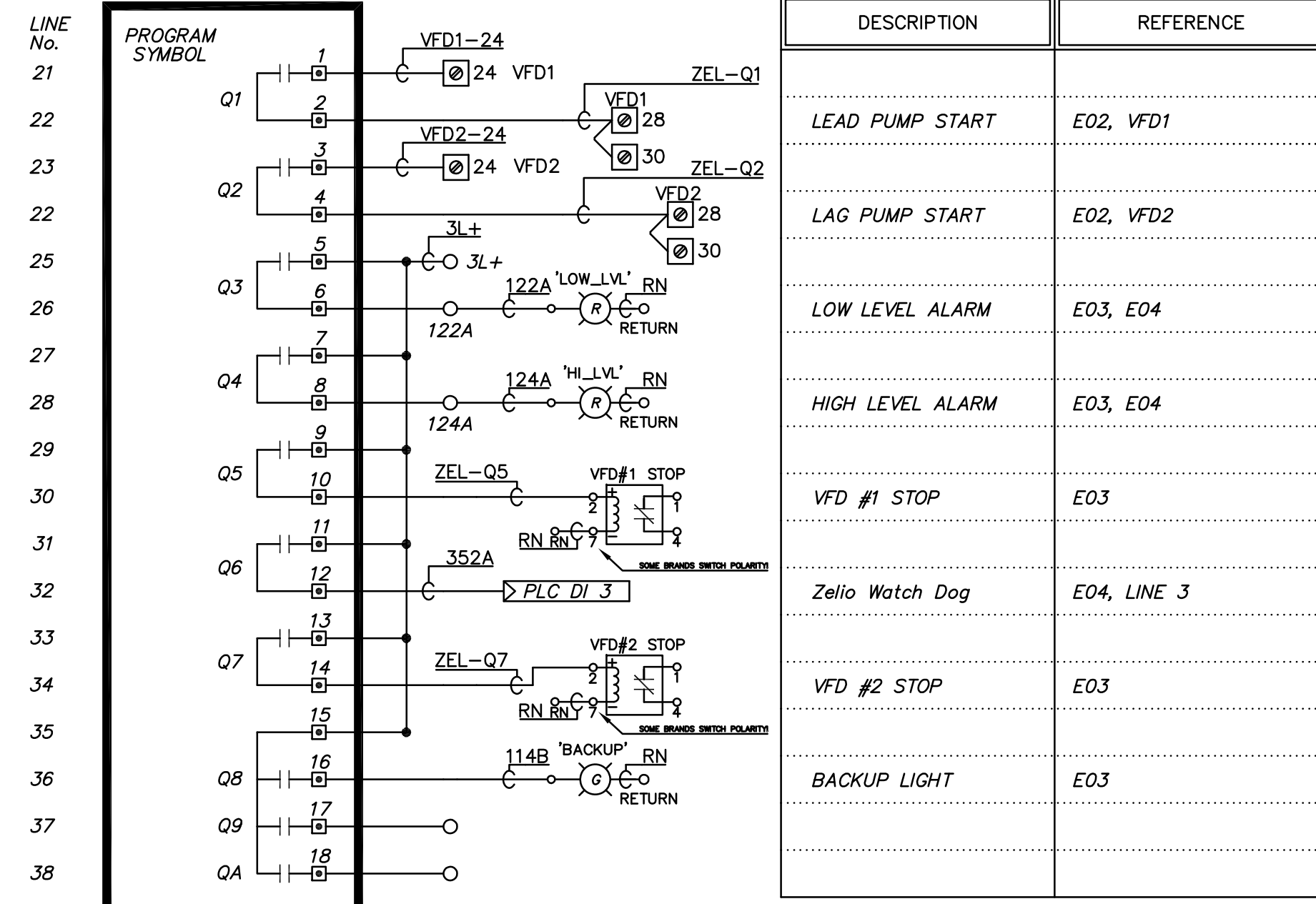
TITLE:
**ECKERSLEY 'A' PUMP STATION
PLC I/O WIRING**

DESIGN: TS
DRAWN: TS
CHECKED: KW
ENGINEER: KW

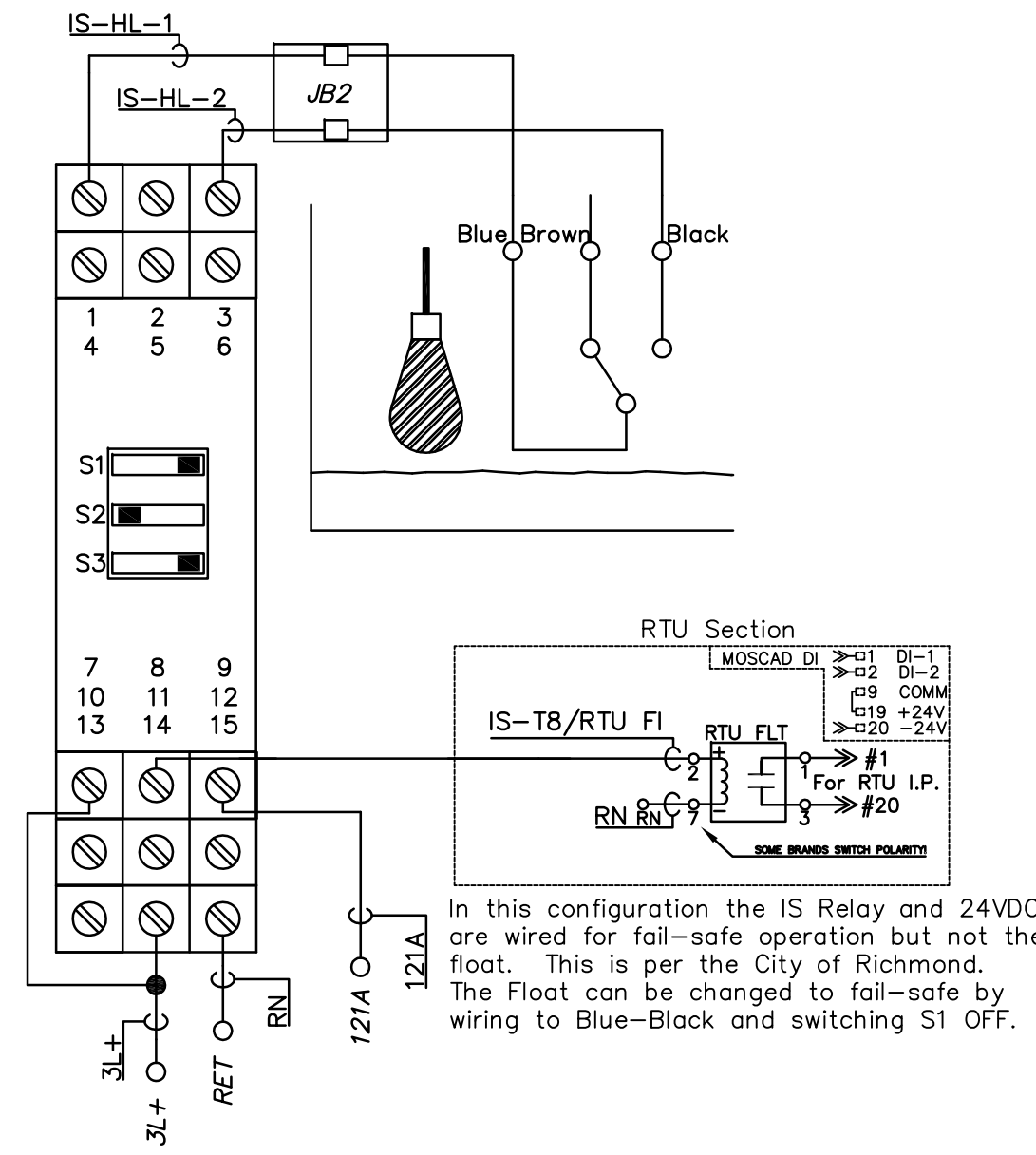
DWG. NO: **0946-08-0C**

SCALE: AS SHOWN
DATE: JUNE, 2008
SHT. NO: 6E OF 7

ZELIO SR3-B261BD
OUTPUT (RELAY)



I.S.L. RELAY

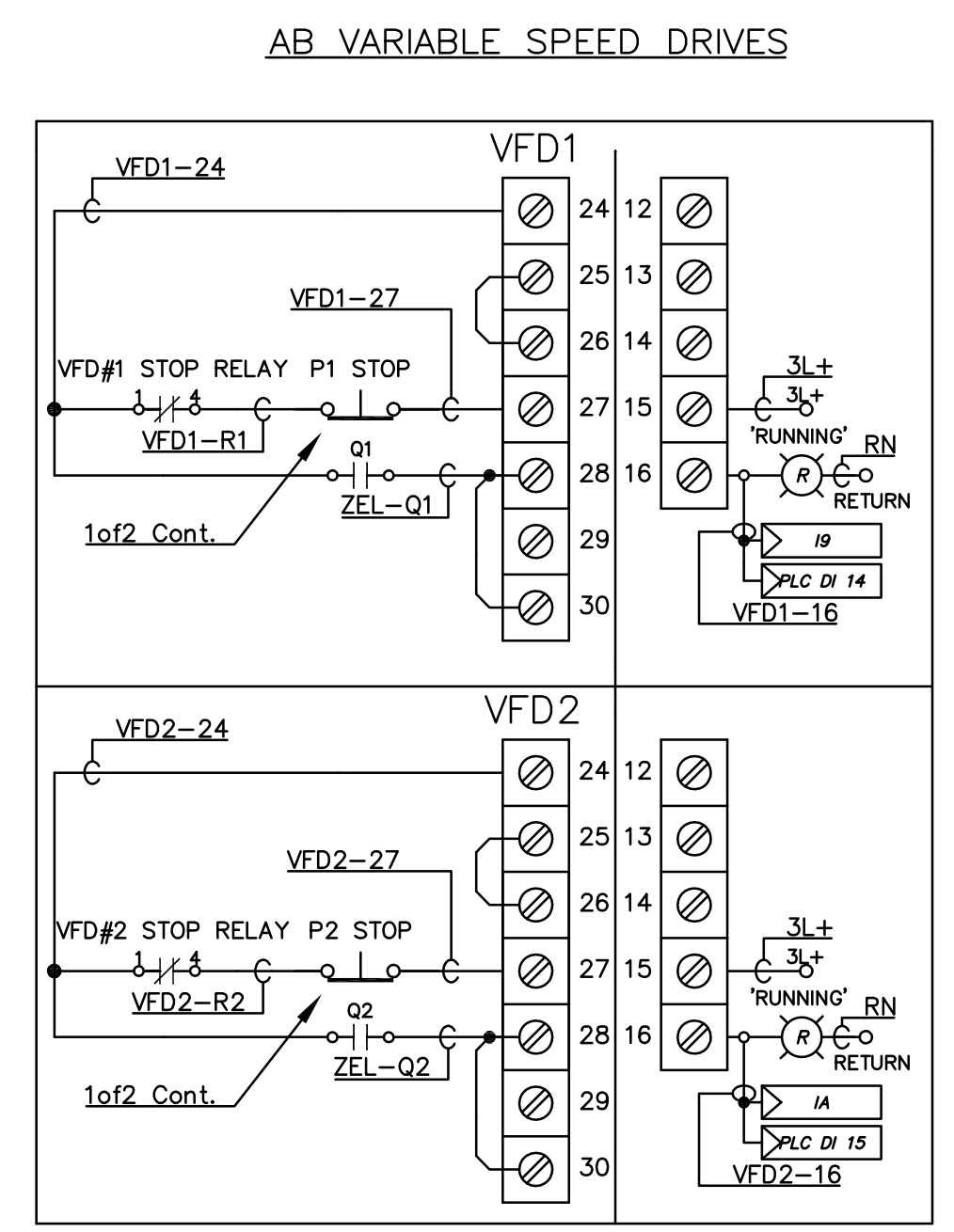
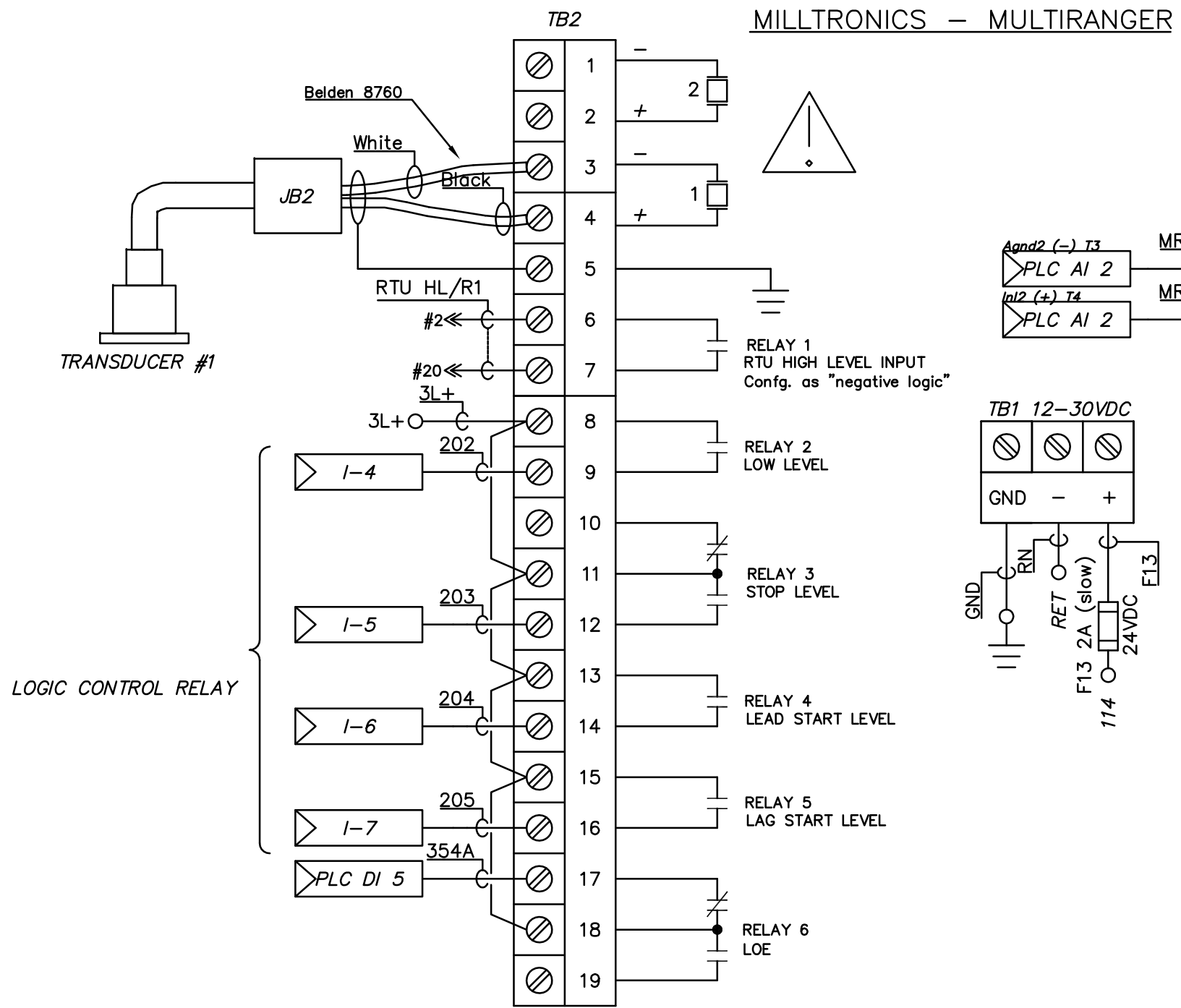
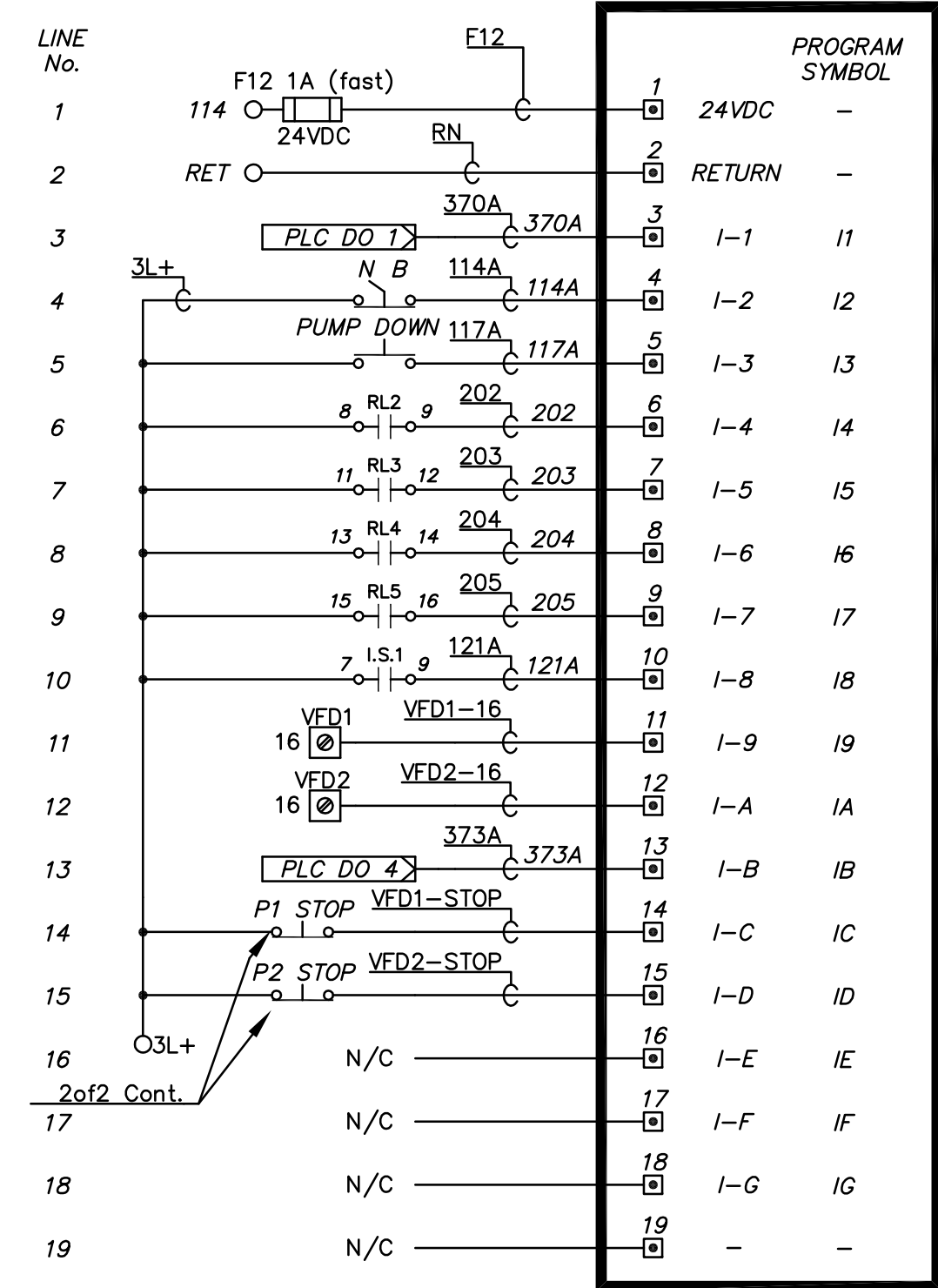


- Construction Notes**
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 - Extensions to resistor legs and temperature sensors should be soldered and have heat shrink.
 - No but-splices are acceptable.
 - All wires should be heat-shrink labeled at their termination points.
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 - #16 AWG Green - Ground
 - #16 AWG Dark Blue - PLC or Zelio Inputs
 - #16 AWG Orange - PLC or Zelio Outputs
 - #16 AWG Yellow - PLC Analog inputs[4.20mA]
- I/O Legend**
- PLC DI # -- PLC Inputs
 - PLC DO # -- PLC Outputs
 - Zelio Inputs
 - Zelio Outputs
- Wire Markings**
- ABC-XXXX

CONTROL LOGIC RELAY

DESCRIPTION	REFERENCE
WATCH DOG FROM PLC	E04 LINE 17
NORMAL/BACK-UP	E03, E04
PUMP DOWN	E03, E04
MULTIRANGER LOW LEVEL	E02 TB2
MULTIRANGER STOP LEVEL	E02 TB2
MULTIRANGER LEAD START	E02 TB2
MULTIRANGER LAG START	E02 TB2
FLOAT HIGH LEVEL (I.S.L.)	E02 I.S.L., E03 LINE 121
PUMP 1 RUNNING	E02 VFD1, E03
PUMP 2 RUNNING	E02 VFD2, E03
DISABLE PUMP REMOTELY	E03, E04 LINE 20
PUMP 1 STOP	E03, E04
PUMP 2 STOP	E03, E04

ZELIO SR3-B261BD
INPUT (24VDC)



REV#	DATE	BY	CHK	DESCRIPTION
A	2009/04/14	TS	KW	ISSUED FOR TENDER - KIOSK PRE-PURCHASE
P2	2009/03/24	TS	KW	ISSUED FOR FINAL REVIEW - KIOSK PRE-PURCHASE
P1	2009/03/16	TS	KW	ISSUED FOR 95% REVIEW - KIOSK PRE-PURCHASE



May 13th, 2009
File: 3472Q

Business & Financial Services Department
Finance Division
Telephone: 604-276-4218
Fax: 604-276-4162

Attention: To All Bidders

Dear Sir/Madame:

Re: Request for Quotation 3472Q - Supply & Delivery of Electrical Kiosk for Eckersley A Pump Station – Addendum 1

Part 1: Inquiries

This addendum has been issued to clarify the Contract Documents, including the Request for Quotation. This addendum forms part of the Contract Documents and shall be read, interpreted and coordinated with all other parts. Please review and consider the following information in preparation of your quotations:

1.0 Under **Specifications** delete Item 2.10.3 and replace it with the following:

2.10.3: INTERMITTENT OUTPUT RATING: intermittent rating shall be **110%** of continuous output rating for minimum 60 seconds.

2.0 Delete Item 45 on Drawing 1892-404 Bill of Material and replace with the following:

Item 45 - Allen-Bradley “Powerflex 700” VFD #20B-E-**041**-AOAYNANCO

Yours truly,

Kerry Lynne Gillis
Buyer II - Contracting Specialist

KG:kg

pc: Anthony Fu, EIT, Project Manager