



**Engineering Ltd.**

**Regional District of Okanagan Similkameen  
Naramata WTP PLC Upgrades**

**9796-003-00**

**November 2020**

*Proud of Our Past... Building the Future*

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MasterFormat Broadscope Heading	Section Number	Section Title
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## **PREAMBLE**

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The format of these Specifications is based on "MasterFormat" published jointly by Construction Specifications Canada and The Construction Specifications Institute. This Table of Contents generally reflects the "MasterFormat" division and section arrangement.

Where it is indicated that a division of "MasterFormat" is "Not Used", or where a division heading is omitted entirely, this means only that the division has not been included in the Specification. It does not necessarily mean that the work normally specified in that division is not required.

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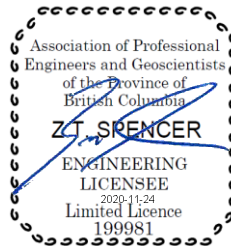
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**Regional District of Okanagan Similkameen**

**Project No. 9796-003-00**

**Naramata WTP PLC Upgrades**



Prepared by MPE Engineering Ltd.

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**Tenderer's Checklist**

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Before submitting your Tender, check the following points:

1. Has your Tender been signed, sealed and witnessed? ( )
2. Have you enclosed the Bid Bond? ( )
3. Have you enclosed the Agreement to Bond, signed and sealed by your proposed Surety? ( )
4. Have you indicated you have received all Addenda in Clause 1.4 of the Tender Form? ( )
5. Have you completed all schedules and prices in the Tender Form? ( )
6. Have you indicated and included the Contingency Allowance in the Tender Form? ( )
7. Have you listed your Subcontractors and major suppliers? (if applicable) ( )
8. Have you completed Statement "A" – Experience in Similar Work? ( )
9. Have you completed Statement "B" – Senior Supervisory Staff? ( )
10. Have you completed Statement "D" – Subcontractors and Suppliers? ( )
11. Have you completed Statement "G" – Schedule of Alternatives? (if applicable) ( )
12. Are the documents complete? ( )

**END OF SECTION**

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## INSTRUCTIONS TO TENDERERS

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### 1. GENERAL

#### 1.1 Tenders

- .1 Sealed Tenders clearly marked as to contents, will be received for:

**Contract Title: “Naramata WTP PLC Upgrades”**

**Contract Number: RDOS-20-PW-30**

Tenders must be addressed and delivered to the Regional District of Okanagan-Similkameen, 101 Martin Street, Penticton, BC, V2A 5J9, not later than the *Tender Closing Time* on:

**December 8, 2020 at 2:00 PM Local Time**

Tenders will not be opened publicly. Unofficial tender results can be obtained by emailing [engineering@rdos.bc.ca](mailto:engineering@rdos.bc.ca). The results will be sent out as soon as possible after the tenders are opened.

#### 1.2 Tender Form

- .1 Tenders must be completed in ink or typed and submitted on the official Tender Form, which is part of the *Contract*. Tenders are to be offered on the basis that the Tenderer whose Tender is accepted shall enter into a written agreement with the *Owner* pursuant to the provisions of the current edition of the Canadian Construction Documents Committee (CCDC) 2 – Stipulated Price Contract. Article A-4, *Contract Price*, and Article A-5, *Payment*, of the *Agreement* between the *Owner* and the *Contractor* are amended by the document Contract Form, which is included as a part of this tender package. The General Conditions are amended by the Supplementary General Conditions, Section 00800, which are included as a part of this tender package.
- .2 Each Tender submission shall include the following original documents: :
  - .1 Tender Form,
  - .2 Agreement to Bond,
  - .3 A Bid Bond
  - .4 Tender Price Breakdown,
  - .5 Statements “A”, “B”, “D” and “G”
- .3 The complete written Tender Documents are part of the Tender. The Tender Form and attachments only, will be submitted; however, the Tenderer accepts and acknowledges by his provision of a Tender that he has read and understood all of the requirements of the *Contract Documents*.

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## INSTRUCTIONS TO TENDERERS

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- .4 The Tenderer shall give the Total Tender Price both in words and in figures and shall fill in all blank spaces for figures, item prices, lump sums and other information in the Tender Form and in the Tender Price Breakdown.
- .5 Original Tenders submitted by e-mail, facsimile, telex, or telegraph will not be considered.
- .6 The Tenderer should provide his own envelope for the Tender. The envelope should be marked clearly with the Contract Title, Contract Number, and the Name of the Tenderer.

### 1.3 Tender Deposit

- .1 Each Tenderer shall include a Tender deposit in the form of a Bid Bond payable to the Regional District of Okanagan-Similkameen in the amount of 10% of the Tender Price.
- .2 Bid Bonds shall be submitted on CCDC Form 220 and shall remain valid for a period of ninety (90) days following the Tender Closing Date.
- .3 Tender deposits shall be returned to unsuccessful Tenderers after a reasonable time for the consideration and award of the *Contract* has elapsed.
- .4 The Tender deposit of the successful Tenderer shall be exchanged for the Performance Bond and the Labour and Material Payment Bond, upon the award of the *Contract*.
- .5 Should the successful Tenderer fail to enter into a *Contract* with the *Owner* or fail to produce the required Performance Bond within 2 weeks of the date of acceptance of the Tender, or to start work as directed, the Tender deposit will be forfeited to the *Owner*.

### 1.4 Signature Required on Tender

- .1 The Tender should bear:
  - .1 One signature, plus a corporate seal, or
  - .2 A signature, and a signature from a witness, or
  - .3 A signature and wording underneath "*I have the authority to bind the Corporation*" – if indeed they have this authority.
- .2 No photocopies of signatures are acceptable; they must be original.

### 1.5 Disqualification of Tenders

- .1 Under no circumstances will Tenders be considered which:
  - .1 Are received after the above advertised *Tender Closing Time*.
  - .2 Are not accompanied by a Bid Bond in the amount specified.
  - .3 Are not signed.

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## INSTRUCTIONS TO TENDERERS

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- .2 Any attempt by the Tenderer or by an officer, employee or agent of the Tenderer to contact an elected member of the Regional District of Okanagan-Similkameen in connection with the submission or award of this Tender may be grounds for disqualification of the Tender.
- .3 The *Owner* may, in its absolute discretion, reject a Tender submitted by a Tenderer, if the Tenderer, or any officer or director of the Tenderer is or has been engaged either directly or indirectly through another corporation in a legal action against the *Owner*, its elected or appointed officers and employees in relation to any other *Contract* for works or services within five years of the date of this Call for Tenders.

In determining whether to reject a Tender under this clause, the *Owner* will consider whether the litigation is likely to affect the Tenderer's ability to work with the *Owner*, its *Consultants* and representatives and whether the *Owner's* experience or the experience of municipalities within the boundaries of the *Owner* indicates that the *Owner* is likely to incur increased staff and legal costs in the administration of this *Contract* if it is awarded to the Tenderer.

### 1.6 Informal or Unbalanced Tenders

- .1 Tenders which are incomplete, conditional, illegible or obscure or that contain additions not called for, reservations, erasures, alterations, or irregularities of any kind, may be rejected as informal.
- .2 Tenders that contain prices which appear to be so unbalanced as likely to adversely affect the interests of the *Owner* may be rejected.
- .3 The *Owner* reserves the right to waive informalities at its discretion.
- .4 Tenderers who have submitted Tenders that have been rejected by the *Owner* because of informalities will normally be notified of the reasons for the rejection within 10 days after the closing date of Tenders.

### 1.7 Subsequent Withdrawal or Modifications of a Tender

- .1 A Tenderer who has already submitted a Tender may submit a further sealed Tender at any time before the official *Tender Closing Time*. The last Tender received shall supersede and invalidate all Tenders previously submitted by the Tenderer.
- .2 A Tender may be withdrawn by the Tenderer by written notice delivered to the *Owner* prior to the time fixed for opening Tenders.
- .3 The onus is on the Tenderer to ensure timely receipt of Tender modifications. The *Owner* makes no assurances regarding the availability of fax communication lines or equipment. To be considered, fax transmissions of Tender modifications must be received in full prior to the time stipulated for receipt of Tender.

### 1.8 Tender Validity



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## INSTRUCTIONS TO TENDERERS

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- .1 This Tender shall constitute an irrevocable offer by the Tenderer, open for acceptance by the *Owner* for a period of 90 days, after which time, if not accepted, the Tender shall be null and void.
- .2 It is understood that errors in the Tender, whether accidental, caused by negligence of the Tenderer or otherwise shall not confer any additional rights of withdrawal upon the Tenderer.

### 1.9 Omissions / Discrepancies

- .1 Should a Tenderer find discrepancies in, or omissions from the drawings, specifications or other Tender documents, or should he be in doubt as to their meaning, he should notify the *Engineer* who may send a written instruction to all Tenderers. Verbal answers are only binding when confirmed by written addenda.
- .2 Should the Tenderer not agree that the materials and methods specified, or designated on the drawings, will provide an installation to meet the requirements of the project, he shall notify the *Engineer* in writing, stating his reason for objection, and may submit a suggested alternative. In such an event, the *Engineer* may choose to issue an *Addendum*.

### 1.10 Errors and Omissions on Tender Form

- .1 Wherever in a Tender the amount tendered for an item does not agree with the extension of the estimated quantity and the tendered unit price, the unit price shall govern and the amount of the Total Tender Price shall be corrected accordingly.
- .2 If a Tenderer has omitted to enter a price for an item of work set out in the Tender Form, he shall, unless he has specifically stated otherwise in his Tender, be deemed to have allowed elsewhere in the Tender Form for the cost of performing the said item of *Work*. Unless otherwise agreed to by the *Owner*, no increase shall be made in the Total Tender Price on account of such omission and the Tenderer shall be deemed to have tendered for the entirety of the scope of work set out in the Tender Form.

### 1.11 Availability of Plans and Specifications

- .1 The Tender Document, including the drawings and specifications, is available for download in pdf format directly from:
  - .1 the Regional District of Okanagan-Similkameen website at [www.rdos.bc.ca](http://www.rdos.bc.ca)
  - .2 [BC Bids website at www.bcbids.gov.bc.ca](http://www.bcbids.gov.bc.ca)
- .2 Hard copies will not be made available for purchase.
- .3 All addenda will be posted to these websites. .
- .4 The Tender Document may be viewed at:

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## INSTRUCTIONS TO TENDERERS

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The Regional District of Okanagan-Similkameen, 101 Martin Street, Penticton, BC,  
V2A 5J9,

Southern Interior Construction Association, 104-151 Commercial Drive, Kelowna,  
BC, V1X 7W2.

Vancouver Regional Construction Association, 3636 East 4<sup>th</sup> Avenue, Vancouver,  
BC, V5M 3Y7

### 1.12 Proof of Ability

- .1 In order to aid the *Owner* in determining the ability of each Tenderer to complete the *Work*, the Tenderer shall complete the following Statement sheets which are bound in the document:
  - .1 Statement “A” – Tenderer’s Experience in Similar Work: Stating the Tenderer’s experience in similar work which it has successfully completed. Include experience for major *Subcontractors*.
  - .2 Statement “B” – Tenderer’s Senior Supervisory Staff: Giving a list of the Tenderer’s senior supervisory staff with a summary of the experience of each. Include staff and experience for major *Subcontractors*.
  - .3 Statement “D” – *Subcontractors* and Suppliers: Giving the name and address of each proposed *Subcontractor* used in making up his Tender, where that *Subcontractor* is responsible for more than 2.5 percent of the *Work* or as noted, and shall state the portion of the *Work* allotted to each. Only one *Subcontractor* shall be named for each part of the *Work* to be subcontracted. Where these items are to be undertaken by the *Contractor*’s own forces, note in the statement.
  - .4 Statement “G” – Schedule of the Alternatives: If the Tenderer desires to propose alternatives to listed products or indicated designs, alternatives can be proposed for the consideration of the *Owner*. These alternatives will only be assessed for the successful Tenderer after the Base Bid evaluation. To enable the assessment of these alternatives, provide the following information:
    - .1 Name of alternative product or design.
    - .2 Description of proposed product or design. Supplement the space available with descriptive literature and design information.
    - .3 Cost savings or additional costs associated with the adoption of this alternative.
- .2 The Tenderer may be required to furnish additional statements covering other matters including financial resources and convictions or orders imposed under Health & Safety or Environmental legislation.

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## INSTRUCTIONS TO TENDERERS

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- .3 Information submitted in the Statements shall be used as the basis for the successful Tenderer completing his *Work*. Personnel, equipment, or products listed in the Statements cannot be changed subsequently without the written permission from the *Engineer* and only at the discretion of the *Owner*.

### 1.13 Evaluation of Tenders

- .1 Tenders will be evaluated based on the following criteria:
  - .1 Qualifications and related experience of the Tenderer and senior personnel and *Subcontractors* to be assigned to this project;
  - .2 Performance of the Tenderer and *Subcontractors* on similar projects, including, without limitation, the Tenderer's history with respect to quality of work, scheduling, changes in the *Work* and force account *Work*;
  - .3 The Tenderer's compliance and ability to comply with all statutes, regulations, bylaws and other enactments affecting the Tenderer's *Work*;
  - .4 Lowest price to the *Owner* of having the *Work* completed in accordance with the Tender Documents;
  - .5 The conformity of the Tender to the requirements set forth in the Instructions to Tenderers; and,
  - .6 Compliance with any time requirements or stipulations provided for in this *Contract*.
- .2 The *Owner* reserves the right to make enquires regarding the qualifications and experience of any one or more of the Tenderers, and shall not be obliged to make the same enquiries regarding all Tenderers.
- .3 The evaluation process will be conducted at the discretion of the *Owner*, and the price to complete the *Work* is not the only or primary criterion to be used by the *Owner* in awarding the *Contract*.
- .4 The *Owner* reserves the right to reject any Tender if the evidence submitted by or investigation of such Tenderer fails to satisfy the *Owner* that such Tenderer is properly qualified to carry out the obligations of the *Contract* and to complete the *Work* as contemplated therein.

### 1.14 Alternatives

- .1 No alternatives or equals to the specified products will be considered during the Tender period. Tenderers shall base their prices upon the specified products only.

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## INSTRUCTIONS TO TENDERERS

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- .2 The Tenderer must submit with its Tender the suggested alternatives to those articles specified. Such submissions shall be made on Statement “G”, bound herein, and shall show the name of the article specified, the name and description of the suggested Alternative, and the total revision to the Tender Price that would result if the equivalent were accepted.
- .3 These Alternatives will be evaluated after selection of the successful Tenderer and will be incorporated in the *Contract* at the *Owner*’s discretion.

### 1.15 Agreement to Bond

- .1 Every Tender shall be accompanied by an “Agreement to Bond” in the form attached to the Tender Submission, and shall be executed under its corporate seal by a Surety Company lawfully doing business in the Province of British Columbia from which the Tenderer proposes to obtain the required Bonds prescribed in the *Contract*. In the event that the Tenderer proposes to submit an alternate Performance Guarantee, a letter from the Bank confirming that the institution is providing the Surety is required to be submitted with the Tender.

### 1.16 Taxes and Duties

- .1 The Tenderer shall include sales tax in accordance with current sales tax legislation taking into account any changes that have been made known by the Government and that will occur during the life of the *Contract*.
- .2 If sales taxes are increased or decreased, or other amendments are made in the legislation during the course of the *Contract* that alter tax amounts carried in the *Contract Price*, an adjustment will be made accordingly to the *Total Contract Price*.
- .3 The *Contractor* shall keep records and invoices of accounts subject to Harmonized Sales Tax for the purpose of establishing taxes paid and for substantiation in the event of changes to the tax legislation during the course of the *Contract*.
- .4 The Tenderer shall contact the Sales Tax authorities and determine what the applicable taxes are and the procedures for tax exemption and/or refunding and include related administrative costs in the Tender.

### 1.17 Non-resident Contractor

- .1 If the *Contractor* is a non-resident of British Columbia, he shall, immediately after he has received the *Engineer*’s written *Notice of Award*, obtain from the Retail Sales Tax Branch a certificate showing that the *Contractor* has registered with the Retail Sales Tax Branch and shall submit such certificate to the *Owner* at the same time that he furnishes the Performance Bond and the Labour and Material Payment Bond.
- .2 The *Contractor* shall not commence *Work* or order any materials or equipment for the *Contract* until he has registered with the Retail Sales Tax Branch.

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## INSTRUCTIONS TO TENDERERS

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- .3 The *Contractor* shall ensure that all *Subcontractors* whom he proposes to use for carrying out any of the work required by the *Contract* and who are non-residents of British Columbia have registered with and have complied with the requirements of the Retail Sales Tax Branch before they commence any such *Work*.

### 1.18 Examination of Site

- .1 Tenderers can visit the site of the *Work* to satisfy itself by personal examination as to the local conditions to be encountered during the construction and conduct of the *Work*. It shall make its own estimate of the surface facilities, sub-surface conditions and difficulties to be encountered. A Tenderer is not to claim at any time after submission of its Tender that there was any misunderstanding of the terms and conditions of the *Contract* relating to site conditions.

The Tenderer, during the period of Tender, may make additional examinations of the soil and subsurface conditions, as it may deem necessary to satisfy itself as to the conditions that may be encountered during construction.

### 1.19 Questions During Tender Period

- .1 No oral interpretations shall be made to any Tenderers as to the meaning of any of the *Contract Documents* or to modify any of the provisions of the *Contract Documents*. All inquiries shall be in writing and directed to:

MPE Engineering Ltd.  
#300 – 714, 5<sup>th</sup> Ave S  
Lethbridge AB, T1J0V1  
Phone: 403-329-3442  
Attention: Zane Spencer, Eng.L.  
Email : zspencer@mpe.ca

- .2 Clarification requested by tenderers must be made no later than three (4) business days prior to Tender Closing Time.
- .3 No formal addenda shall be issued within 48 hours of Tender Closing Time.

### 1.20 Acceptance

- .1 The *Owner* reserves the right in its absolute discretion to accept the Tender which it deems most advantageous to itself and the right to reject any or all Tenders, in each case without giving any notice. In no event will the *Owner* be responsible for the costs of preparation or submission of a Tender.
- .2 Tenders, which contain qualifying conditions or otherwise fail to conform to the Information to Tenderers or for failure to comply with the process for submission set out in these

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## INSTRUCTIONS TO TENDERERS

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Information to Tenderers may be disqualified or rejected. The *Owner* may, however, in its sole discretion, reject or retain the Tender for its consideration.

### 1.21 Schedule

- .1 For scheduling purposes, the intent of the Regional District of Okanagan-Similkameen to issue *Notice of Award* of the *Contract* by December 18, 2020. The Tenderer shall use this date when preparing the schedule. If the date of notice of award changes from what is listed above, the Tenderer's schedule shall be extended by the equivalent length of time after that date.

### 1.22 Award of Contract

- .1 The award of the *Contract* is subject to approval by the Regional District of Okanagan-Similkameen.

### 1.23 Duration of Contract

- .1 The *Contract* is anticipated to take 2 month from Contract Award to *Total Performance*. The *Contractor* is to provide the proposed *Substantial Performance* and *Total Performance* dates in Clause 1.1.4 in Section 00300 Tender Form.

**END OF SECTION**

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**INSTRUCTIONS TO TENDERERS**

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**1. GENERAL**

**1.1 Submission**

- .1 Tender for the Construction of:

**Naramata WTP PLC Upgrades**

- .2 The following Tender is hereby submitted to:

Regional District of Okanagan-Similkameen  
101 Martin Street  
Penticton, BC, V2A 5J9

hereinafter called the “*Owner*”

On behalf of:

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*Contractor*

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Address

hereinafter called the “*Tenderer*”

- .3 (We), the undersigned, having fully examined the locality and *Place of the Work*, having fully investigated the conditions of the *Work*, having read and understood the *Contract Documents* (comprised of the Tendering information, Supplementary General Conditions, General Conditions, Specifications and Drawings, including all Supplements, Addenda and Revisions to same to the date of this Tender) and having secured all of the information necessary to enable the submission of this Tender, hereby agree and offer to perform the totality of the *Work* described in the *Contract Documents*, in accordance with the *Contract Documents*, for the total sum of:

Tender Price (Excluding GST, from Section 00305): \*\$.....

Contingency Allowance: \$......2,500.00....

**Total Tender Price (excluding GST)** \*\$.....

Goods and Services Tax: \*\$.....

[Note: \* To be completed by the Tenderer]

- .4 Further, we, the undersigned, hereby agree and offer to perform the totality of the *Work* described in the *Contract Documents*, in accordance with the *Contract Documents*, to achieve

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## INSTRUCTIONS TO TENDERERS

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*Substantial Performance of the Work* by the ..... day of ..... in the year 202..... and *Total Performance of the Work* by the ..... day of ..... in the year 202.....

### 1.2 Contingencies

- .1 Payment of the *Contingency Allowance* or portions thereof will only be made in the event the *Engineer* and *Owner* authorizes additional *Work* through a *Contract Change Order*, in which case the amount of the payment will be determined as specified. Any unused portion will be deducted from the *Contract Price*.

### 1.3 Additions and Deductions

- .1 The Tenderer agrees that, if this Tender is accepted by the *Owner*:
  - .1 It will carry out any additional or extra *Work* (including the supplying of any additional *Products* pertaining thereto) or will delete any *Work* as may be required by the *Engineer* in accordance with the *Contract*; and,
  - .2 The carrying out of any *Work* referred to in paragraph (.1) above or the issuance by the *Engineer* of a *Contract Change Order* relating to such *Work* or the acceptance by the *Tenderer* of such *Contract Change Order* shall not, except as expressly stated in such *Contract Change Order*, waive, affect or vary any of the terms of the *Contract* or of an *Contract Change Order* previously issued by the *Engineer* or any of the rights of the *Owner* or of the *Engineer* under the *Contract*.
- .2 The Tenderer agrees that, if this Tender is accepted by the *Owner* the prices applicable to *Work* referred to in paragraph 1.3.1 above shall be determined as outlined in the General Conditions of the *Contract* as amended by the Supplemental General Conditions.

### 1.4 Declarations of Tenderer

- .1 The Tenderer declares that no person, firm or corporation other than the Tenderer has any interest in this Tender or in the proposed *Contract* for which this Tender is made.
- .2 The Tenderer declares that this Tender is made without any connection, comparison of figures or arrangement with, or knowledge of, any other corporation, firm or person making a Tender for the same *Work* and is in all respects fair and without collusion or fraud.

### 1.5 Conditions of Tender

- .1 This Tender is irrevocable from the official closing time and is unconditionally open for acceptance for 90 days after the official closing time, whether any other Tender has been previously accepted or not.



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**INSTRUCTIONS TO TENDERERS**

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**1.6 Disclaimer**

- .1 The Tenderer agrees and acknowledges there is no representation, warranty, collateral agreement or condition, whether direct or collateral, or expressed or implied, which induced the Tenderer to submit this Tender, or on which reliance is placed by the Tenderer, or which affects this Tender.

**1.7 Signatures**

Offered by the Tenderer \_\_\_\_\_ this \_\_\_\_\_ day of  
\_\_\_\_\_ 2020.

\_\_\_\_\_  
Signature of Tenderer, Title

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Tenderer, Title

\_\_\_\_\_  
Signature of Witness

-----  
Corporate Seal

**NOTE: In the case of a Tender submitted by a Corporation, the signatory or signatories warrant as follows:**

**“I/We have authority to bind the Corporation.”**

**If the Tender is submitted by an individual or partnership, it is deemed to be given under seal.”**

**END OF SECTION**

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**TENDER PRICE BREAKDOWN FORM**

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We certify that the following is an accurate and balanced breakdown of our tender price(s). *Work* required, but not specifically mentioned, is included in the item with which it is most closely associated.

<u>Item</u>	<u>Lump Sum Price</u>
1.0 DIVISION 0 – CONTRACT REQUIREMENTS	
.1 Bonding and Insurance	<hr/>
2.0 DIVISION 1 – GENERAL REQUIREMENTS	<hr/>
3.0 DIVISION 13 – SPECIALTY EQUIPMENT	<hr/>
4.0 DIVISION 16 - ELECTRICAL	<hr/>
<b>TENDER PRICE (excluding GST)</b>	<hr/> *

Enter this amount in the Tender Form, Section 00300, Clause 1.1.3.

**END OF SECTION**

**BID BOND****CCDC 220 - 2002**

No. \_\_\_\_\_ Bond Amount \$ \_\_\_\_\_

\_\_\_\_\_ as Principal, hereinafter called the Principal, and  
 \_\_\_\_\_ a corporation created and existing under the laws  
 of \_\_\_\_\_ and duly authorized to transact the business of Suretyship in \_\_\_\_\_ as Surety, hereinafter  
 called the Surety, are held and firmly bound unto \_\_\_\_\_ as  
 Obligee, hereinafter called the Obligee, in the amount of \_\_\_\_\_  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ ) lawful money of Canada, for the payment  
 of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has submitted a written bid to the Obligee, dated \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_  
 for \_\_\_\_\_  
 \_\_\_\_\_

The condition of this obligation is such that if the Principal shall have the bid accepted within the time period prescribed in the Obligee's bid documents, or, if no time period is specified in the Obligee's bid documents, within \_\_\_\_\_ ( ) days from the closing date as specified in the Obligee's bid documents, and the Principal enters into a formal contract and gives the specified security, then this obligation shall be void; otherwise, provided the Obligee takes all reasonable steps to mitigate the amount of such excess costs, the Principal and the Surety will pay to the Obligee the difference in money between the amount of the bid of the Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former.

The Principal and Surety shall not be liable for a greater sum than the Bond Amount.

It is a condition of this bond that any suit or action must be commenced within seven (7) months of the date of this Bond.

No right of action shall accrue hereunder to or for the use of any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated \_\_\_\_\_ day of \_\_\_\_\_  
 in the year \_\_\_\_\_.

SIGNED and SEALED

in the presence of

ATTORNEY IN FACT

Principal

\_\_\_\_\_  
Signature\_\_\_\_\_  
Name of person signing

Surety

\_\_\_\_\_  
Signature\_\_\_\_\_  
Name of person signing

Copyright 2002

Canadian Construction Documents Committee

(CCDC 220 - 2002 has been approved by the Surety Association of Canada)

# PERFORMANCE BOND

**CCDC 221 - 2002**

No. \_\_\_\_\_

Bond Amount \$ \_\_\_\_\_

\_\_\_\_\_ as Principal, hereinafter called the Principal, and  
 \_\_\_\_\_ a corporation created and existing under the laws  
 of \_\_\_\_\_ and duly authorized to transact the business of Suretyship in \_\_\_\_\_ as Surety, hereinafter  
 called the Surety, are held and firmly bound unto \_\_\_\_\_ as  
 Obligee, hereinafter called the Obligee, in the amount of \_\_\_\_\_  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) lawful money of Canada, for the payment  
 of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_  
 for \_\_\_\_\_  
 hereinafter referred to as the Contract.

The condition of this obligation is such that if the Principal shall promptly and faithfully perform the Contract then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever the Principal shall be, and declared by the Obligee to be, in default under the Contract, the Obligee having performed the Obligee's obligations thereunder, the Surety shall promptly:

- 1) remedy the default, or;
- 2) complete the Contract in accordance with its terms and conditions or;
- 3) obtain a bid or bids for submission to the Obligee for completing the Contract in accordance with its terms and conditions and upon determination by the Obligee and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as work progresses (even though there should be a default, or a succession of defaults, under the contract or contracts of completion, arranged under this paragraph) sufficient funds to pay to complete the Principal's obligations in accordance with the terms and conditions of the Contract and to pay those expenses incurred by the Obligee as a result of the Principal's default relating directly to the performance of the work under the Contract, less the balance of the Contract price; but not exceeding the Bond Amount. The balance of the Contract price is the total amount payable by the Obligee to the Principal under the Contract, less the amount properly paid by the Obligee to the Principal, or;
- 4) pay the Obligee the lesser of (1) the Bond Amount or (2) the Obligee's proposed cost of completion, less the balance of Contract price.

It is a condition of this bond that any suit or action must be commenced before the expiration of two (2) years from the earlier of (1) the date of Substantial Performance of the Contract as defined in the lien legislation where the work under the Contract is taking place, or, if no such definition exists, the date when the work is ready for use or is being used for the purpose intended, or (2) the date on which the Principal is declared in default by the Obligee.

The Surety shall not be liable for a greater sum than the Bond Amount.

No right of action shall accrue on this Bond, to or for the use of, any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated \_\_\_\_\_ day of \_\_\_\_\_  
 in the year \_\_\_\_\_.

SIGNED and SEALED

Principal

in the presence of

ATTORNEY IN FACT

\_\_\_\_\_  
Signature\_\_\_\_\_  
Name of person signing

Surety

\_\_\_\_\_  
Signature\_\_\_\_\_  
Name of person signing

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Canadian Construction Documents Committee

(CCDC 221 - 2002 has been approved by the Surety Association of Canada)

# LABOUR & MATERIAL PAYMENT BOND (Trustee Form)

Standard Construction Document

CCDC 222 - 2002

No. \_\_\_\_\_ Bond Amount \$ \_\_\_\_\_

\_\_\_\_\_ as Principal, hereinafter called the Principal, and  
\_\_\_\_\_ a corporation created and existing under the laws  
of \_\_\_\_\_ and duly authorized to transact the business of Suretyship in \_\_\_\_\_ as Surety, hereinafter  
called the Surety, are held and firmly bound unto \_\_\_\_\_ as  
Obligee, hereinafter called the Obligee, in the amount of \_\_\_\_\_

\_\_\_\_\_ dollars (\$ \_\_\_\_\_) lawful money of Canada, for the payment  
of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_  
for \_\_\_\_\_

in accordance with the Contract Documents submitted, and which are by reference made part hereof and are hereinafter referred to as the Contract.

The Condition of this obligation is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, by the prevailing rates in the equipment marketplace in which the work is taking place.
2. The Principal and the Surety, hereby jointly and severally agree with the Obligee, as Trustee, that every Claimant who has not been paid as provided for under the terms of its contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of its contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof. Provided still further that, subject to the foregoing terms and conditions, the Claimants, or any of them may use the name of the Obligee to sue on and enforce the provisions of this Bond.
3. It is a condition precedent to the liability of the Surety under this Bond that such Claimant shall have given written notice as hereinafter set forth to each of the Principal, the Surety and the Obligee, stating with substantial accuracy the amount claimed, and that such Claimant shall have brought suit or action in accordance with this Bond, as set out in sub-clauses 3 (b) and 3 (c) below, Accordingly, no suit or action shall be commenced hereunder by any Claimant:
  - a) unless such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Obligee, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or Territory in which the subject matter of the Contract is located. Such notice shall be given.

- i) in respect of any claim for the amount or any portion thereof, required to be held back from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal, or under the lien Legislation applicable to the Claimant's contract with the Principal, whichever is the greater, within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal;
- ii) in respect of any claim other than for the holdback, or portion thereof, referred to above, within one hundred and twenty (120) days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal;
- b) after the expiration of one (1) year following the date on which the Principal ceased work on the Contract, including work performed under the guarantees provided in the Contract;
- c) other than in a Court of competent jurisdiction in the Province or Territory in which the work described in the Contract is to be installed or delivered as the case may be and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such Court.
4. The Surety agrees not to take advantage of Article 2365 of the Civil Code of the Province of Quebec in the event that, by an act or an omission of a Claimant, the Surety can no longer be subrogated in the rights, hypothec and privileges of said Claimant.
5. Any material change in the contract between the Principal and the Obligeé shall not prejudice the rights or interest of any Claimant under this Bond, who is not instrumental in bringing about or has not caused such change.
6. The amount of this Bond shall be reduced by, and to the extent of any payment or payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety of claims made under the applicable lien legislation or legislation relating to legal hypothecs, whether or not such claim is presented under and against this Bond.
7. The Surety shall not be liable for a greater sum than the Bond Amount.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_.

SIGNED and SEALED

Principal

in the presence of

ATTORNEY IN FACT

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of person signing

Surety

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of person signing



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(CCDC 222 – 2002 has been approved by the Surety Association of Canada)

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**AGREEMENT TO BOND**

---

Date: \_\_\_\_\_, 20\_\_\_\_

“Name & Address of Surety Company”

Regional District of Okanagan-Similkameen  
101 Martin Street  
Penticton, BC, V2A 5J9

Gentlemen/Madam:

**CONTRACT: Naramata WTP PLC Upgrades**

---

Should the Regional District of Okanagan-Similkameen [hereinafter referred to as the “*Owner*”] accept the Tender of and execute an Agreement with \_\_\_\_\_ [hereinafter referred to as the “*Tenderer*”], we, the undersigned Surety Company, do hereby consent and agree to become bound to the *Owner* as Surety for the *Tenderer* in any of the following Bonds, on the standard format of the Canadian Construction Association.

1. Performance Bond for an amount equal to 50% of the Total Tender Price.
2. Labour and Material Payment Bond for an amount equal to 50% of the Total Tender Price.

We, the undersigned Surety Company, agree to furnish the *Owner* with the said Bonds within 7 days after written notification that the *Owner* has requested the said Bond or Bonds. We hereby further declare that our Company is legally entitled to do business in the Province of British Columbia.

Yours truly,

\_\_\_\_\_  
[Name of Surety Company]

\_\_\_\_\_  
[Address]

[Seal]

NOTE: This Agreement must be executed on behalf of the Surety Company by its authorized Officers under the Company’s corporate seal.

**END OF SECTION**

**CERTIFICATE OF INSURANCE**

**PROOF OF LIABILITY INSURANCE WILL BE ACCEPTED ON THIS FORM ONLY**

**The Regional District of Okanagan-Similkameen  
CERTIFICATE OF INSURANCE**

Contract Number (if applicable) \_\_\_\_\_ Description of Contract \_\_\_\_\_

INSUREDS: (Contractor) \_\_\_\_\_ \*

AND the Regional District of Okanagan-Similkameen AND All Sub-Contractors of either employed directly or in the work the work to be performed.

AND \_\_\_\_\_

POLICY	COMPANY & POLICY NO.	DATE		LIMITS OF LIABILITY
		EFFECTIVE	EXPIRATION	
GENERAL LIABILITY BODILY INJURY PROPERTY DAMAGE				Minimum Requirement \$5,000,000. Inclusive Per Occurrence
AUTOMOBILE LIABILITY Must cover all vehicles on or behalf of (Contractor) BODILY INJURY PROPERTY DAMAGE				Minimum Requirement \$5,000,000. Inclusive Per Occurrence

OTHER (Describe)

IMPORTANT: This Certificate confirms that the Policies listed above are in full force and effect and that these Policies will not be amended to restrict coverage or cancelled without 30 days prior written notice being given the Regional District of Okanagan-Similkameen and further that the General Liability Policy listed above includes all coverages outlined under (1) and (2) below and includes coverages under (3) as follows:

**GENERAL LIABILITY COVERAGE INCLUDES:**

- 1) Cross Liability clause
- 2)
  - (i) completed operations, which cover shall be maintained continuously in force for a period of not less than twenty-four months from the date of the Certificate of Total Performance of the Work.
  - (ii) Blanket Contractual Liability
  - (iii) Contingent Employers Liability
  - (iv) Non-owned automobile Liability
  - (v) Broad Form Property Damage
  - (vi) Excavation
- 3) where applicable, includes coverage for
  - (i) Underpinning, Shoring
  - (ii) Demolition
  - (iii) Building Raising or Moving
  - (iv) Blasting or the use of explosives
  - (v) Tunneling
  - (vi) Pile driving, caisson work
  - (vii) Use of aircraft or watercraft, owned or non-owned

Date \_\_\_\_\_, 19 \_\_\_\_\_

NAME OF INSURANCE COMPANY (IES) (NOT BROKERS)

ADDRESS OF INSURANCE COMPANY OR BROKER

BY \_\_\_\_\_  
(AUTHORIZED REPRESENTATIVE OR OFFICIAL)

TB2330(REV12/95)

\* Enter name of Consulting Engineer, Architect, Construction or Project Management Firm, if applicable

**END OF SECTION**



## 1. TENDERER'S EXPERIENCE

[illegible]

**NOTE:** Details can be provided on separate sheets attached to this page.

**STATEMENT "A" – TENDERER'S EXPERIENCE IN SIMILAR WORK**

**2. SUBCONTRACTOR'S EXPERIENCE**

Name of Subcontractor: \_\_\_\_\_

<u>Year</u>	<u>Description of Contract</u>	<u>Owner's Name &amp; Telephone Number</u>	<u>Value (\$ Canadian)</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Name of Subcontractor: \_\_\_\_\_

<u>Year</u>	<u>Description of Contract</u>	<u>Owner's Name &amp; Telephone Number</u>	<u>Value (\$ Canadian)</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**Attach additional sheets as required for all major Subcontractors [performing more than 2.5% of the Work].**

**NOTE:** Details can be provided on separate sheets attached to this page.

**END OF SECTION**

---

**STATEMENT “B” – TENDERER’S SENIOR SUPERVISORY STAFF**

---

**1. TENDERER’S Senior Supervisory Staff EXPERIENCE**

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
	Project Manager	
	Project Superintendent	
	Safety Supervisor	

**NOTE:** Qualifications and experience (resumes) should be provided in detail on separate sheets attached to this page. Back-up capability and personnel should be indicated of each category of staffing.

**STATEMENT “B” – TENDERER’S SENIOR SUPERVISORY STAFF**

**2. SUBCONTRACTOR’S Senior Supervisory Staff EXPERIENCE**

Name of Subcontractor: \_\_\_\_\_

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	_____	_____
_____	Project Superintendent	_____
_____	_____	_____

Name of Subcontractor: \_\_\_\_\_

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	_____	_____
_____	Project Superintendent	_____
_____	_____	_____

Name of Subcontractor: \_\_\_\_\_

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	_____	_____
_____	Project Superintendent	_____
_____	_____	_____

**END OF SECTION**

**STATEMENT “D” – SUB-CONTRACTORS AND SUPPLIERS**

**1. SUBCONTRACTORS AND SUPPLIERS**

The Tenderer shall quote the name and address of each proposed *Subcontractor* or supplier, who will be responsible for more than 2.5 percent of the total *Contract Work*. As a minimum, the *Subcontractors* for the categories below will be noted regardless of whether they are responsible for 2.5 percent of the total *Contract Work*. After the Tender has been accepted by the *Owner*, the *Contractor* shall not be allowed to substitute other *Subcontractors* or suppliers in place of those named below without written approval of the *Owner*.

Where *Contractor* intends to undertake the *Work* with his own forces, in the space allocated for the *Subcontractor* Name, indicate “Own Forces”.

**Sub-Trade Section**

**Name and Address of Subcontractor**


**Equipment**

**Manufacturer and Model**


**NOTE:** Additional information can be provided on separate sheets attached to this page.

**END OF SECTION**



CCDC 2

## stipulated price contract

2 0 0 8

Regional District of Okanagan-Similkameen  
Naramata WTP PLC Upgrades

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CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE  
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE  
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE

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The Canadian Construction Documents Committee (CCDC) is a national joint committee responsible for the development, production and review of standard Canadian construction contracts, forms and guides. Formed in 1974 the CCDC is made up of volunteer representatives from:

- Public Sector Owners
- Private Sector Owners
- Canadian Bar Association (Ex-Officio)
- \* The Association of Canadian Engineering Companies
- \* The Canadian Construction Association
- \* Construction Specifications Canada
- \* The Royal Architectural Institute of Canada

\*Committee policy and procedures are directed and approved by the four constituent national organizations.

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**AGREEMENT BETWEEN OWNER AND CONTRACTOR**

For use when a stipulated price is the basis of payment.

This Agreement made on the \_\_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_.

by and between the parties

Regional District of Okanagan-Similkameen

hereinafter called the "Owner"

and

hereinafter called the "Contractor"

The Owner and the Contractor agree as follows:

**ARTICLE A-1 THE WORK**

The Contractor shall:

- 1.1 perform the *Work* required by the *Contract Documents* for  
Regional District of Okanagan-Similkameen - Naramata WTP PLC Upgrades

insert above the name of the Work

located at  
Penticton, B.C.

insert above the Place of the Work

for which the Agreement has been signed by the parties, and for which  
MPE Engineering Ltd.

insert above the name of the Consultant

is acting as and is hereinafter called the "Consultant" and

- 1.2 do and fulfill everything indicated by the *Contract Documents*, and
- 1.3 commence the *Work* by the \_\_\_\_\_ 1 \_\_\_\_\_ day of \_\_\_\_\_ January \_\_\_\_\_ in the year \_\_\_\_\_ 2021 \_\_\_\_\_ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Substantial Performance of the Work*, by the \_\_\_\_\_ 31 \_\_\_\_\_ day of \_\_\_\_\_ January \_\_\_\_\_ in the year \_\_\_\_\_ 2021 \_\_\_\_\_.

**ARTICLE A-2 AGREEMENTS AND AMENDMENTS**

- 2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bidding documents that are not expressly listed in Article A-3 of the Agreement - CONTRACT DOCUMENTS.
- 2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

## ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement - THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- The General Conditions of the Stipulated Price Contract

\*

Bid Bond  
Agreement to Bond  
Performance Bond  
Labour and Materials Payment Bond  
Addenda  
Information to Tenderers  
Tender Form, Associated Forms and Additional Information  
Supplementary General Conditions  
Technical Specifications  
Drawings

\* (Insert here, attaching additional pages if required, a list identifying all other *Contract Documents* e.g. supplementary conditions; information documents; specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date)

## ARTICLE A-4 CONTRACT PRICE

4.1 The *Contract Price*, which excludes *Value Added Taxes*, is:

\_\_\_\_\_/100 dollars \$ \_\_\_\_\_

4.2 *Value Added Taxes* (of \_\_\_\_\_ %) payable by the *Owner* to the *Contractor* are:

\_\_\_\_\_/100 dollars \$ \_\_\_\_\_

4.3 Total amount payable by the *Owner* to the *Contractor* for the construction of the *Work* is:

\_\_\_\_\_/100 dollars \$ \_\_\_\_\_

4.4 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.5 All amounts are in Canadian funds.

## ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents*, and in accordance with legislation and statutory regulations respecting holdback percentages and, where such legislation or regulations do not exist or apply, subject to a holdback of ten \_\_\_\_\_ percent ( \_\_\_\_\_ %), the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* together with such *Value Added Taxes* as may be applicable to such payments, and
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 In the event of loss or damage occurring where payment becomes due under the property and boiler insurance policies, payments shall be made to the *Contractor* in accordance with the provisions of GC 11.1 – INSURANCE.

5.3 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:

(1) 2% per annum above the prime rate for the first 60 days.

(2) 4% per annum above the prime rate after the first 60 days.

Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by

TD Canada Trust

\_\_\_\_\_  
(Insert name of chartered lending institution whose prime rate is to be used)

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.3.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

## ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

- 6.1 *Notices in Writing* will be addressed to the recipient at the address set out below. The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by facsimile or other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender. A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it shall be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* shall be deemed to have been received on the *Working Day* next following such day. A *Notice in Writing* sent by facsimile or other form of electronic communication shall be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it shall be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof. An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

### Owner

Regional District of Okanagan-Similkameen

\_\_\_\_\_  
*name of Owner\**

101 Martin Street, Penticton, BC, V2A 5J9

\_\_\_\_\_  
*address*

250-492-0063

\_\_\_\_\_  
*facsimile number*

engineering@rdos.bc.ca

\_\_\_\_\_  
*email address*

### Contractor

\_\_\_\_\_  
*name of Contractor\**

\_\_\_\_\_  
*address*

\_\_\_\_\_  
*facsimile number*

\_\_\_\_\_  
*email address*

### Consultant

MPE Engineering Ltd. - Zane Spencer

\_\_\_\_\_  
*name of Consultant\**

300, 714 - 5th Ave South, Lethbridge, AB, T1J 0V1

\_\_\_\_\_  
*address*

403-329-9354

\_\_\_\_\_  
*facsimile number*

zspencer@mpe.ca

\_\_\_\_\_  
*email address*

*\* If it is intended that the notice must be received by a specific individual, that individual's name shall be indicated.*

## ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / ~~French~~ # language shall prevail.  
# Complete this statement by striking out inapplicable term.

- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

## ARTICLE A-8 SUCCESSION

8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

**In witness whereof** the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED  
in the presence of:

### WITNESS

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name of person signing*

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name of person signing*

### WITNESS

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name of person signing*

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name of person signing*

### OWNER

Regional District of Okanagan-Similkameen

\_\_\_\_\_  
*name of owner*

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name and title of person signing*

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name and title of person signing*

### CONTRACTOR

\_\_\_\_\_  
*name of Contractor*

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name and title of person signing*

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*name and title of person signing*

N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:  
(a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or  
(b) the affixing of a corporate seal, this Agreement should be properly sealed.

## DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

**1. Change Directive**

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon adjustments in the *Contract Price* and the *Contract Time*.

**2. Change Order**

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

**3. Construction Equipment**

*Construction Equipment* means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

**4. Consultant**

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*. The term *Consultant* means the *Consultant* or the *Consultant's* authorized representative.

**5. Contract**

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

**6. Contract Documents**

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement - CONTRACT DOCUMENTS and amendments agreed upon between the parties.

**7. Contract Price**

The *Contract Price* is the amount stipulated in Article A-4 of the Agreement - CONTRACT PRICE.

**8. Contract Time**

The *Contract Time* is the time stipulated in paragraph 1.3 of Article A-1 of the Agreement - THE WORK from commencement of the *Work* to *Substantial Performance of the Work*.

**9. Contractor**

The *Contractor* is the person or entity identified as such in the Agreement. The term *Contractor* means the *Contractor* or the *Contractor's* authorized representative as designated to the *Owner* in writing.

**10. Drawings**

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

**11. Notice in Writing**

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

**12. Owner**

The *Owner* is the person or entity identified as such in the Agreement. The term *Owner* means the *Owner* or the *Owner's* authorized agent or representative as designated to the *Contractor* in writing, but does not include the *Consultant*.

**13. Place of the Work**

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

**14. Product**

*Product or Products* means material, machinery, equipment, and fixtures forming the *Work*, but does not include *Construction Equipment*.

- 15. Project**  
The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.
- 16. Provide**  
*Provide* means to supply and install.
- 17. Shop Drawings**  
*Shop Drawings* are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.
- 18. Specifications**  
The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.
- 19. Subcontractor**  
A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.
- 20. Substantial Performance of the Work**  
*Substantial Performance of the Work* is as defined in the lien legislation applicable to the *Place of the Work*. If such legislation is not in force or does not contain such definition, or if the *Work* is governed by the Civil Code of Quebec, *Substantial Performance of the Work* shall have been reached when the *Work* is ready for use or is being used for the purpose intended and is so certified by the *Consultant*.
- 21. Supplemental Instruction**  
A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.
- 22. Supplier**  
A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.
- 23. Temporary Work**  
*Temporary Work* means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.
- 24. Value Added Taxes**  
*Value Added Taxes* means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by the tax legislation.
- 25. Work**  
The *Work* means the total construction and related services required by the *Contract Documents*.
- 26. Working Day**  
*Working Day* means a day other than a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

## GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

### PART 1 GENERAL PROVISIONS

#### GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
  - .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
  - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.3 The *Contract Documents* are complementary, and what is required by any one shall be as binding as if required by all.
- 1.1.4 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.5 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.6 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.7 If there is a conflict within the *Contract Documents*:
  - .1 the order of priority of documents, from highest to lowest, shall be
    - the Agreement between the *Owner* and the *Contractor*,
    - the Definitions,
    - Supplementary Conditions,
    - the General Conditions,
    - Division 1 of the *Specifications*,
    - technical *Specifications*,
    - material and finishing schedules,
    - the *Drawings*.
  - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
  - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
  - .4 later dated documents shall govern over earlier documents of the same type.
- 1.1.8 The *Owner* shall provide the *Contractor*, without charge, sufficient copies of the *Contract Documents* to perform the *Work*.
- 1.1.9 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.10 Models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

#### GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

#### GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.
- 1.3.2 No action or failure to act by the *Owner*, *Consultant* or *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.



## **GC 1.4 ASSIGNMENT**

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

## **PART 2 ADMINISTRATION OF THE CONTRACT**

### **GC 2.1 AUTHORITY OF THE CONSULTANT**

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Contractor* and the *Consultant*.
- 2.1.3 If the *Consultant's* employment is terminated, the *Owner* shall immediately appoint or reappoint a *Consultant* against whom the *Contractor* makes no reasonable objection and whose status under the *Contract Documents* shall be that of the former *Consultant*.

### **GC 2.2 ROLE OF THE CONSULTANT**

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 The *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* applications for payment as provided in paragraph 5.3.1.1 of GC 5.3 – PROGRESS PAYMENT.
- 2.2.5 Based on the *Consultant's* observations and evaluation of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement - PAYMENT, GC 5.3 - PROGRESS PAYMENT and GC 5.7 - FINAL PAYMENT.
- 2.2.6 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to carry out the *Work* in accordance with the *Contract Documents*. The *Consultant* will not have control over, charge of or be responsible for the acts or omissions of the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or any other persons performing portions of the *Work*.
- 2.2.7 Except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.8 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.9 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.10 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.11 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.12 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.

- 2.2.13 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.14 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other *Contractor's* submittals, in accordance with the *Contract Documents*.
- 2.2.15 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 2.2.16 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* as provided in GC 5.4 - SUBSTANTIAL PERFORMANCE OF THE WORK.
- 2.2.17 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.18 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.

### **GC 2.3 REVIEW AND INSPECTION OF THE WORK**

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for tests, inspections or approvals in the *Contract Documents*, or by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for special tests, inspections or approvals before such special tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the inspections or tests satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is designated by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by the *Consultant* or the *Owner* if such test or inspection is designated in the *Contract Documents*.

### **GC 2.4 DEFECTIVE WORK**

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work has been incorporated in the *Work* and whether or not the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly other contractors' work destroyed or damaged by such corrections at the *Contractor's* expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a determination.

## **PART 3 EXECUTION OF THE WORK**

### **GC 3.1 CONTROL OF THE WORK**

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.
- 3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

### **GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS**

- 3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to other contractors and to perform work with own forces.
- 3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:
- .1 provide for the co-ordination of the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contract*;
  - .2 assume overall responsibility for compliance with the applicable health and construction safety legislation at the *Place of the Work*;
  - .3 enter into separate contracts with other contractors under conditions of contract which are compatible with the conditions of the *Contract*;
  - .4 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 - INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
  - .5 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of other contractors or the *Owner's* own forces.
- 3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:
- .1 afford the *Owner* and other contractors reasonable opportunity to store their products and execute their work;
  - .2 cooperate with other contractors and the *Owner* in reviewing their construction schedules; and
  - .3 promptly report to the *Consultant* in writing any apparent deficiencies in the work of other contractors or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.
- 3.2.4 Where the *Contract Documents* identify work to be performed by other contractors or the *Owner's* own forces, the *Contractor* shall co-ordinate and schedule the *Work* with the work of other contractors and the *Owner's* own forces as specified in the *Contract Documents*.
- 3.2.5 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of other contractors or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 3.2.6 Disputes and other matters in question between the *Contractor* and other contractors shall be dealt with as provided in Part 8 of the General Conditions - DISPUTE RESOLUTION provided the other contractors have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any other contractor whose contract with the *Owner* contains a similar agreement to arbitrate.

### **GC 3.3 TEMPORARY WORK**

- 3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work*.
- 3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

- 3.3.3 Notwithstanding the provisions of GC 3.1 - CONTROL OF THE WORK, paragraphs 3.3.1 and 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

#### **GC 3.4 DOCUMENT REVIEW**

- 3.4.1 The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency or omission the *Contractor* may discover. Such review by the *Contractor* shall be to the best of the *Contractor's* knowledge, information and belief and in making such review the *Contractor* does not assume any responsibility to the *Owner* or the *Consultant* for the accuracy of the review. The *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies or omissions in the *Contract Documents*, which the *Contractor* did not discover. If the *Contractor* does discover any error, inconsistency or omission in the *Contract Documents*, the *Contractor* shall not proceed with the work affected until the *Contractor* has received corrected or missing information from the *Consultant*.

#### **GC 3.5 CONSTRUCTION SCHEDULE**

- 3.5.1 The *Contractor* shall:
- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
  - .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
  - .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions - CHANGES IN THE WORK.

#### **GC 3.6 SUPERVISION**

- 3.6.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while work is being performed. The appointed representative shall not be changed except for valid reason.
- 3.6.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

#### **GC 3.7 SUBCONTRACTORS AND SUPPLIERS**

- 3.7.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:
- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
  - .2 incorporate the terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
  - .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.
- 3.7.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.
- 3.7.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.
- 3.7.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the differences occasioned by such required change.

- 3.7.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.
- 3.7.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

### **GC 3.8 LABOUR AND PRODUCTS**

- 3.8.1 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.
- 3.8.2 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.
- 3.8.3 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and shall not employ on the *Work* anyone not skilled in the tasks assigned.

### **GC 3.9 DOCUMENTS AT THE SITE**

- 3.9.1 The *Contractor* shall keep one copy of current *Contract Documents*, submittals, reports, and records of meetings at the *Place of the Work*, in good order and available to the *Owner* and the *Consultant*.

### **GC 3.10 SHOP DRAWINGS**

- 3.10.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.
- 3.10.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of other contractors.
- 3.10.3 Upon request of the *Contractor* or the *Consultant*, they shall jointly prepare a schedule of the dates for provision, review and return of *Shop Drawings*.
- 3.10.4 The *Contractor* shall provide *Shop Drawings* in the form specified, or if not specified, as directed by the *Consultant*.
- 3.10.5 *Shop Drawings* provided by the *Contractor* to the *Consultant* shall indicate by stamp, date and signature of the person responsible for the review that the *Contractor* has reviewed each one of them.
- 3.10.6 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.10.7 *Shop Drawings* which require approval of any legally constituted authority having jurisdiction shall be provided to such authority by the *Contractor* for approval.
- 3.10.8 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
  - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.10.9 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.10.10 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.10.11 The *Contractor* shall provide revised *Shop Drawings* to correct those which the *Consultant* rejects as inconsistent with the *Contract Documents*, unless otherwise directed by the *Consultant*. The *Contractor* shall notify the *Consultant* in writing of any revisions to the *Shop Drawings* other than those requested by the *Consultant*.
- 3.10.12 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

### **GC 3.11 USE OF THE WORK**

- 3.11.1 The *Contractor* shall confine *Construction Equipment*, *Temporary Work*, storage of *Products*, waste products and debris, and operations of employees and *Subcontractors* to limits indicated by laws, ordinances, permits, or the *Contract Documents* and shall not unreasonably encumber the *Place of the Work*.
- 3.11.2 The *Contractor* shall not load or permit to be loaded any part of the *Work* with a weight or force that will endanger the safety of the *Work*.

### **GC 3.12 CUTTING AND REMEDIAL WORK**

- 3.12.1 The *Contractor* shall perform the cutting and remedial work required to make the affected parts of the *Work* come together properly.
- 3.12.2 The *Contractor* shall co-ordinate the *Work* to ensure that the cutting and remedial work is kept to a minimum.
- 3.12.3 Should the *Owner*, the *Consultant*, other contractors or anyone employed by them be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 3.12.4 Cutting and remedial work shall be performed by specialists familiar with the *Products* affected and shall be performed in a manner to neither damage nor endanger the *Work*.

### **GC 3.13 CLEANUP**

- 3.13.1 The *Contractor* shall maintain the *Work* in a safe and tidy condition and free from the accumulation of waste products and debris, other than that caused by the *Owner*, other contractors or their employees.
- 3.13.2 Before applying for *Substantial Performance of the Work* as provided in GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK, the *Contractor* shall remove waste products and debris, other than that resulting from the work of the *Owner*, other contractors or their employees, and shall leave the *Place of the Work* clean and suitable for use or occupancy by the *Owner*. The *Contractor* shall remove products, tools, *Construction Equipment*, and *Temporary Work* not required for the performance of the remaining work.
- 3.13.3 Prior to application for the final payment, the *Contractor* shall remove any remaining products, tools, *Construction Equipment*, *Temporary Work*, and waste products and debris, other than those resulting from the work of the *Owner*, other contractors or their employees.

## **PART 4 ALLOWANCES**

### **GC 4.1 CASH ALLOWANCES**

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of work or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, the *Contractor* shall be compensated for the excess incurred and substantiated plus an amount for overhead and profit on the excess as set out in the *Contract Documents*. Where the actual cost of the *Work* under any cash allowance is less than the amount of the allowance, the *Owner* shall be credited for the unexpended portion of the cash allowance, but not for the *Contractor's* overhead and profit on such amount. Multiple cash allowances shall not be combined for the purpose of calculating the foregoing.
- 4.1.5 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the amount of each cash allowance and the actual cost of the work under that cash allowance.
- 4.1.6 The value of the work performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the *Consultant* and *Owner* must authorize ordering of items called for under cash allowances to avoid delaying the progress of the *Work*.

## **GC 4.2 CONTINGENCY ALLOWANCE**

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

## **PART 5 PAYMENT**

### **GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER**

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

### **GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT**

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement - PAYMENT may be made monthly as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 The amount claimed shall be for the value, proportionate to the amount of the *Contract*, of *Work* performed and *Products* delivered to the *Place of the Work* as of the last day of the payment period.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values shall be made out in such form and supported by such evidence as the *Consultant* may reasonably direct and when accepted by the *Consultant*, shall be used as the basis for applications for payment, unless it is found to be in error.
- 5.2.6 The *Contractor* shall include a statement based on the schedule of values with each application for payment.
- 5.2.7 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

### **GC 5.3 PROGRESS PAYMENT**

- 5.3.1 After receipt by the *Consultant* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 - APPLICATIONS FOR PROGRESS PAYMENT:
  - .1 the *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* application for payment,
  - .2 the *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* amends the application, the *Consultant* will promptly advise the *Contractor* in writing giving reasons for the amendment,
  - .3 the *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement - PAYMENT on or before 20 calendar days after the later of:
    - receipt by the *Consultant* of the application for payment, or
    - the last day of the monthly payment period for which the application for payment is made.

#### **GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK**

- 5.4.1 When the *Contractor* considers that the *Work* is substantially performed, or if permitted by the lien legislation applicable to the *Place of the Work* a designated portion thereof which the *Owner* agrees to accept separately is substantially performed, the *Contractor* shall, within one *Working Day*, deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for a review by the *Consultant* to establish *Substantial Performance of the Work* or substantial performance of the designated portion of the *Work*. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.
- 5.4.2 The *Consultant* will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 20 calendar days after receipt of the *Contractor's* list and application:
- .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
  - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.3 Immediately following the issuance of the certificate of *Substantial Performance of the Work*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.

#### **GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK**

- 5.5.1 After the issuance of the certificate of *Substantial Performance of the Work*, the *Contractor* shall:
- .1 submit an application for payment of the holdback amount,
  - .2 submit CCDC 9A 'Statutory Declaration' to state that all accounts for labour, subcontracts, *Products*, *Construction Equipment*, and other indebtedness which may have been incurred by the *Contractor* in the *Substantial Performance of the Work* and for which the *Owner* might in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified amount in dispute.
- 5.5.2 After the receipt of an application for payment from the *Contractor* and the statement as provided in paragraph 5.5.1, the *Consultant* will issue a certificate for payment of the holdback amount.
- 5.5.3 Where the holdback amount required by the applicable lien legislation has not been placed in a separate holdback account, the *Owner* shall, 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.5.4 In the common law jurisdictions, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable on the first calendar day following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*. Where lien legislation does not exist or apply, the holdback amount shall be due and payable in accordance with other legislation, industry practice or provisions which may be agreed to between the parties. The *Owner* may retain out of the holdback amount any sums required by law to satisfy any liens against the *Work* or, if permitted by the lien legislation applicable to the *Place of the Work*, other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.
- 5.5.5 In the Province of Quebec, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable 30 calendar days after the issuance of the certificate. The *Owner* may retain out of the holdback amount any sums required to satisfy any legal hypothecs that have been taken, or could be taken, against the *Work* or other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.

#### **GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK**

- 5.6.1 In the common law jurisdictions, where legislation permits and where, upon application by the *Contractor*, the *Consultant* has certified that the work of a *Subcontractor* or *Supplier* has been performed prior to *Substantial Performance of the Work*, the *Owner* shall pay the *Contractor* the holdback amount retained for such subcontract work, or the *Products* supplied by such *Supplier*, on the first calendar day following the expiration of the holdback period for such work stipulated in the lien legislation applicable to the *Place of the Work*. The *Owner* may retain out of the holdback amount any sums required by law to satisfy any liens against the *Work* or, if permitted by the lien legislation applicable to the *Place of the Work*, other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.



- 5.6.2 In the Province of Quebec, where, upon application by the *Contractor*, the *Consultant* has certified that the work of a *Subcontractor* or *Supplier* has been performed prior to *Substantial Performance of the Work*, the *Owner* shall pay the *Contractor* the holdback amount retained for such subcontract work, or the *Products* supplied by such *Supplier*, no later than 30 calendar days after such certification by the *Consultant*. The *Owner* may retain out of the holdback amount any sums required to satisfy any legal hypothecs that have been taken, or could be taken, against the *Work* or other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.
- 5.6.3 Notwithstanding the provisions of the preceding paragraphs, and notwithstanding the wording of such certificates, the *Contractor* shall ensure that such subcontract work or *Products* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when such certificates were issued.

#### **GC 5.7 FINAL PAYMENT**

- 5.7.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.7.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and advise the *Contractor* in writing that the application is valid or give reasons why it is not valid.
- 5.7.3 When the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment.
- 5.7.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 - WORKERS' COMPENSATION, and any lien legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement - PAYMENT.

#### **GC 5.8 WITHHOLDING OF PAYMENT**

- 5.8.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such remaining work.

#### **GC 5.9 NON-CONFORMING WORK**

- 5.9.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

### **PART 6 CHANGES IN THE WORK**

#### **GC 6.1 OWNER'S RIGHT TO MAKE CHANGES**

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
  - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

#### **GC 6.2 CHANGE ORDER**

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present, in a form acceptable to the *Consultant*, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 When the *Owner* and *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the application for progress payment.

### GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.
- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- .1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
  - .2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
  - .3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following:
- .1 salaries, wages and benefits paid to personnel in the direct employ of the *Contractor* under a salary or wage schedule agreed upon by the *Owner* and the *Contractor*, or in the absence of such a schedule, actual salaries, wages and benefits paid under applicable bargaining agreement, and in the absence of a salary or wage schedule and bargaining agreement, actual salaries, wages and benefits paid by the *Contractor*, for personnel
    - (1) stationed at the *Contractor's* field office, in whatever capacity employed;
    - (2) engaged in expediting the production or transportation of material or equipment, at shops or on the road;
    - (3) engaged in the preparation or review of *Shop Drawings*, fabrication drawings, and coordination drawings; or
    - (4) engaged in the processing of changes in the *Work*.
  - .2 contributions, assessments or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan, insofar as such cost is based on wages, salaries or other remuneration paid to employees of the *Contractor* and included in the cost of the *Work* as provided in paragraph 6.3.7.1;
  - .3 travel and subsistence expenses of the *Contractor's* personnel described in paragraph 6.3.7.1;
  - .4 all *Products* including cost of transportation thereof;
  - .5 materials, supplies, *Construction Equipment*, *Temporary Work*, and hand tools not owned by the workers, including transportation and maintenance thereof, which are consumed in the performance of the *Work*; and cost less salvage value on such items used but not consumed, which remain the property of the *Contractor*;
  - .6 all tools and *Construction Equipment*, exclusive of hand tools used in the performance of the *Work*, whether rented from or provided by the *Contractor* or others, including installation, minor repairs and replacements, dismantling, removal, transportation, and delivery cost thereof;
  - .7 all equipment and services required for the *Contractor's* field office;
  - .8 deposits lost;
  - .9 the amounts of all subcontracts;
  - .10 quality assurance such as independent inspection and testing services;
  - .11 charges levied by authorities having jurisdiction at the *Place of the Work*;
  - .12 royalties, patent licence fees and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 - PATENT FEES;
  - .13 any adjustment in premiums for all bonds and insurance which the *Contractor* is required, by the *Contract Documents*, to purchase and maintain;
  - .14 any adjustment in taxes, other than *Value Added Taxes*, and duties for which the *Contractor* is liable;
  - .15 charges for long distance telephone and facsimile communications, courier services, expressage, and petty cash items incurred in relation to the performance of the *Work*;
  - .16 removal and disposal of waste products and debris; and
  - .17 safety measures and requirements.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof when requested.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for determination.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

#### **GC 6.4 CONCEALED OR UNKNOWN CONDITIONS**

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* which differ materially from those indicated in the *Contract Documents*; or
  - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Consultant*, with the *Owner's* approval, will issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 - CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will report the reasons for this finding to the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 - TOXIC AND HAZARDOUS SUBSTANCES, GC 9.3 - ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

#### **GC 6.5 DELAYS**

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by an action or omission of the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.

- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
  - .2 fire, unusual delay by common carriers or unavoidable casualties,
  - .3 abnormally adverse weather conditions, or
  - .4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*,
- then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly.
- 6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.
- 6.5.5 If no schedule is made under paragraph 2.2.13 of GC 2.2 - ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

## **GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE**

- 6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.
- 6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:
- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
  - .2 keep such records as may be necessary to support the claim.
- 6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based.
- 6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION.

## **PART 7 DEFAULT NOTICE**

### **GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT**

- 7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.1.2 If the *Contractor* neglects to prosecute the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* that sufficient cause exists to justify such action, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor Notice in Writing* that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.

- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:
- .1 commences the correction of the default within the specified time, and
  - .2 provides the *Owner* with an acceptable schedule for such correction, and
  - .3 corrects the default in accordance with the *Contract* terms and with such schedule.
- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
  - .2 terminate the *Contractor's* right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor's* right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense, and
  - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued, and
  - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant's* additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 - WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
  - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor's* work under GC 12.3 - WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor's* obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue after such termination of the *Contract*.

## **GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT**

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner's* insolvency, or if a receiver is appointed because of the *Owner's* insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* is suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner's* contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*, or
  - .2 the *Consultant* fails to issue a certificate as provided in GC 5.3 - PROGRESS PAYMENT, or
  - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by arbitration or court, or
  - .4 the *Owner* violates the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, confirms by written statement to the *Contractor* that sufficient cause exists.
- 7.2.4 The *Contractor's* *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

## PART 8 DISPUTE RESOLUTION

### GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved in the first instance by findings of the *Consultant* as provided in GC 2.2 - ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions - DISPUTE RESOLUTION.
- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.2.3 to 8.2.8 of GC 8.2 - NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.3 - RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.
- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

### GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.2.1 In accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
  - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.2.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 - ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.2.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.2.4 After a period of 10 *Working Days* following receipt of a responding party's *Notice in Writing* of reply under paragraph 8.2.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing.
- 8.2.5 If the dispute has not been resolved within 10 *Working Days* after the Project Mediator was requested under paragraph 8.2.4 or within such further period agreed by the parties, the Project Mediator shall terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.2.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.2.5, either party may refer the dispute to be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.2.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.2.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.2.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.

- 8.2.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.2.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.2.6 shall be
- .1 held in abeyance until
    - (1) *Substantial Performance of the Work*,
    - (2) the *Contract* has been terminated, or
    - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and
  - .2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.2.6.

### **GC 8.3 RETENTION OF RIGHTS**

- 8.3.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions - DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.3.2 Nothing in Part 8 of the General Conditions - DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.2.6 of GC 8.2 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

## **PART 9 PROTECTION OF PERSONS AND PROPERTY**

### **GC 9.1 PROTECTION OF WORK AND PROPERTY**

- 9.1.1 The *Contractor* shall protect the *Work* and the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors in the *Contract Documents*;
  - .2 acts or omissions by the *Owner*, the *Consultant*, other contractors, their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.

### **GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES**

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
  - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substances exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless toxic or hazardous substances which were present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.

- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
  - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
  - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substances exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
  - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.
- 9.2.6 If the *Owner* and *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
  - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
  - .3 extend the *Contract* time for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
  - .4 indemnify the *Contractor* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.8 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
  - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
  - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
  - .4 indemnify the *Owner* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions - Dispute Resolution. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

### **GC 9.3 ARTIFACTS AND FOSSILS**

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Consultant*, with the *Owner's* approval, will issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 CHANGE DIRECTIVE.

### **GC 9.4 CONSTRUCTION SAFETY**

- 9.4.1 Subject to paragraph 3.2.2.2 of GC 3.2 - CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, the *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*.



## GC 9.5 MOULD

- 9.5.1 If the *Contractor* or *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing, and
  - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and
  - .3 if the *Owner* and *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and *Contractor*.
- 9.5.2 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor*'s operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
  - .2 make good any damage to the *Work*, the *Owner*'s property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
  - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
  - .4 indemnify the *Owner* as required by GC 12.1 - INDEMNIFICATION.
- 9.5.3 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
  - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
  - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
  - .4 indemnify the *Contractor* as required by GC 12.1 - INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 - MOULD.

## PART 10 GOVERNING REGULATIONS

### GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement - CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in such included taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

### GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.

- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will make the changes required to the *Contract Documents* as provided in GC 6.1 - OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; and fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

### **GC 10.3 PATENT FEES**

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor's* performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor's* performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the model, plan or design of which was supplied to the *Contractor* as part of the *Contract Documents*.

### **GC 10.4 WORKERS' COMPENSATION**

- 10.4.1 Prior to commencing the *Work*, again with the *Contractor's* application for payment of the holdback amount following *Substantial Performance of the Work* and again with the *Contractor's* application for final payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*, including payments due thereunder.
- 10.4.2 At any time during the term of the *Contract*, when requested by the *Owner*, the *Contractor* shall provide such evidence of compliance by the *Contractor* and *Subcontractors*.

## **PART 11 INSURANCE AND CONTRACT SECURITY**

### **GC 11.1 INSURANCE**

- 11.1.1 Without restricting the generality of GC 12.1 - INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the minimum requirements of which are specified in CCDC 41 – CCDC Insurance Requirements in effect at the time of bid closing except as hereinafter provided:
- 1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Substantial Performance of the Work*. Liability coverage shall be provided for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*.
  - 2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.
  - 3 Aircraft or Watercraft Liability Insurance when owned or non-owned aircraft or watercraft are used directly or indirectly in the performance of the *Work*
  - 4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
    - (1) 10 calendar days after the date of *Substantial Performance of the Work*;

- (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*;
- (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
- .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Substantial Performance of the Work*.
- .6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
  - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;
  - (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
  - (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces or another contractor, the *Owner* shall, in accordance with the *Owner's* obligations under the provisions relating to construction by *Owner* or other contractors, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.
- .7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.
- 11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.
- 11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.
- 11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.
- 11.1.6 If a revised version of CCDC 41 – INSURANCE REQUIREMENTS is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.
- 11.1.7 If a revised version of CCDC 41 – INSURANCE REQUIREMENTS is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.
- 11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41 – INSURANCE REQUIREMENTS.

## GC 11.2 CONTRACT SECURITY

- 11.2.1 The *Contractor* shall, prior to commencement of the *Work* or within the specified time, provide to the *Owner* any *Contract* security specified in the *Contract Documents*.

- 11.2.2 If the *Contract Documents* require surety bonds to be provided, such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*. The form of such bonds shall be in accordance with the latest edition of the CCDC approved bond forms.

## PART 12 INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY

### GC 12.1 INDEMNIFICATION

- 12.1.1 Without restricting the parties' obligation to indemnify as described in paragraphs 12.1.4 and 12.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:

- .1 caused by:
  - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose acts or omissions that party is liable, or
  - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
- .2 made by *Notice in Writing* within a period of 6 years from the date of *Substantial Performance of the Work* as set out in the certificate of *Substantial Performance of the Work* issued pursuant to paragraph 5.4.2.2 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK or within such shorter period as may be prescribed by any limitation statute of the province or territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

- 12.1.2 The obligation of either party to indemnify as set forth in paragraph 12.1.1 shall be limited as follows:

- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the general liability insurance limit for one occurrence as referred to in CCDC 41 in effect at the time of bid closing.
- .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
- .3 In respect to claims by third parties for direct loss resulting from bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, the obligation to indemnify is without limit. In respect to all other claims for indemnity as a result of claims advanced by third parties, the limits of indemnity set forth in paragraphs 12.1.2.1 and 12.1.2.2 shall apply.

- 12.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 12.1.1 and 12.1.2 shall be inclusive of interest and all legal costs.

- 12.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

- 12.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:

- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
- .2 arising out of the *Contractor's* performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.

- 12.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:

- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based became known;
- .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

## GC 12.2 WAIVER OF CLAIMS

- 12.2.1 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* arising from the *Contractor's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
  - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
  - .3 claims for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 12.1.4 or 12.1.5 of GC 12.1 – INDEMNIFICATION; and
  - .4 claims resulting from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.2 The *Contractor* waives and releases the *Owner* from all claims referenced in paragraph 12.2.1.4 except for those referred in paragraphs 12.2.1.2 and 12.2.1.3 and claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the date of *Substantial Performance of the Work*.
- 12.2.3 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* arising from the *Owner's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
  - .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
  - .3 claims for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 12.1.4 of GC 12.1 - INDEMNIFICATION;
  - .4 damages arising from the *Contractor's* actions which result in substantial defects or deficiencies in the *Work*. “Substantial defects or deficiencies” mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
  - .5 claims arising pursuant to GC 12.3 - WARRANTY; and
  - .6 claims arising from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.4 The *Owner* waives and releases the *Contractor* from all claims referred to in paragraph 12.2.3.4 except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the date of *Substantial Performance of the Work* should any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, within such shorter period as may be prescribed by:
- .1 any limitation statute of the Province or Territory of the *Place of the Work*; or
  - .2 if the *Place of the Work* is the Province of Quebec, then Article 2118 of the Civil Code of Quebec.
- 12.2.5 The *Owner* waives and releases the *Contractor* from all claims referenced in paragraph 12.2.3.6 except for those referred in paragraph 12.2.3.2, 12.2.3.3 and those arising under GC 12.3 – WARRANTY and claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the date of *Substantial Performance of the Work*.
- 12.2.6 “*Notice in Writing* of claim” as provided for in GC 12.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 12.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of the intention to claim;
  - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
  - .3 a statement of the estimated quantum of the claim.
- 12.2.7 The party giving “*Notice in Writing* of claim” as provided for in GC 12.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.

- 12.2.8 Where the event or series of events giving rise to a claim made under paragraphs 12.2.1 or 12.2.3 has a continuing effect, the detailed account submitted under paragraph 12.2.7 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 12.2.9 If a *Notice in Writing* of claim pursuant to paragraph 12.2.1.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.3.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*.
- 12.2.10 If a *Notice in Writing* of claim pursuant to paragraph 12.2.3.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.1.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*.

### **GC 12.3 WARRANTY**

- 12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date of *Substantial Performance of the Work*.
- 12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.
- 12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.
- 12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor's* expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.
- 12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.
- 12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor's* responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

**CCDC 41**  
**CCDC INSURANCE REQUIREMENTS**

**PUBLICATION DATE: JANUARY 21, 2008**

1. General liability insurance shall be with limits of not less than \$5,000,000 per occurrence, an aggregate limit of not less than \$5,000,000 within any policy year with respect to completed operations, and a deductible not exceeding \$5,000. The insurance coverage shall not be less than the insurance provided by IBC Form 2100 (including an extension for a standard provincial and territorial form of non-owned automobile liability policy) and IBC Form 2320. To achieve the desired limit, umbrella or excess liability insurance may be used. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
2. Automobile liability insurance in respect of vehicles that are required by law to be insured under a contract by a Motor Vehicle Liability Policy, shall have limits of not less than \$5,000,000 inclusive per occurrence for bodily injury, death and damage to property, covering all vehicles owned or leased by the *Contractor*. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.
3. Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft (if used directly or indirectly in the performance of the *Work*), including use of additional premises, shall have limits of not less than \$5,000,000 inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof and limits of not less than \$5,000,000 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*.
4. "Broad form" property insurance shall have limits of not less than the sum of 1.1 times *Contract Price* and the full value, as stated in the *Contract*, of *Products* and design services that are specified to be provided by the *Owner* for incorporation into the *Work*, with a deductible not exceeding \$5,000. The insurance coverage shall not be less than the insurance provided by IBC Forms 4042 and 4047 (excluding flood and earthquake) or their equivalent replacement. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
5. Boiler and machinery insurance shall have limits of not less than the replacement value of the permanent or temporary boilers and pressure vessels, and other insurable objects forming part of the *Work*. The insurance coverage shall not be less than the insurance provided by a comprehensive boiler and machinery policy.
6. "Broad form" contractors' equipment insurance coverage covering *Construction Equipment* used by the *Contractor* for the performance of the *Work*, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance, the *Owner* may agree to waive the equipment insurance requirement.
7. Standard Exclusions
  - 7.1 In addition to the broad form property exclusions identified in IBC forms 4042(1995), and 4047(2000), the *Contractor* is not required to provide the following insurance coverage:
    - Asbestos
    - Cyber Risk
    - Mould
    - Terrorism

**1. GENERAL**

**1.1 WORK OF THE PROJECT**

- .1 Work of the Project, of which Work of this Contract is a part, comprises the following:
  - .1 Regional District of Okanagan Similkameen - Naramata WTP PLC Upgrades

**1.2 WORK OF THIS CONTRACT**

- .1 The main items of Work of this Contract include the following:
  - .1 Naramata WTP – PLC Control Panel – CP-750 – Remove existing PLC and alarm dialer equipment. Install new PLC in control panel and complete wiring as detailed in the drawings.
  - .2 Naramata WTP – Sodium Hypochlorite System Control Panel – CP-360 – Remote existing PLC and installed owner provided PLC. Connect existing PLC terminal block to the terminal block adaptors for the new PLC. Make any wiring changes required as required for the terminal block adaptors.
- .2 The Site of the Work of this Contract is located in:
  - .1 Naramata WTP: Mckay Road - 49.59208, -119.58487

**1.3 CONTRACT TIME**

- .1 The Contract will commence on the date on which the Letter of Acceptance is issued.
- .2 Upon receipt of the Letter of Acceptance, promptly, and without undue delay, commence work at the Site.
- .3 Attain Substantial Performance by the date listed within the Tender Form, Section 00300.
- .3 Attain Total Performance of the Work by the date listed within the Tender Form, Section 00300.

**2. PRODUCTS – NOT USED**

**3. EXECUTION – NOT USED**

**END OF SECTION**



**1. GENERAL**

**1.1 DEFINITIONS**

- .1 “Administrative Submittals” means data presented for review to ensure administrative requirements of the Contract are met.
- .2 “Shop Drawings” means technical data specifically prepared for work of this Contract including drawings, diagrams, schedules, templates, patterns, and similar information not in standard printed form.
- .3 “Product Data” means standard printed information describing materials, products, equipment, and systems not specifically prepared for work of this Contract. Product Data consisting of manufacturers’ standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations, and descriptive data will be accepted in lieu of Shop Drawings provided that:
  - .1 Information not applicable to the work of this Contract is deleted; and
  - .2 Standard information is supplemented with information specifically applicable to the Work of this Contract.
- .4 “Samples” means cuts or containers of materials or partial sections of manufactured or fabricated components that are physically identical to products proposed for use.
- .5 “Field Samples” means volumes of materials as specified, which are physically representative of the materials proposed for use.

**1.2 SCHEDULE OF SUBMITTALS**

- .1 Submittals required for the Contract are specified in each section of the Contract Documents.
- .2 Submittals required by this section are appended to this section.

**1.3 SUBMITTAL PREPARATION**

- .1 Determine and verify:
  - .1 Field measurements.
  - .2 Field construction criteria.
  - .3 Catalogue numbers and similar data.
  - .4 Compliance with the Contract Documents.
- .2 Co-ordinate each submittal with requirements of the Work and the Contract Documents.

- .3 Notify the Owner, in writing, on the submittal and at the time of submission, of any deviations from the requirements of the Contract Documents.

#### **1.4 SUBMITTAL REQUIREMENTS**

- .1 Make submittals within the times required by the Contract Documents and sufficiently in advance of the date that reviewed submittals will be required, and in such sequence as to cause no delay in the Work.
- .2 Make submittals in the form specified or in a form considered as an industry standard.
- .3 Provide a transmittal letter with each submittal containing:
  - .1 Date.
  - .2 Project Name.
  - .3 Contract Name.
  - .4 Tender Number.
  - .5 Contractor's name and address.
  - .6 Number of each Shop Drawing, Product Data, and Sample submitted.
  - .7 Other pertinent data.
- .4 Include in the submittals:
  - .1 Date and revision dates.
  - .2 Project Name.
  - .3 Contract Name.
  - .4 Tender Number.
  - .5 Name of:
    - .1 Contractor.
    - .2 Subcontractor.
    - .3 Supplier.
    - .4 Manufacturer.
    - .5 Name of detailer when details are not prepared by the Contractor, Subcontractor, or Supplier.

- .6 The Contractor's stamp, signed, certifying its review of the submittal, verification of field measurements, and compliance with the Contract Documents, or that deviations, if incorporated, will be compatible with other elements of the Work.

## **1.5 REVIEW OF SUBMITTALS**

- .1 The Owner will review each submittal within 10 working days of receipt of the submittal unless specified otherwise in the Contract Documents.
- .2 Make corrections or changes to reviewed submittals and resubmit as specified for the initial submission.
- .3 Until a reviewed submittal is received, do not proceed with the Work related to the submittal.
- .4 The Owner's review of any submittal does not relieve the Contractor from responsibility for errors and omissions, nor deviations from the requirements of the Contract Documents.

## **1.6 CASH FLOW FORECAST**

- .1 Submit to Owner for review, 15 days before submission of first application for payment, a forecast of approximate progress payments for the duration of the Contract.
- .2 Submit revised cash flow forecasts of progress payments as the Work progresses and as requested by Owner.

## **1.7 LIST OF SUPPLIERS**

- .1 Submit a list of suppliers to Owner for review 15 days prior to commencement of activities at the Site.
- .2 Submit revised list of suppliers as the work progresses and as requested by the Owner.

## **1.8 LIST OF CONSTRUCTION EQUIPMENT**

- .1 Submit a list of construction equipment to Owner for review 15 days prior to commencement of activities at the Site.
- .2 Submit revised list of construction equipment as the work progresses and as requested by the Owner.

## **1.9 SCHEDULE OF WORKERS**

- .1 Not applicable.

**1.10 SITE MANAGEMENT PERSONNEL**

- .1 Submit a list of site management personnel to Owner for review 15 days prior to commencement of activities at the Site.
- .2 Submit revised site management personnel as the work progresses and as requested by the Owner.

**1.11 CONSTRUCTION NOTIFICATIONS - PUBLIC**

- .1 Seven days prior to construction, notify all affected businesses, institutions, facilities and residents informing them in writing of the nature of the work to be performed, how long the inconvenience will last, who to contact in the event of damages to the home, business or property, and what to do for access and alternative parking arrangements. The Contractor shall submit the proposed notification to the Owner's Representative for review before issuance.

**2. PRODUCTS – NOT USED**

**3. EXECUTION – NOT USED**

**END OF SECTION**

**1. GENERAL**

- .1 Submit for review, shop drawings, product data and samples called for by the Contract Documents and for such other items as the Owner's Representative may reasonably request.
- .2 Until submittal is reviewed, do not proceed with work involving the relevant product.

**2. SHOP DRAWINGS**

- .1 Shop drawings means technical data specially prepared for work of this Contract; including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form.
- .2 Present shop drawings in a clear and thorough manner to appropriately illustrate the work.
- .3 Identify field dimensions on drawings.
- .4 Identify shop drawings by appropriate references to sheet, detail, schedule or room numbers.
- .5 Maximum drawing size: 860 x 1120 mm.
- .6 Leave a clear space of 100 mm x 75 mm on each sheet of shop drawings for placement of Engineer's review stamp.
- .7 Submit one set of sepia for each required shop drawing.

**3. PRODUCT DATA**

- .1 Product data means standard printed information describing materials, products, equipment and systems; not specially prepared for work of this Contract, other than the designation of selections.
- .2 Clearly mark product data to identify products.
- .3 Manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and descriptive data will be accepted in lieu of shop drawings provided that:
  - .1 Information not applicable to work of this Contract is deleted, and
  - .2 Standard information is supplemented with information specifically applicable to the work of this Contract.

- .4 Submit clear reproducible information as follows:
  - .1 One copy when product data is submitted as:
    - .1 Data sheets larger than 216 mm x 355 mm. Submit mylars.
    - .2 Unbound data sheets 216 mm x 355 mm or smaller. Submit printed or photocopied sheets.
  - .2 Four copies when product data is submitted as follows:
    - .1 Information that can not be duplicated using a photocopier with an automatic document feeder, such as bound or multi-fold information.
    - .2 Information containing photographs or other information that does not reproduce well on a commercial photocopier.

#### **4. SAMPLES**

- .1 Samples means cuts or containers of materials or partial sections of manufactured or fabricated components which are physically identical to products proposed for use and which establish minimum standards by which the work will be judged.
- .2 Label samples as to origin and intended use in the Work.

#### **5. SUBMITTAL PREPARATION**

- .1 Review, date and sign, shop drawings, product data and samples, prior to submission.
- .2 Determine and verify:
  - .1 Field measurements.
  - .2 Field construction criteria.
  - .3 Catalogue numbers and similar data.
  - .4 Conformance with Contract Documents.
- .3 Coordinate each submittal with requirements of work and Contract documents. Individual drawings will not be reviewed until all related shop drawing and product data are available.
- .4 Notify Owner's Representative, in writing, on the submittal and at the time of submission, of deviations from requirements of Contract Documents.

**6. SUBMISSION REQUIREMENTS**

- .1 Make submittals sufficiently in advance of date that reviewed submittals will be required and in such sequence as to cause no delay in the Work.
- .2 Accompany submittals with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Number of each shop drawing, product data and sample submitted.
  - .5 Other pertinent data.
- .3 Submittals shall include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name of:
    - .1 Contractor.
    - .2 Subcontractor.
    - .3 Supplier.
    - .4 Manufacturer.
    - .5 Name of detailer when details not prepared by Contractor, sub-contractor, or supplier.
  - .4 Contractor's stamp, initialed or signed, certifying review of submittal, verification of field measurements, and compliance with Contract Documents.
- .4 Make corrections or changes to rejected submittals and resubmit, as specified for initial submission.

**7. RESPONSIBILITY FOR ERRORS, OMISSIONS AND DEVIATIONS**

- .1 Owner's Representative's review of submittals does not relieve Contractor from responsibility for errors and omissions, nor deviations from requirements of the Contract Documents.

**8. REPRODUCTION OF SUBMITTALS**

- .1 After final review, Owner's Representative will reproduce at his expense, the number of copies he requires, and return reviewed reproducible documents. Contractor shall reproduce at his expense the number of copies required for performance of the Work.

**END OF SECTION**



**1. GENERAL**

**1.1 REGULATORY RESPONSIBILITY**

- .1 Conform to Regulatory Requirements and pay all fees and give all notices required by them.
- .2 Obtain approvals necessary for the Work and the Contract from the regulatory agencies having jurisdiction, except those approvals obtained by the Owner as identified in this section.
- .3 The Owner will obtain the approvals necessary for the Project that involve agreement between the Owner and the regulatory agency having jurisdiction.

**1.2 VARIATIONS BETWEEN THE CONTRACT DOCUMENTS AND THE REGULATORY REQUIREMENTS**

- .1 If the Contract Documents are at variance with Regulatory Requirements, notify the Owner in writing, requesting direction, immediately after such variance becomes known.
- .2 The Owner may make Changes in the Work due to Regulatory Requirements, and such changes will be authorized by Change Order and valued in accordance with the contract conditions.
- .3 If the Contractor fails to notify the Owner in writing and obtain the Owner's direction related to variations in Regulatory Requirements and performs work knowing it to be contrary to Regulatory Requirements, the Contractor accepts responsibility for correcting violations thereof, and bears the costs, expenses, and damages attributable to the Contractor's failure to comply with the provisions of such Regulatory Requirements.

**1.3 CONTRACT DOCUMENTS**

- .1 Contractor shall not be responsible for verifying that Contract Documents comply with regulatory requirements. If Contract Documents are at variance therewith, or changes which require modification to Contract Documents are made to regulatory requirements, by authorities having jurisdiction, subsequent to date of tender closing, Contractor shall notify Owner's Representative in writing, requesting direction, immediately such variance or change becomes known to him. Owner's Representative may make changes required to Contract Documents and any resulting change in Contract Price or Contract Time will be made in accordance with the General Conditions of Contract.
- .2 If Contractor fails to notify Owner's Representative in writing and obtain Owner's Representative's direction as required in paragraph 1.3.1 and performs work knowing it to be contrary to regulatory requirements, Contractor shall be responsible for and shall correct violations thereof and shall bear costs, expenses and damages attributable to his failure to comply with provisions of such regulatory requirements.

**1.4 PERMITS**

**.1 Electrical Permit:**

- .1** Apply for, obtain and pay for electrical permit and other permits required for the Work and its various parts.

**2. PRODUCTS - NOT USED**

**3. EXECUTION - NOT USED**

**END OF SECTION**

## **1. GENERAL**

### **1.1 SUMMARY OF PROCESS**

- .1 A Contract acceptance process will be used to facilitate the Owner's acceptance of the Work. The process can be summarized as follows:
  - .1 Substantial Performance of the Work:
    - .1 Fulfilment of prerequisites to Substantial Performance.
    - .2 Inspection for Substantial Performance.
    - .3 Issuance of a Certificate of Substantial Performance.
  - .2 Total Performance of the Work:
    - .1 Fulfilment of prerequisites to Total Performance.
    - .2 Inspection for Total Performance.
    - .3 Issuance of a Certificate of Total Performance.
  - .3 Warranty Performance of the Work:
    - .1 Fulfilment of prerequisites to Warranty Performance.
    - .2 Inspection for Warranty Performance.
    - .3 Issuance of Certificate of Warranty Performance.

### **1.2 SUBSTANTIAL PERFORMANCE OF PART OF THE PERMANENT WORK**

- .1 When utilization of part of the Permanent Work is required and Substantial Performance of part of the Permanent Work is a condition of such utilization, the applicable requirements specified in this section will apply to the part of the Permanent Work to be utilized.

### **1.3 PREREQUISITES TO SUBSTANTIAL PERFORMANCE**

- .1 Prior to requesting the Owner's inspection for Substantial Performance carry out the following:
  - .1 Perform Initial Commissioning.
  - .2 Obtain and submit evidence of compliance with Regulatory Requirements.
  - .3 Remove from the Site temporary facilities along with construction tools, equipment, mock-ups, and similar items not required for the performance of the remaining work.
  - .4 Correct all Contract Deficiencies that may affect operation of the canal and structures.
  - .5 Complete the Work and have it ready for the purpose intended except for the parts of the Permanent Work specified in Articles 1.3.2 and 1.6.

- .6 Review the Contract Documents and inspect the Work to confirm that prerequisites to Substantial Performance have been fulfilled and that the Work is ready for inspection for Substantial Performance.
- .7 Submit product warranties and extended warranties when specified in the Contract Documents.
- .8 Make final change-over of locks and transmit keys to the Owner.
- .9 Complete installation of architectural finish items, including all mechanical and electrical covers and trims.
- .2 Complete all work items such that the Control and Communication System can be used for the purpose intended. Work that does not have to be completed to obtain Substantial Performance follows:
  - .1 Final cleanup.
  - .2 Operation and maintenance manuals.
  - .3 Record drawings.

#### **1.4 INSPECTION FOR SUBSTANTIAL PERFORMANCE**

- .1 Submit a written request to the Owner for inspection for Substantial Performance, certifying that prerequisites have been fulfilled and specifying known exceptions in the form of a list of items to be completed, corrected, or submitted.
- .2 The Owner will, within a reasonable time after receipt of the Contractor's request:
  - .1 Proceed with the inspection; or
  - .2 Advise the Contractor that prerequisites are not adequately fulfilled.
- .3 Results of the Owner's inspection for Substantial Performance will form the Substantial Performance Contract Deficiency List (SPC Deficiency List).

#### **1.5 SUBSTANTIAL PERFORMANCE OF THE WORK**

- .1 Following inspection, the Owner will:
  - .1 Issue a Certificate of Substantial Performance of the Work stating the effective date of Substantial Performance, with a copy of the SPC Deficiency List attached; or
  - .2 Advise the Contractor that prerequisites to Substantial Performance are not fulfilled and repeat the inspection for Substantial Performance as necessary.
- .2 Upon acceptance of a Certificate of Substantial Performance of the Work, the Owner will assume responsibility for care, custody, and control of the Work, including responsibility for the following:
  - .1 Facility operation, including all systems and equipment.

- .2 Maintenance.
- .3 Security.
- .4 Property insurance.
- .5 Utility costs.

## **1.6 PREREQUISITES TO TOTAL PERFORMANCE**

- .1 Prior to requesting the Owner's inspection for Total Performance, carry out the following:
  - .1 Perform the entire Work, including the correction of all Contract Deficiencies, including items listed in Article 1.3.2 and except those items arising from the warranty provisions of the Contract Documents.
  - .2 Review the Contract Documents and inspect the Work to confirm that prerequisites to Total Performance have been met and that the Work is ready for inspection for Total Performance.

## **1.7 INSPECTION FOR TOTAL PERFORMANCE**

- .1 Submit a written request to the Owner for inspection for Total Performance, including a copy of the Owner's most recent SPC Deficiency List, and certify that each Contract Deficiency has been corrected or otherwise resolved in a manner agreed to between the Owner and the Contractor. List known exceptions, if any, in the request.
- .2 The Owner will, within a reasonable time after receipt of the Contractor's request:
  - .1 Proceed with the inspection; or
  - .2 Advise the Contractor that prerequisites are not adequately fulfilled.

## **1.8 TOTAL PERFORMANCE OF THE WORK**

- .1 Following the inspection, the Owner will:
  - .1 Issue a Certificate of Total Performance of the Work, stating the effective date of Total Performance; or
  - .2 Advise the Contractor of Contract Deficiencies that must be corrected prior to issuance of a Certificate of Total Performance of the Work.

## **1.9 PREREQUISITES TO WARRANTY PERFORMANCE**

- .1 The prerequisites to Warranty Performance are:
  - .1 Total Performance of the Work;
  - .2 Expiry of the warranty period; and
  - .3 Correction of items arising from the warranty period required by the Contract Documents.

**1.10 INSPECTION FOR WARRANTY PERFORMANCE**

- .1 Thirty to sixty days prior to the end of the warranty period, the Contractor shall apply to the Owner for acceptance of the Warranty Performance of the Work.
- .2 Just prior to the end of the warranty period, the Owner will conduct an inspection for Warranty Performance.

**1.11 WARRANTY PERFORMANCE OF THE WORK**

- .1 Following the inspection, the Owner will:
  - .1 Issue a Certificate of Warranty Performance of the Work; or
  - .2 Advise the Contractor of items that must be corrected prior to issuance of the Certificate of Warranty Performance of the Work.

**2. PRODUCTS – NOT USED**

**3. EXECUTION – NOT USED**

**END OF SECTION**

**1. GENERAL**

**1.1 OPERATION AND MAINTENANCE MANUAL BY THE CONTRACTOR**

- .1 An O&M manual is not required for this project, however information for equipment shall be provided. Prepare operation and maintenance information (spec sheets and manuals) for each of the following:

- .1 PLC Components
- .2 Control Panel Components

**1.2 SUBMITTALS**

- .1 Provide the following submittals:
- .1 One draft copy of the operation and maintenance information prior to requesting inspection for Substantial Performance.
  - .2 Three copies and one digital copy of the compiled operation and maintenance information prior to requesting inspection for Total Performance.
- .2 The Owner reserves the right to withhold any amount of payment up to a maximum of \$1,000 until the Contractor provides satisfactory copies of the O&M information.

**2. PRODUCTS – NOT USED**

**3. EXECUTION – NOT USED**

**END OF SECTION**

**1. GENERAL**

**1.1 SECTION INCLUDES:**

- .1 Requirements for placing Work in a state of readiness for acceptance by Owner.
- .2 Section supplements, but does not supersede, specific requirements of other sections.

**1.2 INTENT**

The Contractor is responsible for all phases of commissioning. The Owner's representative will supply a commissioning manager that will assist the Contractor to fully commission all aspects of the facility. The Commissioning Manager will coordinate full systems commissioning including scheduling, direction of commissioning activities, and informing the Contractor when the applicable equipment manufacturer's representatives are required on site. The Contractor shall supply qualified personnel to assist the Commissioning Manager through all phases of commissioning. The Contractor shall bear the cost of equipment manufacturers technical representatives on site representation. The Commissioning Manager will be the sole judge of the competence and qualifications required of the equipment manufactures technical representative.

**2. SCHEDULE**

- .1 Contractor to allow sufficient time for total systems commissioning and include in the overall project schedule.

**3. DEFINITIONS AND PROCEDURES**

- .1 Prestart-up: consists of the non-operating functions required to bring Work to a state of readiness for placing systems into service. Related testing includes but is not limited to hydrostatic and pressure testing, disinfection and completion of Owner supplied installation checklists as documented by the attached Form, labeling, wiring, loop wiring and megger checks on equipment as described in the contract document.
  - .1 Fill out equipment installation checkout lists for all process mechanical, building mechanical, instrumentation and controls and electrical equipment. Group listing into logical systems or sub-systems for orderly progression of activities during start-up.
  - .2 To extent practical, remove all scaffolding, debris, planks tools and other construction related material.
  - .3 Remove all sand, silt, dirt and debris from tanks, channels, chambers, instrumentation and control panels and electrical panels and vacuum clean.
  - .4 Clean all surfaces of tanks and conduits, including walls, roofs, floors and columns and as specified in individual Sections.



- .5 Clean interior of all pipes and fluid-carrying equipment, including pumps and inspect with Owner's Representative present.
  - .6 Conduct leakage and pressure tests in accordance with individual Sections.
  - .7 Conduct disinfection procedures in accordance with requirements of individual Sections.
  - .8 Submit all installation, programming and maintenance manuals for applicable equipment prior to Start-up as deemed necessary by the Owners Commissioning manager. Ensure that this documentation is included in the O&M manuals as laid out in section 01790
- .2 Start-up: Includes but is not limited to programming, calibration or balancing of instruments and equipment, filling out Start-up instrument and equipment setup sheets and confirming operation of control systems and protective devices and performance testing prior to placing equipment in service.
- .1 The Manufacturers technical representatives, in accordance with the requirements of individual Sections, shall be on site for full duration of Start-up of applicable equipment in a system. Supply at this time all documentation relating to testing of equipment and supplier's certification of satisfactory installation.
  - .2 The Commissioning Manager shall assist the Contractor in filling out Start-up instrument and equipment setup sheets and confirming operation of control systems and protective devices prior to placing equipment in service. Equipment start-up sheets to be included in the O&M manual.
- .3 System Start-up:
- .1 Includes but is not limited to placing the system or systems into operation, re-confirming all equipment test results, performing any tests not yet carried out which may be deemed necessary by the Owner's Representative to demonstrate satisfactory performance of equipment.
  - .2 Start-up of systems shall take place in an orderly manner. Coordination of start-up shall take place so that adequate staff is available and that conflicts do not occur due to multiple start-ups at the same time.
- .4 Commissioning:
- .1 Commissioning includes but is not limited to all the procedures and events included under Prestart-up, Start-up, System Start-up and Operator training of systems.
  - .2 Commissioning is deemed complete when all systems have been operating continuously without fault and all process, mechanical and electrical equipment is free of vibration, overloading or overheating, is functioning in accordance with specified rates, methods and performance and all documentation has been

completed submitted and reviewed to the satisfaction of the Commissioning Manager.

- .3 The period for continuous operation for completion of commissioning shall be 80 hours, during which time the system shall operate without fault or failure as described above. Provide competent staff to oversee the operation and arrange for manufactures' service personnel and subcontractors' personnel, if so required, to attend to any problems that arise. Failure of any part of the Works during this period will require restart of the 80 hour period following rectification of the fault or failure.
- .4 Provide sufficient qualified manpower for duration of the entire commissioning period. Make necessary adjustments during commissioning to enable the Works to be put into continuous operation.
- .5 Operator Training:
  - .1 Special training of facility staff to take place following successful start-up of all systems, during commissioning period. Coordinate visits of equipment suppliers' supervisors and schedule mutually agreeable times for special training periods.
- .6 System:
  - .1 A "system" is defined as an integral operating entity or loop in a process.
- .7 Manufacturers Technical Representative:
  - .1 The equipment manufacturer's technical representative shall be familiar with the equipment supplied and shall come prepared with both knowledge and equipment to perform and interpret the test, inspections and procedures recommended by the manufacturer for the starting of equipment that has not previously been run.
  - .2 The equipment manufacturer's technical representative shall, immediately after completion of the inspection, convey to the Owner's Representative in writing, confirmation of the tests and inspections carried out and the result of this examination of the work.
  - .3 If the inspection reveals defects in the Work correct as soon as possible and repeat the entire inspection procedure. Repeat until the Work passes the inspection.
  - .4 Document the results of the inspection by the equipment manufacturer's representative.
  - .5 Ensure the installation meets all manufacturer's requirements for durable and trouble-free operation.

#### 4. SEQUENCE OF EVENTS

- .1 Installation and Pre-Operational Checks:
  - .1 Ensure equipment is installed in accordance with the manufacturer's instructions. Allow for sufficient days on-site by equipment supplier's qualified technician to instruct installer and inspect installation.
  - .2 Receive instruction from manufacturers in the methods and precautions to be followed in the installation of the equipment.
- .2 Prestart-up:
  - .1 On completion of construction of a system, test and otherwise check the system as defined in definitions and as directed by commissioning manager and be satisfied that it is ready for pre start-up. Note all deficiencies brought to light by Prestart-up activities and rectify before moving to Start-up activities.
  - .2 Cleaning, leakage testing and disinfection of all systems is required prior to Start-up activities.
- .3 Start-up:
  - .1 On completion of Prestart-up, the Commissioning Manager in conjunction with the Contractor shall Start-up and otherwise check the equipment and instrumentation in the system as defined in definitions. Note all deficiencies brought to light by Start-up activities and rectify before proceeding to System Startup and placing into operation.
  - .2 Correct any deficiencies uncovered during Start-up before proceeding to System Start-up activities. Retesting shall be conducted, when required, as determined by the Commissioning Manager.
- .4 System Start-up:
  - .1 On satisfactory completion of Start-up of the devices in a system and after the documentation has been completed, submitted and reviewed and after deficiencies have been rectified to the satisfaction of the Owners commissioning manager the system shall be deemed ready to System Start-up.
  - .2 Notify the Operations staff in writing 48 hours prior to a System Start-up.
  - .3 The following constraints during System Start-up will be taken into account:
    - .1 Cleaning and disinfection of all systems is required prior to System Start-ups.

- .2 System Start-ups to be done in an orderly manner following a written procedure authored by the Commissioning Manager so that all the various systems of the Works can be placed into simultaneous continuous operation.
- .3 A complete simulated System Start-up or parts of the system may be required to reconfirm the equipment prestart test results, particularly in the case of, but not limited to, chemical or hazardous materials and shall be determined by the Owners Commissioning manager. (e.g. Filling a chemical tank with water to confirm the accuracy and/or settings of a level transmitter prior to filling with chemical.)
- .4 In the event that further deficiencies arise during System Start-up immediately rectify and if of a sufficiently serious nature stop the Start-up of the system till such time as deficiencies are rectified.
- .5 Place the system or systems and place into operation as defined in Start-up and commissioning.

## **5. RESPONSIBILITY**

- .1 Be responsible for overall commissioning and continuous operation as defined in definitions.
- 2 Coordinate equipment suppliers' representatives and all sub-trades personnel for start-up and commissioning as directed by Owner's Commissioning Manager.
- .3 Arrange for the services of the equipment manufacturer's technical representative, when equipment installation has been completed as directed by Owner's Commissioning Manager.
- .4 Equipment manufacturer's technical representative to inspect installation to ensure that equipment has been installed in accordance with manufacturer's requirements. Make adjustments in accordance with instructions of equipment manufacturer's technical representative.
- .5 Advise Owner's Representative in writing that installation of equipment has been checked, installed correctly and is in working order following satisfactory System Start-up.
- .6 Cost of equipment manufacturer's representative shall be borne by Contractor. Do not designate a subtrade as a representative during construction, Prestart-up, start-up, System Start-up and continuous operation. In the event that the Work is phased and the equipment manufacturer's representative is required to additional trips to site the additional costs shall be borne by the Contractor.

- .7 Owner's Commissioning manager will request that equipment be operated to demonstrate that it will perform as specified. Commissioning manager will note deficiencies. Correct deficiencies immediately. Advise Owner's Commissioning manager in writing when deficiencies have been corrected.
- .8 If deficiencies are of a sufficiently serious nature as determined by the Commissioning Manager that manufacturers' representatives are required to make additional visits, additional costs shall be borne by Contractor.
- .9 If it is necessary to suspend start-up, or commissioning, or continuous operation due to deficiencies in any system, the full cost of interruption, call back and resumption of start-up, or commissioning, or continuous operation shall be paid by Contractor.
- .10 Commission and operate the Works during continuous operating period. Operation personnel may observe and assist during commissioning and continuous operating period.
- .11 The lack of availability of equipment manufacturers representatives shall not result in an extension to the contract.

## **6. SYSTEMS DEMONSTRATION**

- .1 Special training of District staff shall take place following successful System Start-up of all systems, during the commissioning period. Coordinate visits of equipment suppliers' supervisors with Operations Staff and schedule mutually agreeable times for special training periods.
- .2 Demonstrate operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment at agreed upon times.
- .3 Owner will provide list of personnel to receive instructions, and will coordinate their attendance at agreed upon times.
- .4 Instruct personnel in all phases of operation and maintenance using operation and maintenance manuals as the basis of instruction.
- .5 Review contents of manual in detail to explain all aspects of operation and maintenance.
- .6 Prepare and insert additional data in operations and maintenance manuals when the need for additional data becomes apparent.
- .7 The individuals providing training on equipment must be a manufacture's certified technician with competent instructional skills and fully familiar with the detailed operation and maintenance of the provided equipment. The Owner will be the sole judge of the competence of the instructor and quality of instruction. The Owner reserves the right to withhold any amount of payment up to a maximum of \$15,000 until the Contractor provides training to the satisfaction of the Owner.

- .8 Training to cover the following items:
  - .1 Overview of equipment;
  - .2 Review of Operations and Maintenance Manual documentation for the equipment;
  - .3 Instruction and demonstration of operation. Includes start up, shut down, all possible equipment faults and possible rectification.
  - .4 Instruction and demonstration of maintenance to include daily, weekly, monthly, quarterly and annual preventative maintenance checks/actions as recommended by the manufacturer as well as trouble shooting summarized clearly on trouble shooting sheets for the specific model of each major piece of equipment.
- .9 All instructional training, supplemented by training and manual handouts, must be in sufficient detail to cover all Owner responsible operations and maintenance requirements to maintain manufacturers' warranties in tack. Training and documentation must highlight specific requirements that if completed or not completed may or would, void or jeopardize the equipment warranty.
- .10 Refer to specific equipment section for additional training requirements.

**END OF SECTION**

**1. GENERAL**

**1.1 INTENT**

- .1 The work in this section to include, but not necessarily be limited to the following:
  - .1 Supply, installation and connections of all cable, conduit and wiring for the control and instrumentation systems.
  - .2 Supply, installation and connection of control panels.
  - .3 Installation, connection and commissioning of Programmable Logic Controller.

**1.2 SHOP DRAWINGS**

- .1 Submit the following items:
  - .1 Programmable Logic Controls and Computers section 13317
  - .2 Control Panels
  - .3 Control relays
  - .4 Rail-mount terminals
  - .5 Rail-mount fuse holders
  - .6 Power Supplies
- .2 Shop drawings to indicate (where applicable):
  - .1 Instrument tag numbers(s)
  - .2 Available range
  - .3 Materials of construction
  - .4 Wetted materials
  - .5 Accuracy
  - .6 Rating of enclosure
  - .7 Other details listed on the Instrument Specification Sheet
  - .8 Detailed wiring/interconnection diagrams with terminal labels
  - .9 Complete product part numbers for each piece of equipment

- .10 Any additional information requested by Owner or Owners representative

**2. PRODUCTS NOT USED**

**3. EXECUTION**

**3.1 INSTRUMENT TAGGING**

- .1 Provide each instrument with a tag stamped or engraved with the Instrument number.
- .2 Tags to be done in accordance with specifications described in section 16075.
- .3 The code lettering and number system shall be as shown on the P & I drawings or as directed by the Owners Representative.
- .4 Affix tags to instruments with nylon tie-wraps or adhesive. Do not use adhesive on curved surfaces.
- .5 All tags on existing equipment are to be removed. New tags are to be attached to all existing equipment, with new lettering and numbering as specified in the drawings.

**3.2 COMMISSIONING**

- .1 Prior to notifying Owner's Representatives to begin commissioning activities, verify all PLC inputs, and outputs, and complete Record Drawings as described in this section.
- .2 Electrical controls, circuits and systems shall be tested by trial operation of control equipment after all wiring is completed to see that each interlock and control function operates in accordance with the contract drawings and the description of operation for the equipment. Where field conditions prevent actual equipment functioning during testing, the contractor shall simulate the intended operating condition in the associated control circuits.
- .3 The contractor shall locate the cause of any malfunction and make the necessary wiring and / or equipment changes or corrections to obtain the particular systems intended operation as defined by the contract drawings. Such changes shall be included in the test report.
- .4 Control Panels shall be operated through all design functions. This shall include remote operation of all equipment and actuation of alarms and indicating devices according to design requirements.
- .5 Complete operation tests shall be given to all relays, and control devices to show that the equipment performs all design functions and meets design and procurement specifications.



- .6 During start-up, debug system operation and correct any deficiencies and omissions which appear.

### **3.3 RECORD REPORTS**

- .1 During each of the aforementioned tests, the electrical contractor shall maintain a comprehensive set of test reports defining the specific condition in which the apparatus is left, after it has been given approval for use in its indented service. The completed report shall become the property of the Owner.
- .2 An Owner supplied check list type report for each individual item of all electrical equipment listed in Division 13, should be headed with but not limited to the following identification data, defining:
  - 1 Equipment Name
  - 2 Item Tag Number
  - 3 Manufacturer
  - 4 Type of Class
  - 5 Application
  - 6 Plant Location
  - 7 Voltage Rating
  - 8 Date of Test
  - 9 Ambient Conditions
  - 10 Testers Signature
- .3 Among the specific requirements of testing to determine the equipments operation condition relative to that particular apparatus, all items shall be visually inspected and evaluated on the report as to its general condition both exterior and interior.

**END OF SECTION**

**1. GENERAL**

- .1 Not Applicable.

**2. PRODUCTS**

**2.1 WIRE AND CABLE**

- .1 Wire for 120 VAC control signals to be as specified in Division 16, except that control wiring within cabinets shall be #18 AWG.
- .2 All control wires shall be color coded as follows:  
  
120VAC Hot- Black.  
120VAC Neutral- White.  
24VDC Positive- Red.  
24VDC Negative- Blue.  
GROUND- Green.
- .3 Wire for 24 VDC analog instrument signals to be stranded copper, AWG 18 or AWG 20, foil or braided shield, 300V rating.
- .4 All control and instrumentation cables not in control cabinets shall be protected via interlocked galvanized steel or RPVC Conduit or aluminum armour with PVC Coating.

**3. EXECUTION**

**3.1 TERMINATION OF CONDUCTORS**

- .1 Where spare conductors are pulled into an instrument or junction box where spare terminals are not provided, tie back spare conductors.
- .2 Where spare conductors are pulled into a control panel, provide spare terminals and terminate all conductors.
- .3 The conductor and conduit schedules are intended to show the majority of the power and instrument runs. Supply, Install and connect all cables and conduit for the control instrumentation and power system to provide a complete and functional system.

**3.2 CABLE LABELING**

- .1 Label each cable where it enters a panel or instrument with double zip tied engraved lamacoid labels. See section 16075 for electrical identification.
- .2 Write on labels are not acceptable.

.3 All teck control cable is to have an outer jacket colour as follows:

- .1 Instrumentation and control cable – Grey
- .2 Power cable - Black
- .3 Ethernet Network cable (Cat5e or Cat6) - Blue

### **3.3 CONDUCTOR LABELING**

- .1 Conductors to be labeled at each end by slip-on plastic tags Wieland type Z5 or Weidmuller type Z or by machine-printed heat-shrink labels.
- .2 Write on Labels are not acceptable.

**END OF SECTION**

## **1. GENERAL**

- .1 Provide only CSA approved materials and met all applicable industry standards and codes. Panel to be constructed in a CSA approved shop.
- .2 Control panels shall be field marked to warn qualified persons of potential electric arc flash hazards. The marking should be located so as to be clearly visible to qualified persons before examination, adjustment, servicing or maintenance of the equipment. All components used interior to the control panel to be "touch safe" to person or persons opening the control panel while energized.
- .3 All Control Panel Wiring to be "Touch Safe" as per IP20 Standards. This rating assures that a probe approximately the size of a finger is not able to make contact with any hazardous or energized parts.
- .4 Clearly indicate on the door of the control panel if there can be more than one voltage source.
- .5 All control panels to be constructed and certified as per the most recent edition of CSA C22.2 No.286

## **2. PRODUCTS**

### **2.1 CONTROL PANEL CONSTRUCTION**

- .1 Provide only CSA approved materials and meet all applicable industry standards and codes.
- .2 Contractor to design, supply and construct each control and marshall panel based upon provided IO lists, field measurements, available record drawings and PLC programs.
- .3 Specified equipment:
  - .1 Naramata Water Treatment Plant – PLC Control Panel – CP-750
  - .2 Naramata Water Treatment Plant – Sodium Hypochlorite System – CP-360

### **2.3 TERMINALS**

- .1 Unfused terminals to be CSA approved for 600 V, 10A, accepting #12- #18 wire. Terminals to be one of:
  - .1 Wieland WK4/U
  - .2 Weidmuller SAK4
  - .3 Phoenix Contact UT 4
- .2 Provide separate fused terminals for all analog and discrete input points, determined by PLC module type. Provide new fuse terminals for all added equipment including but not limited to radios, network switches, power supplies and other devices.

- .3 Fused terminals to be CSA approved for 300 V, 10A, with blown-fuse indicator operating on 120 VAC, accepting #10 - #14 wires, and either 5x20 mm fuses or 1/4" x 1.4" fuses, or both. Terminals to be one of:
  - .1 Weidmuller ASK-1
  - .2 Wieland WK4/THSI6GL250U
  - .3 Phoenix Contact P-FU 6,3x32 LA 250 with UT 6-TG
- .4 Provide and install in control panel 10% spare terminals of each type used. Provide 10% spare fuses of each type and size loose in each control panel (Minimum 5 of each type).
- .5 Grounding terminals to be CSA approved for 300V, 15A, accepting #14 wires, grounding to the rail, colored green & yellow. Terminals to be one of:
  - .1 Weidmuller SAK2.5
  - .2 Wieland WK4SL
  - .3 Phoenix Contact UT 4-PE
- .6 Shorting bars to be used for jumpering. Wire jumpers are not acceptable.
- .7 Terminals to be colored as shown:
  - Ground - Green & Yellow
  - 120V Line - Black
  - 120V Neutral - White
  - 24V DC - Blue, Red
- .8 All terminals to be din rail mounted.

## 2.4 LABELING

- .1 Each terminal to be labeled with snap on plastic tags, Wieland type 9705 , Weidmuller type FW or FS, Phoenix Contact UC-TM or, machine-printed.
- .2 All panel-mounted devices to be labelled by means of engraved lamaroid labels, white lettering on black.
- .3 Write on labels are not acceptable.

## 2.5 CONTROL RELAYS

- .1 Control relays to be installed in socket with the following features:
  - .1 Built-in LED, neon or mechanical flag operation indicator
  - .2 Push-to-operate button (aka push-to-test)
  - .3 Relays shall have varistor protection for AC coil, and diode protection for DC coil.
  - .4 Minimum 2 Form C (N.O. and N.C.) Contacts. Contacts to switch minimum 5A 120/240V AC inductive or resistive.
  - .5 Coil voltage as required, CSA approved.

- .3 Operating times to be 20 mS max for AC coil, 30 mS max for DC coil.
- .4 Life expectancy to be 100 000 operations @ 5A 120/240V AC.
- .5 Relays to be:
  - .1 Omron: MKS 2PIN Series
  - .2 Phoenix Contact: PR2-RSC3 Series, REL-MR Series
  - .3 Weidmuller: D Series, Rider Series
  - .4 Releco: MRC Series, QRC Series, IRC Series
  - .5 Allen Bradley/Rockwell Automation
- .6 Provide and install a minimum of 10% spare relays of each type used in each control panel.
- .7 Relays specified to be used as control relays only. Refer to section 16421- Motor Starters and section 16423 – Starters and Contactors for relays controlling equipment with loads greater than 5amp resistive or 2.5amp inductive.
- .8 All relays to be labeled with type written labels. Handwritten labels are not acceptable.

## **2.6 TIME-DELAY RELAYS**

- .1 Time-delay relays to be installed in socket, with manually-adjustable timing via knob with dial, output status light, operating voltage as required, ON-delay or OFF-delay time as indicated, CSA approved.
- .2 Contacts to switch 5A 120/240V AC inductive or resistive.
- .3 Life expectancy to be 100 000 operations @ 2A 120/240V AC.
- .4 All relays to be OMRON type H3BH, H3G, H3CA, or H3CR or approved alternative.

## **2.7 PILOT LIGHTS**

- .1 Water and dust-proof with internal Gasket, jewelled lens, color as shown on drawings, LED bulb, voltage 120VAC.
- .2 Lights to be one of following:
  - .1 Allen-Bradley 800T
  - .2 Siemens class 52

## **2.8 PUSH BUTTONS**

- .1 Water and dust-proof with internal Gasket, flush head, contacts rated 5A 20/240 VAC, accepting AWG 18-12 wires, removable contact blocs.

- .2 Push buttons to be one of following:

- .1 Allen-Bradley 800T
- .2 Siemens class 52

## **2.9 SELECTOR SWITCHES**

- .1 Manual selector switches to be Water and dust-proof with internal Gasket, standard black lever actuator, maintained position unless indicated, contacts rated 5A 120/240 VAC, accepting AWG 18-12 wires, removable contact blocks.
- .2 Selector switches to be one of following:
  - .1 Allen-Bradley 800T
  - .2 Siemens class 52

## **2.10 WIRE DUCTS**

- .1 Use Panduit or equivalent plastic type.
- .2 Wiring not installed in wire ducts are to be neatly bundled and secured with wrap around spiral banding, secured with cable ties and mounting bases.

## **2.11 24VDC DC POWER SUPPLIES**

- .1 Power supply with 24 VDC, 10A, PLC I/O to include over-voltage shutdown, 120V AC input, and CSA approval.
- .2 Output voltage to be adjustable  $\pm 10\%$  via screwdriver.
- .3 Output current rating to be sized by contractor during panel design.
- .4 Power supplies to be one of the following:
  - .1 Allen Bradley
  - .2 Omron
  - .3 Phoenix Contact Quint Series
  - .4 Weidmuller Pro Series

## **2.12 12VDC DC POWER SUPPLIES**

- .1 Power supply with 12 VDC, 5A, PLC I/O to include over-voltage shutdown, 120V AC input, and CSA approval.
- .2 Output voltage to be adjustable  $\pm 10\%$  via screwdriver.
- .3 Output current rating to be sized by contractor during panel design.

.4 Power supplies to be one of the following:

- .1 Allen Bradley
- .2 Omron
- .3 Phoenix Contact Quint Series
- .4 Weidmuller Pro Series

**END OF SECTION**



## 1. GENERAL

- .1 Should any equipment or software indicated below be no longer available it is the Contractors responsibility to provide equal or better equipment or Software. The Contractor is to confirm with Owners Representative for any part number alterations and order equipment **AFTER** signed reviewed shop drawings have been issued.

## 2. PRODUCTS

### 2.1 PROGRAMMABLE LOGIC CONTROLLERS

- .1 Schneider Electric Modicon M340 System  
.2 Location: PLC Control Panel – CP-750

Item	Description	Schneider Part NO.	Qty.
1	12 Slot Mounting Rack	BMXXBP0120	1
2	100-240 VAC Power Supply	BMXCPS3500	1
3	M340 Processor With 4 Mbytes Memory	BMXP342020	1
4	120 VAC Isolated Input 16 Pts	BMXDAI1604	4
5	Analog Input - Current/Voltage 8 Pts	BMXAMI0810	3
6	Isolated Relay Output	BMXDRA0815	3
7	Analog Output Module, 8 Pts	BMXAMO0802	1
8	I/O module screw connector	BMXFTB2010 BMXFTB2800	As Req.

- .2 Schneider Electric Modicon M340 System  
.2 Location: Sodium Hypochlorite System – CP-360  
**\*Note – Equipment listed in section 2.2.2 is provided by owner. Contractor to install provided equipment. Allow for one day of installation and commissioning.**

Item	Description	Schneider Part NO.	Qty.
1	12 Slot Mounting Rack	BMXXBP1200	1
2	24VDC Power Supply	BMXCPS3020	1
3	M340 Processor With 4 Mbytes Memory	BMXP342020	1
4	19-30 VDC Isolated Input 16 Pts	BMXDDI1602	2
5	Analog Input - Current/Voltage 8 Pts	BMXAMI0810	2
6	Isolated Relay Output	BMXDRA0815	1
7	Analog Output – Current 4 Pts	BMXAMI0410	1
8	Quick Wiring Adapters	Migration Hardware	As Req.

**3. EXECUTION**

**3.1 INSTALLATION**

- .1 Contractor is responsible for installation, wiring, testing, and commissioning of all PLC equipment, and PLC communication equipment.
- .2 Contractor shall supply all required cabling to connect hardware above.
- .3 The Naramata WTP system cannot sustain extended downtime during this project. The contractor shall develop a comprehensive work plan to minimize the required shutdowns and provide assistance to the Owner to mitigate the effects of PLC shutdowns during the switchover periods. The work plan for each facility will be presented to the Owner and Engineer for review, comment and adjustment.

**3.2 PROGRAMMING**

- .1 Programming the PLC and SCADA system components will be by others. Contractor is responsible to provide assistance to programmer during IO checks and system startup.

**END OF SECTION**

**1. SCOPE**

- .1 This project requires the electrical installation of all equipment, components and connections shown in the specifications and drawings for the upgrades to the Naramata Water Treatment Plant.
- .2 The contractor shall furnish all tools, materials and labour required to provide a functional system as specified and shown in the contract drawings. Contractors scope includes demolition of existing electrical equipment.
- 3. The electrical work includes but is not limited to:
  - .1 Supply and installation of new PLC in the PLC Control Panel and Sodium Hypochlorite Control Panel.
  - .2 Connection to existing controls signals as shown on the contract drawings.

**2. REGULATORY REQUIREMENTS**

- .1 Comply with Safety Codes Act and rules and regulations made pursuant thereto, including the Canadian Electrical Code.
- .2 Unless otherwise indicated, all references to "Canadian Electrical Code" or "CEC" shall mean the edition of the Canadian Electrical Code, Part I, CSA C22.1, and the variations made thereto by British Columbia regulation, which are in force on the date of bid closing for the Contract.
- .3 All electrical products shall be tested, certified and labeled in accordance with a certification program accredited by the Standards Council of Canada. Where a product is not so labeled, provide written approval by the authority having jurisdiction.
- .4 Submit to authority having jurisdiction and Utility Company, necessary number of drawings and specifications for examination and approval prior to commencement of electrical work. Pay associated fees.
- .5 Submit to Owner, copy of electrical permit obtained from authority having jurisdiction.
- .6 If authority having jurisdiction conducts an electrical inspection, submit copy of certificate of acceptance provided by authority having jurisdiction.
- .7 All equipment supplied to have 75°C termination ratings.
- .8 All cable ampacities in the drawings and specifications are based on equipment termination ratings of 75°C. Should equipment be provided with a different rating it is the Contractors responsibility to size cable accordingly to meet the electrical code requirements.

**3. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

- .1 Submit shop drawings, product data and samples of equipment and materials. Shop drawings to include but not be limited to the following:
  - .1 Complete product part numbers for each piece of equipment
  - .2 Corresponding equipment tag numbers with part numbers
  - .3 Product specification sheets indicating product features and options
  - .4 Dimensions
  - .5 Weights
  - .6 Wiring/interconnection diagrams with manufacturer terminal numbers
  - .7 Any additional information requested by Owner or Owners representative

**4. OPERATION AND MAINTENANCE DATA**

- .1 Provide the following for all systems and components:
  - .1 Manufacturer's product data, including performance curves and schematic and wiring diagrams for all electrical control systems.
  - .2 Manufacturer's installation instructions.
  - .3 Manufacturer's operation instructions.
  - .4 Manufacturer's maintenance instructions, including complete parts list for all serviceable components.
- .2 Provide a comprehensive list of Subcontractors, Sub-subcontractors and suppliers who supplied and installed systems and components.
- .3 Provide copies of all inspection certification reports from authorities having jurisdiction.

**5. RECORD DRAWINGS**

- .1 Record actual locations of all pull boxes, panelboards, luminaires, feeders, electrical equipment and electrical site services.
- .2 Record any changes to circuit designations. Record any changes to control circuit wiring.
- .3 Include on record drawings, revisions due to engineering change orders, site alterations, additions and field ordered changes made during construction.

**6. COORDINATION**

- .1 Coordinate work specified in Division 16 with work specified in other Divisions. Ensure that proper arrangements and provisions are made for work specified in Division 16.

**7. SOURCE OF SUPPLY**

- .1 All like materials shall be by a single manufacturer.

**8. REFERENCE STANDARDS**

- .1 Comply with standards of following organizations:
  - .1 Electrical and Electronic Equipment Manufacturers Association of Canada (EEMAC).
  - .2 Institute of Electrical and Electronic Engineers (IEEE).

**9. PRODUCT OPTIONS AND SUBSTITUTIONS**

**1. DEFINITIONS**

- .1 Proprietary specification means a specification which includes one or more proprietary names of products or manufacturers, or both, and may also include descriptive, reference standard, or performance requirements, or any combination thereof.
- .2 Non-proprietary specification means a specification that includes descriptive, reference standard or performance requirements, or any combination thereof, but does not include proprietary names of products or manufacturers.
- .3 Substitution means a product or manufacturer not specified by proprietary name which may be acceptable in place of a product or manufacturer which is specified by proprietary name.

**2. PRODUCT OPTIONS**

- .1 For products specified by non-proprietary specification:
  - .1 Select any product by any manufacturer, which meets requirements of Contract Documents.
- .2 For products specified by proprietary specification:
  - .1 Select any product or manufacturer named, or
  - .2 Substitute an unnamed product or manufacturer in accordance with 8.4.

- .3 For products specified by proprietary specification and accompanied by words indicating that substitutions will not be accepted:
  - .1 Select any product or manufacturer named; substitutions are not permitted.

### **3. SUBSTITUTIONS**

- .1 Substitute Products: Where substitute products are permitted, unnamed products will be accepted by the Owner's Representative, subject to the following:
  - .1 Substitute products shall be the same type as, be capable of performing the same functions as, and meet or exceed the standards of quality and performance of the named product(s). Substitutions shall not require revisions to Contract Documents nor to work of Other Contractors.
- .2 Substitute Manufacturers: Where substitute manufacturers are permitted, unnamed manufacturers will be accepted by the Owner's Representative, subject to the following:
  - .1 Substitute manufacturers shall have capabilities comparable to those of the named manufacturer(s). Substitutions shall not require revisions to Contract Documents nor to work of Other Contractors.
- .3 In making a substitution Contractor represents that:
  - .1 he has investigated substitute product or manufacturer, or both, and has determined that it meets the criteria specified in 3.1 or 3.2, or both, and
  - .2 he will make any changes to the Work necessitated by the substitution as required for the Work to be complete in all respects, and
  - .3 he waives claims for additional costs and time caused by substitution which may subsequently become apparent.
- .4 Substitutions shall not be ordered nor installed without Owner's Representative's acceptance.
- .5 If in Owner's Representative's opinion, a substitution does not meet requirements of Contract Documents, Contractor shall, at no extra cost to Owner, provide a product which, in Owner's Representative's opinion, does meet requirements of Contract Documents.

### **4. PROPRIETARY SPECIFICATIONS**

- .1 Notwithstanding specified proprietary names of either or both products and manufacturers, products provided shall meet other applicable requirements of Contract Documents. Modify products if necessary to ensure compliance with all requirements of Contract Documents.

**5. CHANGES TO ACCEPTED PRODUCTS AND MANUFACTURERS**

- .1 Products and manufacturers accepted by Owner's Representative for use in performance of Work of Contract shall not be changed without Owner's Representative's written consent.
- .2 Submit requests to change accepted products and manufacturers to Owner's Representative in writing, including product data indicated in Article 6.

**6. PRODUCT DATA**

- .1 When requested by Owner's Representative, submit complete data substantiating compliance of a product with requirements of Contract Documents. Include the following:
  - .1 Product identification, including manufacturer's name and address.
  - .2 Manufacturer's literature providing product description, applicable references standards, and performance and test data.
  - .3 Samples, as applicable.
  - .4 Name and address of projects on which product has been used and date of each installation.
- .2 For substitutions and requests for changes to accepted products, include in addition to the above, the following:
  - .1 Itemized comparison of substitution with named product(s). List significant variations.
  - .2 Designation of availability of maintenance services and sources of replacement materials.

**10. TESTING**

- .1 Prior to energizing any portion of the electrical system, perform megger tests on all parts of the distribution system. Results shall meet the requirements of the CEC, authority having jurisdiction and the Contract Documents.

**11. AMBIENT ENVIRONMENT**

- .1 Unless otherwise indicated, supply equipment enclosures, boxes, electrical materials and products suitable for ambient environment of the following areas:

Area		General Classification	Equipment Enclosure Type
1.	Indoor Areas	General	NEMA 12

**END OF SECTION**



**1. GENERAL**

**1.1 REQUIREMENTS**

- .1 The Electrical Contractor shall be responsible for the disconnection, removal, relocation, reconnection, etc., of electrical devices, equipment, material, etc., as indicated on the drawings and/or as required by renovations to existing building and the installation of new facilities.
- .2 All electrical devices and equipment which are disconnected, removed from service, etc., and which are not reused on the job and not required to be retained by the Owner shall be removed from the site.

**2. PRODUCTS**

**2.1 MANUFACTURERS & COMPONENTS**

- .1 Manufacturers of existing devices and equipment, where known, are indicated on the drawings or in the specifications.
- .2 Material and equipment added in renovation area shall match existing wherever possible unless otherwise noted.

**3. EXECUTION**

**3.1 GENERAL**

- .1 Visit site prior to submitting Tender and make survey of renovation areas. Check out locations and operation of all systems and be aware of all requirements involved in changes and modifications to systems. Consult maintenance staff for any information regarding type and operation of systems. Take into account and allow for all work required to existing facilities to meet requirements as indicated on the drawings and in the specifications.
- .2 Check and be aware of work requirements of the project. This would include reading of the architectural specifications and checking and coordinating with General Contractor to ensure that all requirements are covered and allowed for and that all necessary existing facilities are maintained and operational during construction period.

**3.2 DEMOLITION**

- .1 Provide all labour and equipment required to remove existing electrical facilities in the area to be renovated. All miscellaneous conduit, boxes, wiring, etc., no longer required shall be removed.

- .2 The work shall include, but necessarily be limited to, the following:
  - .1 Removal of alarm dialer interface and alarm dialer installed in CP-750.  
Installation of blanking plate where alarm dialer interface was installed.

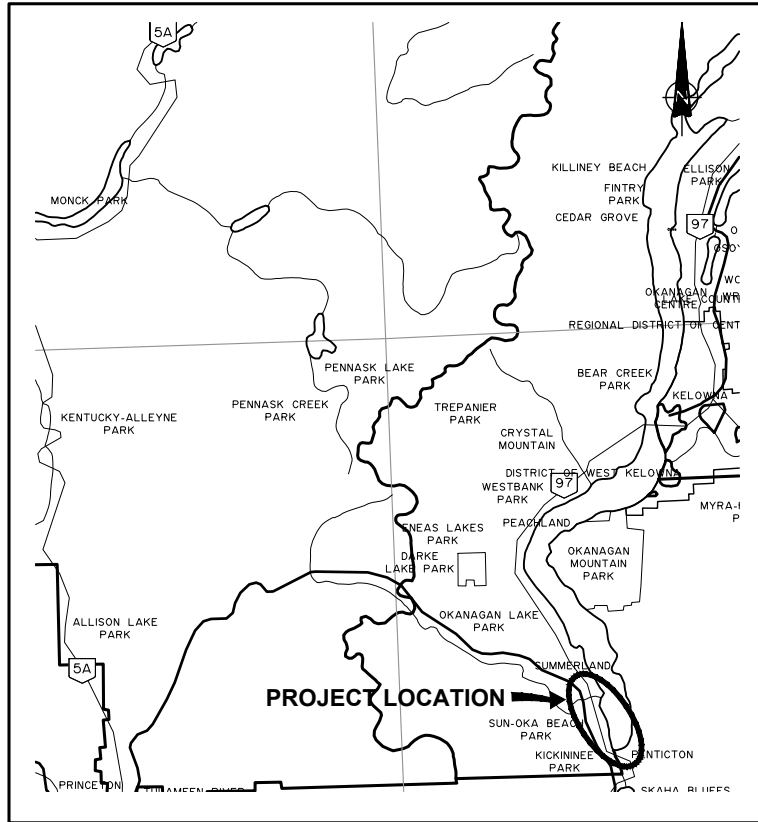
### **3.3 PHASING OF WORK**

- .1 Disconnection, relocation, reconnection, etc. of existing facilities will be required to accommodate phasing of the work and the installation of new facilities. Be aware of all requirements and make all allowances to accommodate these requirements.

### **3.4 INSTALLATION**

- .1 Provide all labour and materials required to revise existing electrical facilities as indicated on the drawings and/or as required by building renovations and for installation of new facilities.
- .2 Existing facilities shall remain operational as much as possible during construction period. When renovations are complete, all facilities shall be checked and tested and shall be left in a proper working order and to the satisfaction of Architect, Engineer and Owner.
- .3 Where walls, ceilings, floors, etc. containing electrical devices, material and equipment, etc., are removed and the deletion of outlets in said areas disrupts service to adjacent devices and equipment, then conduit and wiring shall be provided to pick up adjacent devices and equipment to maintain continuity of service.

**END OF SECTION**



LOCATION PLAN

# LIST OF DRAWINGS

SET \_\_\_\_\_

-- TITLE PAGE

## ELECTRICAL

EO.1 LEGEND

### NARAMATA WTP PLC

E1.1 CONTROL PANEL LAYOUT

E1.2 CONTROL PANEL POWER 1 OF 2

E1.3 CONTROL PANEL POWER 2 OF 2

E1.4 PLC IO 1 OF 4

E1.5 PLC IO 2 OF 4








































































































































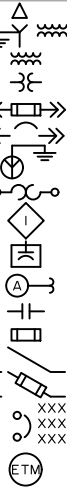
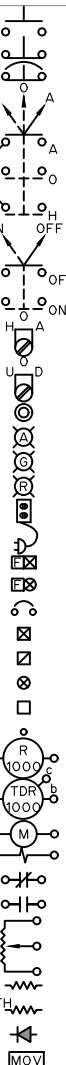
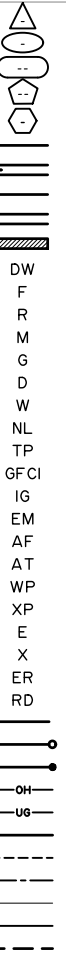
E1.6 PLC IO 3 OF 4

E1.7 PLC IO 4 OF 4

### NARAMATA HYPO GENERATION PLC


E2.1 CONTROL PANEL LAYOUT

# REGIONAL DISTRICT OF OKANAGAN—SIMILKAMEEN NARAMATA WTP PLC UPGRADES FOR TENDER 9796—003—00

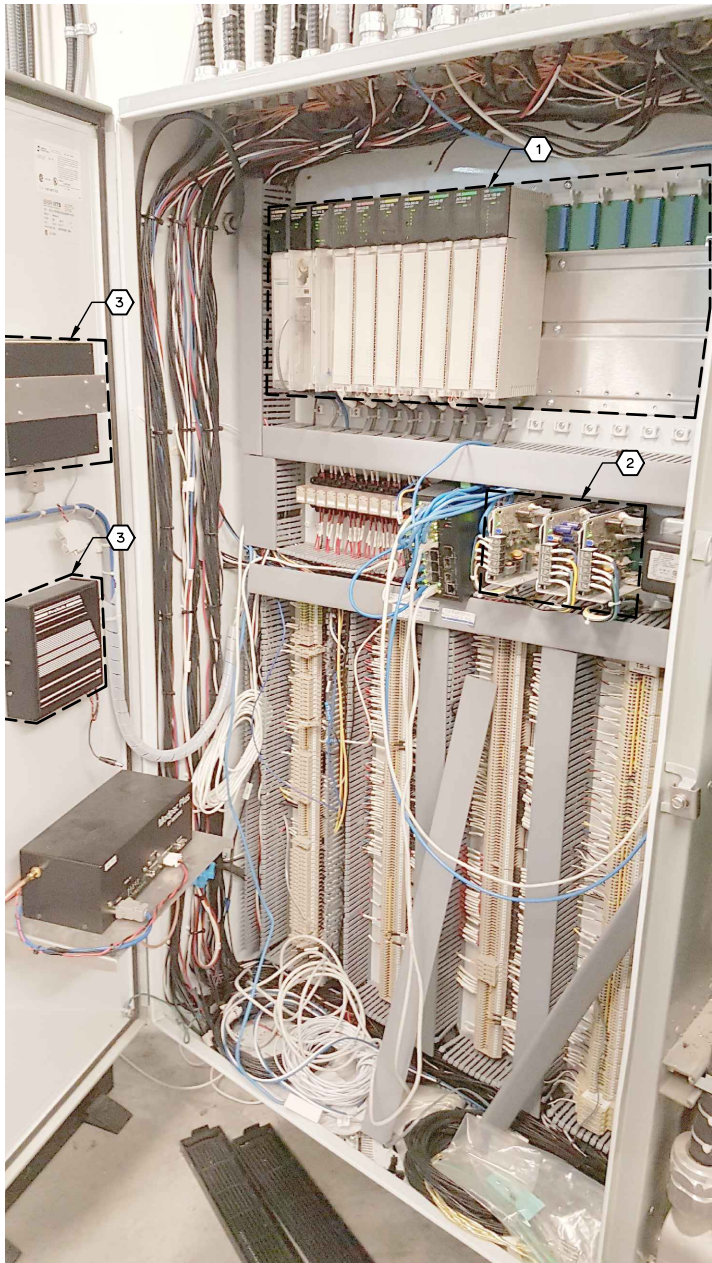
DISTRIBUTION	POWER CONTINUED	POWER EQUIPMENT CONTINUED	INSTRUMENTATION EQUIPMENT
<div> CONDUIT IDENTIFICATION TAG</div> <div> LIGHTING/POWER PANEL</div> <div> DATA PANEL</div> <div> INTERCOM PANEL</div> <div> FIRE ANNUNCIATOR PANEL</div> <div> GROUND BAR</div> <div> PLYWOOD BACKBOARD</div> <div> EXTERIOR TRANSFORMER</div> <div> DRY TYPE TRANSFORMER</div> <div> METERING CABINET GREATER THAN 200A</div> <div> UTILITY METER PLAN</div> <div> POWER METER</div> <div> ELECTRIC UTILITY METER 200A AND LESS</div> <div> WATER METER</div> <div> GAS METER</div> <div> SPLITTER</div> <div> ELECTRICAL CENTRAL DISTRIBUTION PANEL (CDP)</div> <div> ELECTRICAL MOTOR CONTROL CENTRE (MCC)</div> <div> ELECTRICAL MAIN DISTRIBUTION BOARD</div> <div> TRANSFER SWITCH WITH BY-PASS</div> <div> TRANSFER SWITCH</div> <div> 120/24V LOW VOLTAGE TRANSFORMER</div> <div> WEATHER HEAD</div>	<div> MAGNETIC MOTOR STARTER</div> <div> HOME RUN WITH WIRE COUNT</div> <div> WIRELESS ACCESS POINT</div> <div> ELECTRICAL HEATING</div> <div> HEAT TRACING</div> <div> PIN AND SLEEVE CONNECTOR (FEMALE)</div> <div> PIN AND SLEEVE CONNECTOR (MALE)</div>	<div> GROUND ROD</div> <div> GROUND ROD C/W WELL</div> <div> GROUND ROD WITHOUT WELL</div> <div> GATE HOIST</div> <div> HEATER C/W KILOWATT RATING</div> <div> MOTOR CONTROL IDENTIFICATION TAG</div> <div> TRANSFER SWITCH</div>	<div> LEVEL SWITCH (OPEN ON RISING LEVEL)</div> <div> LEVEL SWITCH (OPEN ON FALLING LEVEL)</div> <div> FLOW SWITCH (OPEN ON RISING FLOW)</div> <div> FLOW SWITCH (OPEN ON FALLING FLOW)</div> <div> PRESSURE SWITCH (OPEN ON RISING PRESSURE)</div> <div> PRESSURE SWITCH (OPEN ON FALLING PRESSURE)</div> <div> TEMPERATURE SWITCH (OPEN ON RISING TEMPERATURE)</div> <div> TEMPERATURE SWITCH (OPEN ON FALLING TEMPERATURE)</div> <div> LIMIT SWITCH (NC)</div> <div> LIMIT SWITCH (NO)</div> <div> TIME DELAY RELAY (NC)</div> <div> TIME DELAY RELAY (NO)</div> <div> INSTRUMENTATION IDENTIFICATION TAG</div>
<div> SURFACE MOUNTED LIGHT FIXTURE</div> <div> RECESSED LIGHT FIXTURE</div> <div> RECESSED LIGHT FIXTURE WITH END PLATES</div> <div> SURFACE MOUNTED STRIP LIGHT FIXTURE</div> <div> UNDER CABINET/VALENCE STRIP LIGHT FIXTURE</div> <div> WALL MOUNTED CUBED LIGHT FIXTURE</div> <div> SURFACE MOUNTED LIGHT FIXTURE</div> <div> RECESSED LIGHT FIXTURE</div> <div> WALL MOUNTED LIGHT FIXTURE</div> <div> WALL MOUNTED LIGHT FIXTURE ON EMERGENCY</div> <div> TRACK LIGHT C/W PENDANT HEADS</div> <div> TRACK LIGHT C/W ADJUSTABLE HEADS</div> <div> BOLLARD LIGHT FIXTURE</div> <div> POLE MOUNTED LIGHT FIXTURE (ONE HEAD SHOWN)</div> <div> WALL MOUNTED HID LIGHT FIXTURE</div>	<div> LINE VOLTAGE SWITCH</div> <div> SWITCH C/W PILOT LIGHT</div> <div> TWO POLE SWITCH</div> <div> THREE WAY SWITCH</div> <div> FOUR WAY SWITCH</div> <div> MANUAL MOTOR PROTECTION SWITCH C/W PILOT LIGHT</div> <div> KEY OPERATED SWITCH - CYLINDER TYPE</div> <div> TIMER SWITCH</div> <div> DIMMER SWITCH - SLIDER TYPE</div> <div> INTERNALLY ILLUMINATED LIGHT SWITCH</div> <div> LOW VOLTAGE SWITCH</div> <div> 2 GANG SWITCH</div> <div> 3 GANG SWITCH</div> <div> 4 GANG SWITCH</div> <div> 5 GANG SWITCH</div> <div> WALL MOUNTED PHOTOCCELL</div> <div> WALL MOUNTED JUNCTION BOX</div> <div> FLOOR MOUNTED JUNCTION BOX</div> <div> SQUARE CEILING MOUNTED JUNCTION BOX</div> <div> THERMOSTAT</div> <div> NON-FUSEABLE DISCONNECT SWITCH</div> <div> FUSEABLE DISCONNECT SWITCH</div> <div> COMBINATION MAGNETIC HOA STARTER</div> <div> O/H DOOR PUSH BUTTON</div> <div> PULL BOX</div>	<div> WALL MOUNTED TELEPHONE OUTLET</div> <div> WALL MOUNTED DATA OUTLET</div> <div> WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET</div> <div> WALL MOUNTED TELEVISION OUTLET</div> <div> WALL MOUNTED CHIME OR BUZZER</div> <div> CEILING MOUNTED TELEPHONE OUTLET</div> <div> CEILING MOUNTED COMBINATION TELEPHONE/DATA OUTLET</div> <div> CEILING MOUNTED TELEVISION OUTLET</div> <div> CEILING MOUNTED DATA OUTLET (No. OF OUTLETS)</div> <div> FLOOR MOUNTED DATA OUTLET (No. OF OUTLETS)</div> <div> FLOOR MOUNTED TELEPHONE OUTLET (No. OF OUTLETS)</div> <div> FLOOR MOUNTED TELEVISION OUTLET (No. OF OUTLETS)</div> <div> FLOOR MOUNTED COMBINATION TELEPHONE/DATA OUTLET (No. OF OUTLETS)</div> <div> RADIO LINK</div>	<div> PLC/RTU DIGITAL INPUT</div> <div> PLC/RTU DIGITAL OUTPUT</div> <div> PLC/RTU ANALOG INPUT</div> <div> PLC/RTU ANALOG OUTPUT</div>
<div> DUPLEX RECEPTACLE</div> <div> SPLIT FEED RECEPTACLE</div> <div> FOURPLEX RECEPTACLE</div> <div> SWITCHED DUPLEX RECEPTACLE</div> <div> 20A T-SLOT RECEPTACLE (KITCHEN)</div> <div> TWISTLOCK RECEPTACLE</div> <div> 208 VOLT 1PH RECEPTACLE</div> <div> 208 VOLT 3PH RECEPTACLE</div> <div> WALL MOUNTED USB PORT</div> <div> PEDESTAL DUPLEX RECEPTACLE</div> <div> WALL MOUNTED MULTI-GANG BOX</div> <div> WALL MOUNTED PUSH BUTTON</div> <div> WALL MOUNTED SURGE PROTECTIVE DEVICE (SPD OR TVSS)</div> <div> WALL MOUNTED VARIABLE FREQUENCY DRIVE (VFD)</div> <div> CEILING MOUNTED DUPLEX RECEPTACLE</div> <div> CEILING MOUNTED FOURPLEX RECEPTACLE</div> <div> CEILING MOUNTED 208 VOLT 1PH RECEPTACLE</div> <div> CEILING MOUNTED 208 VOLT 3PH RECEPTACLE</div> <div> AUXILIARY RELAY</div> <div> CEILING MOUNTED POWER ZONE BOX</div> <div> REEL DOWN RECEPTACLE</div> <div> PACK POLE</div> <div> FLOOR MOUNTED DUPLEX RECEPTACLE (No. OF OUTLETS)</div> <div> FLOOR MOUNTED FOURPLEX RECEPTACLE (No. OF OUTLETS)</div> <div> FLOOR MOUNTED 208 VOLT 1PH RECEPTACLE</div> <div> FLOOR MOUNTED 208 VOLT 3PH RECEPTACLE</div> <div> FLOOR MOUNTED MULTI-GANG BOX</div> <div> MOTOR</div> <div> MOTOR WITH DISCONNECT SWITCH</div> <div> MOTOR WITH FUSIBLE DISCONNECT SWITCH</div> <div> MOTOR WITH COMBINATION DISCONNECT SWITCH</div>	<div> LIFE SAFETY</div> <div> POWER EQUIPMENT</div>	<div> CONTROL PANEL EQUIPMENT</div>	<div> MISCELLANEOUS AND LABELS</div>

- NOTES:
- ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
  - ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED.

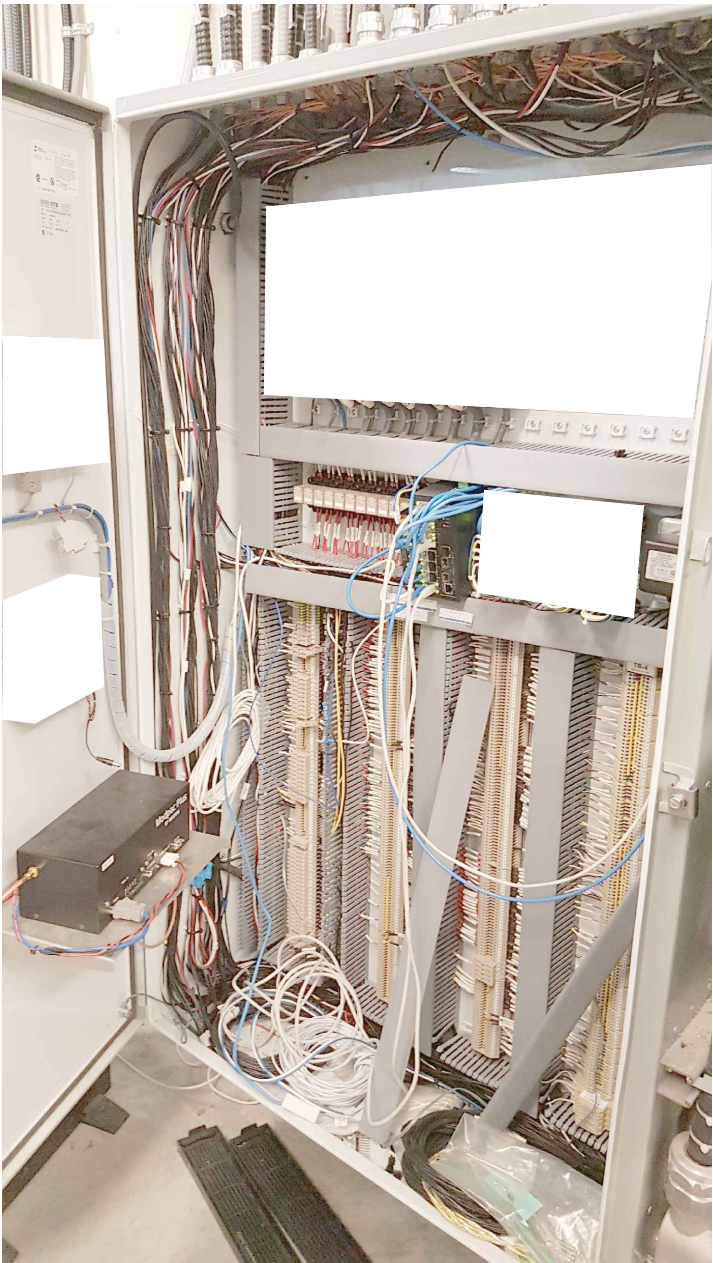
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1	20-11-23	FOR TENDER
ISSUE	YY-MM-DD	REVISION
<div><div>Association of Professional Engineers and Geoscientists of the Province of British Columbia</div><div><b>Z.T. SPENCER</b></div><div>ENGINEERING LICENSEE</div><div>1999081</div><div>Limited Licence</div><div>20241224</div></div>		
<div></div>		
REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN		
NARAMATA WTP PLC UPGRADES		
ELECTRICAL		
LEGEND		
DESIGNED	N.D.S., Z.T.S.	JOB 9796-003-00
DRAWN	N.O.W.	SCALE
DATE	NOVEMBER 2020	DRAWING E0.1





DEMOLITION CONTROL PANEL INTERIOR  
NTS

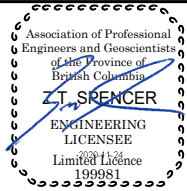


PROPOSED CONTROL PANEL INTERIOR  
NTS

- KEY NOTES:
1. REMOVE EXISTING PLC AND SALVAGE TO OWNER.
  2. REPLACE POWER SUPPLIES WITH NEW AS PER SPECIFICATIONS.
  3. REMOVE EQUIPMENT AND SALVAGE TO OWNER. DEMOLISH WIRING BACK TO POINT OF SOURCE. INSTALL BLANKING PLATE TO COVER HOLE.

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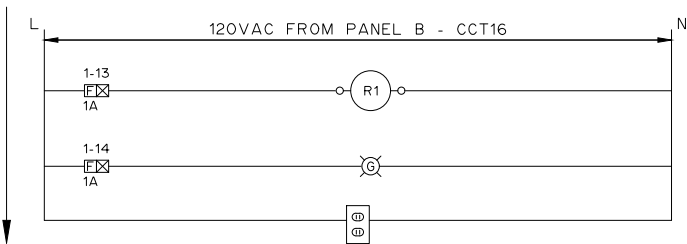
1	20-11-23	FOR TENDER
ISSUE	YY-MM-DD	REVISION



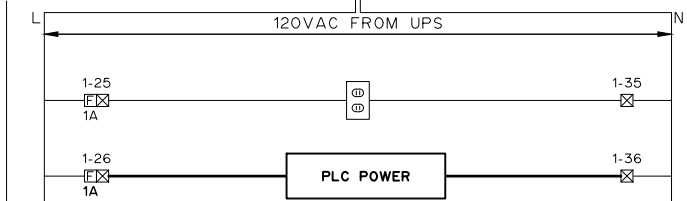
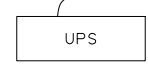
REGIONAL DISTRICT OF  
OKANAGAN-SIMILKAMEEN

NARAMATA WTP PLC UPGRADES  
ELECTRICAL  
NARAMATA WTP PLC  
CONTROL PANEL LAYOUT

DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E1.1



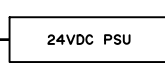
CONTROL  
POWER ON



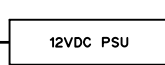
CONVENIENCE  
RECEPTACLE



PLC POWER



24VDC POWER SUPPLY  
CONTROL PANEL



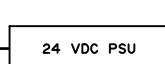
12VDC POWER SUPPLY  
UNIT MODPAC POWER



DI 1 TERMINAL  
POWER



DI 3 TERMINAL  
POWER



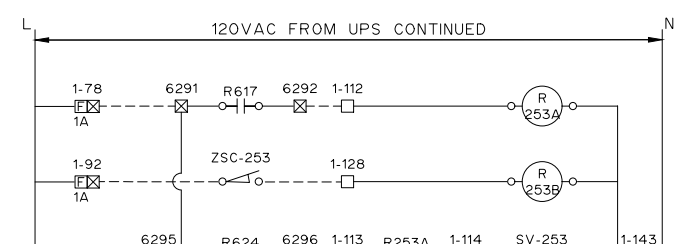
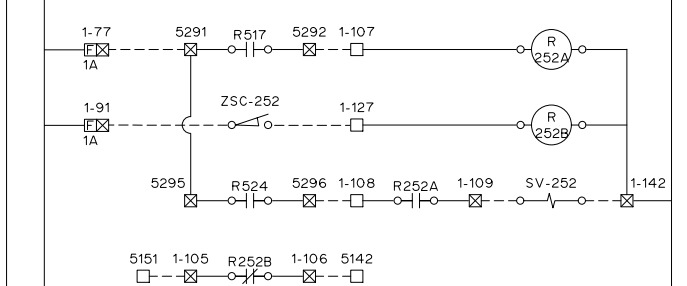
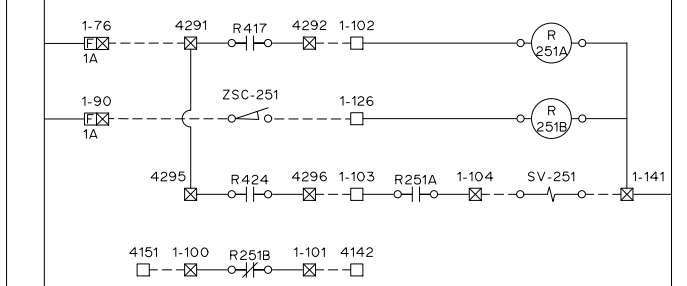
24 VDC POWER SUPPLY  
UNIT HVAC POWER



DI 2 TERMINAL  
POWER



DI 4 TERMINAL  
POWER



UVT ANALYZER

CHLORINE RESIDUAL  
ANALYZER

INFLUENT FLOW

SOUTH ZONE FLOW

NORTH ZONE FLOW

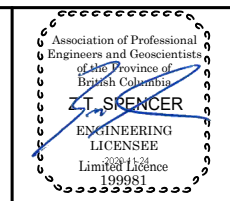
TOWNSITE FLOW

HVAC WATER FLOW

PUMP ROOM SMOKE  
DETECTOR No. 1

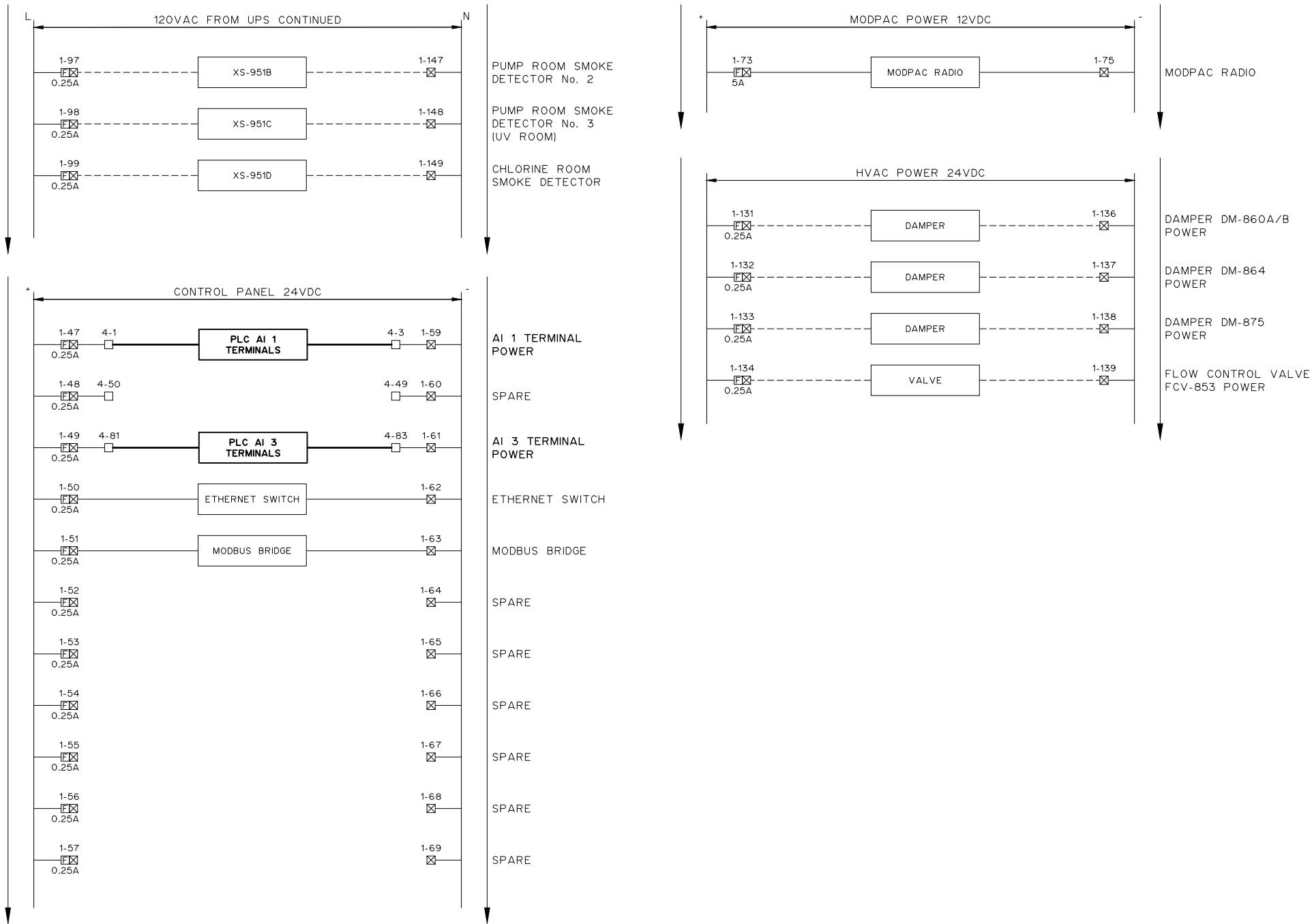
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REGIONAL DISTRICT OF  
OKANAGAN-SIMILKAMEEN  
NARAMATA WTP PLC UPGRADES  
ELECTRICAL  
NARMATA WTP PLC  
CONTROL PANEL POWER 1 OF 2

DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E1.2



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ISSUE	YY-MM-DD	REVISION

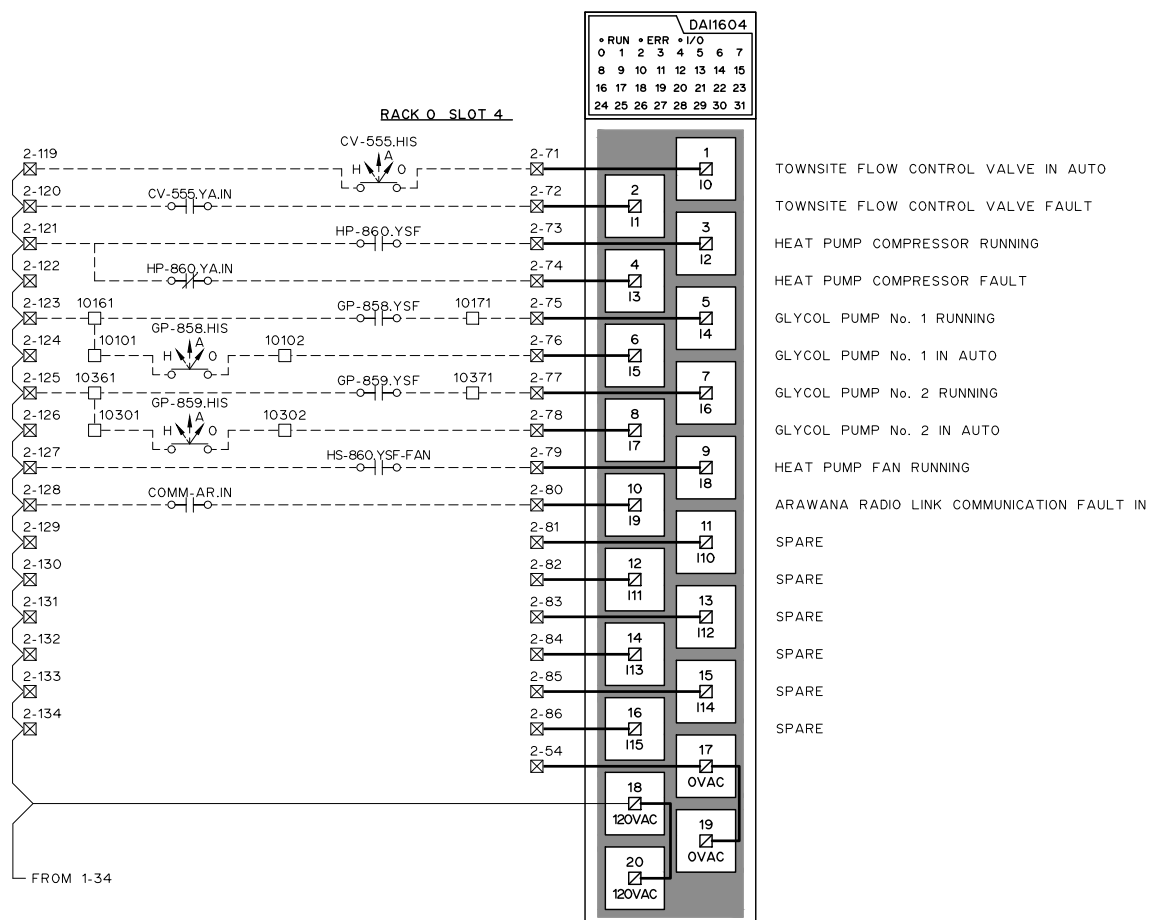
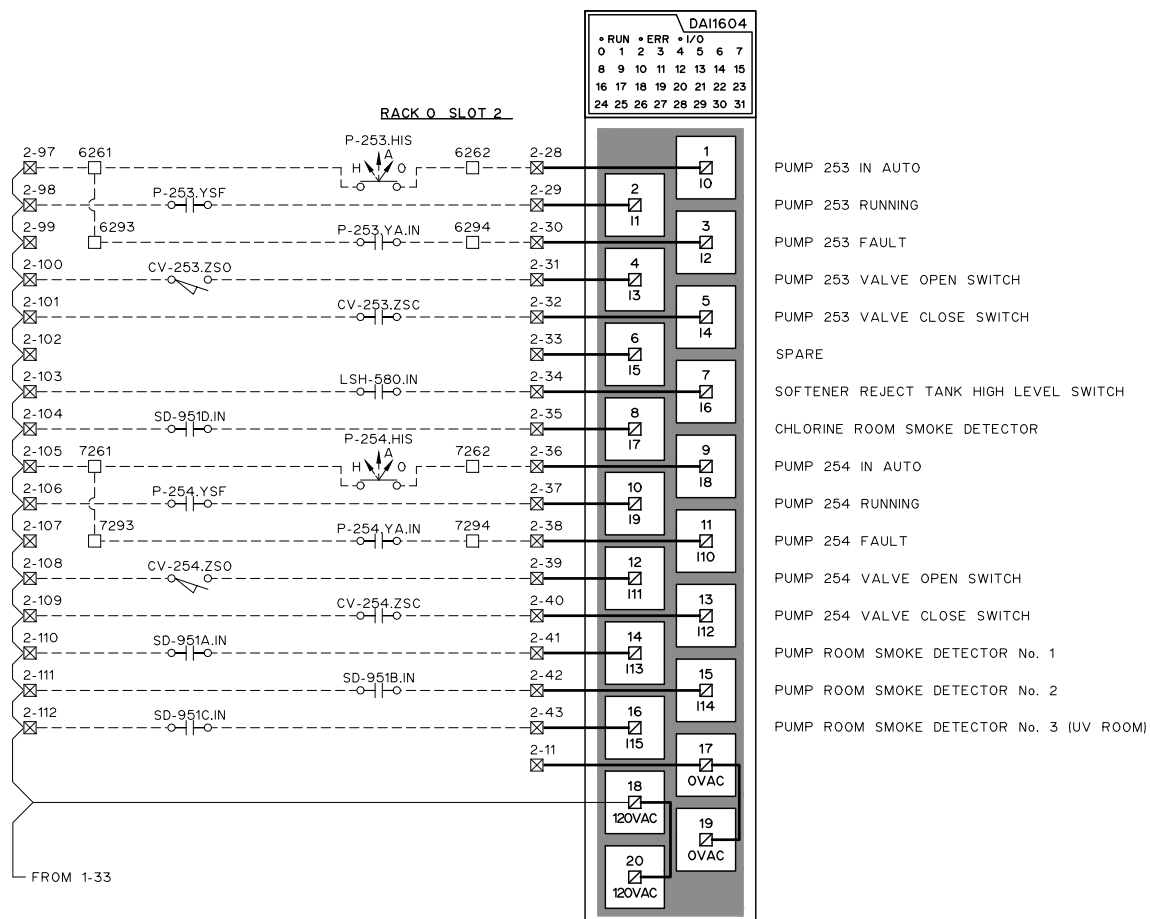


REGIONAL DISTRICT OF  
OKANAGAN-SIMILKAMEEN

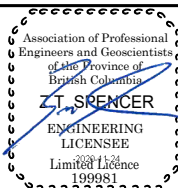

NARAMATA WTP PLC UPGRADES  
ELECTRICAL  
NARMATA WTP PLC  
CONTROL PANEL POWER 2 OF 2

DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E1.3

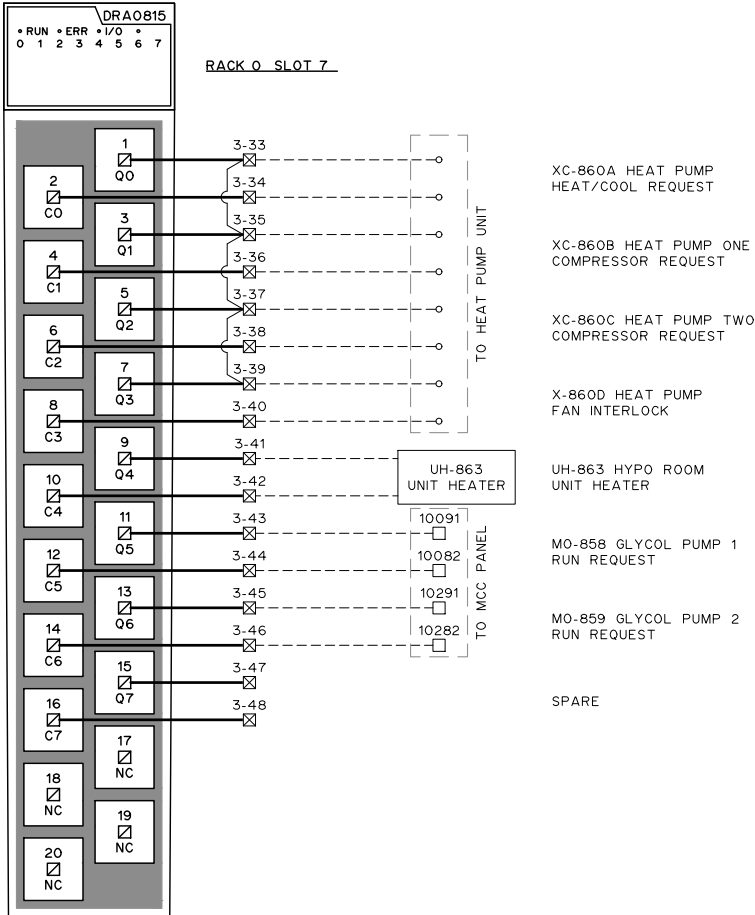
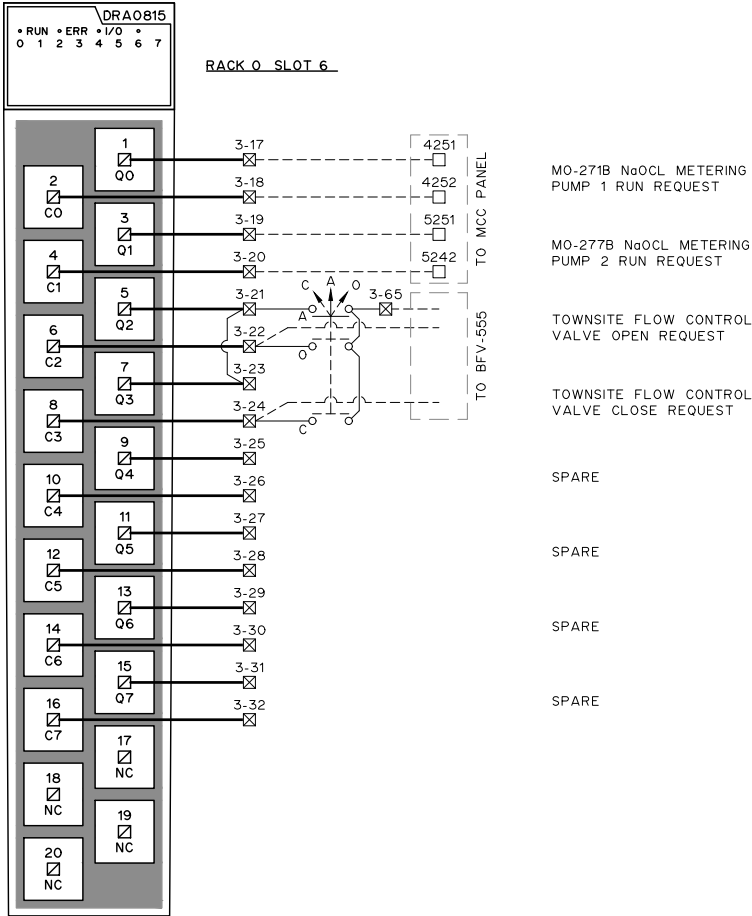
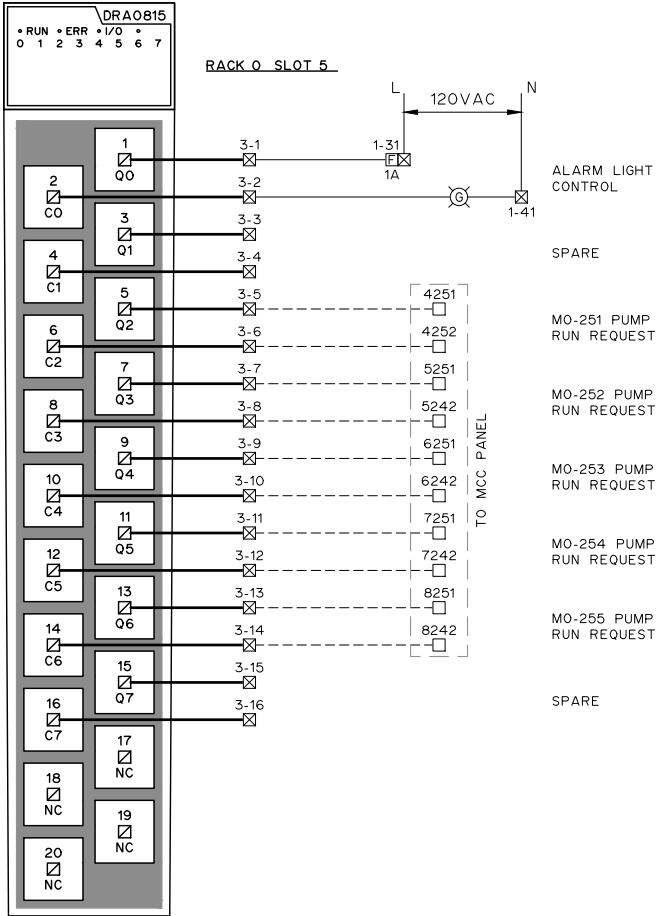




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1	20-11-23	FOR TENDER
ISSUE	YY-MM-DD	REVISION
		
		
REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN		
NARAMATA WTP PLC UPGRADES ELECTRICAL		
NARMATA WTP PLC		
PLC IO 1 OF 4		
DESIGNED	N.D.S., Z.T.S.	JOB 9796-003-00
DRAWN	N.O.W.	SCALE
DATE	NOVEMBER 2020	DRAWING E1.4





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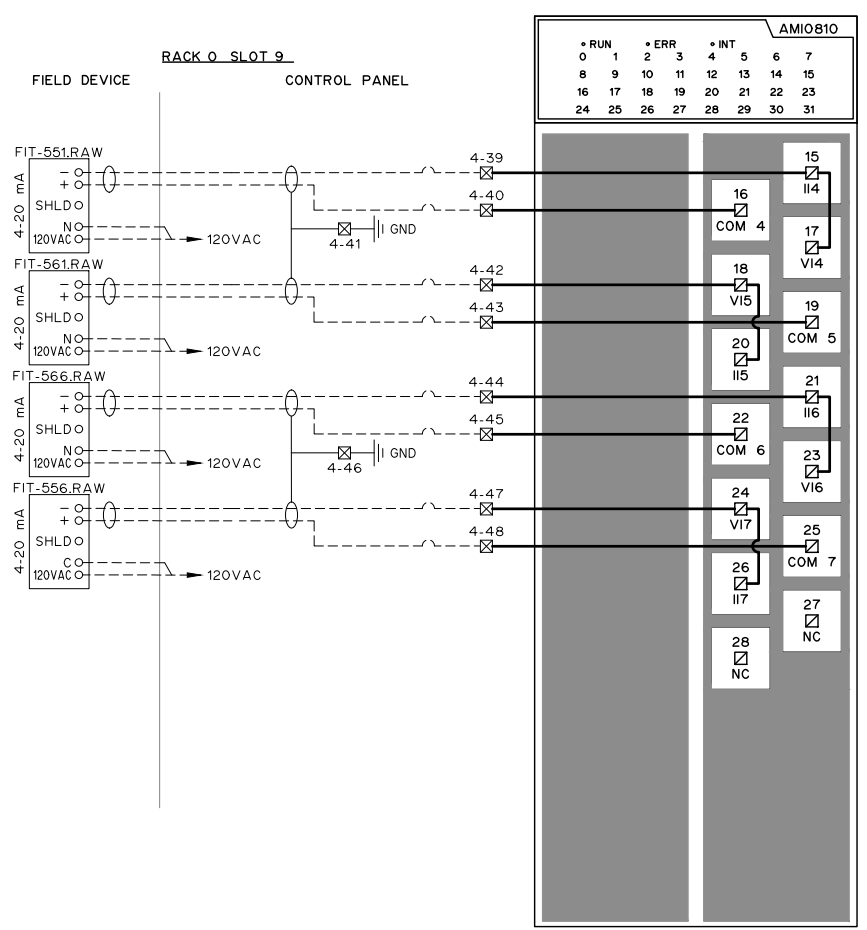
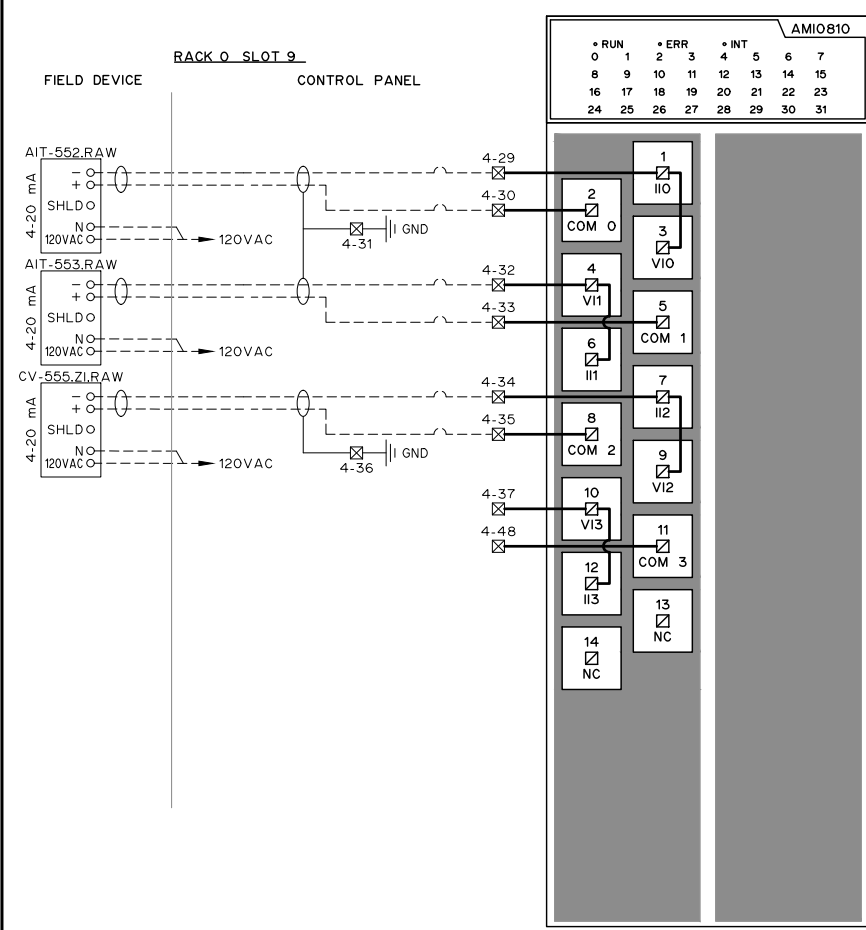
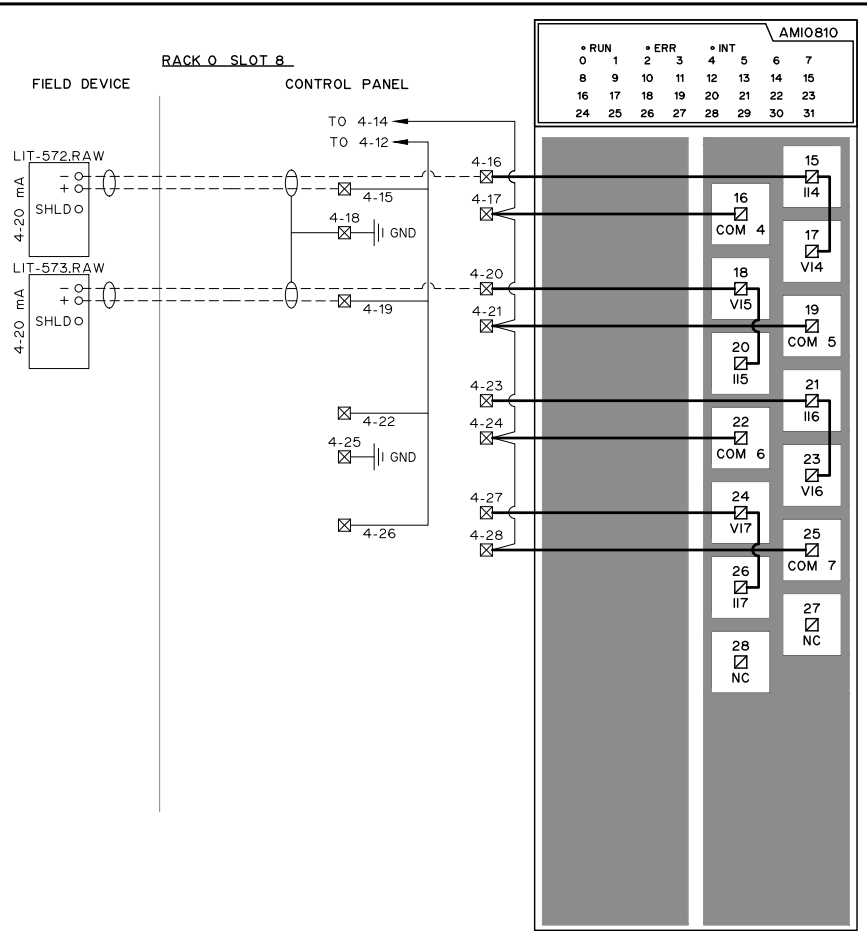
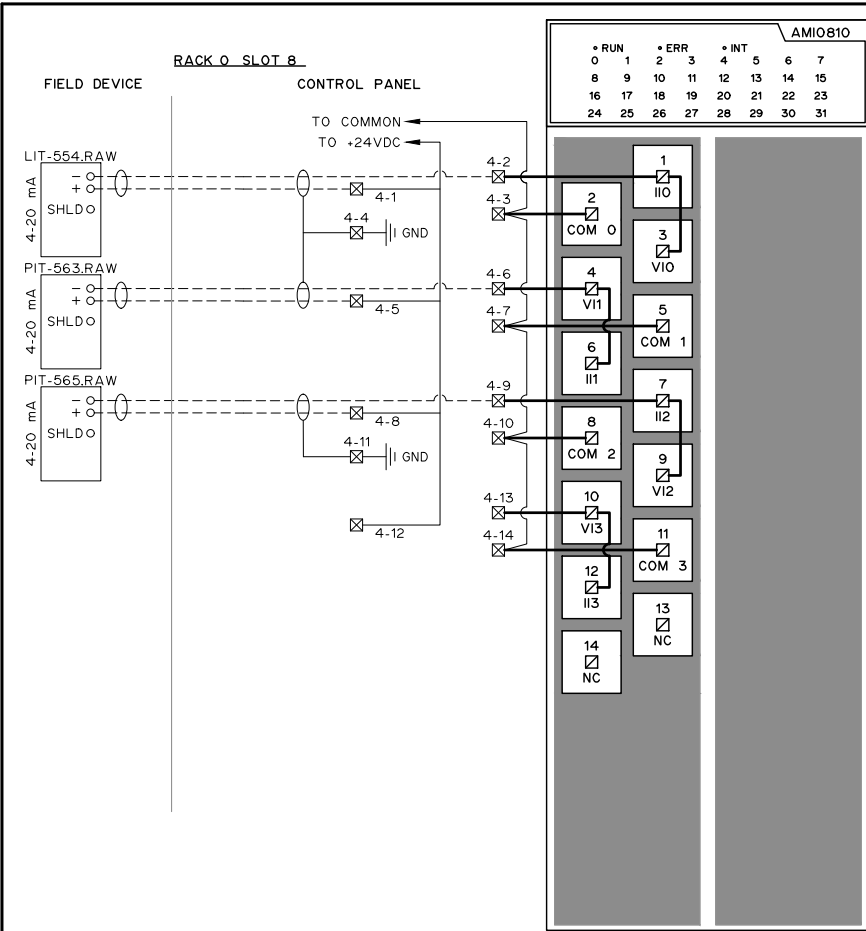
1	20-11-23	FOR TENDER
ISSUE	YY-MM-DD	REVISION



REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN


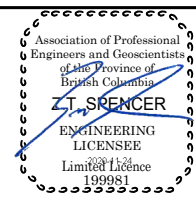
NARAMATA WTP PLC UPGRADES  
ELECTRICAL  
NARMATA WTP PLC  
PLC IO 2 OF 4

DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E1.5



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1	20-11-23	FOR TENDER
ISSUE	YY-MM-DD	REVISION



**REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN**

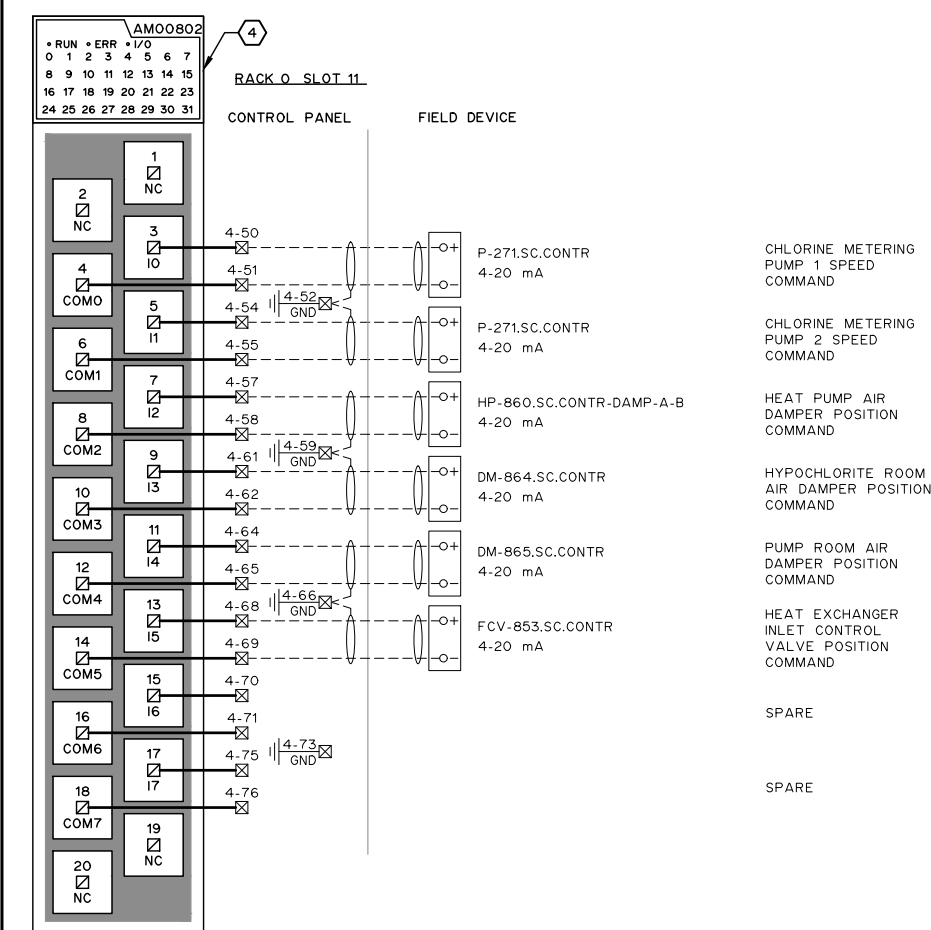
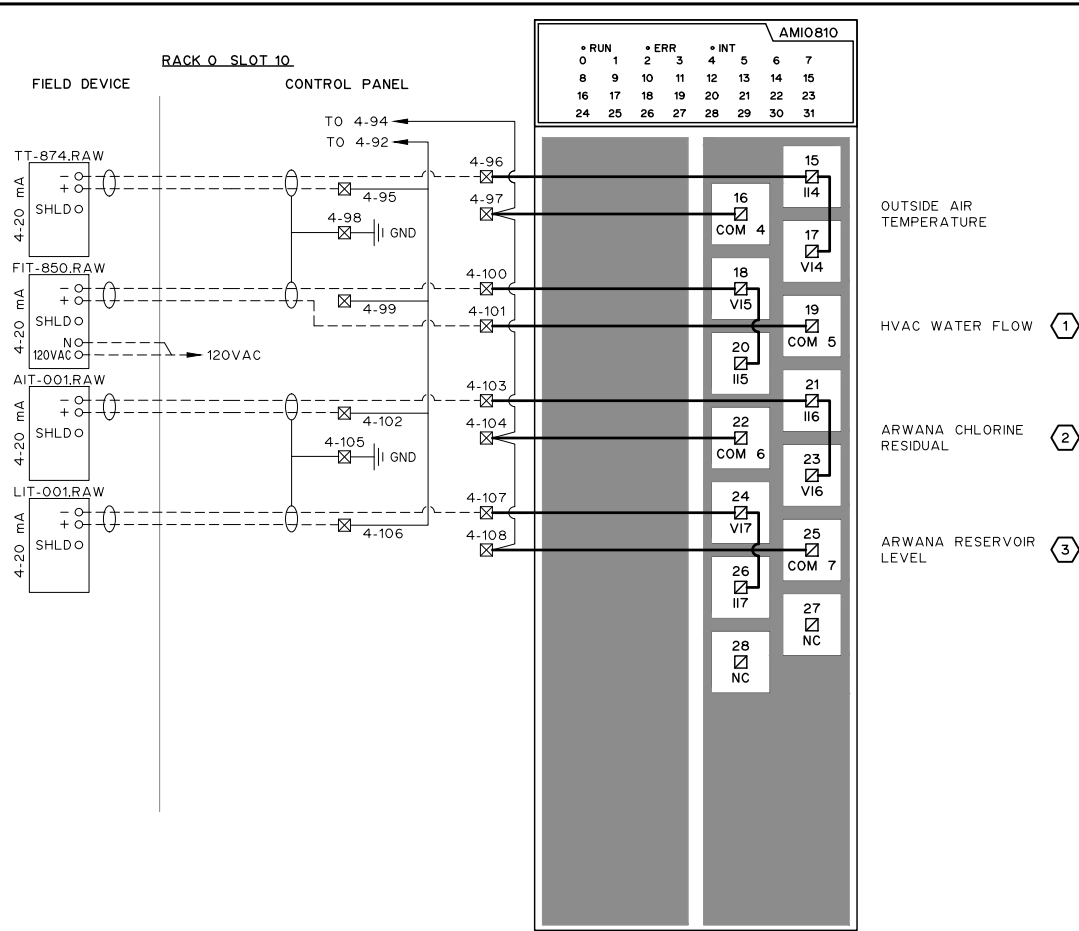
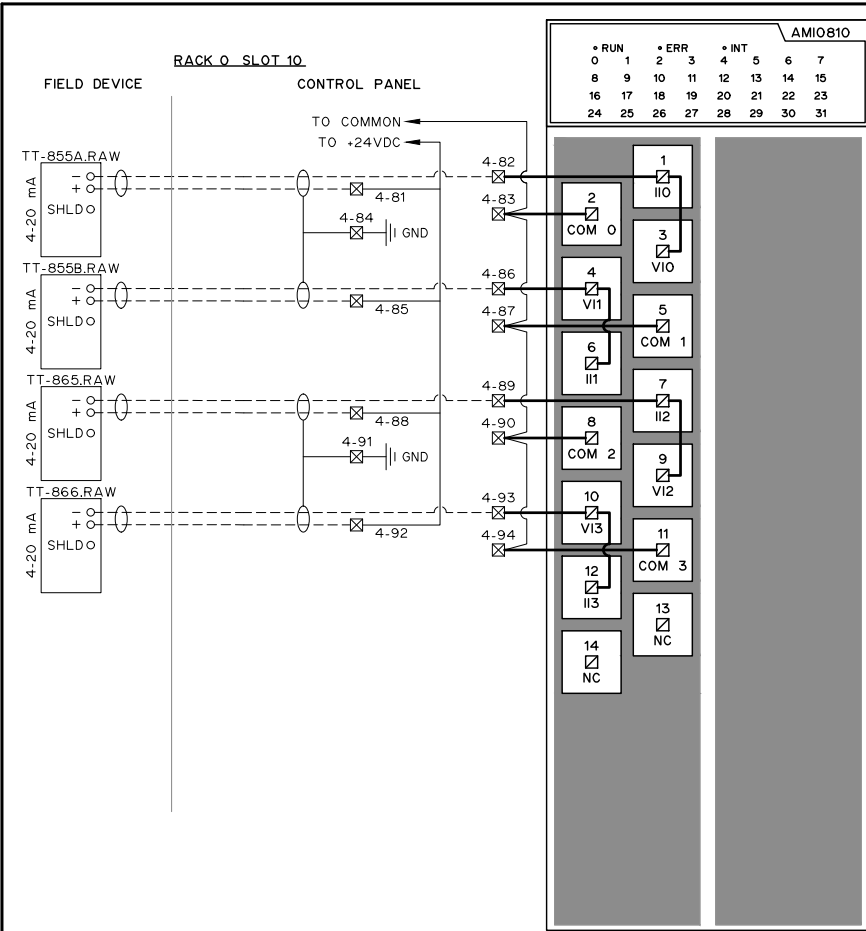
**NARAMATA WTP PLC UPGRADES**

**ELECTRICAL**

**NARMATA WTP PLC**

**PLC IO 3 OF 4**

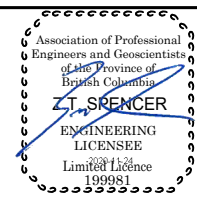
DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E1.6



- KEY NOTES:
- FIT-850 TO BE RE-WIRED AS FOLLOWS:
    - FIELD WIRE ON 4-109 TO 4-100
    - FIELD WIRE ON 4-110 TO 4-101
    - FIELD WIRE ON 4-111 TO 4-98
    - REMOVE JUMPER FROM 4-97 TO 4-101
  - AIT-001 TO BE RE-WIRED AS FOLLOWS:
    - FIELD WIRE ON ??? TO 4-102
    - FIELD WIRE ON ??? TO 4-103
    - FIELD WIRE ON ??? TO 4-104
    - FIELD WIRE ON ??? TO 4-105
  - LIT-001 TO BE RE-WIRED AS FOLLOWS:
    - FIELD WIRE ON ??? TO 4-106
    - FIELD WIRE ON ??? TO 4-107
    - FIELD WIRE ON ??? TO 4-108
    - FIELD WIRE ON ??? TO 4-105
  - ANALOG OUTPUT WAS WIRED WITH EXTERNAL 24VDC POWER. NEW ANALOG OUTPUT CARD IS INTERNALLY POWERED. CONTRACTOR TO VERIFY THAT WIRING MATCHES DRAWINGS AND THAT ALL UNNECESSARY COMPONENTS (JUMPERS) ARE REMOVED. JUMPERS TO BE REMOVED INCLUDE BUT NOT LIMITED TO:
    - 1-48 TO 4-50
    - 4-50 TO 4-54
    - 4-54 TO 4-57
    - 4-57 TO 4-61
    - 4-61 TO 4-64
    - 4-64 TO 4-68
    - 4-68 TO 4-71
    - 4-71 TO 4-75

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

1	20-11-23	FOR TENDER
ISSUE	YY-MM-DD	REVISION



REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

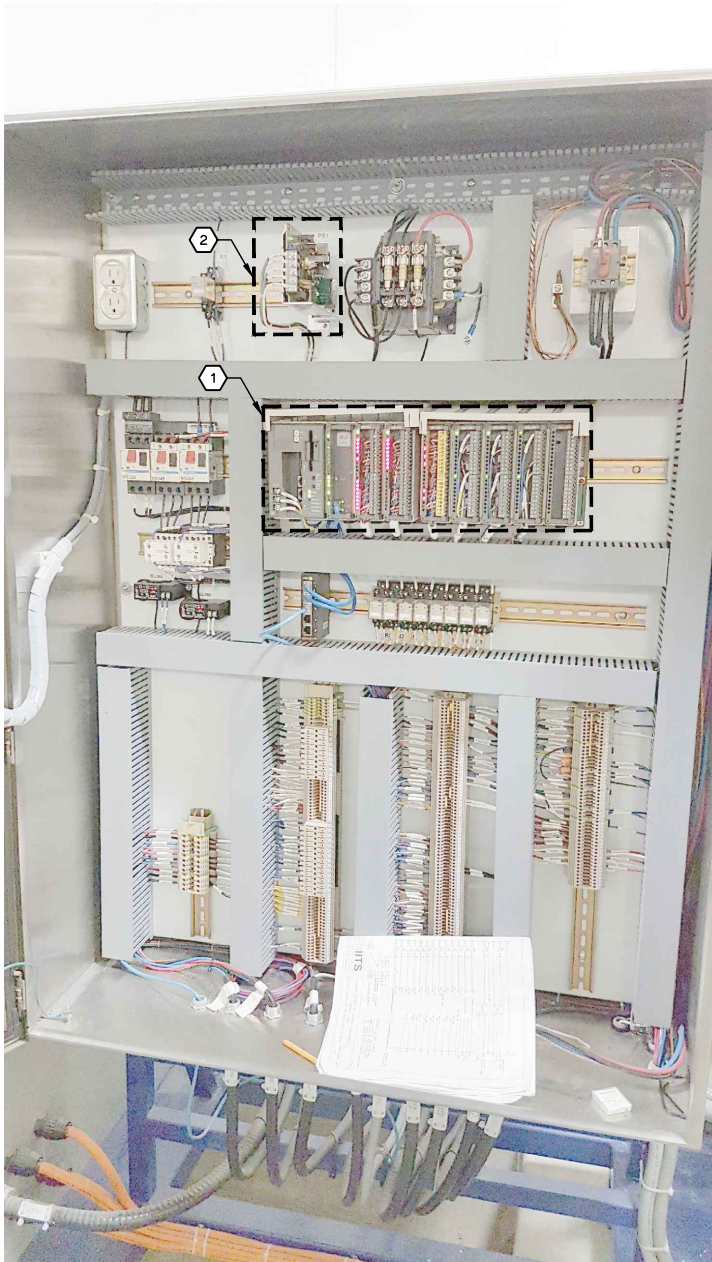
NARAMATA WTP PLC UPGRADES

ELECTRICAL

NARMATA WTP PLC

PLC IO 4 OF 4

DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E1.7

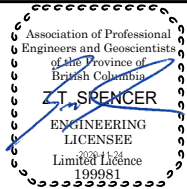


**EXISTING ENCLOSURE**  
NTS

- KEY NOTES:
1. PLC TO BE REPLACED WITH OWNER PROVIDED M340 PLC. EXISTING PLC TERMINAL BLOCKS TO BE RE-USED WITH NEW PLC TERMINAL BLOCK ADAPTERS. ALLOW FOR ONE DAY SWITCH OVER AND COMMISSIONING ASSISTANCE.
  2. REPLACE 24VDC POWER SUPPLY AS PER SPECIFICATIONS.

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REGIONAL DISTRICT OF  
OKANAGAN-SIMILKAMEEN

NARAMATA WTP PLC UPGRADES  
ELECTRICAL  
NARAMATA HYPO GENERATION PLC  
CONTROL PANEL LAYOUT

DESIGNED	N.D.S., Z.T.S.	JOB	9796-003-00
DRAWN	N.O.W.	SCALE	
DATE	NOVEMBER 2020	DRAWING	E2.1