



**REQUEST FOR TENDER
FOR THE PROVISION OF CONSTRUCTION SERVICES FOR
APEX ROAD CROSSWALK**

BID CALL: January 4, 2023

BIDS DUE: January 25, 2023 @ 3:00 p.m.

2022-RFT-033

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SECTION A – TENDER CALL

1. INTRODUCTION

- 1.1 The City of Iqaluit Department of Public Works and Engineering (the City) is issuing a Request for Tender (RFT) for qualified Proponents to provide construction services as further outlined in this RFT document. The purpose and objective of this project is to install a signalized pedestrian cross walk (PXO Type C) at the intersection of Apex road and Queen Elizabeth, near the entrance to the Qikiqtani General Hospital, including all signage, pavement markings and reinstatement of existing roads. The Contractor will coordinate with QEC to install new wooden poles for lighting and power supply for the new crosswalk.

2. BACKGROUND

2.1 Location:

Iqaluit is the capital of Nunavut and is located at the south end of Baffin Island, Frobisher Bay 64°31'N latitude and 68°31'W longitude. Access to Iqaluit is provided by regular scheduled commercial aircraft year-round, snowmobile trails from other Baffin Island communities in the winter, and sealift from the port of Montreal in the summer.

2.2 Geology and Terrain:

Iqaluit's location is above the tree line and within the continuous permafrost zone of Canada. The region generally consists of glacially scoured igneous/metamorphic terrain. In some locations, a thin layer of organic material is found.

2.3 Climate:

Iqaluit has an Arctic climate with January and July high and low mean temperatures of -21.5° C/ -29.7°C (high/low) and 11.4° C/3.7° C (high/low) respectively. The annual precipitation is made up of 19.2 cm of rainfall and 255.0 cm of snowfall. The prevailing winds are northwest at 16.7 km/hr.

3. TENDER CALL

- 3.1 Proponents must submit their Tenders by electronic bid submission only, through MERX Canadian Public Tenders. MERX can be accessed via the following website link – <https://www.merx.com/>. Tenders must address tenders to:

City of Iqaluit
Att: Sumon Ghosh
Director of Engineering and Capital Planning
901 Nunavut Drive, P.O. Box 460
Iqaluit, Nunavut, X0A 0H0

- 3.2 Tenders are required to conform to the conditions below. For further instructions on how to submit an electronic bid through MERX, refer to the MERX Electronic Bid Supplier Guide, via the following link – <https://marketing.merx.com/Support/EBSGuide.pdf>. Alternatively, you can contact MERX customer service at 1-800-964-6379.
- 3.3 Bidders must obtain a unique PIN number from MERX in order to upload electronic bid submission documents. It is important to keep this PIN number in a permanent location as it will be required each time you wish to submit a bid response to a call to tender.
- 3.4 See Section 27.4 for date and time that Electronic Tenders are to be received.
- 3.5 The final decision on whether to accept late Bids is at the City's discretion.

END OF SECTION

SECTION B – TENDER CONDITIONS

1. SUBMISSION REQUIREMENTS

- 1.1 The Tenderer shall complete all documents pertaining to this Contract in ink or in type.
- 1.2 If the Tenderer is a corporation, an authorized officer of the corporation shall sign and seal the Form of Tender.
- 1.3 If the Tenderer is a partnership, a minimum of two partners shall sign the Form of Tender and signatures shall be witnessed.
- 1.4 If the Tenderer is a sole proprietorship, the sole proprietor shall sign the Form of Tender and the signature shall be witnessed.
- 1.5 The Tenderer shall submit its Tender by the date and time specified in Part I of the Tender.
- 1.6 The Tenderer shall submit to the City in their complete bid submission:
 - .i Completed Form of Tender Form, which includes:
 - .a Appendix A – Consent of Surety.
 - .b Appendix B – Cost Submission Form.
 - .ii Bid bond.

Failure to submit the required items identified in (ii) and (iii) may present a Major or Minor Irregularity on the bid. Refer to 1.7 and 1.8 on how Major and Minor Irregularities are to be addressed. The City shall be the sole judge of whether or not a Tender contains irregularities.

- 1.7 Bidders will be automatically disqualified for any Major Irregularities on their bid submission. Major Irregularities are defined as deviations from the competitive procurement process request that affects the price, quality, quantity or delivery, and is material to the award.
- 1.8 Tender irregularities that are Minor Irregularities will be handled in the first instance by conferring with the Tenderer to seek clarification. Minor Irregularities are defined as deviations from the competitive process request, which affects form, rather than substance. The effect on the price, quality, quantity or delivery is not material to the award. The bidder will be given the opportunity to adjust the irregularity and continue in the process. However, if an unsatisfactory irregularity remains after consulting with the Tenderer, the Tenderer may be disqualified.

- 1.9 The Tenderer shall submit electronic files through MERX for both their Security Deposit and Consent of Surety, alongside the electronic tender submission.
- 1.10 The successful Tenderer shall submit to the City the following documents within five (5) business days of the day the City notifies the successful Tenderer that the documentation should be sent to the City:
 - .i Valid City of Iqaluit Business License.
 - .ii Form of Tender forms, which include
 - .a Appendix C – Subcontractors List.
 - .b Appendix D – Equipment List.
 - .c Appendix E – Product Suppliers List.
 - .d Appendix F – Labour & Equipment Rates.

2. INQUIRIES AND AMENDMENTS

- 2.1 All inquiries concerning this RFT are to be directed by email only to:

Richard Sithole
Senior Project Manager
E: Richard.Sithole@colliersprojectleaders.com
- 2.2 Refer to Section 27.4 for the deadline for submitting inquiries.
- 2.3 Written addendums issued as part of this RFT, in response to inquiries, will be posted publicly on the City's website and on MERX. Verbal explanations or instructions will not be binding.
- 2.4 Tenderers assume all risk of delivery of amendments. Without limiting the foregoing, the City shall not be held liable for any claim, demand or other action should a transmission be interrupted, not received in its entirety, received after the Closing Time, received by another electronic means other than specified through MERX, or for any other reason over which the City does not have control.

3. SECURITY DEPOSIT

- 3.1 Every submission shall be accompanied by a security deposit payable to the City of Iqaluit, in an amount not less than 10% of the total Tender amount. The security deposit shall be in the form of one of the two following security deposit options and shall be submitted with the tenderer's electronic tender submission.:

3.2 OPTION #1: A Digital Bid Bond

- .i Tenderers shall submit a copy of the Digital Bid Bond and follow the submission instructions as stated above in Section 1.9.
- .ii If Tenderer's are using this option, the Tenderer and the Tenderer's Surety should refer to the digital bonding information on Surety Association of Canada's website. Information at this site includes:
 - .a A list of third parties that provide online surety digital bond services, such as Mobile Bonds or Xenex. The City does not endorse or promote any third-party digital bond service provider.
 - .b An Industry Checklist which digital bonds provided should meet.
- .iii The Digital Bid Bond shall be digitally verifiable. The results of the digital verification process shall provide a clear and immediate indication that the document received is the true document executed and that the content has not been changed or altered.
- .iv All instruction details for performing the digital verification of the bond should be included with the uploaded bond and be clear and concise.

3.3 OPTION #2: Scanned Paper Bid Bond / Certified Cheque, Bank Draft, Money Order (PDF Format)

- .i Tenderer's shall scan and attach a copy of the paper Bid Bond, Certified Cheque, Bank Draft or Money Order and follow the submission instructions as stated above in 1.9. Tenderer's will be required to provide to the City the original Bid Bond, Certified Cheques, Bank Draft, and/or Money Order that were scanned and attached with the tender submission within 72 hours of tender close. Failure to provide the above original document(s) or to enter into a contract may result in the tenderer being barred from future tender opportunities for the City of Iqaluit for an indeterminate period of time.
- .ii If an alternative Bid Bond is used, it is recommended that tenderer's request either an ink seal from their Surety or that they trace over the embossed seal prior to scanning to allow for the seal to be visible to the City.

3.4 Bid bonds shall be in the name of the City of Iqaluit as obligee and signed and sealed by the Tenderer and by a surety licensed to conduct business as a surety in Nunavut.

- 3.5 The City shall not pay interest on security deposits.
- 3.6 Bid bonds shall be Bid Bond Form CCDC Document No. 220, latest edition, effective until sixty (60) business days after the Closing Date.
- 3.7 Security deposits will be returned after delivery to the City of the required performance bond and labour and material payment bond by the successful Tenderer.
- 3.8 If the Contract is not awarded, all security deposits will be returned with reasonable promptness after such decision is made by the City.
- 3.9 After all executed contracts and bonds are received, and the contract award is made, the successful tenderer and the contract value will be posted on the MERX website. After contract award, the bid deposit of the successful tenderer and all tenderers shall be null and void.

4. CONSENT OF SURETY

- 4.1 Tenderers must submit with the Bid and Bid Bond, a “Consent of Surety,” stating that the surety is willing to supply the performance bond and labour and material payment bond as specified.
- 4.2 A “Consent of Surety” shall be in one of the two following options and shall be submitted with the Tenderer’s submission and as instructed above in 1.9.
 - i. The City’s “Consent of Surety” Form provided in Appendix A.
 - ii. Other “Consent of Surety” Form used by a Surety company and authorized by law to do business in the Territory of Nunavut, and acceptable to the City.

5. PERFORMANCE ASSURANCE

- 5.1 The accepted Bid shall provide security (by way of bonds or a security deposit) as stated in the Contract Documents.
- 5.2 The cost of all security shall be included in the Tender prices.

6. ORDER OF PRECEDENCE

- 6.1 The following order of precedence will apply:

Order of Precedence
Issued Addenda
SERVICE AGREEMENT
PROCUREMENT AND CONTRACT REQUIREMENTS
SUPPLEMENTAL CONDITIONS
GENERAL CONDITIONS
GENERAL REQUIREMENTS
TERMS OF REFERENCE/ SPECIFICATION
DRAWINGS

7. TERMS AND CONDITIONS

- 7.1 Submission of a Bid constitutes acknowledgement that the Tenderer has read and agrees to be bound by all the terms and conditions of this RFT.
- 7.2 The City will not make any payments for the preparation of a response to this RFT. All costs incurred by a Tenderer will be borne by the Tenderer.
- 7.3 This is not an offer. The City does not, by virtue of this Tender call, commit to an award of a Bid, nor does it limit itself to accepting the lowest price or any Bid submitted, but reserves the right to award this Bid in any manner deemed to be in the City's best interest.
- 7.4 Tenderers may amend their Bid at any time prior to the closing date time. Tenderers may not amend their Bid after the closing date time.
- 7.5 The City has the right to cancel this RFT at any time and to reissue it for any reason whatsoever, without incurring any liability and no Tenderer will have any claim against the City as a result of the cancellation or reissuing of the RFT.
- 7.6 The City will not consider any Bid that is delivered to any address or in any manner other than that provided in Part I Tender Call of this RFT.
- 7.7 If a contract is to be awarded as a result of this RFT, it will be awarded to the Tenderer whose Bid for each service, in the City's opinion, provides the best potential value to the City and is capable in all respects to perform fully the contract requirements and has the integrity and reliability to assure performance of the contract obligations.
- 7.8 If the City decides to award a contract based on a submission received in response to this RFT, the Successful Tenderer(s) will be notified of the intent to award in writing, and the subsequent execution of a written agreement shall constitute the making of a Contract. Tenderers will not acquire any legal or equitable rights or privileges whatsoever until a Contract is signed by both parties.

- 7.9 Any resulting contract will be in the form of the City’s standard “City of Iqaluit Services Agreement” and it will contain the relevant provisions of this Request for Tenders, the accepted bid as well as such other terms as may be mutually agreed upon, whether arising from the accepted bid or as a result of any negotiations prior or subsequent thereto. The City reserves the right to negotiate modifications with any Tenderer who has submitted a Bid.
- 7.10 A copy of the Services Agreement is included in RFT.
- 7.11 Any amendment made by the City to the Request for Tender will be issued in writing and posted onto the bidding platform in accordance with Section 2.
- 7.12 The Bid and accompanying documentation submitted by the Tenderers are the property of the City and will not be returned. Bid bonds will be returned to all unsuccessful Tenderers.
- 7.13 Tenderers must acknowledge receipt of any addenda issued by the City in their Bid on the Section C – Form of Tender document.
- 7.14 Tenderers shall disclose in their Bid any actual or potential conflicts of interest and/or existing business relationships it may have with the City, its elected or appointed officials or employees. The City may rely on such disclosure.
- 7.15 Tenderers and their agents will not contact any member of the City Council, City Staff or City Consultants with respect to this RFT, other than the City Representative named in Part I Tender Call, at any time prior to the award of a contract or the cancellation of this RFT.
- 7.16 If an arithmetical error is identified in the submitted Bid between any individual price and the price extension (e.g. Unit Price x Quantity of Units), the individual price shall govern. The price extension and the total Bid amount will be corrected accordingly.
- 7.17 For contracts that include multi-phased work which spans more than the current fiscal year, authorization to proceed with work phases that are to be completed in future years is conditional upon approval of capital spending by the City of Iqaluit Council for each future year. Contracts will only be executed for work that has approved funding under the current fiscal budget.

8. VALIDITY OF OFFER

- 8.1 Bids shall remain open for acceptance for a period of not less than sixty (60) business days from the closing date of this RFT.

9. TENDER INELIGIBILITY

- 9.1 Bids that are unsigned, improperly executed, submitted to a location or in a manner other than specified in this RFT, incomplete, conditional, illegible, obscure or contain arithmetical errors, additions not called for, reservations, qualifications, erasures, alterations, or irregularities of any kind, or which are otherwise not completed or submitted in strict compliance with the Instructions to Tenderers, may be rejected by the City whether they constitute as a Major or Minor Irregularity.
- 9.2 Notwithstanding anything to the contrary herein, the City may in its sole discretion elect to retain any such Bid for consideration and may waive any or all of the foregoing, on such terms or conditions as the City may consider appropriate, even if any of the foregoing would otherwise render the Bid null and void and the Bid may be considered in the same manner as Bids that fully conform to the requirements of the Tender Documents without qualification.

10. REVIEW AND ACCEPTANCE OF BID

- 10.1 Upon receipt of the Bids, the City in its discretion may elect to conduct a post tender meeting with one or more Tenderers to discuss in detail their respective bid submission and such other items as the City may consider appropriate or necessary without invalidating the procurement process.
- 10.2 Before award of the Contract, the Tenderer may be required to provide specific information with respect to its legal and or financial status.
- 10.3 THE LOWEST OR ANY TENDER WILL NOT NECESSARILY BE ACCEPTED.
- 10.4 Notwithstanding any custom of the trade to the contrary, the City reserves the right to reject the lowest Bid, even if the lowest Bid is a compliant Bid, accept any Bid or part thereof, negotiate any aspect of any Bid, advertise for new Bids, negotiate a contract as the City deems to be most advantageous to the City's interest without incurring any liability, and to award a contract to whomever the City in its sole and absolute discretion deems appropriate and solely in the best interest of the City and no Tenderer will have any claim against the City as a consequence. Unless required otherwise, the City shall not, at any time, be required to disclose any information to the Tenderers regarding the City's consideration and evaluation of Bids.
- 10.5 Following acceptance by the City, a written Notice of Award will be issued to the successful Tenderer. If the Tenderer fails for any reason to execute and return the Articles of Agreement within seven (7) working days of receipt for signature of the Articles of Agreement from the City, or fails to provide the performance bond and labour and material bond or other security deposit stipulated in GC 11 or to

satisfy such other terms and conditions specified hereunder within any period specified, or such extension of time as may be granted by the City, then the City reserves the right to terminate the Tenderer's right to complete the Contract and to award the Contract to whomever the City considers appropriate. The bid bond shall forthwith become payable.

- 10.6 The City shall not be obligated in any manner to the successful Tenderer whatsoever until the Contract has been awarded and the Contract has been duly executed by the parties.
- 10.7 If the City receives no Bids satisfactory to the City in its sole discretion, the City reserves the right in its sole discretion to negotiate a contract for the whole or any part of the Work with any one or more persons whatsoever, including any one or more of the Tenderers, or to postpone or cancel this Bid and then issue a new tender, or to cancel or postpone some or all of the Work.
- 10.8 The City shall not, under any circumstances, be responsible for any costs, expenses, loss, damage or liabilities, whether direct, indirect, consequential or economic in nature, incurred by a Tenderer as a result of, in connection with or incidental to:
 - .i The tendering of the work;
 - .ii Costs incurred for the preparation of this Bid;
 - .iii The acceptance or rejection of any Bid; or
 - .iv The exercise by the City of its rights under this RFT.
- 10.9 By participation in the tendering process, the Tenderer on its own behalf and on behalf of all firms, corporations and individuals comprising the Tenderer, agrees that none of the City or its directors, officers, employees, agents and other representatives shall be liable to any Tenderer, or any firm, corporation or individual comprising the Tenderer, including in contract, tort, statutory duty, duty of fairness, duty of care, law, equity or otherwise, for any claims, direct or indirect, whether for costs, expenses, losses or damages, or loss of anticipated profits, or for any matter whatsoever, incurred in preparing and submitting a Bid, or negotiations of a Contract, or in any way arising in connection with the Bid Documents. The Tenderer further agrees on its own behalf and on behalf of all firms, corporations and individuals comprising the Tenderer, that the award of the Contract is in the sole discretion of the City and in no event shall the Tenderer or any firms, corporations or individuals comprising the Tenderer seek injunctive or other relief to prevent or delay the award of the Contract or the performance of any Work or services in relation thereto.

11. UNBALANCED TENDERS

- 11.1 The Tenderer shall not submit an unbalanced Tender.
- 11.2 The City shall have the right to:
 - .i Deem a Tender to be unbalanced; and
 - .ii Reject a Tender which may be, in its opinion, unbalanced.

12. COLLUSION

- 12.1 The Tenderer shall not engage in collusion of any sort and, in particular, shall:
 - .i Ensure that no person or other legal entity, other than the Tenderer, has any undisclosed interest in the Tenderer's Tender; and
 - .ii Prepare its Tender without any knowledge of, comparison of figures with or arrangement with any other person or firm preparing a Tender for the same work.

13. RIGHT TO ACCEPT OR REJECT TENDERS

- 13.1 Notwithstanding any other provision in this Contract, the City shall have the right to:
 - .i Accept any Tender;
 - .ii Reject any Tender; and
 - .iii Reject all Tenders.
- 13.2 Without limiting the generality of 13.1, the City shall have the right to:
 - .i Accept an irregular Tender;
 - .ii Accept a Tender which is not the lowest Tender; and
 - .iii Reject a Tender even if it is the only Tender received by the City.
- 13.3 Acceptance of the Tender shall occur at the time the City awards the Tender and not necessarily at the time the award is communicated to the successful Tenderer.

14. CONTRACT DOCUMENTS

- 14.1 The Tenderer shall obtain and review all Contract Documents as listed in the Form of Tender and all Addenda issued by the City pertaining to this Contract.

15. COMMENCEMENT AND COMPLETION OF WORK

- 15.1 The Tenderer, in submitting the Bid, agrees that the Tenderer can complete the Work by the date for completion stated in the Tender Form.

16. OMISSIONS, DISCREPANCIES AND INTERPRETATIONS

- 16.1 Tenderers finding discrepancies or omissions in the drawings or terms of reference or having doubt as to the meaning or intent thereof, shall at once notify the Purchasing Coordinator who will, if necessary, send written instructions or explanations to all Tenderers.
- 16.2 Oral interpretations made to any Tenderer shall not affect a modification of any provision of the Tender Documents. Only addenda written and issued by the City can be considered.
- 16.3 The City reserves the right in its sole discretion at any time, and for whatever reason to, by Addendum, modify, amend or otherwise change the Tender Documents. Any such Addendum shall be issued in writing and shall be expressly identified as an Addendum to these Tender Documents. All such changes shall become part of the Tender Documents and their effects shall be reflected in the Tender prices. The City also reserves the right in its sole discretion to cancel this Tender at any time.

17. IRREVOCABILITY OF OFFER

- 17.1 The Tenderer shall not revoke its offer until after the expiration of sixty (60) business days after the opening of Tenders by the City.
- 17.2 If the Tenderer revokes its offer prior to the expiration of sixty (60) business days after the Tender opening, the Tenderer shall forfeit its Tender security deposit, but this shall not prohibit the City from pursuing and other legal remedy which it may have.

18. ALTERNATIVES & EQUALS

- 18.1 Where requested in this RFT, Tenderers may propose alternatives or equals to the stated scope of work. In case alternate or equals are requested in this RFT, the following will apply:

- .i Where the Tender Documents stipulate a particular product, alternatives or equals will be considered by the City up to ten (10) calendar days prior to the Closing Time.
- .ii When a request to substitute an allegedly equal product is made to the City, the City may approve the substitution either as an equal or as an alternative and will issue an Addendum to all Tenderers. If a product is approved as equal, all Tenderers may use that product in place of the specified product. If the product is approved as an alternative, Tenderers shall base their prices upon the specified product and shall indicate in the Bid the change in price which will apply if use of the alternative product is allowed.
- .iii In their submission of alternatives to products specified, Tenderers shall include and allow for any changes required in the Work to accommodate such alternative products. A later claim by the Contractor for an addition to the Contract Price because of changes in the Work necessitated by use of alternative products shall not be considered.
- .iv Where selected products are stipulated in the Tender Documents the Bid shall be based on the use of only these selected products.
- .v Bids with alternative products will not be considered, unless the alternative has been approved by the City and communicated to the Bidders through an Addendum as noted in 18.1(ii). Bids with alternatives that have not been approved by the City will be deemed non-compliant.
- .vi Submissions shall provide sufficient information to enable the City to determine the acceptability of such products.
- .vii Provide complete information on required revisions to other work and products to accommodate each alternative product, and the amount of addition or reduction from Tender prices, including required revisions, for each alternative product.
- .viii Unless a bid for an alternative product is submitted in this manner and later accepted, provide the product specified.

19. PUBLIC OPENING

19.1 A public opening of bids will be completed for this competition.

19.2 The public opening of bids will occur immediately following the closing time stipulated in section 27.4.

19.3 Due to current COVID-19 restrictions, the public opening will be conducted virtually via zoom/ conference call. Bidders are to use the following instructions to participate in the virtual public opening:

- Virtual Public Opening Time: 4:00 p.m., January 25, 2023
- Conference Call #: 1-855-703-8985
- Conference Meeting ID: 336 649 2470

20. TENDER SIGNING

- 20.1 The Bid must be executed under seal by the Tenderer.
- 20.2 If the Tenderer is an individual or a partnership, the Bid shall be executed by the individual or a partner in the presence of a witness and the signatory must show the capacity in which he or she signs (e.g.: “Partner” or “Proprietor”).
- 20.3 If the Tenderer is a corporation, the Bid shall be executed under the seal of the company, affixed in the presence of the authorized officers or two directors.
- 20.4 If the Tenderer is a joint venture, each party to the joint venture shall execute the Bid under seal in the manner appropriate to such party.

21. APPENDICES TO FORM OF TENDER

- 21.1 Tenderers shall complete all Appendices attached to the Form of Tender and submit these with the Tender.

22. PROVISIONAL ITEMS

- 22.1 Provisional items shall mean items for which only very approximate quantities have been included in the tender documents. No work for which "Provisional" items are allowed shall be commenced without written instructions from the City.
- 22.2 Once a Tenderer has been chosen by the City for the Project, it shall be open to the City to accept, reject or negotiate the Tenderer’s bid for any provisional item contained in the Bid. Should the City choose to reject the successful Tenderer’s bid for such provisional work, it shall be open to the City to call for new Bids for this work and the successful Tenderer for the Project may submit a Bid if he so chooses.

23. SUCCESSFUL TENDERER – BONDS

23.1 The successful Tenderer and its surety shall provide:

- .i A performance bond signed and sealed by the Tenderer's surety; and
- .ii A labour and material payment bond signed and sealed by the Tenderer's surety;

Each in the amount of at least fifty percent (50%) of the total Tender price. The cost of Bonds shall be included in the Tender price.

23.2 The surety of the successful Tenderer and the bonds referred to in 23.1 must be originals and shall be to the satisfaction of the City.

24. SUCCESSFUL TENDERER – WORKERS' SAFETY AND COMPENSATION COMMISSION CERTIFICATE OF CLEARANCE

24.1 The successful Tenderer shall provide the City with a valid Workers' Safety and Compensation Commission Certificate of Clearance to the satisfaction of the City.

25. SUCCESSFUL TENDERER – EXECUTION OF ARTICLES OF AGREEMENT

25.1 The successful Tenderer shall execute in accordance with Section 1, in triplicate, the Articles of Agreement provided in the Contract Documents.

25.2 The successful Tenderer shall forward the executed Articles of Agreement to the City.

26. SUCCESSFUL TENDERER – INSURANCE

26.1 The successful Tenderer shall provide the City with an original Certificate of Insurance for each type of insurance coverage required by GC12.3 and any additional coverage specified in the Supplementary Conditions.

26.2 The Contractor shall carry insurance in the amount of at least **Two Million Dollars (\$2,000,000)**

- 26.3 The Contractor shall carry insurance, which names the following as additional insureds:

	Address
<u>City of Iqaluit</u>	<u>901 Nunavut Drive, P.O. Box 460, Iqaluit, NU, X0A 0H0</u>
<u>Colliers Project Leaders</u>	<u>2720 Iris Street, Ottawa, ON, K2C 1E6</u>
<u>Dillon Consulting Limited</u>	<u>334-11th Avenue SE Suite 200 Calgary, Alberta, T2G 0Y2</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

27. SUCCESSFUL TENDERER – TIME FOR COMPLETION

- 27.1 The successful Tenderer shall Substantially Perform the work by Friday, the 6th day of October, 2023 and this shall be the first date for the calculation of Liquidated Damages per Section 28.
- 27.2 The successful Tenderer shall Complete the Work by Friday, the 3rd day of November, 2023 and this shall be the second date used for the calculation of Liquidated Damages as per Section 28.
- 27.3 The successful Tenderer acknowledges that time shall be deemed to be of the essence of the Contract. For the Tenderer's purpose of establishing a scheduled for the Work, it is anticipated that the Contract Award will be complete 30 calendar 31 days after the opening of Tenders by the City, and then the Commence Work Order will be issued 3 business days after the Contract Award is complete. Milestone dates associated with the Contract will be adjusted, when possible, due to any delays caused by the City during the Contract Award and/or issuance of the Commence Work Order.
- 27.4 The Contract general timelines have been identified below. All times are local Iqaluit time.

ACTION	DATE
Opening Date for RFT	January 4, 2023
Deadline for Submitting Inquiries	January 13, 2023
Deadline for Inquiry Response	January 20, 2023
Closing Date for RFT	January 25, 2023, 3:00 p.m.
Public Opening (Call in)	January 25, 2023, 4:00 p.m.

Council Approvals	February 14, 2023
Contract Award Date	February 17, 2023
Commence Work Date	March 1, 2023
Project Kick-Off Meeting	March 3, 2023
Substantial Performance	October 6, 2023
Warranty Start Date	October 6, 2023
Warranty End Date	October 6, 2024
Project Completion	November 3, 2023

28. SUCCESSFUL TENDERER – LIQUIDATED DAMAGES

28.1 Liquidated damages shall be in the amount of:

Five Hundred DOLLARS (\$500) per calendar day beyond the Substantial and Completion Dates, as determined in Section 27.

29. SUCCESSFUL TENDERER – SUBMISSION OF DOCUMENTATION

29.1 The successful Tenderer shall submit the documentation required in 1.1.10 within five (5) business days of the day the City notifies the successful Tenderer that the documentation should be sent to the City.

29.2 If the successful Tenderer fails to comply with 29.1 the City may, in its sole discretion, withdraw its acceptance of the Tender and the Tenderer shall have no recourse whatsoever against the City.

30. SUCCESSFUL TENDERER – COMMENCEMENT OF THE WORK

30.1 The successful Tenderer shall not commence the Work until it has received a Commence Work Order issued by the City.

31. COVID-19 MITIGATION MEASURES (CMM)

31.1 Definitions:

- .i COVID-19 Mitigation Measures (CMM) means measures required to be in compliance with the CMM Guidelines.
- .ii “CMM Guidelines” means all guidelines and regulations published by the Government of Nunavut Department of Health and the Canadian Construction Association *COVID-19 Standardized Protocols for All*

Canadian Construction Sites, Version 4, April 16, 2020 regarding measures to mitigate COVID-19.

- .iii “COVID-19 Change” means any change in the work caused by or attributable to changes in CMM or changes made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction that pertain to the control of COVID-19 that come into force after the time of Bid Closing.

31.2 Instructions to Bidders:

- .i If, in the Owner’s sole opinion, substantial changes to the CMM Guidelines occur within five (5) business days of the Tender Closing, the Owner may adjust the Tender Closing as the Owner deems appropriate to allow for adjustment for these changes.
- .ii By submitting a Bid, the Contractor acknowledges its willingness and ability to execute the Work under the CMM in force as of the Bid Closing.
- .iii The Bidder shall ensure that all of its subcontractors are aware of the CMM and the CMM Guidelines.
- .iv The Bid is to assume that the CMM as of the date of Bid Closing are to be in effect up to and including October 6, 2023, following which the additional scope of work required to meet the Canadian Construction Association COVID-19, *Standardized Protocols for All Canadian Construction Sites, Version 7, April 19, 2021* should be assumed to be substantially eliminated.
- .v The incremental cost of any COVID-19 Change will be addressed as a Claim for Change in Contract Price.
- .vi Notwithstanding the foregoing, the Bidder acknowledges its obligation to adhere to the CMM Guidelines and any subsequent revision as part of its responsibility for health and safety on the Work Site.

31.3 Site-Specific Health and Safety Plan

- .i The Site-Specific Health and Safety Plan, as defined in Section K of the General Requirements (PART VI), is to specifically define CMM, a COVID Safety Plan, and is to comply with CMM Guidelines. The Site-Specific Health and Safety Plan is to be updated promptly after the CMM Guidelines are updated.

- .ii The Site-Specific Health and Safety Plan must consider best practices and requirements for construction sites, as provided by the Government of Nunavut (GN) and the Workers Safety and Compensation Commission (WSCC).

31.4 Site Shutdown Plan

- .i “Site Shutdown Plan” means a plan outlining the shutdown procedures for the project in the event of a shutdown directive from the City or governing authority relating to COVID-19.
- .ii The Site Shutdown Plan” shall address items such as how the site will be made safe, how any materials or equipment will be stored or removed, plans regarding any portion or work that requires ongoing monitoring and how the site will be kept secure. Associated timelines required for execution of the plan are to be identified. These procedures are to be updated as required as the project progresses.

31.5 Schedule Impact

- .i If the Contractor is delayed in completion of the Work by Force Majeure or by changes to the CMM, then the time of completion shall be extended by the Town for a period of time equal to the time lost due to such delays. Force Majeure is defined as labour disputes, strikes, lockouts, fire, unusual delay by common carriers or unavoidable casualties, or such other cause beyond the reasonable control of the Contractor. The Contractor's lack of funds is not a cause beyond the Contractor's control. For clarity, any issues or delays in any way arising from or related to COVID-19 (or any similar or related disease), except for delays as a result of changes to the CMM, are expressly excluded and do not fall under the definition of Force Majeure. The Contractor agrees that the scheduling requirements of the Contract are reasonable in light of any issues that may arise from COVID-19's impact on the Work and the Project, and that the Contractor may not rely on COVID19 (or any similar or related disease) in any manner as a Reason or cause for delay except for delays as a result of changes to the CMM.
- .ii Notwithstanding the foregoing, no extension shall be made for delay unless the Contractor provides to the City written notice within five (5) Working Days of the commencement of the Force Majeure or commencement of the changes to the CMM.

31.6 Cost Impact

- .i In the case of a shut-down or suspension of the Work resulting from changes to the CMM Guidelines, the Contractor shall provide the City the value of any change in the Contract Price and/or Contract Time.
- .ii In the case of a shut-down or suspension of the Work resulting from changes to the CMM Guidelines, the Contractor is to provide, not less than monthly, and more frequently if requested, an accounting of actual incremental costs incurred for any Work required to maintain the Work Site in a safe and secure state.
- .iii Any adjustments to the Contract Amount associated with re-starting the Work is to be quantified within thirty (30) calendar days of such time that authorization to re-commence the Work has been provided.
- .iv When the change to the Work is caused by changes to the CMM Guidelines the City will pay net actual costs only. No allowance for mark-up, contributions to overhead, profit, or stand-by charges will be considered. Labour rates shall include only the actual wage paid to the employee, plus the payroll burden. The Contractor will mitigate cost and time impact to the Contract Amount and the Work Schedule. The Contractor is to provide detailed supporting documentation to substantiate reasonable incurred impact to the Contract Amount and the Work Schedule.
- .v No consideration will be given to adjustment of the Contract Amount or Work Schedule where the impact to the Contract Amount or Work Schedule is as a result of the Contractor's failure to comply with the CMM Guidelines.

END OF SECTION



CONSTRUCTION SERVICES
PART I – PROCUREMENT AND CONTRACT REQUIREMENTS



SECTION C – FORM OF TENDER

Date: _____

Submitted By: Name: _____

Address: _____

Telephone: _____

To: **City of Iqaluit
City Hall
Iqaluit, Nunavut**

Project: **Project Title: Apex Road Crosswalk
Project Number: 2022-RFT-033**

The undersigned Tenderer, having carefully examined the Tender Documents and the Site, and having full knowledge of the Work and of the materials and products to be furnished and used, hereby agrees to provide all necessary materials, products, supervision, labour and equipment and perform and complete all Work and fulfill everything for the stipulated lump sum price of:

(Total in Words)

_____ Dollars \$ _____

in Canadian funds, which price includes all specified cash and contingency allowances and the applicable taxes in force at this date excluding GST.

We have included herewith the security deposit and Consent of Surety as required by the Instructions to Tenderers.

The undersigned also agrees:

1. That the provisions of the Instruction to Tenderers apply, including without limitation provisions that provide that City is in no way obligated to accept this Bid, the City may at its sole discretion to accept any Tender or part thereof or waive any defect, irregularity, mistake or insufficiency and accept any Tender or alternative bid, in whole or in part, which is deemed by the City to be most favourable to its interest, and that limit the City's liability.
2. That the estimate of quantities shown in Tender Documents serves only to provide a basis for comparing Bids and that no representations have been made by either the City or their Agent that the actual quantities correspond therewith, and further, that the City has the right

to increase or decrease the quantities in any or all items and to eliminate items entirely from the Work.

3. That this Bid is made without knowledge of the Bid prices to be submitted for the Work by any other company, firm or person.
4. That this Bid is made without connection or arrangement with any company, firm or person submitting a bid for the Work.
5. That this Bid is made without any undisclosed connection or arrangement with any other company, firm, or person having an interest in this Bid or in the proposed contract.
6. That this Bid is irrevocable for sixty (60) business days after the Closing Time and that the City may at any time within such period accept this Bid whether any other contract has previously been awarded or not and whether acceptance of another Bid has been given or not.
7. If this Bid is accepted by the City, to execute the Articles of Agreement and to present to the City the required security (by way of bonds or a security deposit) as stated in the General Conditions within seven (7) calendar days after the date of Notice of Award.
8. If this Bid is accepted within the time stated herein, and we fail to execute the Articles of Agreement and provide the required Bonds or security deposit, or we request to withdraw, the security deposit provided with the Bid shall be forfeited as damages to the City by reason of our failure, limited in amount to the lesser of the face value of the deposit or the difference between this Bid and the price the Contract is signed.
9. In the event our Bid is NOT accepted within the time stated herein the required security deposit shall be returned to the undersigned in accordance with the provisions in the Instructions to Bidders, unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.
10. That payment for the Work done will be made on the basis of the quantities measured by the City or its Agent and at the Bid prices shown in the Tender Form which shall be compensation in full for the Work done under the terms of the Contract.
11. That payment of the contingency allowance or portion thereof will only be made in the event that the City or its Agent authorizes work, in which case the amount of payment will be determined as specified in the General Conditions. Any unused portion thereof will be retained by the City.
12. To commence and proceed actively with the Work on Site within seven (7) business days of the date of the execution of the contract, and to substantially perform the Work by **October 6, 2023**, subject to the provisions of Section 6 of the General Conditions for extension of the Contract Time.

13. That should the undersigned fail to complete the Work in the time specified above, he shall compensate the City of Iqaluit in accordance with GC 6 of the General Conditions.
14. That the undersigned has carefully examined the Work described herein, has become familiar with local conditions and the character and extent of the Work, has carefully examined every part of the proposed contract and thoroughly understands its terms and conditions, has determined the source of supply and transport of the materials required, has investigated labour conditions and has arranged for the continuous performance of the Work described in the Tender Documents.

15. **Appendices:**

- 16.1 Appendix A – Consent of Surety
- 16.2 Appendix B – Cost Submission Form
- 16.3 Appendix C – List of Subcontractors
- 16.4 Appendix D – List of Equipment
- 16.5 Appendix E – List of Product Suppliers
- 16.6 Appendix F – Labour and Equipment Rates

16. **Addenda**

- 17.1 The following Addenda have been received. The modifications to the Tender Documents noted therein have been considered and the effects are included in the Tender prices.

Addendum #:		Date:	
Addendum #:		Date:	
Addendum #:		Date:	
Addendum #:		Date:	
Addendum #:		Date:	
Addendum #:		Date:	
Addendum #:		Date:	

This Tender is executed under seal at _____ this _____ day of _____ 2023.

Name of Firm: _____

Address: _____



CONSTRUCTION SERVICES
PART I – PROCUREMENT AND CONTRACT REQUIREMENTS



FOR INDIVIDUAL OR PARTNERSHIP:

SIGNED, SEALED AND DELIVERED by:

(Tenderer – Please Print) _____ (Seal)
(Signature of Tenderer)

In the presence of:

(Witness – Signature)

Name: _____

Address: _____

Occupation: _____

FOR LIMITED COMPANY:

The Corporate Seal of:

(Tenderer – Please Print) _____ (Seal)

Was hereunto affixed in the presence of:

Authorized Signing Officer and Title

Authorized Signing Officer and Title

Note: If the Tender is by a joint venture, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF SECTION



CONSTRUCTION SERVICES
PART I – PROCUREMENT AND CONTRACT REQUIREMENTS



APPENDIX A – CONSENT OF SURETY

Herewith is the Consent of Surety of the Tender submitted.

By: _____

To: The City of Iqaluit

Dated: _____ 2023 and which is an integral part of the Tender

CONSENT OF SURETY COMPANY

Should it be required, the undersigned Surety Company hereby consents and agrees with the City to become bound as Surety in all performance bonds and labour and material payment bonds required by the Tender Documents, all for the fulfillment of the Contract for the Work covered by the annexed Tender, which may be awarded to:

(Name of Tenderer)

(Address)

At prices set forth in the attached Tender. The said Surety is legally entitled to do business in Nunavut.

The Corporate Seal of:

(Surety – Please Print)

Was hereunto affixed in the presence of:

(Authorized Signing Officer) Title

(Authorized Signing Officer) Title

END OF SECTION

APPENDIX B – COST SUBMISSION FORM

Date: _____

Project Name: **Apex Road Crosswalk**

I/We, _____
(Company Name)

Of _____
(Business Address)

have fully inspected the Site and examined all the conditions affecting the Work. I/we have also carefully examined all documents prepared for this Contract including Addenda thereto; and hereby offer to furnish all labour, materials, plant, equipment and services for the proper execution and completion of the items listed below, in accordance with the Contract Documents, including all Addenda thereto which are acknowledged hereinafter for the above project for the sums separately indicated as follows:

Item	Description	Unit	QTY.	Unit Price	Amount
1.	Mobilization & demobilization including permits & site set up.	L.S	1	\$	\$
2.	Traffic control, project signage and safety set up	L.S.	1	\$	\$
3.	Cash Allowance - QEC Work, including installation of Wood Poles	L.S.	1	\$25,000	\$ 25,000
4.	Project removals and disposal	L.S	1	\$	\$
5.	Re-instatement of existing driveways and road shoulders	L.S	1	\$	\$
6.	Supply and Install Bollards	Each	8	\$	\$
7.	Asphalt Repair, including granular Base Materials and compaction testing.	L.S.	1	\$	\$
8.	Traffic Signs	Each	6	\$	\$
9.	Line Painting	L.S	1	\$	\$

Electrical

1.	Supply and Place Electrical handholes				
	a) Synertech Model #1118 T 12" Duo	Each	1	\$	\$
2.	Rigid Duct, Direct Buried				
	a) 1 - 53mm Duct	m	30	\$	\$
3.	Rigid Duct, Concrete Encased				

Item	Description	Unit	QTY.	Unit Price	Amount
	a) 1 - 53mm Duct	m	15	\$	\$
4.	Low Voltage Cables, In Ducts				
	a) 1 - 1/C #6 AWG	m	90	\$	\$
	b) 1 - 4/C #14 AWG (Flashing Beacon)	m	30	\$	\$
5.	Extra Low-Voltage Cables, in Ducts				
	a) 1 - 2/C #12 ELV (Audible Pushbutton Cable)	m	30	\$	\$
6.	Ground Wires				
	a) #6 bare copper ground wire	m	1	\$	\$
	b) #2/0 bare copper ground wire	m	16	\$	\$
	c) #6 Insulated ground wire	m	50	\$	\$
7.	Ground Electrodes				
	a) Ground rods	Each	5	\$	\$
8.	Supply Control Cabinet Assemblies				
	a) Square D QOE260GFNM	Each	1	\$	\$
9.	LED Roadway Luminaires and Bracket Assemblies.				
	a) CREE XSP 101W or Livable Cities NXT 100W	Each	2	\$	\$
	b) Livable Cities 158W (Existing to be relocated)	Each	2	\$	\$
	c) 2.4m arms	Each	2	\$	\$
10.	Accessible Pedestrian Signals				
	a) Polara 2-Wire APS	Each	2	\$	\$
11.	Pedestrian Crossover System				
	a) Type C PXO	Each	1	\$	\$

Sub-Total: \$ _____

GST: \$ _____

TOTAL: \$ _____

Provisional Unit Price:

- Additional Cost for Asphalt Repair – Including Granular Material (m²) \$ _____
- Additional Cost for Bollards (Each) \$ _____
- Additional Cost for Traffic Signs (Each) \$ _____

END OF SECTION

APPENDIX C – LIST OF SUBCONTRACTORS

Re: Bid for Apex Road Crosswalk

1. This List of Subcontractors Form is acknowledged and agreed to form an integral part of the Bid for:

Apex Road Crosswalk

2. The Subcontractors listed below will remain unchanged and will be used to perform the work of the trade section indicated, unless the Owner gives written permission to change one or more of the Subcontractors. Where subcontractors are not intended to be used for the work of the trade section indicated, the term “By Own Forces” is inserted.
3. Each Subcontractor listed below has been consulted and is fully acquainted with the extent and nature of the Work, the contract conditions and requirements, the proposed construction schedule, and has agreed to execute the Work in accordance with the terms of the Contract and for the Bid Price amount shown.

TRADE SECTION	SUBCONTRACTOR COMPANY NAME

Add rows if required.

END OF SECTION

APPENDIX D – LIST OF EQUIPMENT

Re: Bid for Apex Road Crosswalk

1. This List of Equipment Form is acknowledged and agreed to form an integral part of the Bid for:

Apex Road Crosswalk

EQUIPMENT	SIZE	MAKE	MODEL

Add rows if required.

END OF SECTION

APPENDIX E – PRODUCT SUPPLIERS

Re: Bid for Apex Road Crosswalk

1. This List of Product Suppliers Form is acknowledged and agreed to form an integral part of the Bid for:

Apex Road Crosswalk

PRODUCT	PRODUCT SUPPLIER
Asphalt	
Electrical Handholes	
LED Roadway Luminaires	
Type C Pedestrian Crossover System	
Other (specify)	

Add rows if required.

END OF SECTION

APPENDIX F – LABOUR AND EQUIPMENT RATES

Re: Bid for Apex Road Crosswalk

1. This List of Product Suppliers Form is acknowledged and agreed to form an integral part of the Bid for:

Apex Road Crosswalk

2. The rates listed below will remain unchanged and will be used to measure payment for additional work, not include in the Contract Documents.

POSITION	RATE
Superintendent	
Supervisor/Foreman	
Skilled Labourer	
General Labourer	
Operator	
Surveyor	
Other	

EQUIPMENT	RATE
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	
Insert Equipment	

Add rows if required.

END OF SECTION

SECTION D – ARTICLES OF AGREEMENT

THIS AGREEMENT MADE IN DUPLICATE THIS _____ DAY OF _____ 2023
BETWEEN:

THE CITY OF IQALUIT

(“the City”)

-and-

(“the Contractor”)

ARTICLES OF AGREEMENT

IN CONSIDERATION of the mutual promises and obligations contained in the Contract Documents, the City and the Contractor agree as follows:

A1. CONTRACT DOCUMENTS

- 1.1 The documents forming the Contract between the City and the Contractor, referred to herein as the Contract Documents shall consist of:
- a) these Articles of Agreement;
 - b) the document attached hereto entitled “General Conditions”;
 - c) the document attached hereto entitled “Supplementary General Conditions”;
 - d) the documents attached hereto entitled “Plans and Specifications”;
 - e) the documents attached hereto entitled “Tender Documents”; and
 - f) any amendment or variation of the Contract Documents that is made in accordance with the General Conditions.
- 1.2 The City will designate a representative for the purposes of the Contract.
- 1.3 In the Contract:
- a) “Fixed Price Arrangement” means that part of the Contract that prescribes a lump sum as payment for performance of the Work to which it relates; and
 - b) “Unit Price Arrangement” means that part of the Contract that prescribes the product of a price multiplied by a number of units of measurement of a class as payment for performance of the Work to which it relates.

- 1.4 Any of the provisions of the Contract that are expressly stipulated to be applicable only to a Unit Price Arrangement are not applicable to any part of the Work to which a Fixed Price Arrangement is applicable.
- 1.5 Any of the provisions of the Contract that are expressly stipulated to be applicable only to a Fixed Price Arrangement are not applicable to any part of the Work to which a Unit Price Arrangement is applicable.

A.2 DATE OF COMPLETION OF WORK AND DESCRIPTION OF WORK

- 2.1 The Contractor shall between the date of these Articles of Agreements and October 6, 2023 in a careful and workmanlike manner, diligently perform and complete the following Work:

Install a signalized pedestrian cross walk (PXO Type C) at the intersection of Apex road and Queen Elizabeth, near the entrance to the Qikiqtani General Hospital, including all signage, pavement markings and reinstatement of existing roads. The Contractor will coordinate with QEC to install new wooden poles for lighting and power supply for the new crosswalk.

A.3 CONTRACT PRICE

- 3.1 Subject to any increase, decrease, deduction or set-off that may be made under the Contract, the City shall pay the Contractor at the times and in the manner set out or referred to in the General Conditions.
- 3.1.1 the sum of \$ _____ in consideration for the performance of the Work or the part thereof that is subject to a Fixed Price Arrangement, excluding goods and services tax (GST); and
- 3.3 A3.1.1 is applicable only to a Fixed Price Arrangement.
- 3.5 The Contract Price shall exclude Goods and Services Tax.

A.4 ADDRESSES

- 4.1 For all purposes of the Contract, the Contractor's address shall be deemed to be:

- 4.2 For all purposes of the Contract, the City's address shall be deemed to be:

City of Iqaluit
P.O. Box 460
Iqaluit, Nunavut, X0A 0H0



CONSTRUCTION SERVICES
PART I – PROCUREMENT AND CONTRACT REQUIREMENTS



SIGNED, SEALED AND DELIVERED in the presences of:

CONTRACTOR:

Per:	_____	_____
	Signature	Witness
	_____	_____
	Name	Date

	Position	
Per:	_____	_____
	Signature	Witness
	_____	_____
	Name	Date

	Position	

MUNICIPAL CORPORATION OF THE CITY OF IQALUIT

Per:	_____	_____
	Mayor	Date
Per:	_____	_____
	Chief Administrative Officer	Date

END OF SECTION

CONSTRUCTION SERVICES
PART II – SERVICE AGREEMENT

CITY OF IQALUIT SERVICES AGREEMENT

BETWEEN: THE MUNICIPAL CORPORATION OF THE CITY OF IQALUIT
(hereinafter referred to as the "CITY OF IQALUIT")

OF THE FIRST PART

AND: . **<CONTRACTOR NAME>**
(hereinafter referred to as the "Contractor")

OF THE SECOND PART

WHEREAS the CITY OF IQALUIT has requested the Contractor to provide **<description of services>**;

AND WHEREAS the Contractor has agreed to provide such services to the CITY OF IQALUIT in its bid dated **<Bid Submission Date>**;

AND WHEREAS the CITY OF IQALUIT and the Contractor wish to set out the terms and conditions relating to the provision of such services;

THEREFORE the CITY OF IQALUIT and the Contractor agree as follows:

1. SERVICES AND PAYMENT

1.1 The Contractor agrees to provide to the CITY OF IQALUIT those services set out in the job description and scope of work provided on **<RFT Date>**. A copy of the bid is attached as Appendix "A".

1.2 The CITY OF IQALUIT agrees to pay for the services described above, a total amount not greater than **<Bid Value>**, for the provision of professional services based on the Bid dated **<Bid Submission Date>**.

2. TERM

2.1. This Contract shall commence on the **<Contract Commence Date>** and terminates on the **<Contract Termination Date>** unless otherwise terminated in accordance with the provisions of this Contract.

3. NOTICE AND ADDRESS

3.1 Any notice required to be given herein or any other communication required by this contract shall be in writing and shall be personally delivered, sent by facsimile, or posted by prepaid registered mail and shall be addressed as follows:

i) If, to the CITY OF IQALUIT:

Amy Elgersma
Chief Administrative Officer
City of Iqaluit
P.O. Box 460
Iqaluit, NU
X0A 0H0
Fax: 979-5922

Reference:

CONSTRUCTION SERVICES
PART II – SERVICE AGREEMENT

ii) If to the Contractor at:

<Contractor Representative – Name>

<Contractor Organization Name>

<Contractor Address>

- 3.2 Every such notice and communication, if delivered by hand, shall be deemed to have been received on the date of delivery or if sent by prepaid registered mail shall be deemed to have been received on the seventh day after posting, or if by facsimile, 48 hours after the time of transmission, excluding from the calculation weekends and statutory holidays.

4. COMPLETE AGREEMENT

- 4.1 This Contract and its attachments constitute the complete Contract between the parties. Except as provided herein, it supersedes and shall take effect in substitution for all previous agreements. It is subject to change only by an instrument executed in writing by the City.
- 4.2 If this Contract arises from a request for proposals or tender call, the provisions of the request for proposals or tender call and the Contractor's bid or proposal submission are incorporated into this Contract and may be used to clarify, explain or supplement this Contract, but shall not be used to contradict any express terms of this Contract.
- 4.3 In the event of a conflict between this Contract, the Contractor's bid or proposal submission, and the City's original tender bid instructions or Request for Proposals, the more recently prepared document shall govern to the extent of such inconsistency.

5. GENERAL TERMS

- 5.1 Any information obtained from or concerning any department of the CITY OF IQALUIT or clients of any department of the CITY OF IQALUIT, by the contractor, its agents or employees in the performance of any contract shall be confidential. The Contractor shall take such steps as are necessary to ensure that any such information is not disclosed to any other person and shall maintain confidential and secure all material and information that is the property of the CITY OF IQALUIT and in the possession of or under the control of the Contractor. This clause survives the termination of this contract.
- 5.2 Time shall in every respect be of the essence. The Contractor shall deliver the services specified in the contract and according to the project schedule on costs. The CITY OF IQALUIT may grant reasonable extensions to the Contractor for delays, if the Contractor can show those delays were caused by circumstances beyond the control of the Contractor.
- 5.3 The Contractor is an independent Contractor with the CITY OF IQALUIT and nothing in this contract shall be construed or deemed to create the relationship of employee and employer or of principal and agent between the CITY OF IQALUIT and the Contractor. The Contractor is solely responsible for payments of all statutory deductions or contributions including but not limited to pension plans, unemployment insurance, income tax, workers' compensation and the Nunavut Payroll Tax.
- 5.4 This contract shall be interpreted and governed in accordance with the laws of Nunavut and the laws of Canada as they apply in Nunavut.
- 5.5 No waiver by either party of any breach of any term, condition or covenant of this contract shall be effective unless the waiver is in writing and signed by both parties. A waiver, with respect to a specific breach, shall not affect any rights of the parties relating to other or future breaches.
- 5.6 The failure of either party at any time to require the performance of any provision or requirement of this contract shall not affect the right of that party to require the subsequent performance of that provision or requirement.

CONSTRUCTION SERVICES
PART II – SERVICE AGREEMENT

- 5.7 Title to any report, drawing, photograph, plan, specification, model, prototype, pattern, sample, design, logo, technical information, invention, method or process and all other property, work or materials which are produced by the Contractor in performing the contract or conceived, developed or first actually reduced to practice in performing the contract (herein called "the Property") shall vest in the CITY OF IQALUIT and the Contractor hereby absolutely assigns to the CITY OF IQALUIT the copyright in the property for the whole of the term of the copyright. The Contractor shall not be responsible for any loss or damage suffered by the City of Iqaluit or any third parties resulting from any unauthorized use or modification of the property, errors in transmission of the property, changes to the Property by others, the consequences of design defects due to the design of others, or defects in contract documents prepared by others, and the City of Iqaluit agrees to defend, indemnify, and hold the Contractor harmless from and against all claims, demands, losses, damages, liability and costs associated therewith. Subject to the foregoing, the Property may be relied by the City of Iqaluit for design and construction work undertaken by other parties with respect to the Services provided that such parties verify the accuracy and completeness of the Property to their satisfaction.
- 5.8 It is intended that all provisions of this agreement shall be fully binding and effective between the parties, but in the event that any particular provision or provisions or a part of one is found to be void, voidable or unenforceable for any reason whatever, then the remainder of the agreement shall be interpreted as if such provision, provisions, or part thereof, had not been included.
- 5.9 This contract may be extended by the written consent of the parties.
- 5.10 The CITY OF IQALUIT may delegate any of its authority and undertaking pursuant to this contract to any employee or contractor the CITY OF IQALUIT by notice in writing to the Contractor.
- 5.11 This contract shall enure to the benefit of and be binding on the respective administrators, successors and assignment of each of the parties hereto.
6. CONTRACTOR RESPONSIBILITIES
- 6.1 The Contractor shall indemnify and hold harmless, the CITY OF IQALUIT, its officers, employees, servants and agents from and against all claims, actions, causes of action, demands, losses, costs, damages, expenses, suits or other proceedings by whomsoever made, brought or prosecuted in any manner based upon or related to the negligent acts, errors, or omissions of the Contractor under this contract.
- 6.2 The Contractor shall be liable to the CITY OF IQALUIT for any loss or damage to property or equipment that is supplied to or placed in the care, custody or control of the Contractor for use in connection with the contract if such loss or damage is attributable to the negligence or deliberate acts of the Contractor or its employees or agents.
- 6.3 If, in the opinion of the CITY OF IQALUIT acting reasonably, the Contractor is in default in respect of any obligation of the Contractor hereunder, the CITY OF IQALUIT may rectify such default and pursue a claim against the Contractor for any direct costs associated with any such remediation, including a reasonable allowance for the use of the CITY OF IQALUIT's own employees or equipment.
- 6.4 The Contractor may not assign or delegate work to be done under this contract, or any part thereof, to any other party without the written consent of the CITY OF IQALUIT. In the case of a proposed assignment of monies owing to the Contractor under this contract, the consent in writing of the CITY OF IQALUIT must be obtained.
- 6.5 The Contractor shall keep proper accounts and records of the services for a period of 3 years after the expiry or termination of this agreement. At any time during the term of this contract or during the three years following the completion or termination of this agreement, the Contractor shall produce copies of such accounts and records upon the written request of the CITY OF IQALUIT.
- 6.6 The Contractor shall notify the CITY OF IQALUIT immediately of any claim, action, or other proceeding made, brought, prosecuted or threatened in writing to be brought or prosecuted that is based upon,

CONSTRUCTION SERVICES
PART II – SERVICE AGREEMENT

occasioned by or in any way attributable to the performance or non-performance of the services under this contract.

- 6.7 If at any time the Contractor considers their estimates indicate costs will exceed the project budget they will immediately advise the City of Iqaluit. If in the opinion of the City of Iqaluit, acting reasonably, the excess is due to design, costs factors or matters under the control or reasonably foreseeable by the Contractor, the CITY OF IQALUIT may require the Contractor to do everything by way of revision of the design to bring the cost estimate within the project budget. Costs of completing such revisions shall be based upon a level of compensation reasonably appropriate to the circumstances, including the reason for the revisions.
- 6.8 Except as required in the performance of services set out in this agreement, the Contractor must maintain as confidential all data and information made available to the Contractor, the CITY OF IQALUIT, or any other parties which is generated by or results from the Contractor's performance of the Services described in this Contract. All such data and information is the property of the City of Iqaluit. This clause shall survive the termination of the Contract.

7. TERMINATION

- 7.1 The CITY OF IQALUIT may terminate this contract at any time upon giving written notice to this effect to the Contractor if, in the opinion of the CITY OF IQALUIT, the Contractor is unable to deliver the service as required, the Contractor's performance of work is persistently faulty, in the event that the Contractor becomes insolvent or commits an act of bankruptcy, in the event that any actual or potential labor dispute delays or threatens to delay timely performance of the contract or the (Contractor's Sub-Contractor) defaults or fails to observe the terms and conditions of the contract in any material respect.
- 7.2 This contract shall terminate as of the day for termination set out in the written notice and the Contractor shall forthwith invoice the CITY OF IQALUIT for work performed to the date of termination.
- 7.3 Any invoice submitted by the Contractor pursuant to clause 7.2 shall be reviewed by the CITY OF IQALUIT to assess the amount which is properly due and owing for work done by the Contractor prior to termination.

8. FINANCIAL

- 8.1 The CITY OF IQALUIT, having given written notice of a breach, may withhold or hold back in whole or in part any payment due the Contractor without penalty, expense or liability, if in the opinion of the Contracting Authority, the Contractor has failed to comply with or has in any way breached an obligation of the Contractor. Any such hold back shall continue until the breach has been rectified to the satisfaction of the CITY OF IQALUIT.
- 8.2 The CITY OF IQALUIT may set off any payment due the Contractor against any monies owed by the Contractor to the CITY OF IQALUIT.
- 8.3 The City of Iqaluit will pay the Goods and Services Tax (GST).
- 8.4 Provided all terms and conditions on the part of the Contractor have been complied with, each invoice will be paid thirty (30) calendar days after receipt of the invoice, or thirty (30) calendar days after delivery of the services, whichever is later. Invoices from Nunavut Contractors (as defined by the CITY OF IQALUIT NNI Policy) will be paid twenty (20) calendar days after receipt of the invoice, or twenty (20) calendar days after receipt of the services, whichever is later.
- 8.5 The CITY OF IQALUIT may, in order to discharge lawful obligations or to satisfy lawful claims against the Contractor or a Sub-Contractor arising out of the execution of work, pay any amount, which is due and payable to the Contractor under the contract, if any, directly to the obligee of and the claimants against the Contractor or Sub-Contractor.

CONSTRUCTION SERVICES
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9. INSURANCE AND LIABILITY

- 9.1 The Contractor's liability to the City of Iqaluit for claims arising out of this Agreement, or in any way relating to the Services, will be limited to direct damages and to the re-performance, without additional compensation, of any Services not meeting a normal professional standard of care and such liability will, in the aggregate, not exceed the amount of \$1,000,000.00. The limitations of liability will apply, to the extent permitted by law, whether Contractor's liability arises under breach of contract or warranty; tort, including negligence; strict liability; statutory liability; or any other cause of action, and will extend to and include Contractor's directors, officers, employees, insurers, agents and sub-contractor.
- 9.2 In no event will either party be liable to the other party for indirect or consequential damages including without limitation loss of use or production, loss of profits or business interruption.
- 9.3 The Contractor shall, without limiting his obligations or liabilities hereto, obtain, maintain and pay for during the period of this agreement, the following insurance with limits not less than those shown:
- a) Workers' Compensation insurance covering all employees engaged in the work in accordance with the statutory requirements of the Territory or Province having jurisdiction over such employees. If the Contractor is assessed any additional levy, extra assessment or super-assessment by a Workers' Compensation Board as a result of an accident causing injury or death to an employee of the Contractor or any sub-contractor, or due to unsafe working conditions, then such levy or assessment shall be paid by the Contractor at its sole cost and is not reimbursed by the CITY OF IQALUIT.
 - b) Employer's liability insurance with limits not less than \$500,000 for each accidental injury to or death of the Contractor's employees engaged in the work. If Workers' Compensation insurance exists, then in such event, the aforementioned Employer's Liability insurance shall not be required but the Comprehensive General Liability policy referred to in item (d) herein shall contain an endorsement providing for Contingent Employers' Liability insurance.
 - c) Motor Vehicle, water craft and snow craft standard liability insurance covering all vehicles and/or craft owned or non-owned, operated and/or licensed by the Contractor and used by the Contractor in the performance of this agreement in an amount not less than one million dollars (\$1,000,000.00) per occurrence for bodily injury, death and damage to property; and with respect to busses limits of not less than one million dollars (\$1,000,000.00) for vehicle hazards and not less than one million dollars (\$1,000,000.00) for Bodily Injury to or death of one or more passengers and loss of or damage to the passengers property in one accident.)
 - d) Comprehensive General Liability Insurance with limits of not less than \$2,000,000 (inclusive) per occurrence for bodily injury, death and damage to property including loss of use thereof. Such insurance shall include but not be limited to the following terms and conditions:
 - Products & Completed Operations Liability *
 - Contractor's Protective Liability
 - Blanket Contractual Liability
 - Broad Form Property Damage
 - Personal Injury Liability
 - Cross Liability
 - Medical Payments

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- Non-owned Automobile Liability *
- Contingent Employers Liability *
- Employees as Additional Insureds *

**WHERE APPLICABLE*

- e) Professional Liability Insurance with limits of not less than two hundred fifty thousand dollars (\$250,000.00) per claim and five hundred thousand dollars (\$500,000.00) in the annual aggregate, to cover claims arising out of the rendering of or failure to render any professional service under this contract or agreement.

All policies shall provide that thirty days written notice be given to the CITY OF IQALUIT prior to any cancellations of any such policies.

The Comprehensive General Liability Insurance policies shall name the CITY OF IQALUIT and any permitted sub-contractor's as additional insureds only with respect to the terms of this contract and shall extend to cover the employees of the insureds hereunder.

The Contractor shall be responsible for any deductibles, exclusions and/or insufficiency of coverage relating to such policies.

The Contractor shall deposit with the CITY OF IQALUIT prior to commencing with the work a certificate of insurance evidencing the insurance(s) required by this clause in a form satisfactory to the CITY OF IQALUIT and with insurance companies satisfactory to the CITY OF IQALUIT.

IN WITNESS WHEREOF the parties hereto have set their hand as of the date and year entered below.

FOR THE CITY OF IQALUIT:

FOR THE CONTRACTOR:

Name/Title

Name/Title

Signature

Signature

Date

Date

Witness

Witness

CONSTRUCTION SERVICES
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1. GENERAL PROVISIONS

1.1 Definitions

The following terms, whenever used in the Contract Documents, shall mean:

- a) **“Adjustment”**: a change in either the Contract Price or the Contract Time, or both, in accordance with the applicable provisions of the Contract Documents;
- b) **“Applicable Laws”**: any and all applicable laws, rules, regulations, by-laws, codes and orders of any and all government bodies, agencies, authorities and courts;
- c) **“Arbitrator”**: the person appointed under GC 9.3(a);
- d) **“Articles of Agreement”**: the executed Articles of Agreement;
- e) **“Change Order”**: a written instrument prepared by the City Representative and signed by the City and the Contractor stating their agreement upon:
 - i. a change in the Work, and
 - ii. the method and/or the amount of Adjustment, if any;
- f) **“City”**: the party defined as such in the Articles of Agreement;
- g) **“City Representative”**: A Consultant, Owner’s Agent, and/ or Engineer designated as such in the Articles of Agreement, or such other person designated as such by the City from time to time, who will be responsible for administering the construction contract;
- h) **“Claim”**: any or all of:
 - i. a demand or assertion by the City or the Contractor seeking an interpretation of Contract terms, an Adjustment, or other relief with respect to the terms of this Contract;
 - ii. other disputes and matters in question between the City and the Contractor arising out of or relating to this Contract; and
 - iii. allegations by the City or the Contractor of errors or omissions on the part of the City Representative;
- i) **“Completion Date”**: the date of Substantial Performance of the Work, as certified by the City Representative;

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- j) **“Construction Schedule”**: the Construction Schedule referred to in GC 3.6, including revisions thereto as provided in GC 3.6, GC 10.2(d) or otherwise required by the City Representative;
- k) **“Consultant”**: a person retained by the City to act as the City's Representative;
- l) **“Contract”**: the undertaking by the parties to perform their respective duties and discharge their obligations as set out in the Contract Documents which represents the entire agreement between the parties;
- m) **“Contract Documents”**: the documents referred to in the Articles of Agreement and amendments agreed on by the parties in writing;
- n) **“Contract Price”**: the sum stated in the Articles of Agreement and as may be amended during the progress of the Work;
- o) **“Contract Time”**: the time stated in the Articles of Agreement, and as may be amended during the progress of the Work, elapsing from the date of commencement of the Work until the date of Substantial Performance of the Work, as certified by the City Representative;
- p) **“Contractor”**: the party defined as such in the Articles of Agreement;
- q) **“Day”**: a calendar day;
- r) **“Engineer”**: a person retained by the City to act as the City's Representative;
- s) **“Final Completion”**: when the Work has been performed in accordance with the Contract Documents, as certified by the City Representative;
- t) **“GC”**: an acronym reference to a clause in these general conditions of this Contract;
- u) **“Holdback Payment Certificate”**: a certificate issued in accordance with GC 5.6;
- v) **“Lien Holdback”**: has the meaning given in GC 5.2(a)(i);
- w) **“Owner's Agent”**: a person retained by the City to act as the City's Representative;
- x) **“Project”**: the total construction of which the Work to be performed under this Contract may be the whole or a part;
- y) **“Referee”**: the person appointed under GC 9.2(a);

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- z) **“Site”**: the land or actual place designated in the Contract Documents for the performance of the Work;
- aa) **“Subcontractor”**: a party having a direct contract with the Contractor for the performance of any part of the Work, or to supply products worked to a special design for the Work;
- bb) **“Substantial Performance”**: when the Work has progressed to the point where, in the opinion of the City Representative as evidenced by the certificate of Substantial Performance, it is sufficiently complete, in accordance with the Contract Documents, so that the Work can be utilized for the intended purpose;
- cc) **“Supplier”**: a party having a direct contract with the contractor to supply products not worked to a special design for the Work;
- dd) **“Work”**: all or any part of the construction and services required by the Contract Documents, including all labour, materials, equipment and services provided or to be provided by the Contractor to fulfill his obligations under this Contract.

1.2 Documents and Interpretation

- a) It is the intent of the Contract Documents to include all labour, materials, equipment and services necessary to perform the Work in accordance with the Contract Documents. Any labour, materials, equipment and services that may be reasonably inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result, will be furnished and performed by the Contractor, whether or not specifically called for.
- b) The Contract Documents are complementary, and what is required by one document shall be as binding as if required by all.
- c) This Contract represents the entire agreement between the City and the Contractor and supersedes all prior negotiations, representations and agreements, either written or oral.
- d) When words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents and are not otherwise defined, they shall be interpreted in accordance with that meaning.
- e) The Contract Documents shall not be construed to create a contractual relationship of any kind between:

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- i. the City Representative and the Contractor, a Subcontractor, a Supplier, a subcontractor or its or their agent or employee, or other person performing any of the Work;
- ii. the City and a Subcontractor, a Supplier, or their agent, employee, or other person performing any of the Work, or
- iii. between any persons or entities other than the City and the Contractor.

The City Representative shall however, be entitled to demand performance and enforce the obligations of the parties under this Contract, to facilitate performance of the City Representative's duties.

- f) Clarifications and interpretations of the Contract Documents shall be issued by the City Representative as provided in GC 4.1.
- g) In the event of any inconsistency or conflict between provisions of the Contract Documents, the following shall apply:
 - i. documents of later date shall govern over earlier documents of the same classification;
 - ii. figured dimensions shown on drawings shall govern over scaled dimensions;
 - iii. drawings of larger scale shall govern over those of smaller scale;
 - iv. specifications shall govern over drawings;
 - v. the general conditions shall govern over the specifications;
 - vi. supplementary general conditions shall govern over the general conditions, and
 - vii. the Articles of Agreement shall govern over all documents.
- h) The City shall provide the Contractor with as many sets of Contract Documents as are reasonably required for the performance of the Work.
- i) The Contractor shall maintain a set of drawings on the Site and record accurately and legibly all deviations caused by Site conditions and written instructions or change orders ordered by the City Representative. The Contractor shall also keep one copy of all current Contract Documents and shop drawings on the Site, in good condition. These documents shall be available to the City Representative throughout the duration of the Work.

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- j) All Contract Documents, including copies, and all models furnished by or to the Contractor are and shall remain the property of the City and are not to be used on other work. The Contract Documents are not to be copied or revised in any manner without the City's written consent.
- k) The division into sections, the table on contents, and the heading in the Contract Documents, other than in the drawings and specifications, form no part of this Contract but are inserted for convenience of reference only.
- l) Any reference to a statutory provision shall include any subordinate legislation made and from time-to-time amended, extended or re-enacted.
- m) Unless otherwise indicated, all dollar amounts referred to in this Contract are in lawful money of Canada.
- n) If any provision of this Contract is determined to be invalid or unenforceable in whole or in part, such invalidity or unenforceability shall attach only to such provision and everything else in this Contract shall continue in full force and effect, In the event that any provision of this Contract, as amended from time to time, shall be deemed invalid or void, in whole or in part, by any court of competent jurisdiction, the remaining terms and provisions of this Contract shall remain in full force and effect.
- o) The schedules, appendices and attachments to this Contract are an internal part of this Contract and a reference to this Contract includes a reference to the schedules, appendices and attachments.
- p) The language of the specifications and other documents comprising this Contract is in many cases written in the imperative for brevity. Clauses containing instruction, directions or obligations are directed to the Contractor and shall be construed and interpreted as if the words "the Contractor shall" immediately preceded the instructions, directions or obligations.
- q) Unless the context otherwise requires, wherever used herein the plural includes the singular, the singular includes the plural, and each of the masculine, feminine and neuter genders include all other genders.
- r) Unless otherwise provided in this Contract, all accounting and financial terms used in this Contract shall be interpreted and applied in accordance with Canadian generally accepted accounting principles, consistently applied from one period to the next.
- s) References containing terms such as:

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- i. “hereof,” “herein,” “hereto,” “hereinafter,” and other terms of like import are not limited in applicability to the specific provision within which such references are set forth but instead refer to this Contract taken as a whole; and
- ii. “includes” and “including”, whether or not used with the words “without limitation” or “but not limited to”, shall not be deemed limited by the specific enumeration of items but shall in all cases be deemed to be without limitation and construed and interpreted to mean “includes without limitation” and “including without limitation”;
- t) Whenever the terms “will” or “shall” are used in this Contract in relation to the Contractor they shall be construed and interpreted as synonymous and to read “the Contractor shall”.

1.3 Notices

- a) Where a notice is required by the Contract Documents to be given in writing to the Contractor, it may be delivered personally to the Contractor or his site superintendent, or delivered or sent by mail or facsimile transmission to the Contractor’s address set out in the Articles of Agreement or to his office at or near the Site.
- b) Where a notice is required by the Contract Documents to be given in writing to the City Representative, it may be delivered personally, by email, or delivered or sent by mail or facsimile transmission to the City Representative’s address set out in the Articles of Agreement, or to the office of the City Representative at or near the Site.
- c) Notwithstanding the foregoing provisions of this GC 1.3, each party shall use the most expeditious method of giving the written notice or communication.
- d) A written notice or communication sent by mail shall be deemed to have been received ten (10) calendar days from the date of posting. Whenever a notice or communication is sent by facsimile transmission, acknowledgement from the receiving party must be given to the other party that the notice or communication has in fact been received, for it to be effective; this acknowledgement may be made verbally, in person or by telephone. If no such acknowledgement is given, it shall be deemed to have been received and be effective ten (10) calendar days from the date the original document was sent.

1.4 Rights and Renders

- a) No obligations or responsibilities of any kind by or on behalf of the City shall be implied into the Contract Documents if in the opinion of the City Representative, it is

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not reasonable under the circumstances to imply that such obligations or responsibilities form part of the Contract Documents.

- b) Any failure by the City or the City Representative to enforce or to require the strict performance of any of the provisions of this Contract shall not, in any way constitute a waiver of those provisions and affect or impair those provisions or any right the City has at any time to avail itself of any remedies the City may have for any breach of these provisions or to require the Work to be performed in accordance with the Contract Documents.
- c) 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.

1.5 Assignment

This Contract, or any part of it, or any benefit or interest in it, shall not be assigned by either party without the prior written consent of the other party, which consent shall not be unreasonably withheld. Notwithstanding the foregoing, the City has the right, in the event of any default by the Contractor, to assign all its rights and remedies against the Contractor to the Government of Nunavut.

1.6 Applicable Law

This Contract shall be deemed to have been made in Nunavut and shall be governed by and interpreted in accordance with the laws of Nunavut and the laws of Canada applicable therein.

1.7 Successors and Assigns

This Contract shall ensure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and assigns.

2. CITY'S OBLIGATIONS

2.1 Payment

Subject to any other provision in the Contract Documents, the City shall make payments to the Contractor at the times and in the manner set out in GC 5.

2.2 Site Availability

- a) The City shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access to the Site and any other lands designated for the use of the Contractor. The Contractor shall

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provide and pay for any additional lands and access the Contractor may require, in accordance with GC 3.10(a).

- b) Except for permits and fees which are the responsibility of the Contractor under GC 3.13, the City shall obtain and pay for necessary approvals, easements and charges required for the development of the Site and for the use or occupancy of permanent structures or for permanent changes in existing facilities.

2.3 Consultant, Owner's Agent, and/ or Engineer as City Representative

- a) Unless otherwise provided in the Contract Documents, the City shall communicate with the Contractor through the Consultant, and the Contractor shall communicate with the City through the Consultant.
- b) If the contract with the Consultant is terminated, the City shall promptly appoint a replacement.

2.4 Reference Points

The City shall establish physical reference points for construction on the Site which are, in the opinion of the City Representative, necessary to enable the Contractor to proceed with the Work. The Contractor shall safeguard such reference points in accordance with GC3.11(b).

2.5 Materials Supplied by the City

Any materials, instructions, information or services required to be supplied by the City under this Contract shall be furnished with reasonable promptness to avoid delay in the orderly progress of the Work.

2.6 Control of the Work

Neither the City nor the City Representative shall supervise or have control or authority over, nor be responsible for, the Contractor's means, methods, techniques or procedures of construction. Neither the City nor the City Representative will be responsible for the Contractor's failure to perform the Work in accordance with the Contract Documents, nor for its failure to comply with Applicable Laws.

2.7 Limitation of Liability

In no event, including without limitation if the City breaches its obligations under this Contract, shall the City be liable to the Contractor, its Subcontractors, its Suppliers, or any other parties engaged directly or indirectly by or acting on their behalf, for indirect loss, consequential loss, loss of business opportunity or loss of anticipated profit.

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3. CONTRACTOR’S OBLIGATIONS

3.1 General Obligations

Notwithstanding any omissions from the Contractor’s tender, the Contractor is required to perform all of the Work required by the Contract Documents, including any Work which can be reasonably inferred from them as being necessary to produce the intended result. The Contractor is to perform the Work within the Contract Time, in accordance with the Construction Schedule referred to in GC 3.6.

3.2 Independent Contractor

The Contractor is an independent contractor and shall have complete control of the Work. The Contractor shall effectively direct and supervise the Work to ensure conformance with the Contract Documents. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all parts of the Work, except as may be otherwise specified in the Contract Documents.

Nothing in this Contract shall be construed to mean that the Contractor is an employee, agent or other representative of the City.

3.3 Review of Contract Documents

- a) By executing this Contract, the Contractor represents that the Contractor has reviewed the Contract Documents and has verified the dimensions, quantities and details described in them. Failure to discover or correct errors, omissions, conflicts or discrepancies which ought to have been discovered by such a review shall not relieve the Contractor from full responsibility for unsatisfactory Work, faulty construction or improper operations resulting therefrom, nor from rectifying such conditions at the Contractor’s expense.
- b) If the Contractor proceeds with the Work in the face of an error, inconsistency or omission that the Contractor discovered, or that a competent Contractor reasonably experienced in the Work would have discovered, without additional instructions from the City Representative, then the Contractor shall at the Contractor’s cost remove or replace any incorrectly constructed Work.

3.4 Site Conditions

- a) By executing this Contract, the Contractor represents that the Contractor is familiar with the conditions under which the Work is to be performed. The Contractor further represents that the Contractor understands the requirements of the Contract Documents and what effects the Site conditions will have on the Work. The Contractor’s failure to visit the Site will not excuse the Contractor from the responsibility which otherwise would have been assumed, had the Contractor visited the Site.

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- b) Following the start of the Work, if the subsurface conditions are substantially different from what could reasonably have been expected, based on a reasonable and proper examination of the Site by the Contractor and the information provided in the tender documents, if any, the Contractor must promptly notify the City Representative in writing prior to performing the Work. The Contractor may make a claim for changed site conditions in only accordance with GC 9.1.

3.5 Temporary Structures

The Contractor shall have the sole responsibility for the design, erection, operation, maintenance and removal of temporary structures and other temporary facilities and the design and execution of construction methods required in their use. The Contractor shall engage and pay for professional engineering personnel, registered to practice in Nunavut, skilled in the appropriate discipline, to perform these functions where required by law or by the Contract Documents and in all cases where such temporary facilities and their method of construction are of such a nature that professional engineering skill is required to produce safe and satisfactory results. The Contractor shall submit engineered documents to the City Representative, for review, before commencing temporary work.

3.6 Schedule

- a) Within fourteen (14) calendar days of executing the Articles of Agreement and as a condition of the first progress payment, the Contractor shall submit to the City Representative for review, a proposed Construction Schedule showing the anticipated time of commencement and completion of each of the major activities of the Work to be performed. This Construction Schedule shall include the sequence and coordination of the various operations and the estimated time required for the Work and shall provide sufficient detail to permit the City Representative to monitor the progress of the Work. The Contractor shall revise the proposed Construction Schedule as requested by the City Representative, and the Contractor shall perform the Work in strict adherence to the Construction Schedule, including revisions thereto required by the City Representative, unless it is changed in accordance with the terms of this Contract.
- b) If at any time it should appear to the City Representative that the actual progress of the Work does not conform to the Construction Schedule, the Contractor shall produce at the City Representative's request, a revised Construction Schedule showing the modifications necessary to ensure completion of the Work in accordance with the previously approved Construction Schedule and shall promptly adopt acceptable additional means and methods of construction, at no cost to the City, which will make up for the time lost and will ensure completion in accordance with the revised Construction Schedule.

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- c) If the Contractor fails or refuses to revise the Construction Schedule as required by this GC, this Contract may be terminated at the City's option, in accordance with GC 10.3.
- d) The City Representative's review, comments, consent, acceptance or approval to the Construction Schedule shall not relieve the Contractor of any of the Contractor's obligations under this Contract.

3.7 Superintendent

- a) The Contractor shall assign a competent superintendent and necessary assistants, one or more of whom shall be in attendance at the Site at all times during the progress of the Work. The superintendent and necessary assistants, if any, shall be designated in writing to the City Representative and shall act as the Contractor's authorized representative at the Site. All written or oral communications to the superintendent shall be deemed to have been given to the Contractor. The superintendent shall only be replaced after the Contractor has received written approval from the City.
- b) The City may order the removal from the Work of any superintendent, supervisor, foreman or other employee who is in the opinion of the City, unfit for the Work, unskilled in the work assigned to him or otherwise unsuitable. Any person so removed shall not be re-employed on the Work by the Contractor or by a Subcontractor.

3.8 Subcontractors

- a) The Contractor shall not employ any Subcontractor without the approval of the City. Once the names of the proposed Subcontractors have been submitted, the Contractor shall not change these Subcontractors without the advance written consent of the City. If any changes are made without consent, this Contract may be terminated at the City's option, in accordance with GC 10.3.
- b) The City, through the City Representative, may, at any time during the performance of the Work, object to the use of a Subcontractor and direct the Contractor in writing to employ a different Subcontractor satisfactory to the City Representative.
- c) The Contractor shall be fully responsible to the City for the acts and omissions of Subcontractors, their agents, employees, and all parties engaged by the Contractor or its Subcontractors for the provision of work or the supply of materials.
- d) The Contractor agrees to incorporate the terms of the Contract Documents into all the Contractor's subcontract agreements.

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- e) The Contractor shall maintain good order and discipline among the Contractor's employees and the Subcontractors engaged in the Work. The Contractor shall not employ, or permit Subcontractors to employ, workers who are not skilled in the assigned task. The Contractor shall employ sufficient workers to perform the Work in compliance with the Construction Schedule.

3.9 Other Contractors

- a) The City reserves the right to let separate contracts with other contractors or workers, or to undertake work using the City's own forces to do other work. If other contractors, workers or the City's own forces are sent onto the Site, with or without plant and material, the Contractor shall, to the satisfaction of the City, grant access to and cooperate with such persons and, in accordance with usual construction practice, coordinate the Work with the other work and connect to other work as specified or shown in the Contract Documents.
- b) The Contractor shall at all times remain the Constructor, with regards to the Health and Safety Act requirements. The City and other contractors entering the Contractors site shall be responsible for adhering to the Contractor's Health and Safety policy.
- c) If the sending of other contractors, workers or the City's own forces onto the Site results in a delay in the performance of the Work, which could not have been reasonably foreseen or anticipated by the Contractor when executing the Articles of Agreement, the Contractor may make a claim therefor in accordance with GC 6.2 and 9.1.
- d) If the Contractor discovers any deficiencies in any other work which might affect the Work, the Contractor shall immediately report such deficiencies to the City Representative and then confirm such report in writing.

3.10 Use of the Site

- a) The Contractor shall make every effort to confine the Contractor's equipment and plant, storage of materials and operations to limits indicated by the Contract Documents, by a specific direction of the City Representative or by Applicable Laws and shall not unreasonably occupy the Site. Where the Contractor requires additional land for the erection of temporary facilities and storage of materials, including access to them, the Contractor shall arrange for such and assume all costs and liabilities arising therefrom.
- b) The Contractor shall not load or permit to be loaded on any part of the Work, a weight or load or force that will endanger its safety or exceed the design loads.

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- c) The Contractor shall not interfere in any way with the work or scheduling of any other contractor, worker or employee of the City. Subject to GC 3.9(b), in order to avoid or minimize such interference, the City may in its absolute discretion, establish schedules or methods and shall notify the Contractor accordingly.

3.11 Survey

- a) The Contractor shall provide the City Representative with assistance, as required, to make any surveys and measurements, and to establish or check lines and grades.
- b) The Contractor shall safeguard all points, stakes, grade marks and benchmarks made or established on the Work. The Contractor shall bear the expense of re-establishing them and for rectifying Work improperly installed due to the Contractor's failure to safeguard such points, stakes and marks. Additional surveys and staking required by the Contractor to perform the Work, shall be provided by the Contractor at its expense.

3.12 Protection of the Work, Property and the Public

- a) The Contractor shall be responsible for protecting the Work, the City's property at the Site including the Contract Documents and any plant and material, including plant and material supplied by the City to the Contractor, against loss or damage from any cause but subject to GC 3.15(c). In particular, the Contractor shall take necessary precautions, at the Contractor's expense, to ensure that:
 - i. no person, adjacent property, right, easement or privilege is injured, damaged or infringed by reason of the Contractor's activities in performing the Work;
 - ii. pedestrian and other traffic on any public or private road or waterway is not unduly impeded, interrupted or endangered by the performance or existence of the Work;
 - iii. fire hazards in or about the Work or the Site are minimized;
 - iv. adequate medical services are available to all persons employed on the Work at all times during the performance of the Work;
 - v. adequate sanitation measures are taken in respect of the Work; and
- b) The City Representative may order the Contractor to do such things and to perform such additional Work as the City Representative considers reasonable and necessary to ensure compliance with or to remedy a breach of GC 3.12(a) and the Contractor shall comply with the directions of the City Representative, at the Contractor's expense.

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3.13 Permits

- a) The Contractor shall procure and post at the Site all permits, certificates and licenses required for the construction of the Work and shall be responsible for all fees in respect thereof.
- a) The Contractor will be responsible for procuring and coordinating all permits issued by the City's Public Works and Engineering Department. Such permits include:
 - i. Water & Sewer Service Connection/ Disconnection Permit
 - ii. Utility Permit
 - iii. Road Closure Permit

Permit applications must be submitted to the City twenty (20) business days prior to the start of the works.

3.14 Applicable Laws

- a) The Contractor shall perform the Work and give any required notices in full compliance with all Applicable Laws, ordinances, rules, regulations, codes and orders of the municipal and other authorities having jurisdiction which are in or come into force during the performance of the Work.
- b) The Contractor shall have due regard for the protection of the environment in the performance of the Work and shall not place any materials, including without limitation, hazardous materials, or dispose of any such materials, or perform any Work in a manner contrary to applicable federal or territorial or municipal environmental laws and regulations, either at the Place of the Work, or at any other place or property.

3.15 Material and Plant Supplied by City

- a) The Contractor is liable for any loss or damage to material, plant or real property that is supplied or placed by the City in the care, custody and control of the Contractor for use in connection with the Work, whether or not that loss or damage is attributable to causes beyond the Contractor's control.
- b) The Contractor shall not use any material, plant or real property placed in the Contractor's care, custody and control by the City, except for the purpose of performing the Work.

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- c) The Contractor is not liable to the City for any loss or damage to material, plant or real property if that loss or damage results from and is directly attributable to reasonable wear and tear.

3.16 Equipment, Plant and Material Supplied by Contractor

- a) Unless otherwise specified in the Contract Documents, the Contractor shall furnish and assume full responsibility for all materials, equipment, labour, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the performance, testing, finishing, start-up and completion of the Work. All materials, equipment, facilities, etc., furnished by the Contractor shall be maintained in a working, clean and sanitary manner.
- b) Materials provided shall be new unless otherwise specified in the Contract Documents. Products that are not specified shall be of a quality best suited to their purpose and use, as approved by the City Representative.
- c) All equipment, plant and material owned by the Contractor and to be incorporated in the Work, from the time of initial delivery to the Site, shall be deemed to be the property of the City; provided always that the vesting of such property shall not prejudice the right of the Contractor to the sole use of the said equipment, plant and material for the purpose of performing the Work nor shall it affect the Contractor's responsibility to operate and maintain the same in accordance with the Contract Documents. The City shall not at any time be liable for the loss of, damage to or risk of loss of any of the Contractor's equipment, plant or materials.

3.17 Workers' Compensation Act

- a) The Contractor shall comply with and ensure compliance at time of tender by all Subcontractors, with the requirements of the Workers' Compensation Act, R.S.N.W.T. 1988, c. W-6, as duplicated for Nunavut by s. 29 of the Nunavut Act. The Contractor and its Subcontractors shall maintain accounts in good standing with the Workers' Safety and Compensation Commission. The Contractor shall provide verification from the Workers' Compensation Board that the Contractor's account is in good standing prior to the release of holdbacks, at the end of the warranty period and as requested by the City Representative. The City may refuse to make a payment to the Contractor unless the Contractor furnishes evidence from the Workers' Compensation Board that the Contractor's account is in good standing.
- b) If the City receives a notice from the Workers' Compensation Board that the Contractor's accounts, or any Subcontractors' accounts are not in good standing, or if a demand for payment is received, the City may suspend payments due to the Contractor until a letter of clearance is obtained or the City has paid the amount on behalf of the Contractor.

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- c) If the City is required to pay any amount to the Workers' Compensation Board on behalf of the Contractor, or any Subcontractor, the City may deduct the amount from any amount owing to the Contractor under this or any other contract, or may demand a reimbursement by the Contractor to the City for the amount paid by the City.
- d) If at any time the performance of the Work is stopped because the Contractor unreasonably fails or refuses to comply with a regulation or order issued pursuant to the Workers Compensation Act, then such failure or refusal shall be considered a default under this Contract, and this Contract may be terminated at the City's option, in accordance with GC 10.3.

3.18 Occupational Health and Safety

- a) The Contractor shall be solely responsible for construction safety at the Site as and to the extent required by the Safety Act, in effect at time of tender, and any other applicable construction safety legislation, regulations and codes, any City safety Policies, as amended from time to time, and by good construction practice.
- b) In any case where, pursuant to the provisions of the Safety Act, R.S.N.W.T. 1988, c. S-1, as duplicated for Nunavut by s. 29 of the Nunavut Act, the Director of Inspections or a Safety Officer orders the Contractor or any Subcontractor performing the Work, to cease work because of failure to install or adopt safety devices directed by the regulations made under the said Act, or required by it, or because the Director of Inspections or a Safety Officer is of the opinion that conditions of immediate danger exist that would likely result in injury to any person, the City may exercise its right to terminate this Contract or suspend the Work immediately, in accordance with GC 10, until the default or failure is corrected.

3.19 Cutting and Patching

- a) The Contractor shall do all cutting, fitting or patching of the Work that may be required to tie in properly with the work of other contractors shown in, or reasonably inferable from the Contract Documents.
- b) The Contractor shall not endanger any existing Work by cutting, patching or otherwise, and shall not cut or alter the work of any other contractor save with the consent of the City Representative and then only to the extent permitted by the City Representative.
- c) The Contractor shall not unreasonably withhold from the City or a separate contractor the Contractor's consent to cutting or otherwise altering the Work in accordance with any direction given by the City Representative.

3.20 Defective Work

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- a) Defective work, whether the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the Contractor or any Subcontractor, and whether incorporated in the Work or not, which has been rejected by the City Representative as failing to conform to the Contract Documents, shall be removed promptly from the Work and replaced or re-executed by the Contractor in accordance with the Contract Documents, at the Contractor's expense.
- b) Where any part of the Work is damaged by such removals, replacements or re-execution, it shall be made good, promptly, at the Contractor's expense.
- c) Where the Contractor fails to correct defective or rejected work within the time limits specified by the City Representative, the City may correct defective or rejected Work and deduct the cost of same from the Contract Price, or may terminate this Contract in accordance with GC 10.3.
- d) In cases of emergency, the City may take whatever action it deems necessary to correct defective or rejected Work and deduct the cost of same from the Contract Price.
- e) If, in the opinion of the City Representative, it is not expedient to correct defective work or work not done in accordance with the Contract Documents, the City may deduct from the Contract Price the difference in value between the Work as done and that required by this Contract, as determined and certified by the City Representative.

3.21 Testing and Inspection

- a) Unless otherwise specified in the Contract Documents, the Contractor shall not rely on the City's testing program, for the Contractor's own quality control, but shall perform such testing as may be required to ensure that the Work complies in all respects with the Contract Documents.
- b) The Contractor shall promptly provide the City Representative with two copies of all certificates, inspection and testing reports required by the Contract Documents or ordered by the City Representative.
- c) The City Representative may conduct quality control testing regarding the acceptability of materials used in the Work and the Contractor shall furnish for the City Representative's approval such samples as the City Representative may reasonably require, at the Contractor's expense.
- d) The City Representative may order retesting of questioned Work. If such retesting shows the Work to comply with the provisions of this Contract, the City shall pay the

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cost of retesting. If the retesting shows that through the fault of the Contractor the Work does not so comply, the Contractor shall pay all associated costs. Testing which is paid for by the City shall not be subject to direction or control by the Contractor.

- e) The City Representative shall at all times have access to the Work and the Contractor shall provide proper facilities for such access and for inspection. If any Work should be covered without the approval or consent of the City Representative, it must, if required by the City Representative, be uncovered for examination and subsequently recovered, both at the Contractor's expense.
- f) Any inspection of the Work by the City Representative or the failure of the City Representative to make any inspection, or:
 - i. the thoroughness or lack of thoroughness of any inspection made by the City Representative;
 - ii. the failure of the City Representative to observe defective workmanship or materials either by the Contractor or a Subcontractor;
 - iii. the failure to direct the attention of the Contractor or Subcontractor, or of any other person, to the inadequacy of the manner in which this Contract is being performed, or
 - iv. the inadequacy or insufficiency of any equipment or material used in the performance of or incorporated in the Work,

shall not relieve the Contractor from the responsibility for any failure to supply materials and complete the Work strictly in accordance with the Contract Documents.

3.22 Site Cleanliness

- a) The Contractor shall maintain the Site in a tidy condition and free from the accumulation of waste material and debris, to the satisfaction of the City Representative.
- b) Before the issuance of a certificate of Substantial Performance, the Contractor shall remove all the Contractor's tools and material not required for the remaining Work, and all waste material and other debris, and shall ensure that the Work and the Site are clean and suitable for occupancy or use by the City, unless otherwise directed by the City Representative.

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- c) Before the issuance of a certificate of Final Completion, the Contractor shall remove from the Site all the Contractor's tools and material and any waste material and other debris, to the satisfaction of the City Representative.
- d) If the Contractor fails or refuses to remove all such tools, materials, equipment and waste within a reasonable time after achieving Final Completion then, on written notice from the City Representative to the Contractor specifying a reasonable time to remedy such failure or refusal, the City may do or cause to be done the removal and all reasonable resulting costs incurred by the City may be deducted from any amounts owing by the City to the Contractor.
- e) The Contractor's obligations described above do not extend to waste material and other debris caused by the City's agents or other contractors.

3.23 Claims Against and Obligations of the Contractor

- a) The Contractor shall pay out and discharge all its lawful obligations and shall satisfy all lawful claims against it arising out of the performance of the Work at least as often as this Contract requires the City to pay the Contractor.
- b) The Contractor shall, in accordance with the Contract Documents and whenever requested to do so by the City Representative, make a statutory declaration regarding the existence and condition of any obligations of and claims against the Contractor, any Subcontractors, or Suppliers. Upon request by the City, the Contractor shall provide letters from its Subcontractors and Suppliers regarding the status of any accounts with the Contractor and the details of any claims, if any.
- c) The City may, in its absolute discretion, and at any time prior to the final release of holdbacks, in order to discharge lawful obligations of and satisfy lawful claims against the Contractor, any Subcontractors or Suppliers arising out of the performance of the Work, pay any amount that is due and payable to the Contractor pursuant to this Contract, directly to the obligees of and the claimants against, the Contractor, Subcontractor or Supplier. When the parties involved in the claim are in agreement on the validity and amount of the claim, the City may treat this as a lawful claim.
- d) Where no agreement is reached between the parties as referred to above, the City may withhold payment, without any obligation to pay interest, until the validity and amount of the Claim is established by legal proceeding. The City may, in its absolute discretion, bring the matter before the Nunavut Court of Justice by way of Interpleader, and shall dispose of the funds withheld in accordance with the direction of the Court.

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- e) A payment made pursuant to this provision is, to the extent of the payment, a discharge of the City's liability to the Contractor under this Contract and may be deducted from an amount payable to the Contractor under this Contract.

3.24 Patent Rights

The Contractor shall indemnify the City from and against all claims, liabilities and proceedings for or on account of infringement of any patent rights, design trademark or name or other protected rights in respect of the Contractor's equipment, materials or tools used for or in connection with, or for incorporation into the Work, and from and against all damages, costs, charges and expenses whatsoever relating thereto.

3.25 Royalties

Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for obtaining building materials required for the Work.

3.26 Records to be Kept by Contractor

- a) The Contractor shall maintain complete records of the Contractor's estimated and actual costs of the Work together with all tender calls, quotations, contracts, correspondence, invoices and receipts. In accordance with the terms of this Contract, these documents shall be available for audit and inspection by the City or by persons acting on behalf of the City when requested. The Contractor shall furnish any such person with any information it may require from time to time in connection with these records.
- b) Records maintained by the Contractor shall be kept intact for six years following the end of the warranty period or such other period of time as directed by the City Representative.
- c) The Contractor shall ensure that all of its Subcontractors comply with the above requirements.

3.27 Public Ceremonies and Signs

- a) The Contractor shall not permit any public ceremony in connection with the Work without the prior written consent of the City.
- b) The Contractor shall not erect or permit the erection of any sign or advertising on the Site without the prior written consent of the City.

3.28 Non-Compliance by Contractor

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- a) If the Contractor fails to comply, within a reasonable time, with any decision or direction given by the City Representative, the City may employ such methods as the City deems advisable to do that which the Contractor failed to do.
- b) The Contractor shall pay the City the total of all costs, expenses and damages incurred or sustained by the City by reason of the Contractor's failure to comply with any decision or direction referred to above, including the cost of any method employed by the City. Where the amounts owing to the Contractor under this Contract are insufficient to cover such costs, the Contractor shall pay the balance to the City immediately.

4. ADMINISTRATION BY CITY REPRESENTATIVE

4.1 City Representative's Duties and Authority

- a) The City Representative will administer this Contract on behalf of the City as provided in the Contract Documents.
- b) The City Representative will be the City's representative until the Work has been completed in accordance with the Contract Documents.
- c) Except as expressly stated in the Contract Documents, the City Representative shall have no authority to relieve the Contractor of any of the Contractor's obligations under this Contract.
- d) The City Representative will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work performed and shall deal with Claims as they arise, in accordance with GC 9.1.
- e) If any error, inconsistency, or omission in the Contract Documents is discovered, the City Representative shall provide directions or clarifications to the Contractor.
- f) During the progress of the Work, the City Representative shall have authority to reject Work that, in the City Representative's opinion, does not conform with the requirements of the Contract Documents, or to issue written additional instructions regarding the Work which may, in the opinion of the City Representative, be necessary to supplement or clarify the Contract Documents. Such additional instructions shall be consistent with the intent of the Contract Documents, shall not entitle the Contractor to an Adjustment and shall be binding upon and be carried out promptly by the Contractor.
- g) Wherever, under this Contract, the City Representative is required to exercise discretion by:
 - i. rendering a decision, opinion or consent;

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- ii. expressing satisfaction or approval;
- iii. determining value; or
- iv. otherwise taking action which may affect the rights and obligations of the City or the Contractor,
the City Representative shall do so impartially, consistent with the terms of this Contract and having regard to all of the circumstances. Any such decision, opinion, consent, expression of satisfaction or approval, determination of value or action, may be opened up, reviewed or revised as provided in GC 9.

4.2 Observing the Work

The City Representative will visit the Site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. However, the City Representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of such on-site observations, the City Representative will keep the City informed of the progress of the Work and will endeavour to guard the City against defects and deficiencies in the Work.

4.3 City Representative's Decision

Except as provided in GC 4.1(g), neither the City Representative's authority or responsibilities under GC 4 or under any other provision of the Contract Documents nor any decision made by the City Representative in good faith either to exercise or not exercise such authority or responsibility, shall create, impose or give rise to any duty or responsibility owed by the City Representative to the Contractor, any Subcontractor, Supplier, or to any surety for or employee or agent of any of them.

5. PAYMENT AND COMPLETION

5.1 Progress Payments

- a) At the end of each calendar month, or such other period as is agreed to between the City Representative and the Contractor, the Contractor shall deliver to the City Representative a written progress claim that describes the Work that has been completed and any material that was delivered to the Site but not yet incorporated into the Work since the last progress claim. The Contractor's progress claim shall be submitted on the last day of the month, for the month which progress is being claimed. If the last day coincides on a weekend or holiday, it will be issued on the following business day.

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- b) The City Representative shall, within fourteen (14) business days of receipt of the Contractor's progress claim, review the claim and prepare a certificate for payment which may take the form of an endorsement on the progress claim. If the City Representative amends the progress claim, he will promptly notify the Contractor in writing, giving reasons for the amendment.
- c) Where the Contractor does not submit a progress claim or where the City Representative does not endorse the Contractor's progress claim, the City Representative may calculate the progress payment and prepare a certificate for payment by the City. Where unit prices apply, payment will be calculated on the basis of the unit prices specified in the Contract Documents and the units of Work completed as determined by the City Representative. Where a lump sum price applies, payment will be calculated on the basis of the City Representative's estimate of the percentage of the Work completed.
- d) The progress certificate will show, to the end of the period covered by the progress claim, the estimated value of all labour and materials incorporated into the Work, GST monies paid, all materials stored at the Site and all Change Orders certified by the City Representative. The certificate shall also show the aggregate of previous payments and the amounts withheld. The gross amount shown on such certificate, less the aggregate of all payments to date and sums withheld, shall become due and be payable by the City to the Contractor within thirty (30) calendar days following receipt by the City of the progress certificate.
- e) The estimates referred to above shall not bind the City or the City Representative in any manner in the preparation of the final estimate of the Work done, but shall be held to be approximate only and shall in no case be taken as an acceptance of the Work or as a release of the Contractor from the Contractor's responsibilities under this Contract.
- f) If for any reason the City disputes the net amount shown for payment on a progress certificate the City shall, within the time specified in this GC, pay to the Contractor any amount not disputed and also deliver to the Contractor and the City Representative written reasons for any deductions.

5.2 Contract Holdbacks

- a) The City will retain Contract holdbacks in accordance with the following:
 - i. ten percent from each progress payment made prior to the issuance of the first Holdback Payment Certificate by the City Representative (the "Lien Holdback"), and

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- ii. five percent Owners Offset from any payments made to the Contractor following the issuance of the first Holdback Payment Certificate, other than from holdback payments.

5.3 Substantial Performance

- a) When the Contractor considers the Work ready to be utilized for its intended purpose, the Contractor may apply in writing to the City Representative to issue a Certificate of Substantial Performance. The Contractor shall prepare and submit with its application a comprehensive list of deficiencies and/or incomplete items to be completed or corrected, a statutory declaration as per GC 3.23(b) and particulars of, or a waiver of, all outstanding claims against the City, arising out of the Work. The Contractor shall proceed promptly to complete and correct the items on the list. Failure to include an item on this list does not alter the Contractor's responsibility to complete the Work in accordance with the Contract Documents.
- b) Following the receipt of an application from the Contractor for a certificate of Substantial Performance, the City Representative shall, with reasonable promptness, make an inspection and assessment of the Work. Within seven (7) calendar days of the inspection, the City Representative shall notify the Contractor of his approval, or reasons for, disapproval of the application. If the City Representative determines that the Work is substantially completed, he shall issue a certificate of Substantial Performance to the City and the Contractor. A list of items to be completed or rectified shall accompany the certificate. If the City Representative does not consider the Work to be substantially completed, he shall notify the Contractor in writing of the reasons why and list the items to be completed or rectified, of which the City Representative is aware.
- c) The City may deduct from the Contract Price, or any amounts due to the Contractor, the costs associated with the City Representative being called upon to perform more than one inspection for the purpose of determining Substantial Performance, when in the opinion of the City Representative, the Work was clearly not yet substantially complete.
- d) The certificate of Substantial Performance shall establish the date of Substantial Performance and shall fix the time within which the Contractor shall complete or correct all items on the list accompanying the certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Performance, unless otherwise provided, in the certificate of Substantial Performance.
- e) Similarly, in accordance with the procedure set out above, the City Representative may in its absolute discretion, issue a Certificate of Substantial Performance in respect of any part of the Work which has been both completed to the satisfaction of the City Representative and which the City has elected to occupy or use prior to completion.

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- f) In addition to other holdbacks as provided by the Contract Documents, when considering Substantial Performance, the City may hold back from payments otherwise due to the Contractor the amount that is two times of the amount of a reasonable estimate, as determined by the City Representative, on account of deficient or defective Work already paid for. This holdback may be held, without interest, until such deficiency or defect is remedied. The items of defect or deficiency and the amounts of related holdback shall be listed separately on the payment certificate.

5.4 Final Completion

- a) Following Final Completion of the Work, including any testing, the Contractor shall provide the City Representative with the following:
 - i. a statutory declaration as referred to in GC 3.23(b) that:
 - A. the Work has been completed in accordance with the Contract Documents; and
 - B. no claims exist or alternatively setting out the particulars of any claims relating to personal injury or death or property loss or damage arising out of the Work, and any alleged infringement by the Contractor of a patent or other property right in performing this Contract; and
 - ii. particulars of, or a waiver of, all outstanding claims against the City, arising out of the Work.
- b) Following receipt of the documents referred to in GC 5.4(a), the City Representative shall, with reasonable promptness, conduct an inspection and assessment of the Work to verify that the Work has been completed in accordance with the Contract Documents. Within fourteen (14) calendar days of receipt of the above documents, the City Representative shall either issue a certificate of Final Completion to the City and the Contractor or a list of items to be completed or rectified, of which the City Representative is aware. The City may deduct from monies owed to the Contractor the costs associated with the City Representative being called upon to perform more than one inspection.
- c) Receipt by the Contractor of the certificate of Final Completion shall entitle the Contractor to payment in accordance with GC 5.5.

5.5 Final Progress Payment

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- a) The final progress payment certificate will be prepared following the issuance of the certificate of Final Completion. The final progress payment certificate will show the total amount payable to the Contractor, less any amounts retained.
- b) The final progress payment amount shall be paid by the City to the Contractor within thirty (30) calendar days following receipt by the City of the final progress payment certificate.

5.6 Holdback Release

- a) Forty-five (45) calendar days following the date of the issuance of the certificate of Substantial Performance by the City Representative, the Contractor may apply to the City for release of fifty percent of the Lien Holdback. The Contractor shall with such application provide the City Representative with a statutory declaration as referred to in GC 3.23(b), with the content referred to in GC 5.4(a)(i), and the particulars of a waiver of, all outstanding claims against the City, arising out of the Work. The City Representative shall, within fourteen (14) calendar days' receipt of the Contractor's application, issue a Holdback Payment Certificate or a list of items to be rectified prior to payment.
- b) Following the release of fifty percent of the Lien Holdback in accordance with GC 5.6(a), the Contractor may apply in writing for release of the remainder of all Contract lien holdback funds retained by the City, provided an irrevocable letter of credit, in a form acceptable to the City and from a bank and branch acceptable to the City, for the same amount is presented for the City's consideration. The City may, in its absolute discretion, accept or reject the Contractor's irrevocable letter of credit in place of the remainder of all Contract holdback funds.
- c) The irrevocable letter of credit referred to in this provision must be for the same amount as the remainder of all Contract lien holdback funds and must remain in place until expiry of the warranty period referred to in GC 11.4. Should the Contractor's irrevocable letter of credit be scheduled to expire prior to the end of such warranty period, the City may, at any time within the fourteen (14) calendar days prior to the expiry date, call upon and draw down the irrevocable letter of credit, unless the Contractor presents a renewal thereof with an expiry date beyond the warranty period.
- d) One year following the date of the issuance of the Certificate of Substantial Performance by the City Representative, the Contractor may apply to the City for release of the remainder of all Contract holdbacks or the return of irrevocable letters of credit, if any. The City Representative shall, within fourteen (14) calendar days of receipt of the Contractor's application, issue a Holdback Payment Certificate or a list of items to be rectified prior to payment.

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- e) The City may withhold from monies owing to the Contractor, an amount equal to the City Representative's estimate of the value of all outstanding deficiencies.
- f) Subject to any applicable lien legislation requirements, holdback payments shall become payable or irrevocable letters of credit shall be returned by the City to the Contractor, within thirty (30) calendar days following receipt by the City of the Holdback Payment Certificate.

5.7 Delay in Making Payment

- a) Delay by the City in making payments when they are due pursuant to this provision shall not be a breach of this Contract by the City.
- b) Unless otherwise stated in this Contract, when the City delays in making a payment that is due pursuant to this clause, the Contractor shall be entitled to receive simple interest on the amount that is overdue, at the prime lending rate of the main banker of the City.

5.8 Right of Set-off

Without limiting any right of set-off or deduction given or implied by law or elsewhere in the Contract Documents, the City may set-off any amount payable to the City by this Contractor against any amount payable to the Contractor under this Contract.

6. TIME AND DELAYS

6.1 Time of the Essence

Time is of the essence of this Contract, including without limitation the dates and time limits stated in the Contract Documents. By executing this Contract, the Contractor confirms that this Contract Time is a reasonable period for performing the Work.

6.2 Delays

- a) Where a delay occurs in the progress of the Work and:
 - i. the delay is attributable to or within the control of the Contractor or its Subcontractors or was reasonably foreseeable by them at the time this Contract was entered into, the Completion Date will not be adjusted. The Contractor will be liable to the City for all costs and expenses incurred by the City, as well as for any losses resulting from the City's inability to utilize the Work for its intended purpose resulting from the delay, and the City may deduct such costs from payments owing to the Contractor under this Contract;
 - ii. the delay is due to an act or neglect by the City, the City Representative, or other contractor, or of an employee of any of them, then the Contractor may make a Claim therefor, in accordance with GC 9.1, or

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- iii. the cause for the delay does not fall within the circumstances described in (i) or (ii) above, the Contractor may make a Claim for an Adjustment in the Contract Time (but not for an Adjustments of the Contract Price), in accordance with GC 9.1. This shall be the Contractor's sole and exclusive remedy for such delays.
- b) In no event will adverse weather be considered to be a cause of delay beyond the Contractor's or its Subcontractors' control or not reasonably foreseeable by them at the time this Contract was entered into.

7. ASSESSMENTS AND DAMAGES FOR LATE COMPLETION

7.1 Late Completion

- a) For the purposes of this General Condition, "period of delay" means the number of days commencing on the Completion Date fixed by the Articles of Agreement and ending on the day immediately preceding the day on which the certificate of Substantial Performance is issued but does not include any day within a period of extension granted pursuant to GC 9.1 and 6.2, or any other day on which, in the opinion of the City Representative, completion of the Work was delayed for reasons beyond the control of the Contractor.

8. CHANGE ORDERS

8.1 Changes in the Work

- a) Without invalidating this Contract, the City may, through the City Representative, direct in writing the Contractor to make changes in the Work by adding to, deleting from or revising the Work.
- b) When no Change Order has been issued by the City Representative, and the Contractor claims that any of the Work being performed or proposed constitutes a change in the Work entitling the Contractor to an Adjustment, the Contractor may make a Claim therefore in accordance with GC 9.1.
- c) Changes in the Work directed by the City shall not be initiated, and shall not be carried out by the Contractor, without the prior written authorization of the City through the City Representative.
- d) Upon receipt of a Change Order from the City Representative, the Contractor shall promptly proceed with the Work involved under the applicable provisions of the Contract Documents, except as specifically provided in the Change Order.

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- e) The City Representative may in writing direct the Contractor to proceed with the Change notwithstanding that a Change Order has not been prepared or agreed at the time of such direction, and upon receipt of such direction the Contractor shall promptly proceed with the Work as aforesaid. If the parties fail to agree upon the price for such Change, the price therefor shall be as set out in GC 8.2(f) or (i), as applicable.
- f) If notice of any change in the Work is required by the provisions of any bond to be given to a surety, the Contractor will be responsible for giving such notice, and the amount of each applicable bond shall be adjusted accordingly. For the purposes of this provision, the Contractor will be considered to be the surety's agent.

8.2 Valuation of Changes

- a) When a change results in a decrease in the Work, the Contract Price shall be decreased by an amount to be determined by the City Representative, with such decrease valued in the same manner as if it were an increase.
- b) When a change causes an increase in the Work, the Contract Price shall be increased in accordance with this provision.
- c) If this Contract specifies unit prices for changes to the Work, and the City Representative concurs in their use on a particular change or portion thereof, then the Contractor shall be paid for such change or portion, a sum determined by applying the unit prices to the actual quantum, as measured by the City Representative, determined after completion of the Change.
- d) Where this Contract specifies force account rates for labour, equipment and materials, and the City Representative concurs in their use on a particular change or portion thereof, then the Contractor shall be paid for such change or portion, a sum determined by applying the force account rates to the number of hours of labour and equipment expended and quantities of materials utilized. The Contractor shall present records of the work done to the City Representative for approval, at the times and in the manner specified by the City Representative.
- e) If there are changes, or portions of changes, for which unit prices or force account rates are not applicable or specified, then the Contractor shall propose to the City Representative a fixed price for such changes or portions. Upon agreement by the City on the amount thereof, the proposed fixed price shall become the sum the Contractor shall be paid for such change or portion.
- f) If the Contractor and the City are unable to agree on a fixed price, then the Contractor shall be reimbursed its costs for performing the changes as directed by the City Representative, consistent with the following:

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- i. wages, salaries and travelling expenses of the Contractor's employees while actually engaged on the Work, excluding any and all expenses of head office personnel;
 - ii. workers' compensation assessments, unemployment insurance premiums, pension plan payments and paid holidays;
 - iii. rental cost of machinery and equipment that is used in the performance of the Work, or an allowance for depreciation if owned by the Contractor;
 - iv. operation and maintenance costs for machinery and equipment used in the performance of the Work, other than costs of repairs arising out of defects existing before it was brought on to the Site;
 - v. cost of materials necessary for and incorporated into the Work or consumed in the performance of the Work;
 - vi. cost of premiums for all bonds and insurance;
 - vii. other expenses incurred by the Contractor as approved in advance by the City Representative for the proper performance of the Work;
 - viii. Subcontractor costs calculated in accordance with GC 8.2(f) (i to vii) above; and
 - ix. an allowance for profit and all other expenditures or costs, including overhead, general administration costs, financing and interest charges, and every other cost, charge and expense, in an aggregate amount that is equal to twenty percent of the expenses referred to in GC 8.2(f) (i to vii), and equal to ten percent of the expenses referred to in GC 8.2(f) (viii) above.
- g) Whenever the cost of any Work is to be determined in accordance with GC 8.2(f), the Contractor will establish and maintain records in accordance with GC 3.26.
- h) Pending final determination of cost, amounts not in dispute shall be included in progress payments.
- i) If the method of valuation of any increase cannot be promptly agreed upon, the City Representative shall determine the method of valuation and issue a written authorization for the change setting out the method of valuation.

8.3 Contingency Allowance

- a) The Contract Price includes the contingency allowance, if any, stated in the Contract Documents.

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- b) Expenditures under the contingency allowance shall be authorized in the same manner as for a Change Order in accordance with GC 8, and the value shall be determined in accordance with GC 8.2.
- c) The unexpended portion of the contingency allowance shall be credited to, and paid to, the City as a condition of achieving Substantial Performance, unless otherwise agreed to by the City.

9. DISPUTE RESOLUTION

9.1 City Representative's Decision

- a) Where a Claim arises out of, or in connection with this Contract or the performance of the Work, whether during the performance of the Work or after its completion and whether before or after termination of this Contract, the Claim shall, in the first place, be referred in writing to the City Representative in accordance with this provision.
- b) A written notice stating the general nature of the Claim shall be delivered by the party making the Claim to the other party and to the City Representative promptly, and in no event later than seven (7) calendar days after the occurrence of the event giving rise to the Claim. Any Work for which a Claim has been made, shall be kept readily accessible and shall not be covered up without the express permission of the City Representative.
- c) Notice of the extent of the Claim with supporting data shall be delivered within fourteen (14) calendar days after such occurrence. The Contractor shall keep contemporaneous records as may reasonably be necessary to support the Contractor's Claim, which may be inspected by the City Representative, as he deems necessary.
- d) The City Representative shall review the information submitted, consult with the parties and make reasonable efforts to obtain agreement between the City and the Contractor regarding the Claim. The parties agree that, both during and after the performance of the Work, each of them shall use their best efforts to resolve any disputes arising between them by amicable negotiations, and shall provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate those negotiations. The City Representative may request the parties to refer the matter to more senior levels of management within their organizations, in an effort to resolve the Claim.
- e) Where the City and the Contractor reach an agreement on the Claim, the City Representative will, where appropriate, prepare a Change Order for the City's

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approval, which shall be sufficient to effect a change in this Contract, in accordance with the terms of the Change Order and the Contract Documents.

- f) If the City and the Contractor cannot reach an agreement regarding the Claim, the City Representative shall decide the matter and notify the parties in writing of his decision, within fourteen (14) calendar days of the last submission, and in no event later than thirty (30) calendar days following the date of the occurrence giving rise to the Claim. Valuation of Adjustments in the Contract Price shall be determined by the City Representative in accordance with GC 8.2.
- g) Unless this Contract has already been terminated, the Contractor shall, in every case, proceed with the Work with all due diligence and the City and the Contractor shall give effect forthwith to every such decision of the City Representative unless and until the same shall be revised, as hereinafter provided.
- h) Where either party disputes the decision of the City Representative or where the City Representative fails to notify the parties of his decision in accordance with GC 9.1(f) then either party may, within fourteen (14) calendar days, notify the other party of its intention to refer the matter to the Referee in accordance with GC 9.2 or Arbitrator in accordance with GC 9.3, as application. No referral may be made unless such notice is given. Notices shall be copied to the City Representative for information.
- i) If the City Representative has given notice of his decision as to a matter in dispute to the parties and no notice of intention to refer the matter to the Referee has been given by either the City or the Contractor within thirty (30) calendar days, the City Representative's decision shall become final and binding upon the parties.
- j) No act by the claimant shall be construed as a renunciation or waiver of any of its rights or recourses provided the claimant has given the required notices and carried out the instructions specified. The presentation of a Claim shall not be grounds for delay or interruption of the Work.

9.2 Appointment of Referee

- a) If the City and the Contractor agree to appoint a Referee, the City and the Contractor shall name, within thirty (30) calendar days of the parties signing this Contract, a Referee who may be called upon during the performance of, or after the completion of the Work, to settle any Claims or disputes arising under this Contract. Where the Referee appointed in accordance with this provision refuses to act, is incapable of acting or dies, the parties shall name a new Referee at the earliest opportunity. Should the parties be unable to agree on a Referee within the time specified, the City Representative whose decision shall be final, shall name a Referee.

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- b) Where either party has disputed a decision of the City Representative in accordance with GC 9.1(h), the Referee shall review the decision of the City Representative and may, if he deems it appropriate, require the parties to supply him with further information or documentation, giving each party an opportunity to respond. The Referee may inspect the Work after giving reasonable notice to each party of the time he intends to do so.
- c) Not later than thirty (30) calendar days after receipt of the last documentary submission, where the matter has not been resolved in accordance with GC 9.2(b), the Referee shall issue his written decision with reasons to the parties.
- d) The costs of retaining the Referee shall be shared equally between the City and the Contractor, unless the Referee directs otherwise. The City may deduct such costs assessed against the Contractor by the Referee, from any amount due and payable by the City to the Contractor under this Contract.

9.3 Appointment of Arbitrator

- a) If the parties agree to appoint a Referee, then within fourteen (14) calendar days after the Referee has rendered his decision, either party may, by written notice to the other party and to the City Representative for information, refer the decision of the Referee to arbitration pursuant to this GC 9.3. If the parties have not agreed to appoint a Referee, then within the fourteen-day period referred to in GC 9.1(h), either party may refer to decision of the City Representative to arbitration pursuant to this 9.3. Upon any such referral, the parties shall appoint a single Arbitrator, for arbitration in accordance with the Arbitration Act, R.S.N.W.T. 1988, c. A-5, as duplicated for Nunavut by s. 29 of the Nunavut Act, subject to the following provisions:
 - i. the Arbitrator shall have the authority to call upon the Referee to give evidence during the arbitration proceedings, including all documentation prepared by the Referee or reviewed by him;
 - ii. the decision of the Arbitrator shall be final and binding upon the parties who covenant that their disputes shall be so decided by arbitration alone and not by recourse to any court by way of action at law;
 - iii. arbitration proceedings may be commenced prior to or after completion of the Work, provided that the obligations of the City, the City Representative and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the Work;
 - iv. before the arbitration proceeds on the substantive issues, a budget for the proceedings shall be established by the Arbitrator and each party shall deposit, as security for costs, a sum equal to half of such budget with the Arbitrator,

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who shall thereupon deposit such funds in an interest bearing trust account with a chartered bank. Subject to the award and payment of costs as hereinafter provided, the balance of the security deposits and interests shall be properly returned to the respective parties; and

- v. the cost of arbitration may be awarded against the parties hereto or against any one of them as the Arbitrator may decide.
- b) If a Claim involves the Work of a Subcontractor, either the City or the Contractor may join such Subcontractor as a party to the arbitration between the City and the Contractor. The Contractor shall include in all its subcontracts specific provision whereby its Subcontractors consent to being joined in an arbitration between the City and the Contractor involving the Work of such Subcontractors. Nothing in this provision nor in the provision of such subcontracts consenting to joinder shall create any claim, right or cause of action in favour of the Subcontractors as against the City or the City Representative, that does not otherwise exist.
- c) If no notice is received within the time limits set out or referred to in GC 9.3(a), the decision of the Referee shall be final and binding on the parties.
- d) The Contractor agrees that it shall join other arbitration proceedings with respect to the Project, as requested in writing by the City.

9.4 Adherence to Provisions

- a) The provisions, including without limitation, procedure and sequences, outlined in GC 9.1 to 9.3 for the resolution of disputes shall be strictly adhered to by both parties.

10. WITHDRAWAL, SUSPENSION AND TERMINATION

10.1 Withdrawal of the Work

- a) After giving the Contractor seven (7) calendar days written notice within which the Contractor may remedy any delay or default specified, the City may, through the City Representative, withdraw the Work from the Contractor where the Contractor is not diligently performing the Work to the satisfaction of the City Representative or has not completed the Work within the time specified in this Contract.
- b) On withdrawal of the Work, the City may:
 - i. take possession of all plant, equipment and materials on the Site and ordered by the Contractor for the Work but not yet delivered to the Site; and
 - ii. complete the Work withdrawn from the Contractor.

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- c) Withdrawal of the Work by the City does not terminate this Contract and does not relieve the Contractor of its obligation to complete the remainder of the Work.
- d) The Contract Price will be reduced by the value of the Work withdrawn, as determined by the City Representative. The Contractor shall be liable to the City for all extra costs incurred by the City to complete the Work withdrawn from the Contractor, including all amounts set out in GC 10.3(d) notwithstanding that the Contractor may not be in default hereunder, and the City may deduct such costs from payments owing to the Contractor under this Contract.

10.2 Suspension of the Work

- a) The City may through the City Representative suspend the progress of the Work at any time by giving the Contractor a written notice, which shall include the reason for the suspension.
- b) Where such a suspension results in a delay in the progress of the Work, the rights of the parties shall be determined in accordance with GC 6.2(a)(i), (ii) or (iii) as applicable, and shall be based on the reason for the suspension.
- c) During the period of suspension, the Contractor shall protect, preserve and maintain the Work in a manner satisfactory to the City and shall not remove any part of the plant, equipment and materials from the Site without the prior written consent of the City.
- d) Following the suspension, the Construction Schedule shall be revised by the Contractor, for approval by the City, and the Work shall be completed as provided in the revised schedule.
- e) Where the Work or any part thereof is suspended on the written instructions of the City and if permission to resume Work is not given by the City within a period of thirty (30) calendar days from the date of suspension, the Contractor may request permission from the City to proceed with the Work. If the City does not grant permission within fourteen (14) calendar days' receipt of the Contractor's written request, the Contractor may elect to treat the suspension, where it affects only part of the Work, as an omission of such Work by giving a further notice to the City to that effect or, where it affects the whole of the Work, treat this Contract as having been cancelled by the City, in accordance with GC 10.4.

10.3 Termination by City

- a) Without limitation, any or all of the following actions by or circumstances relating to the Contractor shall constitute default on the part of the Contractor:

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- i. committing or threatening to commit any act of insolvency or bankruptcy, voluntary or otherwise;
 - ii. having a receiver appointed on account of insolvency or in respect of any property;
 - iii. making a general assignment for the benefit of creditors;
 - iv. failing to comply with or persistently disregarding statutes, regulations, bylaws or directives of competent authorities relating to the Work;
 - v. failing to comply with any requests, instruction or direction of the City Representative;
 - vi. failing to pay accounts relating to the Work as they come due;
 - vii. failing to prosecute the Work with skill and diligence;
 - viii. assigning or subletting this Contract or any portion thereof without the required consent from the City;
 - ix. failing or refusing to correct defective or deficient Work; and
 - x. being otherwise in default in carrying out any of its obligations under this Contract, whether such default is similar or dissimilar in nature to the causes listed previously.
- b) The Contractor shall immediately advise the City in writing of any default listed in GC 10.3(a)
- c) If the Contractor is in default under this Contract, the City shall be entitled to any or all of the following:
- i. take possession of all Work in progress, materials and construction equipment at the Site, at no additional charge for the retention or use of the construction equipment;
 - ii. eject and exclude from the Site all personnel of the Contractor and any Subcontractor;
 - iii. terminate the City's utilization of the Contractor to perform the Work;
 - iv. finish the Work by whatever means the City may deem appropriate under the circumstances; and

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- v. withhold any further payments to the Contractor until the Contractor's liability to the City is ascertained.
- d) The Contractor shall be liable to the City for:
 - i. the extra expense of finishing the Work, including compensation to the City for additional engineering, managerial and administrative services;
 - ii. the cost of correcting deficiencies in that portion of the Work performed by the Contractor; and
 - iii. all other loss, damage and expense occasioned to the City by reason of the Contractor's default,and the City may deduct such amounts from payments owing to the Contractor under this Contract.
- e) Any action by the City under this GC 10.3 shall be without prejudice to the City's other rights or remedies under any security held by the City for performance of this Contract by the Contractor.

10.4 Contract Cancellation

- a) The City shall have the right which may be exercised from time to time, with or without cause, and on fourteen (14) calendar days' written notice to the Contractor, to cancel any uncompleted or unperformed portion of the Work. In the event of such cancellation, the Contractor shall be entitled to the following:
 - i. reimbursement at this Contract rate for all items completed and delivered;
 - ii. reimbursement for the costs to the Contractor for Work in progress and expenses incurred in the course of the Work, plus a reasonable return on such costs and expenses; and
 - iii. reimbursement for costs and expenses directly caused by the cancellation.
- b) Title to all Work for which reimbursement is made shall vest in the City.
- c) The City shall not be liable to the Contractor for indirect loss, consequential loss, loss of business opportunity or loss of anticipated profit on the cancelled portion or portions of the Work.
- d) This section shall not apply to situations in which the City is entitled to terminate this Contract by reason of default by the Contractor.

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10.5 Termination by Contractor

- a) If the City should be adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the City's insolvency, or if a receiver is appointed because of the City's insolvency, the Contractor may, without prejudice to any other right or remedy the Contractor may have, by giving the City or receiver or trustee in bankruptcy notice in writing, terminate this Contract.
- b) If the Work should be stopped or otherwise delayed for a period of thirty (30) calendar 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, by giving the City notice in writing, terminate this Contract.
- c) If the Contractor terminates this 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 machinery and equipment, and such other damages as the Contractor may have sustained as a result of the termination of this Contract.

11. BONDS AND WARRANTY

11.1 Obligations to Provide Contract Security

- a) The Contractor shall promptly provide to the City the surety bonds called for in the Contract Documents, not later than ten (10) business days following receipt by the Contractor of the letter of acceptance.
- b) Such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in Nunavut and shall be maintained in good standing until the fulfillment of this Contract.
- c) Prior to or at the time of making a Claim under such bonds, the City shall send written notification to the Contractor, stating the nature of the default for which a Claim is being made.

11.2 Prescription of Acceptable Contract Security

- a) The Contractor shall deliver to the City:
 - i. a performance bond and a labour and material payment bond each in an amount that is equal to and not less than fifty percent of the Contract Price referred to in the Articles of Agreement; or

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- ii. a security deposit in an amount that is equal to ten percent of the Contract Price referred to in the Articles of Agreement.
- b) The performance bond and the labour and material payment bond referred to in GC 11.2(a)(i) shall be in a form as approved by the Federal Treasury Board (Federal Contracts).
- c) A security deposit referred to in GC 11.2(a)(ii) shall be in a form of:
 - i. an irrevocable letter of credit in a form acceptable to the City and from a bank and branch acceptable to the City; or
 - ii. a certified cheque or bank draft from a bank acceptable to the City and made payable to the City.
- d) Should the Contractor's irrevocable letter of credit be scheduled to expire prior to the Completion Date set out in the Articles of Agreement, the City may, at any time within the fourteen (14) calendar days prior to the expiry date, call upon and draw down the irrevocable letter of credit, unless the Contractor presents a renewal thereof with an expiry date beyond the anticipated date for Final Completion, as determined by the City Representative.

11.3 Return of Security Deposit

- a) Following issuance of the certificate of Substantial Performance, the City may, in its absolute discretion, release all or part of the security deposit referred to herein.
- b) Following issuance of the certificate of Final Completion, the Contractor shall, subject to the terms of this Contract, be entitled to the remainder of any security deposit.
- c) Interest shall not be paid on security deposits.

11.4 Warranty

- a) The Contractor warrants and guarantees that the Work is and shall be free from all defects or deficiencies in, or arising from, materials or workmanship in any part of the Work for the period of one year from the date of Substantial Performance of the Work, as certified by the City Representative, or such longer period as may be specified in the Contract Documents for certain products or Work.
- b) The Contractor shall promptly correct, at its own expense, defects or deficiencies in the Work which appear prior to and during the warranty described in GC 11.4(a). The Contractor shall correct and pay for all damages resulting from corrections made under this provision.

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- c) Work performed to correct defects or deficiencies shall be warranted and guaranteed to be free from defects or deficiencies, on the same basis as the original Work, for a period of one year from the day said work was completed.
- d) The City or the City Representative shall promptly give the Contractor written notice of observed defects and deficiencies.
- e) If any defects or deficiencies in the Work appear at any time prior to the end of the warranty period, the City Representative may instruct the Contractor to search for the cause thereof. If such defect or deficiency is one for which the Contractor is liable, the cost of the Work carried out in searching shall be at the Contractor's expense, and it shall in such case remedy such defect or deficiency at its own cost; otherwise it shall be at the City's expense.
- f) In an emergency or to prevent an emergency or if the Contractor neglects for any reason to correct defects or deficiencies within a reasonable time, the City may perform the Work or direct another party, on the City's behalf, to do the Work. All costs associated with the correction of such defects or deficiencies shall be paid for by the Contractor and the City may deduct such costs from amounts owing to the Contractor.

12. INDEMNIFICATION AND INSURANCE

12.1 Indemnification by Contractor

- a) The Contractor shall defend, indemnify and save harmless the City and the City Representative, their agents and employees from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of or attributable to the Contractor's performance of the Work, or by reason of any matter or thing done, permitted or omitted to be done, by the Contractor, its Subcontractors, its Suppliers or their agents or employees, whether occasioned by negligence or otherwise. Such indemnity shall survive completion or termination of this Contract.
- b) Nothing contained in the Contract Documents or any approval, express or implied, of the City Representative or City shall relieve the Contractor of any liability for latent defects or any liability which may be imposed by law.

12.2 Indemnification by City

The City shall, subject to any law that affects the City's rights, powers, privileges or obligations, indemnify and save the Contractor harmless from and against all claims, demands, losses, costs, damages, actions, suits or proceedings arising out of his activities under this Contract that are directly attributable to:

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- a) lack of or a defect in the City's title to the Site whether real or alleged; or
- b) an infringement or an alleged infringement by the Contractor of any patent of invention or any other kind of intellectual property occurring while the Contractor was performing any act for the purposes of this Contract employing a model, plan or design or anything related to the Work that was supplied by the City to the Contractor.

12.3 Policies of Insurance

Without restricting the generality of GC 12.1, the Contractor shall provide and maintain the insurance coverages listed in this provision. Unless otherwise stipulated, the duration of each insurance policy shall be from the date of commencement of the Work until the date of issuance of the certificate of Final Completion. Prior to commencement of the Work, the Contractor shall provide the City with confirmation of coverage in the format attached as Appendix A to these General Conditions, and, if required, a certified true copy of the policies certified by an authorized representative of the Insurer. The Contractor shall ensure that any Subcontractors comply with the insurance requirements outlined in this GC 12. The insurance coverages required are as follows:

a) General Liability Insurance

Contractor's comprehensive general or commercial general liability insurance shall have limits of not less than five million dollars (\$5,000,000) per occurrence with a property damage deductible not exceeding two thousand five hundred dollars (\$2,500). The insurance provided shall be no less broad than the insurance provided by IBC Form 2100 or its equivalent replacement and shall include a standard non-owned automobile policy including a blanket contractual liability endorsement. To achieve the required limit, umbrella or excess liability insurance may be used. All liability coverage shall be maintained for completed operations hazards from the date of Final Completion of the Work, as set out in the certificate of Final Completion, on an ongoing basis for a period of not less than six years from the date of such certificate. The City shall be added as an additional insured with respect to liability arising out of the operations of the named insured. The policy shall be endorsed to provide the City with not less than thirty (30) calendar days' written notice in advance of any cancellation, change or amendment restricting coverage.

b) Automobile Liability Insurance

Automobile liability insurance in respect of licensed vehicles shall have limits of not less than five million dollars (\$5,000,000) inclusive per occurrence for bodily injury, death, and damage to property and covering all licensed vehicles owned or leased by the Contractor, endorsed to provide the City with not less than fifteen (15) calendar days' written notice in advance of any cancellation, change or amendment restricting coverage.

c) Property and Boiler and Machinery Insurance

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- i. “All risks” property insurance shall be in the joint names of the Contractor, the City and the City Representative, insuring not less than the sum of the amount of the Contract Price and the full value of all labour, tools, equipment and materials that are to be provided by the City for incorporation into the Work, with a deductible not exceeding two thousand five hundred dollars (\$2,500). The insurance provided shall be no less broad than the insurance provided by IBC Form 4042 or its equivalent replacement. The policy will contain a waiver of rights of subrogation against all those insured by the policy. Such coverage shall be maintained continuously until the date the certificate of Final Completion is issued or an earlier date specified by the City;
- ii. the policy will allow for partial or total use or occupancy of the Work. If because of such use or occupancy the Contractor is unable to provide coverage, the Contractor shall notify the City in writing prior to such use pay for property and, if necessary, boiler insurance insuring the full value of the Work as in (i) above, including coverage for such use or occupancy and shall provide the Contractor with proof of such insurance. The Contractor shall refund to the City the unearned premium applicable to the Contractor’s policy upon termination of coverage;
- iii. where, due to the nature of the Work, the full insurable value of the Work is substantially less than the Contract Price, the City may, at its sole discretion, reduce the amount of insurance required or waive the course of construction insurance requirement;
- iv. where such risks exist, the Contractor shall provide boiler and machinery insurance insuring not less than the replacement value of boilers, pressure vessels and other objects insurable under a boiler & machinery policy and forming part of the Work;
- v. the policies shall provide that, in the event of a loss or damage, payment shall be made to the City and the Contractor as their respective interests may appear. The Contractor shall act on behalf of the City for the purpose of claiming the amount of loss or damage from 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 this Contract except that the Contractor shall be entitled to such reasonable extension of Contract Time relative to the extent of the loss or damage in accordance with the terms of this Contract; and
- vi. the Contractor shall be responsible for deductible amounts under the policies except where such amounts may be excluded from the Contractor’s responsibility in accordance with the Contract documents.

CONSTRUCTION SERVICES
PART III – GENERAL CONDITIONS

d) Aircraft and Watercraft Liability Insurance

Where such risks exist, the Contractor shall obtain 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, and shall have limits of not less than two million dollars (\$2,000,000) inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof, and limits of not less than two million dollars for aircraft passenger hazard. Such insurance shall be in a form acceptable to the City. The policies shall be endorsed to provide the City with not less than fifteen (15) calendar days' written notice in advance of any cancellation, change or amendment restricting coverage.

e) Contractor's Equipment Insurance

The Contractor shall give proof of insurance in a form acceptable to the City of "all risks" Contractor's equipment insurance covering construction machinery and equipment used by the Contractor for the performance of the Work, including boiler insurance on temporary boilers and pressure vessels. The insurance shall be in a form acceptable to the City and shall not allow subrogation claims by the insurer against the City. The policies shall be endorsed to provide the City with not less than fifteen (15) calendar days' written notice in advance of cancellation, change or amendment restricting coverage.

f) Other Insurance

The Contractor shall provide, maintain and pay for any additional insurance required to be provided by law, or which the Contractor considers necessary to cover risks not otherwise covered by insurance specified in the Contract Documents.

12.4 Insurance General

- a) All required insurance policies shall be with insurers licensed to underwrite insurance in Nunavut and signed by representatives licensed to do so for insurance in Nunavut.
- b) The Contractor shall require and ensure that its Subcontractors maintain liability insurance comparable to that required above.
- c) If the Contractor fails to provide or maintain insurance as required by this General Condition or elsewhere in the Contract Documents, then the City shall have the right to provide and maintain such insurance and give evidence to the Contractor and the City Representative. The Contractor shall pay the cost thereof to the City on demand or the City may deduct the costs from monies which are due or may become due to the Contractor.

CONSTRUCTION SERVICES
PART III – GENERAL CONDITIONS

- d) Where an insurer fails or refuses to pay any claims under an insurance policy covering the activities of the Contractor or a Subcontractor relating to or arising out of the Work, the Contractor shall not be released from any liability arising under this Contract.

13. LOCAL AND INUIT INVOLVEMENT

13.1 Requirements for Inuit, Local and Nunavut Content

- a) The Contractor shall, in the performance of the Work, employ Inuit, Local and Nunavut workers and use Inuit, Local and Nunavut content to the greatest extent possible and at a minimum, no less than the amounts tendered by the Contractor in Appendix J-2 “Substantiation of Bid Adjustment” of the tender. Workers shall meet all levels of proficiency, qualification and expertise as dictated by Applicable Laws and/or as defined in the Contract Documents.
- b) The Contractor shall provide to the City Representative a schedule indicating the anticipated total monthly value of all Inuit, Local and Nunavut content and labour to be expended in the execution of the Work. This schedule shall provide the benchmark for ensuring compliance by the Contractor with the requirements for the use of Inuit, Local and Nunavut content during the performance of the Work.

13.2 Requirement for Community Meetings

- a) If required under this RFT (if the NNI Policy applies), The Contractor shall arrange meetings on a monthly basis, or other basis as may be mutually agreed by the parties to this contract, to monitor the use of Inuit, Local and Nunavut labour and Inuit, Local and Nunavut content. The Contractor shall give the City five (5) business days’ notice of all meetings called under GC 13.2. The Contractor shall take reasonable steps to ensure that these meetings include the following representatives:
 - i. a community representative who has been designated to speak on behalf of the community (if available);
 - ii. a community manpower representative (if available);
 - iii. the Contractor; and
 - iv. the City Representative.
- b) In addition to the community meetings contemplated in GC 13.2(a), the Contractor shall arrange a community meeting prior to the start of the Work which shall be arranged on the same terms as indicated in GC 13.2(a) and at that meeting shall:

CONSTRUCTION SERVICES
PART III – GENERAL CONDITIONS

- i. provide a schedule referred to in GC 13.1(b) above to the community representative;
 - ii. request from the community manpower representative or from the City if no community manpower representative has been delegated, a list of workers available in the community; and
 - iii. identify specific types of workers required during the project such as plumbers, painters or electricians and how many of those workers are required and when they are required and based on information received in accordance with GC 13.2(b)(ii) maintain a list of community manpower.
- c) At the community meetings contemplated in GC 13.2(a), the Contractor shall:
 - i. provide employment reports identifying workers used during the past month (to substantiate information provided on Appendix J-2 “Substantiation of Bid Adjustment”);
 - ii. provide a schedule referred to in GC 13.2(b)(i), or such schedule as amended, if necessary; and
 - iii. provide a consolidated report at the time of Substantial Performance, which shall confirm the total amount of Inuit, Local and Nunavut content used. This report will identify Inuit, Local and Nunavut payroll separately. This consolidated report shall be a condition precedent to the release of payment.
- d) The City shall attend all community meetings organized by the Contractor in accordance with this GC 13.2 and when requested by the Contractor shall identify and contact potential community workers who may be available to be employed on the Work, identify alternate workers if those workers initially identified are not available to work, and assist in confirming the residency of local workers.

13.3 Monitoring the Level of Inuit, Local and Nunavut Labour

- a) The Contractor is responsible to ensure that every worker identified as Local or Nunavut meets the qualifying requirements, which are, for Nunavut, being ordinarily resident in Nunavut for the past 12 months, and for Local being a Nunavut resident ordinarily resident in the subject community for the past 4 months. The Contractor may be required to provide proof of residency of workers at any time throughout the course of performing the Work.
- b) Reasonable proof of Nunavut and Local residency shall be any of the following:

CONSTRUCTION SERVICES
PART III – GENERAL CONDITIONS

- i. being listed on the Nunavut Tunggavik Inc. (NTI) enrolment list and provision of a physical address where residing;
 - ii. if the last 12 months have been spent as ordinarily resident in Nunavut and a physical address of such residence has been provided, then
 - A. provides a valid Nunavut Health Care Card effective at least 9 months prior to start date of employment on the Work; and/or
 - B. provides another accepted proof of residency such as: a Nunavut General Hunting License, a Nunavut Driver's Licence, a lease or rental receipt, or a certified Schedule T222 Income Tax return from the previous year or proof that Income Tax was paid in the Nunavut during the previous tax year; or
 - iii. is included on a list of approved Local or Nunavut residents verified by the municipality of their residence.
- c) The Contractor is responsible to ensure that every worker identified as Inuit is on the NTI Inuit enrolment list or would qualify to be on the list.
- d) If requested by the City to do so, the Contractor shall obtain a signed consent form from workers which verifies their residency and permits the City to obtain any and all information required to support the worker's claim of residency and/or Inuit status. A worker does not need to comply with the requirements of this clause if the worker is on the NTI Inuit enrolment list.

13.4 Requirement for Using Hotels or Bed and Breakfast

- a) If performance of the Work is undertaken where a Commercial Room and Board Facility (as defined below) exists within a Community (as defined below), the Tenderer is required to use a Commercial Room and Board Facility to house and feed all workers directly employed by the Contractor, any Subcontractor or agent or any other business working on the Project. The Contractor, Subcontractor, agent or other business are not required to use Commercial Room and Board Facilities for workers who are Local Residents.
- b) In this Contract:
 - i. "Commercial Room and Board Facility" means a Hotel or a Bed and Breakfast (Tourist Home) that holds a Tourist Establishment Licence issued by the Government of Nunavut under the *Travel and Tourism Act*.

CONSTRUCTION SERVICES
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- ii. “Community” means a community in which the Work (as defined in the Contract) is being performed and includes the entire area within a 20- kilometer radius of that community.
- c) The Commercial Room and Board Facility must:
 - i. meet the applicable requirements under the *Public Health Act*, and of the *Eating or Drinking Place Regulations*; and
 - ii. meet all applicable requirements of the *Public Health Act* the *Fire Prevention Act* and applicable regulations thereunder, and any other applicable Government of Nunavut or federal legislation.

14. TRANSPORTATION OF MATERIALS

14.1 Marine Transport Resources

- a) Whenever marine (water) transport is to be utilized, the Contractor may use, and space may be booked directly with the following carrier:
 - i. Nunavut Sealink and Supply (NSSI),
By ships loading at the Montreal area Port of Ste-Catherine
 - ii. Nunavut Eastern Arctic Shipping (NEAS)
By ships loading at the Port of Valleyfield, Salaberry-de-Valleyfield
- b) The annual shipping rates offered by marine carriers are dependent upon anticipated cargo quantities including the materials for construction projects; therefore, Contractors may tender using the published sailing schedules and rates available from the above marine carriers.
- c) In exceptional or extraordinary circumstances, where the specified marine carrier’s sailing schedule is in substantial conflict with the Construction Schedule, the City will review the circumstances, taking into account the adverse impact on the project and the specified marine carrier’s interests, and the City may provide authorization to allow the relevant cargo to be shipped with a marine carrier other than the specified marine carrier, depending upon the circumstances; and such authorization must be writing.
- d) If a Contractor uses a marine carrier other than the City contracted marine carrier without the City’s written authorization to do so, the Contractor shall be responsible for extra freight cost, administrative costs or any other costs, incurred by the City which result directly or indirectly from the Contractor’s failure to use the City specified marine carrier as set out in this GC 14. The Contractor shall also be responsible to refund to the City any monies saved by the Contractor by using a marine carrier other than the specified marine carrier as set out in this GC 14.

CONSTRUCTION SERVICES
PART III – GENERAL CONDITIONS

END OF SECTION

CONSTRUCTION SERVICES
PART IV – SUPPLEMENTARY CONDITIONS

Amend the General Conditions as follows:

Add the following Definitions (if applicable):

- .1 **“CMM Guidelines”** means all guidelines and regulations published by the Territory of Nunavut and the Canadian Construction Association COVID-19 Standardized Protocols for All Canadian Construction Sites, Version 4, April 16, 2020 regarding measures to mitigate COVID-19.
- .2 **“COVID-19 Mitigation Measures (CMM)”** means measures required to be in compliance with the CMM guidelines.
- .3 **“COVID-19 Change”** means any change in the work caused by or attributed to changes in CMM or changes made to applicable laws, ordinances, rules, regulations, or codes of authorities have jurisdiction that pertain to the control of COVID-19 that come into force after the time of Bid Closing.

.1 COVID-19 Restrictions and Protocols

- .1 All Tenderers shall abide by the CMM Guidelines and measures. Due to current travel restrictions, local personnel shall be used where possible, unless measures mandated by local Health Authorities are implemented (e.g. self-isolation, social distancing, etc.)
- .2 Tenderers are to review the current travel restriction orders, self isolation orders and other regulations put forth by the Government of Nunavut and local health authorities. Current regulations and information can be found on the GN website:

<https://gov.nu.ca/health/information/travel-and-isolation>
- .3 Tenderers are to provide all costs and assumptions to abide by the travel and work restrictions identified in Sections 1.1 and 1.2 above, that are required to complete the scope of work identified in the Tender Documents.
- .4 For the purposes of the Tender, it should be assumed that the project will be classified as an essential service, and that Contractors will require to follow the protocols for essential works in the documents listed above in 1.1 and 1.2.

**REQUEST FOR TENDER
FOR THE PROVISION OF CONSTRUCTION SERVICES FOR
APEX ROAD CROSSWALK**

PART V – TECHNICAL SPECIFICATIONS

2022-12-20



END OF SECTION

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32 11 16.01	Granular Sub-Base
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END OF SECTION

<u>Drawing No.</u>	<u>Rev.</u>	<u>Title</u>
C0	B	COVER SHEET
C1	B	EXISTING CONDITIONS AND REMOVALS
C2	B	SITE PLAN, PAVEMENT MARKING PLAN & DETAILS
EL1	B	GENERAL LOCATION PLAN, SITE ELECTRICAL LAYOUT
EL2	B	GENERAL LOCATION PLAN, SITE ELECTRICAL WIRING DIAGRAM
EL3	B	ELECTRICAL SPECIFICATIONS
EL4	B	ELECTRICAL DETAILS

END OF SECTION

PART 1 GENERAL

1.1 CONTRACT DOCUMENTS

- .1 The Contract Documents are complementary and what is called for on one shall be as binding as if called for by all. The intention of the Contract Documents is to include all labour and material, equipment, superintendence and transportation necessary for the proper performance of the work. Materials or work described in words which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

Should there be any conflicts in the drawings with the Contract Documents, the Contractor shall notify the Engineer. The Engineer's decision on questions arising under the Contract Documents or the interpretation of the Specifications and Drawings shall govern.

- .2 Contract documents are diagrammatic only. They are intended to establish scope, materials and quality; they are not detailed installation drawings. Minor details and incidental accessories required for the proper installation which are not shown or specified are to be included in the work.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- .1 The Contractor shall supply all materials, labour and equipment for construction of the work indicated within these Contract Documents. The following description is intended to provide a general overview and is not to be considered a "scope of work".
- .2 The general work description for Apex Road Crosswalk Design;
 - .1 Install a new Pedestrian Crosswalk (PXO Type C) at the intersection of Apex Road and Queen Elizabeth, near the entrance to the Qikiqtani General Hospital.
 - .2 Install new lighting for the intersection.
 - .3 Repair all damaged asphalt and road shoulders.
 - .4 Install new bollards
 - .5 Install new Road Line Painting and Traffic Signs.
 - .6 The Contractor will coordinate with QEC to install new wooden poles for lighting and power supply for the new crosswalk.

1.3 FURNISHED ITEMS

- .1 Contractor Responsibilities:
 - .1 Designate submittals and delivery date for each product in progress schedule.
 - .2 Review shop drawings, product data, and other submittals. Submit to Consultant notification of any observed discrepancies or problems anticipated due to non-conformance with Contract Documents.
 - .3 Receive and unload products at site.
 - .4 Inspect deliveries jointly with Owner, record shortages, and damaged or defective items.

- .5 Handle products at site, including uncrating and storage.
- .6 Protect products from damage, and from exposure to elements.
- .7 Assemble, install, connect, adjust, and finish products.
- .8 Provide installation inspections required by public authorities.
- .9 Repair or replace items damaged by Contractor or Subcontractor on site (under his control). Deliver supplier's bill of materials to owner

1.4 QUALITY ASSURANCE

- .1 Only tradespeople properly licensed in Nunavut for work requiring special skills shall be employed on such work, and under no circumstances shall any tradesperson carry out work for which they have insufficient ability or training.

All materials, fabrication and equipment shall be of reputable manufacturer, and where a product by a manufacturer is noted in the Plans or Specifications, it is to indicate a standard of acceptance for the particular application or approved equal.

1.5 MINIMUM STANDARDS

- .1 In the absence of other standards being required by the Contract Documents, all work shall conform to or exceed the minimum standard of the Canadian Government Specification Board, the Canadian Standards Association, or the National Building Code of Canada (latest edition with all current addenda), whichever is applicable.

1.6 DETAIL DRAWINGS AND INSTRUCTIONS

- .1 The Engineer shall furnish, as necessary for the performance of the work, additional instructions by means of drawings or other media, which shall be consistent with the Contract Documents and the Contractor shall perform the work in accordance with such instructions.

If either the Contractor or the Engineer so requests, they shall jointly prepare a schedule, fixing the dates at which the various detail drawings will be required, and the Engineer shall furnish them in accordance with this schedule.

1.7 JOB CONFERENCES AND MEETINGS

- .1 Job conferences will be jointly arranged weekly between the Contractor, the Engineer and Owner during the progress of the job and when called upon to do so, the job conference shall be attended by an authorized representative of the trade concerned and as described in Section 01 31 19 – Project Meetings. The Contractor shall furnish accommodation for all the job conferences. Notes shall be typed up afterwards by the Engineer and then circulated to all parties concerned.
- .2 The Engineer shall prepare the agenda for the progress meetings and shall be responsible for minuting and circulating the minutes of the meetings to all parties concerned. The agenda for the progress meetings shall include, as a minimum, the following:
 - .1 Review and acceptance of minutes from previous meeting.
 - .2 Review of work progress.
 - .3 Review of planned work prior to next progress meeting.

- .4 Construction issues, such as submittals, health and safety, coordination, field observations, problems, conflicts which may result in changes to the contract price or construction schedule.
- .5 Review of the construction schedule versus actual progress schedules and progress monthly progress claims.
- .6 Review of contemplated changes notices / contract change orders / field orders and field instructions.
- .7 Review of outstanding items from previous meeting.
- .8 Date and location of next progress meeting.
- .9 Other business.

1.8 INSPECTOR AND INSPECTION

- .1 All work covered under this Contract shall be done to the satisfaction of the Engineer or their Inspector.
- .2 The Engineer's Inspector is to ensure that the provisions of the Contract are adhered to. The Inspector shall ensure that the quality of workmanship and materials are to the standards specified in the Contract. The Engineer or his Inspector may stop the work entirely if there is not a sufficient quantity of approved materials on site, or for any reason they deem will adversely affect the quality of work.
- .3 All materials and equipment, and their processes of preparation or manufacture, shall be subject to inspection, and testing at all times. If an inspection or a test is failed, the Engineer may reject the affected material or equipment.
- .4 The Engineer shall give the Contractor reasonable notice of any inspection or testing they wish to carry out, except for any inspection or testing specifically stated in the Contract which requires the presence of the Engineer. The Contractor shall be responsible to provide the Engineer at least seven (7) days notice, in writing, to the commencement of the manufacturing or preparation of any materials or equipment which the Contract requires inspection or testing. The Contractor shall make all the necessary provisions and provide any assistance required, so that the Engineer can carry out the specified inspection or testing.
- .5 If, for any reason, any inspection or testing has not been carried out, the Contractor shall notify the Engineer and any affected material or equipment shall not be delivered to the site of work until authorized by the Engineer, in writing, to do so.
- .6 In any event, no materials or equipment required by the Contract or by the Engineer to be inspected or tested by or in the presence of the Engineer shall be incorporated into the work until the required inspection or testing has been carried out to the satisfaction of the Engineer.
- .7 The Contractor shall provide, and shall ensure that all Subcontractors and those carrying out the process of preparation or manufacture shall provide, every reasonable facility and cooperation to assist the Engineer or Inspector or others designated by the Contract or by the Engineer in carrying out inspection and testing.
- .8 The Contractor shall not backfill or otherwise cover up any work without either having it inspected and passed by the Inspector, or first notifying the Inspector in a manner approved or as directed by the Engineer, that the work is ready to be covered up and

allowing the inspector reasonable notice and opportunity for carrying out an inspection. Failure to do so will require the Contractor to re-excavate the site to allow for inspection, and re-backfill the site at the Contractor's expense.

- .9 Any works covered up, other than in accordance to the foregoing, shall be uncovered or opened up as ordered by the Engineer or the Inspector. All subsequent work, either through the inspection and testing or the opening and reinstatement shall be carried out by the Contractor at his expense.
- .10 No approval by an Inspector or by the Engineer or failure of an Inspector or the Engineer to carry out an inspection shall relieve the Contractor of his obligations under the Contract or shall be interpreted as being an acceptance of defective or improper work or material.
- .11 If, in addition to the inspection provided for above, the Contractor is required by the Contract, by law, by local bylaw or by the Engineer to have any part of the work inspected by others, the Contractor shall give the Engineer and the others concerned reasonable notice of the time and date proposed for the additional inspection.

1.9 COMPACTION TESTING/ INSPECTION REQUIREMENTS

- .1 Contractor shall be responsible to hire a third party Laboratory/Inspection/Testing Agency for all compaction testing of all soils / granular / asphalt material including supplying all necessary nuclear moisture/density gauges and ancillary equipment required to conduct field density and field moisture measurements for QC compaction testing of earth and granular materials as detailed in Section 01 45 00 – Quality Control
 - .1 All tests are the responsibility of the Contractor and costs shall be included within this tender price.

1.10 LAYING OUT WORK

- .1 The Engineer, prior to commencement of the work only, will provide sufficient control points to allow layout by the Contractor. The Engineer shall also set a job benchmark. The Engineer shall advise the Contractor by means of a sketch plan, as to the location of the stakes, benchmarks, and their elevations. The Contractor shall, before commencing the work, satisfy himself as to the meaning and accuracy of the stakes provided by the Engineer.
- .2 The Contractor is required to perform all verifications in the field to confirm existing site conditions prior to executing the Work.
- .3 Unless otherwise specified, all work to be performed under this Contract is to be laid out by the Contractor. The Contractor shall employ competent personnel to accurately set out all lines and establish all levels. The Contractor shall provide and set in place all necessary batter boards, sight rails, stakes and marks and shall establish bench marks to the satisfaction of the Engineer. The Contractor shall also provide the Engineer with competent assistance required for checking such lines and levels. The Contractor shall be responsible for the accuracy of lines, grades, and levels.
- .4 The Contractor shall carefully preserve benchmarks, reference points, and stakes, and in case of willful or careless destruction, The Contractor shall be charged with the resulting

expense of re-establishment and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.

- .5 The Contractor shall provide and maintain all necessary watchmen, barriers, fences, warning lights and signs and take all necessary precautions for the protection and safety of workmen and the public. All excavations or obstructions shall be clearly marked between sunset and sunrise with warning flares or lights. Should any of the Contractor's work cause interference with any existing public road, the Contractor shall provide and maintain the necessary detour roads and shall post such signs, warnings and protection as may be required for public convenience and safety.
- .6 For the following works,
 - .1 Any road closure (through a Public Works road closure permit)
 - .2 Any excavation work in the City right-of-way (Utility permit)
 - .3 Any connecting or disconnecting water and/or sewer services (Water & Sewer services Connection/Disconnection permit)

The Contractor shall notify the following stakeholders and obtain the appropriate permits as detailed in Section 01 14 00 – Work Restrictions and 01 41 00 – Regulatory Requirements for the associated works:

Municipal Office
Police Department
Fire Department
Public Works Department
Utilities Companies

- .7 When the work involves work in streets, the Contractor shall erect at the commencement of the work and shall maintain during the entire period of such work, portable or other signs, and flagmen when working on major roads, as requested by the Engineer. The Contractor shall provide such number of signs as may be required by the Engineer.
- .8 The Contractor shall continuously maintain adequate protection of all work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract.
- .9 The Contractor shall make good any damage, injury or loss to his work and to the property of the Owner, except as per provisions in General Conditions in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect private and public property, as provided by law and the Contract Documents.

1.11 CUTTING AND PATCHING

- .1 Coordinate all work with other trades.
- .2 Coordinate locations and installation of sleeves, inserts and supports with other trades.
- .3 Provide sleeves and openings required for mechanical work.
- .4 Submit and proposed methods to Engineer and obtain permission prior to any cutting or drilling.

1.12 PROTECTION

- .1 Protect equipment and systems openings from dirt, dust, and other foreign materials with materials appropriate to system.

1.13 CONTEMPLATED CHANGE NOTICE (CCN)

- .1 A Contemplated Change Notice does not constitute a direction to perform the change of works described within. It is solely a notice of a proposed change. Upon receipt of a contemplated change notice, the Contractor shall submit to the Engineer, within the timeframe reference within the document a cost adjustment to the contract associated with the proposed change, as well as any impact that the proposed change will have on the construction schedule. The cost adjustment and scheduled adjustments shall be itemized as required within the Contemplated Change Notice.

1.14 CONTRACT CHANGE ORDER (CCO)

- .1 Acceptance of a Contract Change Order by the Owner and the Contractor will constitute a change in the terms, cost and/or schedule of the contract as set forth in the Contract Change Order. The Contract Change Order will be based on a Contemplated Change Order submitted by the Contractor. Contract Change Orders, signed by the Owner and Contractor shall authorize the Contractor to proceed with the change in the scope of work as described with the Contract Change Order.

1.15 FIELD INSTRUCTIONS

- .1 Field instructions may be issued during the course of construction as a mechanism to provide clarification to specific items within the Contract or to give additional instructions to the Contractor. Issuance of a field instruction shall not result in any changes to the contract price or the contract schedule.

1.16 FIELD ORDER

- .1 Field order may be issued by the Engineer during the course of construction to authorize a change or authorize additional work in an emergency situation where following the process of issuance of a Contemplated Change Notice and Contract Change Notice may result in a delay which could result in damage or injury to life or property or would have an adverse effect on the total cost of the Contract. The field order shall either set a firm cost adjustment for the work or shall include a method for determining the cost of the work (i.e., unit price or cost of labour or material) set forth in the field order.

1.17 RESPONSIBILITY REGARDING EXISTING UTILITIES AND STRUCTURES

- .1 The Contractor shall pay for all necessary alterations of any utilities that intersect the line of the proposed work. Excavation in the vicinity of existing structures and utilities shall be carefully performed, and any utilities which cross an excavation must be properly supported or shored to prevent settlement. Where trenching is to be done under existing utilities, such utilities shall be shored before excavation commences and shoring shall be left in place.
- .2 The existence, location and elevation of underground utilities are not guaranteed, and notwithstanding any other provision in the Contract, the Contractor shall be responsible

for determining the location and elevation of all sewer, water mains, services or lines, electric light, power or telephone conduits, or other such structures or utilities, and shall pay for any service supplied by the Waterworks, Sewer, Electric Light Company or Department, or by any other company or department for the location of utilities and the Contractor shall be responsible for notifying the appropriate company, department, person or persons, of his intention to carry out operations in the vicinity of any such main, line, conduit or other such structure or utility, at least one (1) week in advance of any such operations being there carried out.

- .3 The Contractor shall deposit with the Engineer a letter, or letters, from the appropriate authority of the utility or utilities involved stating that the Contractor has made satisfactory arrangements with the utility organization for the location, protection and inspection of the utility involved. The Contractor shall be responsible for any costs incurred in the process.
- .4 Where utilities are to be moved, the Contractor shall make his own arrangements with the Utility Company or department concerned for the alterations necessary and will notify the Engineer of all such requirements.
- .5 The Contractor shall be responsible for the protection of all survey monuments, posts, and markers. All disturbed monumentation shall be reinstated by the Contractor at his cost by a duly licensed Land Surveyor.

1.18 AIR AND WATER POLLUTION

- .1 The attention of the Contractor is called to the Ordinances of Nunavut relating to the pollution of water and air. The Contractor shall carry out his operations in conformity with the applicable sections of the Territorial Ordinances and regulations that are adopted thereto.

1.19 SUBMITTALS

- .1 General:
 - .1 In accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Provide shop drawings and product data for all materials stipulated in the specifications or drawings.
 - .3 Submit four (4) prints of submittals for each requirement requested in specification Sections and as the Engineer may reasonably request.
 - .4 Submit to Engineer submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in work.
 - .5 Work affected by the submittal shall not proceed until review is complete.
 - .6 Review submittals prior to submission to the Engineer. Submittals not stamped, signed, dated, and identified by the Contractor will be returned without being examined and shall be considered rejected.
 - .7 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Engineer review.
- .2 Shop Drawings and Product Data

- .1 The term "Shop Drawings" means drawings, technical documents, plans, diagrams, illustrations, schedules, performance charts, brochures, and other data which are to be provided by the Contractor to illustrate details of a portion of work.
 - .2 Adjustments made on shop drawings by the Engineer are not intended to change the Contract Price. If adjustments affect the value of work, state in writing to the Engineer prior to proceeding with the work.
 - .3 Make changes in shop drawings as the Engineer may require, consistent with Contract Drawings. When resubmitting, notify the Engineer in writing of any revisions other than those requested.
 - .4 Submit four (4) prints of shop drawings for each requirement requested in specification Sections and as the Engineer may reasonably request.
 - .5 Submit four (4) copies of product data sheets or brochures for requirements requested in specification Sections and as the Engineer may reasonably request where shop drawings will not be prepared due to standardized manufacture of product.
- .3 As-built drawings:
- .1 Prior to start of testing finalize production of as-built drawings.
 - .2 Identify each drawing in lower right hand corner in letters at least 12 mm high as follows: - "AS BUILT DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW SYSTEMS AS INSTALLED" (Signature of Contractor) (Date).
 - .3 Submit to Engineer for approval and make corrections as directed.
 - .4 Submit completed reproducible and electronic as-built drawings.

1.20 SAMPLES

- .1 The Contractor shall furnish for the Engineer's approval all samples required by the Contract or as requested by the Engineer. The work shall be in accordance with the approved samples.

1.21 "OR EQUAL" MATERIALS

- .1 Any place in the Drawings or Specifications where "or equal" is specified, the "or equal" shall be submitted to, and be approved by the Engineer in writing. Detailed plans and specifications of the alternate materials shall be submitted to the office of the Engineer, and unless written permission is given for their use, they will not be considered for this Contract.

In the submission of alternatives or equals to items of material mentioned in the Specifications, the Contractor shall in his Tender make consideration for any changes required in the works to accommodate such alternatives or equals. A claim by the Contractor for an addition to the contract sum because of changes in work necessitated by the use of alternatives or equals will not be considered.

1.22 ALTERNATIVE MATERIALS

- .1 The contract price shall be based on the materials specified within the contract documents.
- .2 Approval of alternate materials submitted by the Contractor or his Subcontractor as equal to that specified does not relieve the Contractor of any responsibility.
- .3 Revisions required to allow the use of accepted alternates shall be at the Contractor's expense. No increase in the contract price will be considered to accommodate the use of materials or products other than those specified.

1.23 RECORD DRAWINGS

- .1 A set of drawings and specifications recording the changes and deviations are to be maintained on site and updated daily.
- .2 A set of final record drawings is to be submitted to the Engineer within two (2) weeks of completion and acceptance of the work. Failure to maintain and submit the record drawing, requiring the work to be carried out by other will be at the contractor's expense.
- .3 A copy of the drawings and specifications for the purpose of maintain the record drawings, will be provided by the Engineer.

1.24 SUBSTANTIAL COMPLETION INSPECTION

- .1 The Engineer is to be advised a minimum of five (5) day in advance of the desired date for the Substantial Completion Inspection.
- .2 It is the Contractor's responsibility to ensure all systems are operational prior to the inspection, and that the work is substantially complete. The Contractor shall be responsible for any expenses resulting for the work not being functional or substantially complete resulting in the requirement for a subsequent Substantial Completion Inspection, including the Engineer's and Owner's time and expenses.
- .3 All deficiencies noted in the Substantial Completion Inspection shall be addressed in a timely manner, normally within two (2) weeks unless otherwise specified within the Certificate of Substantial Completion.

1.25 SANITARY REGULATIONS

- .1 The Contractor shall prohibit and prevent the committing of nuisance on the site of the work or on adjoining property and shall discharge any employee who commits a nuisance.
- .2 The Contractor is to provide a toilet on site.

1.26 WORK RESTRICTIONS

- .1 Refer to Section 01 14 00 – Work Restrictions

1.27 ABBREVIATION REFERENCES

- .1 Reference to technical society, organization or body is made in the Specifications in accordance with the following abbreviations:

AISC	American Institute of Steel Construction
ARCA	Alberta Roofing Contractors Association
ASA	American Standards Association
ASTM	American Society for Testing Materials
AWI	Architectural Woodwork Institute
AWSC	American Welding Society Code
BCLMA	British Columbia Lumber Manufacturer's Association
CBURA	Calgary Built-Up Roofers Association
CCA	Canadian Construction Association
CISC	Canadian Institute of Steel Construction
CITC	Canadian Institute of Timber Construction
CGSB	Canadian Government Specifications Bureau
CLA	Canadian Lumberman's Association
CRCA	Canadian Roofing Contractor's Association
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
CUA	Canadian Underwriters Association
API	American Petroleum Association
AWWA	American Water Works Association
ASME	American Society of Mechanical Engineers
MTTAC	Marble, Tile and Terrazzo Association
NBC	National Building Code (Canada) 1980
NRC	National Research Council (Canadian)
RAIC	Royal Architectural Institute of Canada
UL	Underwriter's Laboratories, Inc. (Canada)
CEC	Canadian Electrical Code

END OF SECTION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 01 11 00 – Summary of Work
- .2 Section 01 35 29.06 – Health and Safety Requirements
- .3 Section 01 41 00 – Regulatory Requirements

1.2 CONTRACTORS USE OF PREMISES

- .1 Normal working hours shall be Monday to Sunday, 7:00am to 7:00pm. No work shall be permitted outside of these hours within the Contractor first obtaining written approval from the City Representative and Owner, five (5) working days in advance of the planned work.
- .2 The Contractor shall arrange with the City for easements for construction, storage and access to all the Works within the Owner's property line.
- .3 Do not enter upon or occupy with workers, tools or materials any land other than public streets, roadways, rights-of-way's or easements shown on the Contract Drawings except after written consent has been received from the property owner.
- .4 The Contractor shall obtain written approval from the City Representative for shutdown and tie-in work to existing facilities and structures. The City's staff will be responsible for operations of the existing facilities and structures during the construction period.
- .5 The Contractor shall obtain written approval from the City Representative for work that will be executed within a municipal right-of-way, and for partial or full closure of municipal roadways.
- .6 Do not impede normal operation of existing facilities and structures.

1.3 ENTRY OF OWNER'S STAFF INTO CONTRACTOR'S WORKING LIMITS

- .1 The Owner may require access to the work site during the construction period for the purpose of maintaining normal operation of City infrastructure and services. Cooperate with the Owner in scheduling construction activities to facilitate the Owner's usage and to minimize conflict.
- .2 Maintain the entire works free of debris, snow and ice at all times, including access to all buildings, facilities and structures which continues to be operated and/or maintained by Owner's staff.
- .3 Prepare a written procedure regarding the entry of Owner's staff into the construction site and submit to the City Representative for review. The procedure must be communicated to all operating staff who may enter the construction site.

1.4 CONSTRUCTION COORDINATION WITH CITY OPERATIONS STAFF

- .1 The existing facilities, structures and systems operate 24 hours a day, 7 days per week. In the event of a conflict between construction operations and routine City operations, City operations have priority. Take every precaution to avoid interfering with routine

- operation and maintenance activities. Reschedule construction activities, if required, without change to the contract price.
- .2 Coordinate activities on the site and in the existing buildings/ facilities/ structures with the City Representative.
 - .3 The Contractor must identify work activities that may impact the operation and maintenance activities of the City operations staff, in advance of the scheduled work, at least 5 business days prior to the work. The Contractor shall submit to the City Representative a detailed work plan listing work activities for the next 14 calendar days, detailing the works that will affect City operations staff.
 - .4 Do not close lines, open or close valves, or take other action which would affect the operation of the existing systems, except as specifically required by the Contract Documents and only after the prior authorization of the City Representative has been obtained.
 - .5 Coordinate the proposed work with the City Representative prior to process shutdowns. Under no circumstances stop the work at the end of a normal working day if such action may cause a cessation of any facility or structure operating process. In such cases, remain on site until the necessary work is complete.
 - .6 Coordinate activities on the site and in the existing buildings/ facilities with the City Representative.
 - .7 Perform work continuously during critical shutdown, connection and changeover, and as required to prevent interruption of the facility operation or City services.
 - .1 All temporary equipment, tools, materials, labour, and miscellaneous equipment must be scheduled and available at the Site in advance of any shutdowns. The Owner will not be responsible for delays or claims as a result of the Contractors lack of coordination.
 - .2 The City reserves the right to cancel any scheduled shutdown if system or weather conditions dictate, at no additional cost to the City.
 - .3 Prior to making major tie-ins to existing process units and structures, demonstrate that the equipment installed in all new structures is fully functional. Connections to existing works will not be permitted until all equipment in the new adjacent works operates to the satisfaction of the City Representative. No claim for delay will be entertained due to unsatisfactory operation of any equipment.
 - .8 Operations provided by City staff:
 - .1 Access to City facilities and structures.
 - .2 Opening and closing of existing valves and gates in existing buildings, structures, or systems.
 - .3 Isolation of existing process piping.
 - .9 In the event any existing facility or structure is damaged, changes mode of operation or there is a risk of actual process upset due to the Contractor's work activity, the Contractor shall stop work immediately, contact the City Operations representative, report the incident to the City Representative, and make the Contractor's on-site resources available at the request and direction of the City Operations Representative at no extra cost to the project to mitigate any damage.

- .10 Contractor shall supply and maintain all appropriate and necessary equipment for confined space entry operations in accordance with applicable regulations.
- .11 The Contractor shall coordinate confined space entry operations where multiple parties are involved in accordance with the Nunavut Safety Act and Occupational Health and Safety Regulations.

1.5 COORDINATION OF TRADES AND SUBCONTRACTORS

- .1 The Contractor shall ensure cooperation with and between the trades and Subcontractors to ensure that the Work is carried out expeditiously and in a satisfactory manner. The Contractor shall be responsible for all extra costs arising from failure to properly coordinate the Work with the work of others
- .2 Coordinate civil, structural, architectural, mechanical, electrical, and instrumentation and work for the equipment and systems being constructed. Planning and coordinate the work in a timely manner so that the work proceeds expeditiously.
- .3 Extras will not be considered, based on differences of interpretation of the terms of references, as to which trade shall supply and install certain items or materials. Such coordination is entirely the responsibility of the Contractor.

1.6 COOPERATION WITH OTHER CONTRACTORS

- .1 Other contracts may be awarded to construct adjacent work to which this contract work connects.
- .2 At the interference with other contracts, jointly plan and coordinate with other contractors the work so that the project:
 - .1 Will not be delayed.
 - .2 Will not be endangered in any way.
 - .3 Will be correctly connected.
 - .4 Will not cause the City to be designated as the “Prime Contractor” as set out in the Safety Act.
- .3 Where any equipment is supplied by the Owner, coordinate unloading, transfer, installation, testing and placing into operation.
- .4 Where other work is in progress within or adjacent to the limits of this Contract, cooperate and coordinate with other Contractor(s), Utility Companies and the City of Iqaluit, and allow reasonable, free access to their work at all times.
- .5 Cooperate and make suitable working arrangements with other Contractor(s).
- .6 Notify the City Representative in advance and obtain approval in writing from the City Representative for all arrangements made with other Contractor(s).

1.7 UTILITY NOTIFICATION AND COORDINATION

- .1 Coordinate the Work with various utilities within Project limits. The Contractor shall notify applicable utilities prior to commencing the Work. The Contractor shall also notify the applicable utilities if any damage occurs, or if conflicts or emergencies arise during the execution of the Work.

- .2 Should any piping, sewers, cables or similar services be encountered during performance of the work that are not known from the City or other utility companies records, the Contractor shall notify the City Representative and the appropriate utility agency and shall not proceed with their removal or cutting until direction has been provided.

1.8 WORKING WITHIN A CITY EASEMENT AND/OR RIGHT-OF-WAY

- .1 For construction work that will be taking place within a City easement and/or right-of-way, the Contractor must submit to the City Representative a completed City of Iqaluit Utility Permit application, along with all supplementary documents, for review and approval with the Department of Public Works and Engineering.
- .2 Supplementary documents shall include:
 - .1 Brief work plan methodology describing the work that will be taking place within the easement and/or right-of-way, the means of construction, temporary structures that will be used, the equipment that will be used.
 - .2 Schedule outlining duration of work, along with all phases and activities that will comprise the work.
 - .3 Traffic control plan.
- .3 Utility permits must be submitted 20 business days in advance of the planned Work. The Contractor will not be granted an extension of time to the Contract, should they fail to submit a permit application within the timelines stipulated.
- .4 No work can proceed until approval has been provided in writing by the City Representative.
- .5 The Contractor must account for the time to review and approve permit applications within their construction schedule.
- .6 Pay relevant permit fees and charges.

1.9 PARTIAL OR FULL CLOSURE OF A MUNICIPAL ROADWAY

- .1 For construction work that will require a partial or full closure of a municipal roadway, the Contractor must submit to the City Representative a completed City of Iqaluit Road Closure Permit Application, along with all supplementary documents, for review and approval with the Department of Public Works and Engineering.
- .2 Supplementary documents shall include:
 - .1 Brief work plan methodology describing the work that will be taking place within the easement and/or right-of-way, the means of construction, temporary structures that will be used, the equipment that will be used.
 - .2 Schedule outlining duration of work, along with all phases and activities that will comprise the work.
 - .3 Traffic control plan including drawing.
- .3 Road closure permits must be submitted 20 business days in advance of the planned Work. The Contractor will not be granted an extension of time to the Contract, should they fail to submit a permit application within the timelines stipulated.

- .4 No work can proceed until approval has been provided in writing by the City Representative.
- .5 The Contractor must account for the time to review and approve permit applications within their construction schedule.
- .6 Pay relevant permit fees and charges.

1.10 TRAFFIC – OPERATIONAL REQUIREMENTS

- .1 Work at that requires full-road closures at the intersection of Federal Road and Nunavut Drive will only be allowed over the weekend and must be clearly scheduled in the detailed work plan.
- .2 No road closures will be allowed during periods of all sea-lift arrivals and unloading activities. Contractor to ensure full-lane traffic operations for the entire construction area during these periods.
- .3 Contractor to submit a detailed work plan including traffic control plan and required permits to the City and Engineer and obtain approval prior to starting the work.

1.11 WATER AND SEWER CONNECTIONS/ DISCONNECTIONS

- .1 For tie-in to City water and/or sewer infrastructure, the Contractor must submit to the City Representative a completed City of Iqaluit Water & Sewer Connection/Disconnection Permit Application, along with all supplementary documents, for review and approval with the Department of Public Works and Engineering.
 - .1 Notify Fire Department of any planned or accidental interruptions of the water supply to fire hydrants.
 - .2 Limit any water service interruptions to a maximum of four (4) hours.
 - .1 Should interruptions be anticipated for greater than 4 hours and less than 24 hrs, the contractor shall obtain written approval from the City and Engineer.
 - .3 Determine timing of any interruptions of service with Engineer.
- .2 Supplementary documents shall include:
 - .1 Brief work plan methodology describing the work that will be taking place within the easement and/or right-of-way, the means of construction, temporary structures that will be used, the equipment that will be used.
 - .2 Schedule outlining duration of work, along with all phases and activities that will comprise the work, along with dates/ times when City operations support is required to shutdown/ isolation of City systems.
 - .3 Traffic control plan.
 - .4 By-pass plan.
- .3 Utility permits must be submitted 20 business days in advance of the planned Work. The Contractor will not be granted an extension of time to the Contract, should they fail to submit a permit application within the timelines stipulated.
- .4 No work can proceed until approval has been provided in writing by the City Representative.

- .5 The Contractor must account for the time to review and approve permit applications within their construction schedule.
- .6 Pay relevant permit fees and charges.

1.12 EXISTING SEWER AND WATER SYSTEM - INTERRUPTIONS

- .1 Contractor to notify the Fire Department, and the City's Department of Public Works of any planned or accidental interruptions of the sewer or water supply
- .2 For extended interruptions to the water supply (i.e. greater than 24 hrs), additional temporary service arrangements are required to be provided by the Contractor. Temporary water & sewer service arrangements will need to be provided to the each affected user.

1.13 WORKING IN EXISTING BUILDINGS

- .1 Obtain permission in writing from the City Representative prior to commencing work within an existing City building and/or facility, at least 7 business day prior to the start of work. The Contractor is to notify the City Representative what work will be taking place within the existing building, along with the measures that will be taken in order to ensure separation of work from City operations.
- .2 The Contractor shall be responsible for enforcement of fire protection methods and procedures and adherence to local fire regulations, including any applicable requirements of the Safety Act and Occupational Health and Safety Regulations during the execution of the Work.
- .3 The Contractor shall ensure that existing fire protection and alarm systems are not obstructed, shut-off or made inactive at any time for the duration of the Contract. The Contractor shall not use any fire hydrant, standpipe or hose system for other than fire protection purposes.

1.14 NIGHT WORK

- .1 Night work will only be allowed if written permission is given beforehand by the Engineer. When any work is carried out at night, the Contractor shall supply at their own cost a sufficient number of electric or other approved lights to enable the work to be done in an efficient and satisfactory manner. Permission of the Engineer does not relieve the Contractor of the responsibility for obtaining necessary permission from local governing agencies.

END OF SECTION

PART 1 GENERAL

1.1 CASH ALLOWANCES

- .1 Include in Contract Price specified cash allowances.
- .2 Cash allowances, unless otherwise specified, cover net cost to Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage, installation and other authorized expenses incurred in performing Work.
- .3 Contract Price, and not cash allowance, includes Contractor's overhead and profit in connection with such cash allowance.
- .4 Contract Price will be adjusted by written order to provide for excess or deficit to each cash allowance.
- .5 Where costs under a cash allowance exceed amount of allowance, Contractor will be compensated for excess incurred and substantiated plus allowance for overhead and profit as set out in Contract Documents.
- .6 Amount of each allowance, for Work specified in respective specification Sections is as follows:
 - .1 \$25,000 - Coordination with Qulliq Energy Corporation (QEC). Wooden poles shall be supplied and installed by QEC. Contractor shall coordinate the work.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 11 00 – Summary of Work.

1.2 TERMS OF PAYMENT

- .1 Make applications for payment on account as provided in Agreement as Work progresses.
- .2 Applications for payment will be made monthly.
- .3 The date for Contractors submission of monthly application for payment shall be on the last business day of the month.
- .4 The Contractor shall be reimbursed on a monthly basis in accordance with the instructions provided in the Bid Form.
- .5 For administrative purposes, the monthly application for payment shall be in the form of a progress payment and must indicate:
 - .1 Contract/ Project Title.
 - .2 City of Iqaluit Service Contract number.
 - .3 Progress payment number.
 - .4 Date progress payment issued.
 - .5 Period progress payment covers.
- .6 The Contractor is to provide all relevant back-up material to validate the work that is being claimed in the monthly progress payment. This includes, but is not limited to, daily timesheets for labour and equipment, material costs, back-up invoices, etc. For work completed on a time and materials basis where daily timesheets are produced, the Contractor must present timesheets to the City Representative at the end of each workday for review and approval.
- .7 The City shall reimburse Contractors for mark-ups from sub-contractors and/ or suppliers for parts, materials, and labour up to a maximum of 15%. Back-up invoices from sub-contractors and/ or suppliers/ vendors must be submitted as part of monthly application for payment. Monthly progress claims will be returned if back-up invoices are not provided.
- .8 No payment will be made for the cost of work incurred to remedy errors or omissions for which the Contractor is responsible.
- .9 Additional work that has been completed outside the scope of services identified in the contract, without written approval from the City Representative via the change order process, will not be paid. Contemplated changes must be presented to the City Representative for review. Should the contemplated change be endorsed, it will be presented to the City for approval via a change order. Once approved, the Contractor may proceed with the work in the field. Failure to comply with this requirement may result in no payment.

- .10 All progress payment claims are to be submitted to the City Representative; they are not to be submitted to the City's Finance Department.
- .11 The City will pay all invoices on a Net 30 basis, meaning payments will be made by the City within Thirty (30) calendar days of receipt and acceptance of the invoice, or the receipt and acceptance of the goods or services, whichever is later.

1.3 SCHEDULE OF VALUES

- .1 Make schedule of values out in such form and supported by such evidence as City Representative may reasonably direct and when accepted by City Representative, be used as basis for applications for payment.
- .2 Include statement based on schedule of values with each application for payment. Schedule of values to follow Terms of Reference sections outline.
- .3 Support claims for products delivered to Place of Work by not yet incorporated into Work by such evidence as City Representative may reasonably require establishing value and delivery of products.

1.4 APPLICATION FOR PAYMENT

- .1 Each month prepare a draft application for payment in the form of a progress payment claim for review and acceptance by the City Representative before submitting the monthly application for signature and payment.
- .2 Application for payment must show a schedule of values, for each item of approved breakdown of Contract Price established in the Contract, the following:
 - .1 Percentage and value of Work completed to date.
 - .2 Percentage and value of Work previously approved for payment.
 - .3 Percentage and value claimed this payment period.
 - .4 Percentage and value of Work remaining to be completed.
 - .5 Include separate line items for each approved Change Order executed, along with the information requested in .1, .2, .3, and .4
- .3 Application for payment must include timesheets, back-up invoices from sub-contractors and/ or suppliers/ vendors, whichever applies. Where mark-ups apply per the Contract, ensure they are clearly shown.
- .4 Include an updated cash flow expenditure forecast with the application for payment.
- .5 Submit application for payment to the City Representative on the last business day of each month.
- .6 To assist the Contractor with preparation of application for payment, the City Representative is available to meet with the Contractor on an agreed date each month, on or prior to last day of month, to review progress of Work.
- .7 The Contractor and City Representative shall agree on quantity of Work performed and due for payment. Once quantity has been agreed upon, Contractor shall submit the final application for payment along with a corresponding invoice for the amount being claimed.

- .8 The following shall be included for the first application for payment:
 - .1 Approved monthly progress claim.
 - .2 Coinciding invoice.
 - .3 A copy of Workers Safety Compensation Board Certificate of Clearance.
 - .4 Updated construction schedule.
 - .5 Updated cash flow projection.
- .9 The following shall be included for the second application for payment and onwards:
 - .1 Approved monthly progress claim.
 - .2 Coinciding invoice.
 - .3 A copy of Workers Safety Compensation Board Certificate of Clearance.
 - .4 Statutory Declaration certifying that payment has actually been made in full to all subcontractors, suppliers, workmen, and others for labour, materials, and services required by Contract up to and including latest progress payment.
 - .5 Updated construction schedule.
 - .6 Updated cash flow projection.
- .10 The City shall not release monies for Payment Certificates until the Contractor has provided all of the supporting documentation, as specified herein.
- .11 Deviations from the above specified requirements or incomplete submissions shall require resubmission of the application for payment.

1.5 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- .1 Payment will not be made for the following:
 - .1 Loading, hauling, and disposing of rejected material.
 - .2 Quantities of material wasted or disposed of in a manner not called for under Contract Documents.
 - .3 Rejected loads of material, including material rejected after it has been placed by reason of failure of Contractor to conform to provisions of Contract Documents.
 - .4 Material not unloaded from transporting vehicle.
 - .5 Defective Work not accepted by Owner.
 - .6 Material remaining on hand after completion of Work.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 This Section is not intended to apply to mill test reports and certificates of compliance, tests to demonstrate or adjust and balance equipment and systems, or other similar requirements for quality control that are Contractor's responsibility. Particular requirements should be specified in appropriate Sections related to the product, equipment or system.

1.2 RELATED REQUIREMENTS

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Engineer are specified under various sections.

1.3 APPOINTMENT AND PAYMENT

- .1 Engineer will appoint and pay for services of testing laboratory except for the following:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities;
 - .2 Inspection and testing performed exclusively for Contractor's convenience;
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems;
 - .4 Mill tests and certificates of compliance;
 - .5 Tests specified to be carried out by Contractor under the supervision of Engineer; and
 - .6 Additional tests specified in paragraph.
- .2 Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as Engineer may require to verify acceptability of corrected work.

1.4 CONTRACTOR'S RESPONSIBILITIES

- .1 Furnish labour and facilities to:
 - .1 Provide access to work to be inspected and tested;
 - .2 Facilitate inspections and tests;
 - .3 Make good work disturbed by inspection and test; and
 - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify Engineer sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Engineer.

END OF SECTION

PART 1 GENERAL

1.1 MEASUREMENT AND PAYMENT

- .1 There shall be no direct cost associated with this section. Include cost in lump sum bid price.

1.2 ADMINISTRATIVE

- .1 A schedule should be developed and distributed to the Engineer and Owner for each of the following project phases:
 - .1 Master plan
 - .2 Pre-construction
 - .3 During construction (monthly completion milestones)
 - .4 Post substantial completion
 - .5 Final completion
- .2 Engineer will prepare agenda, schedule and administer project meetings as necessary.
- .3 Provide physical space and make arrangements for meetings.
- .4 Preside at meetings.
- .5 Engineer will record the meeting minutes, including significant proceedings and decisions.
- .6 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

1.3 SCHEDULE REQUIREMENTS

- .1 Schedule based on calendar days, Monday-Friday inclusive.
- .2 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .3 Plan to complete Work in accordance with prescribed milestones and time frame.
- .4 Limit activity durations to maximum of approximately ten (10) working days, to allow for progress reporting.
- .5 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.
- .6 Submit first schedule to Engineer within 15 working days of Award of Contract.
- .7 Submit Project Schedule to Engineer within seven (7) working days of receipt of acceptance of Master Plan.
- .8 Plan for substantial completion by October 6, 2023.

- .9 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:

- .1 Award.
- .2 Granular source permitting and development; other permits.
- .3 Mobilization.
- .4 Testing and Commissioning.
- .5 Supplied equipment long delivery items.
- .6 Each bid item and project task.
- .7 Final Completion.
- .8 Demobilization.

1.4 PRECONSTRUCTION MEETING

- .1 City Representative, Engineer, Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .2 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .3 Engineer will establish agenda and meeting time.

1.5 PROGRESS MEETINGS

- .1 During course of Work and monthly.
- .2 Engineer, Contractor, major Subcontractors, field inspectors and supervisors Contractor, major Subcontractors involved in Work are to be in attendance.

END OF SECTION

PART 1 GENERAL

1.1 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, Work package or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five (5) day work week and define schedule calendar Working Days as part of Bar (GANTT) Chart submission. Consideration may be given to working during weekends, if required to meet the project schedule.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as Work Days or Work Weeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by Departmental Representative to enable monitoring of project Work in relation to established milestones.

1.2 REQUIREMENTS

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Schedule activity durations to maximum of approximately ten (10) Working Days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit to Departmental Representative within five (5) Working Days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Departmental Representative within five (5) Working Days of receipt of acceptance of Master Plan.

1.4 MASTER PLAN

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 City Representative will review and return revised schedules within five (5) Working Days.
- .3 Revise impractical schedule and resubmit within three (3) Working Days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.5 PROJECT SCHEDULE

- .1 Develop detailed Project Schedules for each street derived from Master Plan.
- .2 Ensure detailed Project Schedule for each road, includes as minimum milestone and activity types as follows:
 - .1 Award;
 - .2 Permits;
 - .3 Mobilization;
 - .4 Sub-base Preparation
 - .5 Aggregate Base Course Placement
 - .6 Paving
 - .7 Site Restoration; and
 - .8 Demobilization.

1.6 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

1.7 PROJECT MEETINGS

- .1 Discuss Project Schedule at regular Site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- .1 Shop drawings and product data.
- .2 Samples.
- .3 Certificates and transcripts.

1.2 ADMINISTRATIVE

- .1 Submit to Engineer submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal shall not proceed until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Engineer. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6 Notify Engineer, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Engineer review.
- .10 Keep one reviewed copy of each submission on site.

1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

- .3 Allow ten (10) days for Engineer's review of each submission.
- .4 Adjustments made on shop drawings by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
- .5 Make changes in shop drawings as Engineer may require, consistent with Contract Documents. When resubmitting, notify Engineer in writing of any revisions other than those requested.
- .6 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .7 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .8 After Engineer's review, distribute copies.
- .9 Submit one (1) electronic (pdf) of shop drawings for each requirement requested in specification Sections and as Engineer may reasonably request.

- .10 Submit seven hard copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Engineer where shop drawings will not be prepared due to standardized manufacture of product.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 If upon review by Engineer, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .14 The review of shop drawings by the Engineer is for sole purpose of ascertaining conformance with general concept. This review shall not mean that the Engineer approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

1.4 SAMPLES

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Engineer's business address.
- .3 Notify Engineer in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
- .6 Make changes in samples which Engineer may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become the standard for quality of work and materials against which installed Work will be verified.

1.5 PROGRESS PHOTOGRAPHIC DOCUMENTATION

- .1 Submit progress photographs.

1.6 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.

PART 2 PRODUCTS

2.1 NOT USED

PART 3 EXECUTION

3.1 NOT USED

END OF SECTION

PART 1 GENERAL

1.1 REFERENCE STANDARDS

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).
- .3 Northwest Territories
 - .1 Safety Act, R.S.N.W.T. - Updated 2015.

1.2 MEASUREMENT AND PAYMENT

- .1 There shall be no direct cost associated with this section. Include cost in lump sum bid price.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan for review by Owner within seven (7) calendar days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .3 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .4 Submit copies of incident and accident reports.
- .5 Owner will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within seven (7) working days after receipt of plan. Revise plan as appropriate and resubmit plan to Engineer within seven (7) working days after receipt of comments from Owner.
- .6 Owner's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.

1.4 FILING OF NOTICE

- .1 File Notice of Project with Territorial authorities prior to beginning of Work.

1.5 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.

1.6 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Engineer prior to commencement of Work.

1.7 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Engineer may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.8 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.9 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Territory having jurisdiction and advise Engineer verbally and in writing.

1.10 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Territory having jurisdiction, and in consultation with Engineer.

1.11 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Engineer.
- .2 Provide Engineer with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Engineer may stop Work if non-compliance of health and safety regulations is not corrected.

1.12 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not used.

PART 3 EXECUTION

3.1 NOT USED

.1 Not used.

END OF SECTION

PART 1 GENERAL

1.1 MEASUREMENT AND PAYMENT

- .1 There shall be no direct cost associated with this section. Include cost in lump sum bid price.

1.2 REFERENCES TO REGULATORY REQUIREMENTS

- .1 Perform Work in accordance with all local, territorial and federal laws, ordinances, rules, regulations, codes and orders relating to the Work, which are or become in force during the performance of the Work, including amendments up to tender closing date and other codes of provincial or local application provided that, in case of conflict or discrepancy, more stringent requirements apply.

1.3 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions and municipal by-laws.

1.4 QUALITY ASSURANCE

- .1 Regulatory Requirements: Except as otherwise specified, Constructor shall apply for, obtain, and pay fees associated with, permits, licenses, certificates, and approvals required by regulatory requirements and Contract Documents, based on General Conditions of Contract and the following:
 - .1 Regulatory requirements and fees in force on date of Bid submission, and
 - .2 A change in regulatory requirements or fees scheduled to become effective after date of tender submission and of which public notice has been given before date of tender submission

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

2.2 EASEMENTS AND NOTICES

- .1 Owner will obtain permanent easements and rights of servitude that may be required for performance of Work.
- .2 Constructor shall give notices required by regulatory requirements.

2.3 PERMITS

- .1 The Owner has applied for, obtained and paid for permits related to this construction. Copies of all permits shall be provided by the Owner to the successful Contractor prior to construction.

PART 3 EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 INSPECTION

- .1 Allow the Engineer access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by the Engineer instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 The Engineer will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, the Owner will pay cost of examination and replacement.

1.2 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies will be engaged by the Engineer for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by the Engineer.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by the Engineer at no cost to the Engineer. Pay costs for retesting and re-inspection.

1.3 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

1.4 PROCEDURES

- .1 Notify appropriate agency and the Engineer in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.5 REJECTED WORK

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by the Engineer as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of the Engineer it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by the Engineer.

1.6 REPORTS

- .1 Submit four (4) copies of inspection and test reports to the Engineer.
- .2 Provide copies to manufacturer or fabricator of material being inspected or tested and/or subcontractor of work being inspected or tested.

1.7 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as requested.
- .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by the Engineer and may be authorized as recoverable.

1.8 MILL TESTS

- .1 Submit mill test certificates as requested.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 01 33 00 - Submittal Procedures.

1.2 REFERENCE STANDARDS

- .1 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
 - .2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
- .2 CSA Group (CSA)
 - .1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CSA-0121-M1978 (R2003), Douglas Fir Plywood.
 - .3 CAN/CSA-S269.2-M1987 (R2003), Access Scaffolding for Construction Purposes.
 - .4 CAN/CSA-Z321-96 (R2001), Signs and Symbols for the Occupational Environment.

1.3 INSTALLATION AND REMOVAL

- .1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation.
- .2 Identify areas which have to be gravelled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from site all such work after use.

1.4 SCAFFOLDING

- .1 Scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain ladders, swing staging, temporary stairs, scaffolding, ramps, and platforms.

1.5 HOISTING

- .1 Provide, operate and maintain hoists required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists or cranes.
- .2 Hoists and cranes to be operated by qualified operator.

1.6 SITE STORAGE/LOADING

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

1.7 CONSTRUCTION PARKING

- .1 Parking will be permitted on site provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project site.

1.8 SECURITY

- .1 Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays.

1.9 OFFICES

- .1 Provide office heated to 22 degrees C, lighted to 750 lx and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .2 Provide marked and fully stocked first-aid case in a readily available location.
- .3 Subcontractors to provide their own offices as necessary. Direct location of these offices.
- .4 Engineer's Site office.
 - .1 Provide temporary office for the Engineer.
 - .2 Inside dimensions minimum 3.6 m long x 3 m wide x 2.4 m high, with floor minimum 0.3 m above grade, complete with 4 50% opening windows and one lockable door.
 - .3 Insulate building and provide heating system to maintain 22 degrees C inside temperature at -30 degrees C outside temperature.
 - .4 Finish inside walls and ceiling with plywood, hardboard or wallboard and paint in selected colours. Finish floor with 19 mm thick plywood.
 - .5 Install electrical lighting system to provide min 750 lx using surface mounted, shielded commercial fixtures with 10% upward light component.
 - .6 Provide private washroom facilities adjacent to office complete with flush or chemical type toilet, lavatory and mirror and maintain supply of paper towels and toilet tissue.
 - .7 Equip office with 1 x 2 m table, 4 chairs, 6 m of shelving 300 mm wide, one drawer filing cabinet, one plan rack and one coat rack and shelf.
 - .8 Maintain in clean condition.

1.10 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.

- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

1.11 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 When permanent water and drain connections are completed, provide temporary water closets and urinals complete with temporary enclosures, inside building. Permanent facilities may be used on approval of the Engineer.

1.12 CONSTRUCTION SIGNAGE

- .1 Provide and erect project sign, within three weeks of signing Contract, in a location designated by the Engineer.
- .2 Indicate on sign, name of Owner, Engineer, and Contractor as established by the Engineer.
- .3 No other signs or advertisements, other than warning signs, are permitted on site.
- .4 Provide project identification site sign comprising foundation, framing, and one 1200 x 2400 mm signboard as detailed and as described below.
 - .1 Foundations: 15 MPa concrete to CSA-A23.1 minimum 200 mm x 900 mm deep.
 - .2 Framework and battens: SPF, pressure treated minimum 89 x 89 mm.
 - .3 Signboard: 19 mm Medium Density Overlaid Douglas Fir Plywood to CSA O121.
 - .4 Paint: alkyd enamel to CAN/CGSB-1.59 over exterior alkyd primer to CAN/CGSB 1.189.
 - .5 Fasteners: hot-dip galvanized steel nails and carriage bolts.
 - .6 Vinyl sign face: printed project identification, self-adhesive, vinyl film overlay, supplied by the Owner.
- .5 Locate project identification sign as directed by the Engineer and construct as follows:
 - .1 Build concrete foundation, erect framework, and attach signboard to framing.
 - .2 Paint surfaces of signboard and framing with one coat primer and two coats enamel. Colour white on signboard face, black on other surfaces.
 - .3 Apply vinyl sign face overlay to painted signboard face in accordance with installation instruction supplied.
- .6 Direct requests for approval to erect Consultant/Contractor signboard to the Engineer. For consideration general appearance of Consultant/Contractor signboard must conform to project identification site sign. Wording in all official languages.
- .7 Signs and notices for safety and instruction in all official languages Graphic symbols to CAN/CSA-Z321.

- .8 Maintain approved signs and notices in good condition for duration of project, and dispose of off-site on completion of project or earlier if directed by the Engineer.

1.13 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by the Engineer.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs.
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Haul roads: constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided.
- .9 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .10 Dust control: adequate to ensure safe operation at all times.
- .11 Location, grade, width, and alignment of construction and hauling roads: subject to approval by the Engineer.
- .12 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.
- .13 Provide snow removal during period of Work.
- .14 Remove, upon completion of work, haul roads designated by the Engineer.

1.14 CLEAN-UP

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material not in construction facilities.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 EXECUTION

3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control plan, sedimentation and control drawings, specific to site, or requirements of authorities having jurisdiction, whichever is more stringent.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- .1 Informational and Warning Devices.
- .2 Protection and Control of Public Traffic.
- .3 Operational Requirements.

1.2 RELATED SECTIONS

- .1 Section 01 52 00 – Construction Facilities
- .2 Section 31 24 13 – Roadway Embankments

1.3 REFERENCES

- .1 Manuals of Uniform Traffic Control Devices for Canada, (MUTCD), 5th Edition February 2014, Transportation Association of Canada (TAC).
- .2 Workers' Safety and Compensation Commission (WSCC) Traffic Control Plan requirements.

PART 2 TRAFFIC CONTROL

2.1 DETOURS

- .1 Provide and maintain signage and barricades necessary to direct traffic around routes blocked by construction. Transportation Association of Canada standards shall be followed as a guideline.
- .2 All signage and barricades shall be maintained and cleaned daily. Missing signs shall be replaced immediately.
- .3 Detour routes shall be submitted to the City for review and will be subject to approval by the City. The City will require a minimum of fourteen (14) calendar days to review.
- .4 The Contractor shall submit detailed, legible drawings and a written description of the proposed detours.
- .5 Type and size of detour signage must be approved by Engineer.
- .6 The Contractor must provide fourteen (14) calendar days notice, to all businesses and residents in the area to be affected by detours and road closures, in advance of all planned disruptions to access. Notice must be given in writing.
- .7 Procedures for effecting detours and/or public traffic flow disruption shall be as follows:
 - .1 Contractor shall propose method of traffic signage and control to Engineer.
 - .2 Engineer shall review proposal and, when satisfied, make recommendation to the City.
 - .3 The City shall approve, modify or reject the proposal.

- .4 Once proposal is approved, the City will arrange radio advertisements, and advise the Fire Department, Municipal Enforcement and the RCMP of the traffic control methods the Contractor will follow.
- .5 The Contractor shall effect the detour and/or public traffic flow disruption on the day following the radio advertisements.
- .8 For all road closures:
 - .1 Traffic detour signage plan to be provided to the City 14 calendar days prior to road closure.
 - .2 Notification to be provided to the City of all road and lane closures 24 hours prior to the closure. The notification is for a City working day. Example, notification on Friday will allow for a closure on Monday (or Tuesday on a holiday Monday) at the same hour of the day that the notification is given.
 - .3 Closure only applies to areas where use of flag persons is required for maintaining 2 way traffic
- .9 The Contractor shall assign a representative on the site to oversee barricades, signage and traffic control.
- .10 The City will, if necessary, allow the closure of portions of roadways affected by the proposed work for construction purposes. The City may require that only these streets shall be closed at any time. Local traffic to apartments, businesses and houses shall be maintained.
- .11 The Contractor shall schedule work such that only one (1) intersection is closed to vehicle traffic at any one time. Roadway closures require the Fire Chief's approval.

2.2 PUBLIC TRAFFIC FLOW

- .1 Provide and maintain flagpersons, traffic signals, barricades and flares/lights/lanterns as required to direct the flow of equipment used in performance of the work and to protect public traffic. Make arrangements with local governing authorities when these facilities will disrupt the normal flow of public traffic.
- .2 Unless otherwise authorized, organize working area such that two-way traffic flow is possible at all times.
- .3 Provide detailed sketches of proposed signage plans and traffic flow patterns to the City for approval at least fourteen (14) calendar days in advance of any modifications to existing conditions.

2.3 PROTECTION OF PUBLIC TRAFFIC

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out work or haul materials or equipment.
- .2 When working on travelled way:
 - .1 Place equipment in position to present minimum of interference and hazard to traveling public.

- .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
- .3 Do not leave equipment on travelled way overnight.
- .3 Do not close any lanes of road without approval of the Engineer. Before rerouting traffic erect suitable signs and devices in accordance with instructions contained in Part D of MUTCD.
- .4 Keep travelled-way graded, free of pot holes, and of sufficient width for required number of lanes of traffic.
 - .1 Provide minimum 7 metre wide temporary roadway for traffic in two-way sections through work and on detours.
 - .2 Provide minimum 5 metre wide temporary roadway for traffic in one-way sections through work and on detours.
- .5 At a minimum, provide gravelled detours or temporary roads to facilitate passage of traffic around restricted construction area:
 - .1 Do grading for detour in accordance with Section 31 24 13 - Roadway Embankments.
 - .2 Place and compact granular sub-base in accordance with Section 31 24 13.
 - .3 Place and compact granular base in accordance with Section 31 24 13.
- .6 Provide and maintain road access and egress to property fronting along work under Contract and in other areas as required, unless other means of road access exist that meet the approval of the Engineer.

2.4 INFORMATIONAL AND WARNING DEVICES

- .1 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices as specified in Part D, Temporary Conditions Signs and Devices, of MUTCD.
- .3 Place signs and other devices in locations recommended in MUTCD.
- .4 Meet with the Engineer prior to commencement of work to prepare list of signs and other devices required for project. If situation on site changes, revise list to the approval of the Engineer.
- .5 Continually maintain traffic control devices in use by:
 - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Removing or covering signs which do not apply to conditions existing from day to day.

2.5 CONTROL OF PUBLIC TRAFFIC

- .1 Provide competent flag persons, trained in accordance with, and properly equipped as specified in, MUTCD in the following situations:

- .1 When public traffic is required to pass working vehicles or equipment which block all or part of travelled roadway.
- .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
- .3 When work crews or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
- .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
- .5 For emergency protection when other traffic control devices are not readily available.
- .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
- .7 Delays to public traffic due to contractor's operators: maximum 15 min.
- .2 Where roadway, carrying two-way traffic, is to be restricted to one lane, for 24 hours each day, provide portable traffic signal system. Adjust, as necessary, and regularly maintain system during period of restriction. Submit timing signal pattern for Engineer's review and approval.

2.6 OPERATIONAL REQUIREMENTS

- .1 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified herein and approved by the Engineer to protect and control public traffic, existing conditions for traffic to be restricted as follows:
 - .1 Construction zone speed limit of 30 km/h at all times.
 - .2 Maintain existing conditions for traffic crossing right-of-way except when required for construction.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCE STANDARDS

- .1 Within text of each specifications section, reference may be made to reference standards. Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .2 If there is question as to whether products or systems are in conformance with applicable standards, Owner reserves right to have such products or systems tested to prove or disprove conformance.
- .3 Cost for such testing will be borne by Owner in event of conformance with Contract Documents or by Contractor in event of non-conformance.

1.2 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
- .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Owner based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.3 AVAILABILITY

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Owner of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to Engineer at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Owner reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.4 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, dimensional lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Owner.
- .9 Touch-up damaged factory finished surfaces to Engineer satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.5 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Owner. Unload, handle and store such products.

1.6 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Engineer in writing, of conflicts between specifications and manufacturer's instructions, so that Engineer will establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Owner to require removal and re-installation at no increase in Contract Price or Contract Time.

1.7 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately Engineer if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Owner reserves right to require dismissal from site, workers deemed incompetent or careless.

- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Engineer, whose decision is final.

1.8 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.9 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.10 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.11 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

1.12 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval Engineer.

1.13 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCE STANDARDS

- .1 Engineer's identification of existing survey control points and property limits.

1.2 MEASUREMENT AND PAYMENT

- .1 There shall be no direct cost associated with this section. Include cost in lump sum bid price.

1.3 SURVEY REFERENCE POINTS

- .1 See drawings for control point locations.
- .2 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .3 Make no changes or relocations without prior written notice to Engineer.
- .4 Report to Engineer when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .5 Require surveyor to replace control points in accordance with original survey control.

1.4 SURVEY REQUIREMENTS

- .1 Establish two (2) permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2 Establish lines and levels, locate and lay out, by instrumentation.
- .3 Stake for grading and fill placement, and landscaping features.
- .4 Stake slopes and berms.
- .5 Establish pipe invert elevations.
- .6 Establish liner floor, drainage collection system, top of berm, and top of weir elevations.

1.5 RECORDS

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

1.6 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit name and address of Surveyor to Engineer.
- .2 On request of Engineer, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

1.7 SUBSURFACE CONDITIONS

- .1 Promptly notify Engineer in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should Engineer determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

END OF SECTION

PART 1 GENERAL

1.1 ADMINISTRATIVE REQUIREMENTS

- .1 Acceptance of Work Procedures:
 - .1 Contractor's Inspection: Contractor: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify the Engineer in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
 - .2 Request Engineer's inspection.
 - .2 Engineer's Inspection:
 - .1 Engineer and Contractor to inspect Work and identify defects and deficiencies.
 - .2 Contractor to correct Work as directed.
 - .3 Completion Tasks: submit written certificates in English, French, Inuktitut and Inuinnaqtun and that tasks have been performed as follows:
 - .1 Work: completed and inspected for compliance with Contract Documents.
 - .2 Defects: corrected and deficiencies completed.
 - .3 Equipment and systems: tested, adjusted, balanced, and fully operational.
 - .4 Certificates required by Fire Commissioner, Boiler Inspection Branch, and Utility companies: submitted.
 - .5 Operation of systems: demonstrated to Owner's personnel.
 - .6 Commissioning of mechanical systems: completed in accordance with 01 91 13.13 - Commissioning Plan and 01 91 13.16 – Commissioning Forms, and copies of final Commissioning Report submitted to the Engineer.
 - .7 Work: complete and ready for final inspection.
 - .4 Final Inspection:
 - .1 When completion tasks are done, request final inspection of Work by Engineer, and Contractor.
 - .2 When Work incomplete according to Engineer, complete outstanding items and request re-inspection.
 - .5 Declaration of Substantial Performance: when Engineer considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.
 - .6 Commencement of Lien and Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance to be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.

.7 Final Payment:

.1 When Engineer considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.

.8 Payment of Holdback: after issuance of Certificate of Substantial Performance of Work, submit application for payment of holdback amount in accordance with contractual agreement.

1.2 FINAL CLEANING

.1 Remove surplus materials, excess materials, rubbish, tools and equipment.

PART 2 PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-warranty Meeting:
 - .1 Convene meeting at least one (1) week prior to contract completion with Engineer to:
 - .1 Verify Project requirements.
 - .2 Review warranty requirements and manufacturer's installation instructions.
 - .2 Engineer to establish communication procedures for:
 - .1 Notifying construction warranty defects.
 - .2 Determine priorities for type of defects.
 - .3 Determine reasonable response time.
 - .3 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
 - .4 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Two (2) weeks prior to Substantial Performance of the Work, submit to the Engineer, four (4) final copies of operating and maintenance manuals in Inuktitut and Inuinnaqtun and English.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.3 FORMAT

- .1 Organize data as instructional manual.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings.
 - .1 Identify contents of each binder on spine.
- .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by systems, under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.

- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab.
 - .1 Bind in with text; fold larger drawings to size of text pages.
- .9 Provide 1:1 scaled CAD files in .dwg format on USB drive.

1.4 CONTENTS - PROJECT RECORD DOCUMENTS

- .1 Table of Contents for Each Volume: provide title of project:
 - .1 Date of submission; names.
 - .2 Addresses, and telephone numbers of Consultant and Contractor with name of responsible parties.
 - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.
- .6 Training: refer to individual Sections.

1.5 AS-BUILT DOCUMENTS AND SAMPLES

- .1 Maintain, in addition to requirements in General Conditions, at site one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction:
 - .1 Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual:

- .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition:
 - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Engineer.

1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on one (1) set of drawings, and in copy of Project Manual, provided by the Engineer.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress:
 - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 Referenced Standards to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain field test records, manufacturer's certifications, inspection certifications, commissioning certificates, and training records required by individual specifications sections.
- .7 Provide digital photos for site records.

1.7 FINAL SURVEY

- .1 Submit final site survey certificate, certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

1.8 EQUIPMENT AND SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts:

- .1 Give function, normal operation characteristics and limiting conditions.
- .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .14 Include test and balancing reports.
- .15 Additional requirements: as specified in individual specification sections.

1.9 MATERIALS AND FINISHES

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations:
 - .1 Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional requirements: as specified in individual specifications sections.

1.10 MAINTENANCE MATERIALS

- .1 Spare Parts:
 - .1 Provide spare parts, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items:
 - .1 Submit inventory listing to Engineer.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock Materials:
 - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items:
 - .1 Submit inventory listing to Engineer.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .3 Special Tools:
 - .1 Provide special tools, in quantities specified in individual specification section.
 - .2 Provide items with tags identifying their associated function and equipment.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items:
 - .1 Submit inventory listing to Engineer.
 - .2 Include approved listings in Maintenance Manual.

1.11 DELIVERY, STORAGE AND HANDLING

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and for review by the Engineer.

1.12 WARRANTIES AND BONDS

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, at least thirty (30) days before planned pre-warranty conference, to Engineer's approval.

- .3 Warranty management plan to include required actions and documents to assure that the Engineer receives warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase, to the Engineer for approval prior to each monthly pay estimate.
- .6 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten (10) days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .8 Conduct joint four (4) month and nine (9) month warranty inspection, measured from time of acceptance, by the Engineer.
- .9 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items, to include HVAC balancing, motors, roofs, pumps, transformers, lightning protection systems, fire protection, fire suppression, alarm systems, commissioned systems.
 - .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.

- .7 Cross-reference to warranty certificates as applicable.
- .8 Starting point and duration of warranty period.
- .9 Summary of maintenance procedures required to continue warranty in force.
- .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
- .11 Organization, names and phone numbers of persons to call for warranty service.
- .12 Typical response time and repair time expected for various warranted equipment.
- .4 Contractor's plans for attendance at four (4) and nine (9) month post-construction warranty inspections.
- .5 Procedure and status of tagging of equipment covered by extended warranties.
- .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification to follow oral instructions.
- .1 Failure to respond will be cause for the Engineer to proceed with action against Contractor.

1.13 WARRANTY TAGS

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by the Engineer.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.
- .3 Leave date of acceptance until project is accepted for occupancy.
- .4 Indicate following information on tag:
 - .1 Type of product/material.
 - .2 Model number.
 - .3 Serial number.
 - .4 Contract number.
 - .5 Warranty period.
 - .6 Inspector's signature.
 - .7 Construction Contractor.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 Section 31 23 33.01 – Excavating, Trenching and Backfilling

1.2 REFERENCES

- .1 Canadian Federal legislations, the most current of:
 - .1 Canadian Environmental Protection Act (CEPA).
 - .2 Canadian Environmental Assessment Act (CEAA).
 - .3 Transportation of Dangerous Goods Act (TDGA).
 - .4 Motor Vehicle Safety Act (MVSA).

1.3 MEASUREMENT PROCEDURES

- .1 Asphalt Concrete Pavement Removal
 - .1 Removal of asphaltic concrete pavement will be measured in square meters regardless of depth removed. No differentiation will be made between various pavement thicknesses. Dispose of asphalt in the designated area as directed by the Engineer.
 - .2 The unit price bid for asphalt pavement removal for the major portions of the work shall include the supply of all material, labour, equipment, tools and incidentals required to do all intermediate cutting, removals and general cleanup.
 - .3 Asphalt cutting will be measured for the final perimeter of asphalt removal only.
 - .4 Asphalt removal will not be measured for utility patch repairs designated as water/sewer and should be included in the cost of the work.
 - .5 Asphalt removal will be measured only for miscellaneous patch repairs designated as road/sidewalk.
 - .6 Asphalt cutting will also be measured for miscellaneous maintenance and repairs including road/sidewalk and water/sewer repairs.
- .2 Concrete Removal
 - .1 Removal of concrete pavement and sidewalk will be measured in square meters regardless of thickness. Dispose of concrete in the designated area as directed by the Engineer.
 - .2 The tendered price shall include all costs related to removal and disposal of existing concrete, asphalt pavement, CSP pipes, as directed by the Engineer. The unit price bid for concrete, asphalt, and pipe removal shall include the supply of all material, labour, equipment, tools and incidentals required to do all cutting and general cleanup.
- .3 Removal of culverts, pipe sewers and drains will be measured in meters regardless of diameter. End points of measurements will be at centres of manholes or catch basins or open ends of pipes, as applicable.

- .4 Payment for salvage, stockpiling, sealing, disposal, alternative disposal, recycling, excavating, backfilling and restoration will be included in above removal items.
- .5 Removal of waste materials designated for alternate disposal from the site will not be measured separately.

1.4 STORAGE AND PROTECTION

- .1 Protect in accordance with Section 31 23 33.01 - Excavating, Trenching and Backfilling
- .2 Protect existing items designated to remain and items designated for salvage. In event of damage to such items, immediately replace or make repairs to the approval of the Engineer and at no cost to the Owner.
- .3 In all circumstances ensure that demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
- .4 Do not dispose of waste of volatile materials such as, mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers. Ensure proper disposal procedures are maintained throughout the project.
- .5 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers or onto adjacent properties.
- .6 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.
- .7 Protect trees, plants and foliage on site and adjacent properties. Notify the Engineer prior to the commencement of any work that might impact existing trees, plants or foliage.

1.5 EXISTING CONDITIONS

- .1 Prior to the start of any demolition work, remove contaminated or hazardous materials as directed by the Engineer from site and dispose of in safe manner in accordance with TDGA and all other applicable regulatory requirements.

1.6 REGULATORY REQUIREMENTS

- .1 Ensure all work is performed in compliance with all applicable Territorial and Federal regulations.

1.7 SUBMITTALS

- .1 Supply certified weigh bills from authorized disposal sites for all material removed from site.

PART 2 PRODUCTS

2.1 EQUIPMENT

- .1 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

PART 3 EXECUTION

3.1 PREPARATION

- .1 Inspect site with the Engineer and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.
- .2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.
- .3 Notify and obtain approval of utility companies before starting demolition.

3.2 WORKMANSHIP

- .1 Pavement Cutting
 - .1 Where a new pavement structure ties into an existing pavement structure, the Contractor shall cut back into the existing pavement structure so as to expose the complete cross section of the existing pavement structure. The cut shall be made perpendicular to the centreline of the pavement structure. All cuts shall be made in accordance with this section.
 - .2 The Contractor shall use as directed by the Engineer, an asphalt saw for cutting and breaking out section of pavement structure designated for removal.
- .2 Pavement Removal
 - .1 Asphaltic concrete pavement structures requiring removal will be marked by the Engineer. All tie-in edges are to be cut as described in 3.2.1. Tearing or ripping of tie-ins is not acceptable. Disposal to be at a location approved by the Engineer.

3.3 SEQUENCES OF OPERATION

- .1 Removal
 - .1 Remove items as indicated.
 - .2 Do not disturb items designated to remain in place.
 - .3 In removal of pavements, curbs and gutters:
 - .1 Remove to lines and grades indicated or established by the Engineer in the field.
 - .2 Square up adjacent surfaces to remain in place by saw cutting or other method approved by the Engineer.
 - .3 Use equipment and methods of removal and hauling which do not tear, gouge, break, damage or disturb pavement that is to remain.
 - .4 Protect adjacent joints and load transfer devices.
 - .5 Protect underlying and adjacent granular materials.
 - .4 When removing asphalt pavement for potential future incorporation into hot mix asphalt concrete paving, prevent contamination with base course aggregates.
 - .5 When removing pipes under existing or future pavement area, excavate at least 300 mm below pipe invert.
 - .6 Remove only as many trees as required during construction. Obtain written approval of the Engineer prior to removal of any trees.

- .7 All trees identified by the Engineer to be healthy are to be alternately disposed of.
- .8 Stockpile topsoil for final grading and landscaping. Provide erosion control and seeding if not immediately used.
- .9 Provide water for the suppression of dust generated by the removal process.
- .2 Removal From Site
 - .1 Interim removal of stockpiled material will be required by the Engineer, if it is deemed to interfere with operations of the Engineer or other contractors.
 - .2 Remove stockpiles of like materials by an alternate disposal option once collection of that material is complete.
 - .3 Only dispose of specified material by selected alternative disposal option as provided by the Engineer. Do not dispose of these materials in a landfill or a waste stream destined for landfill. Additional disposal options will be provided by the Engineer prior to disposal.
 - .4 All material destined for alternate disposal must be hauled to authorize disposal sites. Any deviation must be approved in writing by the Engineer.
- .3 Salvage
 - .1 Items to be salvaged: paper, plastic, asphalt, concrete, traffic signs, etc.
 - .2 Carefully dismantle items containing materials for salvage and stockpile salvaged materials at locations approved by the Engineer.
- .4 Sealing
 - .1 Seal pipe ends and walls of manholes or catch basins as indicated. Securely plug to form watertight seal.
- .5 Disposal of Material
 - .1 Dispose of materials not designated for salvage or reuse on site as instructed by the Engineer.
- .6 Backfill
 - .1 Backfill in areas as indicated and in accordance with Section 31 23 33.01 - Excavating, Trenching and Backfilling.
- .7 Stockpile
 - .1 Stockpile in accordance with Section 31 05 16 – Aggregates for Earthwork.

3.4 RESTORATION

- .1 Restore areas and existing works outside areas of demolition to conditions that existed prior to commencement of work.
- .2 Use only soil treatments and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

3.5 CLEANUP

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.

- .2 Sweep remaining surfaces clean of debris resulting from removal operations using rotary power brooms and hand brooming as required.
- .3 Use only cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.
- .4 See Section 01 77 00 – Closeout Procedures.

3.6 REPORTING

- .1 Record off-site removal of debris and materials and provide the following information regarding removed materials to the Engineer within 5 business days.
 - .1 Time and date of removal.
 - .2 Type of material.
 - .3 Weight and quantity of materials.
 - .4 Final destination of materials.

3.7 COORDINATION

- .1 Coordinate alternative disposal activities with the Engineer.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCE STANDARDS

- .1 ASTM International (ASTM)
 - .1 ASTM D4791-10, Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate.
 - .2 ASTM D5084-10, Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Samples:
 - .1 Allow continual sampling by Engineer during production.
 - .2 Provide Engineer with access to source and processed material for sampling.
 - .3 Install sampling facilities at stockpile site, to allow Engineer to obtain representative samples of items being produced. Pay cost of sampling and testing of aggregates which fail to meet specified requirements.
 - .4 Pay cost of sampling and testing of aggregates which fail to meet specified requirements.

1.3 MEASUREMENT FOR PAYMENT

- .1 Production of aggregate and crush gravel will not be measured separately for payment. There shall be no direct cost associated with this section. Include cost in lump sum bid price.

1.4 QUALITY CONTROL AND QUALITY CONTROL TESTING

- .1 General
 - .1 In all sources, quality control and quality control testing are the responsibility of the Contractor throughout every stage of the Work.
 - .2 Tests performed by the Engineer will not be considered to be quality control tests.
 - .3 The Contractor shall provide, pay for and maintain equipment and qualified personnel to carry out all field testing necessary to determine and monitor the characteristics of the materials produced and the final product to be delivered.
 - .4 The Contractor shall provide safe and convenient means for accurately and representatively sampling each aggregate stream being produced during all screening, splitting and crushing processes.
 - .5 Prior to commencement of the Work, the Contractor shall provide the Engineer with his program and schedule of testing for quality control and shall demonstrate to the satisfaction of the Engineer that the program and schedule are adequate to provide reliable quality control within the limits specified.

- .6 All quality control test and test results shall be calculated, recorded and submitted to the Engineer on industry standard worksheets. The tests and test results shall be certified for correctness by the Engineering Consulting Firm employed by the Contractor to perform the tests and shall be signed by the Contractor's representative. All worksheets shall be reviewed and certified for correctness by a Professional Engineer from the Engineering Consulting Firm employed by the Contractor to perform the tests, on a weekly basis at a minimum.
- .2 Test Methods
 - .1 Unless otherwise specified, the latest edition of the following test methods shall be used to determine material characteristics:
 - .1 Sampling Aggregates – ASTM D75
 - .2 Sieve Analysis of Fines & CSA A23.2 Aggregates
 - .3 Sieve Analysis of Materials – ASTM C117 Finer than 75 Micron sieve by Washing
 - .4 Mineral Filler – ASTM D546
 - .5 Hydraulic Conductivity Analysis of Clay – ASTM D5084
 - .3 Quality Control Testing Requirements
 - .1 The Contractor's quality control and quality control testing program shall include the carrying out of quality control testing using the latest edition of the specified test methods at the minimum specified frequencies.
 - .1 Sampling
 - .1 Sampling ASTM D 75 One per 1,000 Aggregate tonnes (This frequency applied to – each fraction being produced).
 - .2 Sieve Analysis
 - .1 Crushed One per 1,000 Aggregate tonnes.
 - .1 Fine and Course ASTM A23.2-2A Fraction
 - .2 Materials finer ASTM C117 than 75 micron sieve by washing. (This frequency applied to each fraction being produced)
 - .2 Blend Sand ASTM D546 (One per 300 tonnes)
 - .3 Manufactured ASTM D546 Blend Sand (Mineral Filler) One per four (4) hours of plant production.
 - .3 Hydraulic Conductivity Analysis ASTM D5084 One per 1,000 Aggregate tonnes. (This frequency applied to each fraction being produced)
 - .4 Reporting of Sieve Analysis test Results and Production Quantities
 - .1 The Contractor shall record all sieve analysis test results on industry standard grain size curve sheets and worksheets which provide all test data, calculations, error checks, test results and any additional information requested by the Engineer. The Contractor shall also determine and record on each sieve analysis worksheet, the time and date of sampling, the total quantity of granular material

produced at the time of sampling and, where applicable, the test lot that the sample refers to.

.5 Quality Acceptance

- .1 Acceptance of processed aggregates will take place when they are in their final position and have met all the requirements of the Contract. The Engineer may test at any time at the work site and reject material that does not meet the specifications. The Contractor shall promptly remove rejected material from the site.
- .2 The Engineer and his representatives reserve the right to sample, test, inspect and monitor the quality of material being produced and incorporated into the work by the Contractor at any time and as often as he deems necessary. The Contractor shall cooperate with the Engineer and his representatives for such sampling, testing, inspecting and monitoring. The Engineer is under no obligation to provide the Contractor with test results and this testing shall in no way relieve the Contractor of his responsibility to produce aggregates that meet the specifications in all respects

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 – Common Product Requirements.
- .2 Transportation and Handling: handle and transport aggregates to avoid segregation, contamination and degradation.
- .3 Storage: store washed materials or materials excavated from underwater 24 hours minimum to allow free water to drain and for materials to attain uniform water content.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Aggregate quality: sound, hard, durable material free from soft, thin, elongated or laminated particles, organic material, clay lumps or minerals, free from adherent coatings and injurious amounts of disintegrated pieces or other deleterious substances.
- .2 Flat and elongated particles of coarse aggregate: to ASTM D4791.
 - .1 Greatest dimension to exceed 5 times least dimension.
- .3 Fine aggregates satisfying requirements of applicable section to be one, or blend of following:
 - .1 Natural sand.
 - .2 Manufactured sand.
 - .3 Screenings produced in crushing of quarried rock, boulders, gravel or slag.
- .4 Granular A and Granular B to be crushed stone or Crushed Gravel and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials.

- .5 Granular C to be crushed stone or gravel or screened stone or gravel and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials.
- .6 Modified Granular C to be crushed stone or gravel or screened stone, gravel or sand and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials
- .7 8 to 10" Cobble Stone (Well Graded). Gradations within limits specified when tested to ASTM C136. Sieve sizes to CAN/CGSB-8.2.
- .8 Aggregate material size used for Rock Drains shall be of nominal 100mm to 150mm and is fully encased with filter cloth on all sides, and overlap the top of trench.
- .9 Table:

ASTM Sieve Designation	% Passing			
	Granular A	Granular B	Granular C	Modified Granular C
200mm	-	-	100	-
100mm	-	100	-	-
75mm	-	95-100	-	-
50mm	-	-	-	-
38.1mm	-	-	-	-
25mm	100	45-100	50-100	-
19mm	85-100	-	-	-
12.5mm	65-90	-	-	-
9.5mm	50-73	-	-	100
4.75mm	35-55	25-70	20-100	55-100
1.8mm	15-40	-	10-100	30-100
0.425mm	-	4-50	-	-
0.300mm	5-22	-	2-65	10-50
0.075mm	2-8	0-8	0-8	0-10

2.2 SOURCE QUALITY CONTROL

- .1 Inform Engineer of proposed source of aggregates and provide access for sampling one (1) week minimum before starting production.
- .2 If materials from proposed source do not meet, or cannot reasonably be processed to meet, specified requirements, locate alternative source.
- .3 Advise Engineer one (1) week minimum in advance of proposed change of material source.

- .4 Acceptance of material at source does not preclude future rejection if it fails to conform to requirements specified, lacks uniformity, or if its field performance is found to be unsatisfactory.

PART 3 EXECUTION

3.1 EXAMINATION

- .1 N/A

3.2 PREPARATION

- .1 N/A

END OF SECTION

PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 Section 31 23 33.01 – Excavating, Trenching and Backfill

1.2 DEFINITIONS

- .1 Rock: material which requires drilling, ripping or breaking up with power operated tools for its removal, and boulders and pieces of concrete exceeding volume limits as follows:
Trench excavation – 0.5m³, Mass excavation 1.0m³.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Not Used.

PART 3 EXECUTION

3.1 ROCK REMOVAL

- .1 Perform excavation in accordance with Erosion and Sedimentation Control Plan.
- .2 Remove rock to alignments, profiles, and cross sections as indicated. Only mechanical rock breaking (pneumatic hammers, ripper teeth, etc.) are permitted on site.
- .3 Use rock removal procedures to produce uniform and stable excavation surfaces. Minimize overbreak, and to avoid damage to adjacent structures.
- .4 Excavate rock to horizontal surfaces with slope not to exceed local regulations.
- .5 Excavate trenches to lines and grades to minimum of 150 mm below pipe invert indicated. Provide recesses for bell and spigot pipe to ensure bearing will occur uniformly along barrel of pipe.
- .6 Cut trenches to widths as indicated.
- .7 Remove boulders and fragments which may slide or roll into excavated areas.
- .8 Correct unauthorized rock removal at no extra cost.

3.2 CLEANING

- .1 Rock Disposal:
 - .1 Dispose of surplus removed rock off site.
- .2 Do not dispose removed rock into landfill. Send material to appropriate location as approved by Consultant.

3.3 PROTECTION

- .1 Prevent damage to surroundings and injury to persons.

END OF SECTION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 01 29 00 – Payment Procedures.
- .2 Section 31 05 16 – Aggregates for Earthworks.

1.2 REFERENCE STANDARDS

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM D698-12(2021), Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³) (600 kN-m/m³).
 - .2 ASTM D1557-12(2021), Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³) (2,700 kN-m/m³).
 - .3 ASTM D4318-17e1, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.3 WORK INCLUDED

- .1 The work covered by this section shall include excavation, trenching, backfilling, and disposal of excess materials, as required to complete the work covered elsewhere in the contract documents.
- .2 The Contractor shall provide all labour, equipment, and materials to complete the works covered by this section.

1.4 CLASSIFICATION OF MATERIAL

- .1 Earth Excavation
 - .1 Includes the excavation of all materials except rock excavation classified hereinafter.
- .2 Rock Excavation
 - .1 Includes the excavation of all boulders greater than 0.75 cubic metres in volume, or solid ledge rock of concrete foundations which, in the opinion of the Engineer, requires for its removal drilling and blasting or wedging or sledging or barring. No soft or disintegrated rock which can be removed with a pick, or loose, shaken or previously blasted rock will be measured or allowed. Frozen materials shall not be classified as rock nor will extra payment be allowed for excavating same.
- .3 Backfill
 - .1 In other areas other than existing roadways, machine backfilling using approved excavated material will be permitted from the top of the granular backfill.

.4 Surplus Material

- .1 Excavated material which is not required for the completion of the work.

.5 Suitable Backfill Material

- .1 Material from excavation which, in the opinion of the Engineer, is suitable for use as backfill or for other processes.

.6 Unsuitable Material

- .1 Material from an excavation which, in the opinion of the Engineer, is not suitable for use as backfill or other processes.

1.5 OCCUPATIONAL HEALTH AND SAFETY ACT

- .1 All excavations will have to conform strictly to the requirements of the latest Occupational Health and Safety Act adopted by The City of Iqaluit.

1.6 SAFETY MEASURES

- .1 Suitable warning signs, lights and barricades shall be erected for the protection of vehicles and pedestrians during construction. Watchpersons or flagpersons, when required, shall be supplied by the Contractor at their own expense.
- .2 The Contractor shall comply with the instructions of a safety inspector appointed or recognized by The City of Iqaluit whose duty is to enforce territorial acts governing the excavation of trenches and the protection of same.
- .3 The Contractor shall inform the City's safety inspector of their intention to excavate at least 24 hours before commencing work.

1.7 CAUTION IN EXCAVATION

- .1 The Contractor must exercise proper caution in excavating and must repair and make good at their own expense any and all damage done to pipes, sewers, maintenance holes, etc. Where necessary, the Contractor shall make necessary explorations to discover location of existing pipes, conduits, services, etc.

1.8 BLASTING

- .1 Retain licensed explosives expert to program and supervise blasting work, and to determine precautions, preparation and operations techniques.
- .2 Submit documentation to the Engineer verifying explosives expert's qualifications in accordance to Federal and Territorial laws and Municipal ordinances.

1.9 INCONVENIENCE TO ADJACENT PROPERTY OWNERS

- .1 Construction of the work shall be carried out in such a manner that a minimum of inconvenience is caused to the owners and occupants of property adjacent to the works.

1.10 WORKING RESTRICTIONS

- .1 The Contractor shall be responsible for maintaining adequate surface drainage during construction. He shall provide all necessary measures to ensure that natural drainage is

not impeded to the detriment of the local municipal authority, private landowners, or the public. Water pumped out or removed from a trench shall not be discharged in the existing sewers unless permission in writing has been obtained from the authority having jurisdiction.

- .2 Steel-tracked equipment will not be allowed on the pavement at any time, unless the pavement is protected by planks, pads, or other devices.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Granular Material
 - .1 Granulars A, B, Modified B, C, Modified C and Sand shall meet the requirements set out in Section 31 05 16 – Aggregates for Earthworks.
- .2 Granular Backfill
 - .1 Backfill material shall be selected from materials taken from the excavation, if in the opinion of the Engineer, they are suitable.

PART 3 EXECUTION

3.1 PREPARATION OF THE WORK

- .1 The Contractor, at their own expense, shall clear the surface or road as may be necessary for the full width and length of the proposed trenches or structures and shall dispose of all refuse in a manner satisfactory to the Engineer. The unit prices for the work shall include all costs incurred in removing material of whatever nature from the surface of the ground or road.

3.2 ALIGNMENT AND GRADE

- .1 Trenches shall be dug to the alignment and grade required and only so far in advance of pipe laying as the Engineer shall permit.
- .2 The bottom of the pipe trench shall be excavated to a flat surface for the bedding material. Earth, boulders and rock shall be removed or excavated to provide a clearance of at least 150 mm below the pipe and the excavation for bedding of the pipe shall be refilled with thoroughly compacted material as specified herein.

3.3 DRAINAGE

- .1 The Contractor shall keep all portions of the work properly and efficiently drained during construction and until completion. They shall be held responsible for all damage that may be caused as the result of water backing up or flowing over, though, from, or along any part of the work or surrounding properties due to their operation.
- .2 All costs associated with providing drainage for the work as required, shall be included in the unit prices for the installation of mains and access vaults.

3.4 EXCAVATION AND PREPARATION OF TRENCH

- .1 Excavation shall be taken to mean the removal from the trench of all materials of whatever kind encountered, for the laying of construction therein of all pressure mains, sewer mains, pre-fabricated maintenance holes, and appurtenances. All excavation shall be made exactly to line and grade, as shown on the drawings or as established by the Engineer. The length of trench which has not been backfilled shall not extend beyond one access vault to the rear of the working area. Excavation, pipe laying, and backfilling shall proceed at such a pace as to prevent permafrost degradation. It shall be braced and drained in a manner to ensure that work may proceed safely and efficiently therein.
- .2 The trench shall be excavated to the depth shown on the drawings so as to provide a firm foundation for the pipe sand bedding on solid and undisturbed ground. Any part of the bottom of the trench excavated below the specified grade shall be corrected with approved backfill, thoroughly compacted as directed by the Engineer, with no extra cost to the Owner.
- .3 Large rocks and boulders shall be removed to provide a clearance of at least 0.15 metres below and on each side of all insulation, pipe, maintenance holes and appurtenances. This is the minimum clear distance which will be permitted between any part of the pipe and appurtenances being laid and any part, projection or point of such rocks, boulders or stones. The subgrade shall be made by backfilling with an approved sand or gravel in 0.15 metre layers.
- .4 These layers shall be thoroughly tamped as directed by the Engineer so as to provide a uniform and continuous bearing and support for the pipe bedding.
- .5 Where the bottom of the trench at subgrade is found to be unstable due to material which, in the judgement of the Engineer, should be removed, the Contractor shall excavate and remove such unsuitable material to the depth determined by the Engineer.
- .6 Ice rich soils shall be removed completely or to a maximum depth of 0.45 metres measured below the insulation of pipe lines.
- .7 The cost of such additional excavation of unstable subgrade due to the presence of unsuitable materials, and backfill, ordered by the Engineer shall be paid for at the tendered unit price.
- .8 The Contractor shall obtain the Engineer's approval, in writing, of the trench or excavation preparation prior to placing pipe bedding, backfill, or structures in the trench or excavation.
- .9 No extra payment shall be made for additional excavation and backfill that has become necessary due to subgrade that has become unstable due to water from melting snow and

ice that has entered the trench. The trench must be kept dry; refer to Clause 3.13 “Water in Excavation”.

3.5 ROCK EXCAVATION

- .1 Any boulders greater than 0.75 cubic metres in volume and any rock that cannot be excavated with a 0.5 cubic metre or larger trackmounted machine, or rock that requires blasting for its removal, will be paid for as rock. Volume of individual boulders will be determined by measuring three mutually perpendicular dimensions. When rock is encountered. The Engineer must be notified at once, so that measurements can be made.
- .2 Measurements for rock volume shall be taken from the top of the rock strata to the bottom of the strata. If the rock strata extends below the elevation of the invert of the pipe, then an allowance of 0.15 metres below the bottom of the pipe insulation will be used in calculating the volume of rock.
- .3 Soft shale, soft sandstone, or other rock that can, in the opinion of the Engineer, be successfully excavated with a 0.5 cubic metre backhoe or equivalent without blasting and without unusual wear and tear to the machine will not be classified as “rock excavation”. Hardpan will not be classified as “rock excavation”. Frozen subgrade material or permafrost will not be classified as “rock excavation”.

3.6 BLASTING

- .1 Use pre-shearing, cushion blasting or other smooth wall drilling and blasting techniques. The Contractor’s methods or procedure in blasting shall conform to Federal and Territorial laws and Municipal ordinances.
- .2 Blasting for excavation will be permitted only after securing the approval of the local municipal authority and only when proper precautions have been taken or the protection of persons or property. The hours of blasting may be fixed by the local municipal authority. Any damage caused by blasting shall be repaired by the Contractor at his own expense. The Contractor will be responsible for obtaining permits required for blasting operations.

3.7 BRACING AND SHORING

- .1 Bracing and shoring is the sole responsibility of the Contractor. Open-cut trenches shall be sheeted and braced as required by the Workers’ Compensation Board and Municipal ordinances, and as may be necessary to protect life, property, and work.
- .2 When close sheeting is required, it shall be so driven as to prevent adjacent soil from entering the trench either below or through such sheeting. The Engineer reserves the right to order the sheeting driven to the full depth of the trench or to such additional depths as may be required for the protection of the work. Where the soil in the lower limits of the trench has the necessary stability, the Engineer, at his discretion, may permit the Contractor to stop the driving of sheeting at some designated elevation above the trench bottom. The granting of permission by the Engineer, however, shall not relieve the Contractor in any degree from his fully responsibility under the contract. Sheeting and bracing, which have been ordered left in place, must be cut off and removed for a depth of one metre below the established road grade or the existing surface of the road, whichever is lower. Trench bracing, except that which must be left in place may be

removed as the backfilling proceeds. Backfilling and withdrawal of sheeting shall proceed together; no voids shall be left in the trench by the withdrawal of sheeting. Sheeting shall not be driven any further below the bottom of the trench than is necessary to ensure proper support for the sheeting.

- .3 The cost of furnishing, placing and removing the sheeting and bracing shall be included in the price bid for the work. When sheeting and bracing have been ordered left in place by the Engineer, the payment for such material shall be as an extra at cost of the material, plus 20% and shall include the upper one metre of “cut-off” section of the sheeting.

3.8 TRENCHING BY HAND

- .1 In any location where the use of trench digging machinery might cause property or utility damage the Contractor shall carry out the trenching by hand at no extra cost to the Owner.

3.9 TUNNELLING

- .1 Tunnelling may be done with the approval of the Engineer and all shoring or grading necessary for the tunnel shall be left in place at the Contractor’s expense. Before approval will be granted, the Engineer may require the Contractor to submit a statement and drawings indicating exactly the method of tunnelling which will be used. Backfilling must be carried out with approved materials and tamped with great care so as to leave the tunnel free of voids.

3.10 EXCAVATED MATERIAL

- .1 All excavated material shall be piled into three piles:
 - .1 Suitable material that can be used for backfill
 - .2 Unsuitable material that cannot be used for backfill or other processes, and
 - .3 Frozen material. If upon inspection by the Engineer, the thawed material is deemed suitable for use as backfill, this material can be classified as suitable, otherwise the material will be classified as unsuitable.
- .2 Unsuitable material shall be considered surplus material.
- .3 Remove soil contaminated with calcium chloride, toxic materials, and petroleum products and legally dispose of at a location accepted by the Engineer.
- .4 All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing roadways and driveways. Hydrants under pressure, access vaults and other utility controls shall be left unobstructed and accessible. Gutters and swales shall be kept clear or other satisfactory provisions made for roadway drainage, and natural watercourses shall not be obstructed.
- .5 The earth taken from the trench shall be neatly deposited at the sides in such a manner as to obstruct the road or driveway as little as possible. When it is impractical, in the opinion of the Engineer, to place the earth at the side of the trench it shall be removed and deposited as designated by the Engineer. In either case, a clear space must be left on one side of the trench to accommodate the survey stakes.

Permafrost excavated from the trench shall not be stockpiled on top of material to be used as backfill. Materials which are unsatisfactory after permafrost has been stockpiled on top of it shall be considered contaminated and removed from the site by the Contractor. The Contractor shall be governed by

- .6 Extra backfill material required because of the disposal of material contaminated by permafrost shall be supplied, placed, and compacted by the Contractor at his expense; see Clause 3.14 “Backfilling”, for specifications on the approved backfill materials and methods.

3.11 OWNERSHIP OF EXCAVATED MATERIAL

- .1 Surplus earth and other excavated materials will remain the property of the Owner.
- .2 All surplus or other material of any kind arising from, or during the construction of the works or any portion thereof which belongs to the Owner shall not be sold, thrown away, dumped, wasted or otherwise disposed of, except as directed by the Engineer. If so disposed of by the Contractor, the Engineer shall ascertain, as nearly as they can, the quantity and value thereof, and shall direct the Contractor or his sureties to pay unto the Owner the amount thus found, or the Owner may deduct it from any subsequent progress claim.

3.12 CLEANING UP AND DISPOSAL OF SURPLUS EXCAVATED MATERIAL

- .1 All surplus and excess materials that arise out of the construction of the works shall be removed and neatly piled, evenly spread or deposited as directed by the Engineer. The entire expense of loading, hauling, unloading, piling, spreading or otherwise dealing with said waste material shall be borne by the Contractor. If any material is dropped or spilled it shall be promptly removed to the satisfaction of the Engineer.

3.13 WATER IN EXCAVATION

- .1 All water pumped or drained from the work shall be disposed of in a suitable manner satisfactory to the Engineer, without damage to the Construction work of other property, structures, or persons.
- .2 The expense of removing the water, regardless of origin, is the responsibility of the Contractor. The Contractor shall be wholly responsible for any damage that may occur due to ground water or storm water entering the trench during the period of construction.
- .3 No extra payment shall be made for additional excavation and backfill that is required due to subgrade that has become unstable due to water from any source.

3.14 BACKFILLING

- .1 Trench excavations shall be backfilled with materials taken from the excavations, if in the opinion of the Engineer, they are suitable for use as compacted backfill. Otherwise Granular “B” or backfill approved by the Engineer shall be supplied by the Contractor as backfill.
- .2 All backfill shall be mechanically compacted in even layers not exceeding 0.15 metres in thickness so that there is no subsequent subsidence in the trench. The backfill shall be compacted to a density of 95% of the maximum density at optimum moisture content as

determined by the Standard Proctor Test as per ASTM D698-12(2021). Edges of existing pavement shall be cut square with an asphalt saw or compressor and all irregularities removed. Prior to placing asphalt, the edges of the existing pavement shall be swept clean. Pavement shall be replaced for the full damaged or removed width. Paved areas will be replaced with asphalt unless asphalt is unavailable. If asphalt is unavailable, the paving will be postponed to the subsequent year. The Contractor shall provide daily compaction test results to the Engineer.

- .3 In open field areas upon completion of all trenching and backfill, the entire disturbed area shall be bladed level.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 The work covered by this section includes placement of rip-rap stone as required elsewhere or as required.

1.2 RELATED REQUIREMENTS

- .1 Section 01 29 00 – Payment Procedures.
- .2 Section 01 33 00 – Submittal Procedures.
- .3 Section 01 35 29.06 – Health and Safety Requirements.
- .4 Section 01 45 00 – Quality Control.
- .5 Section 01 61 00 – Common Product Requirements.
- .6 Section 01 78 00 – Closeout Submittals.
- .7 Section 31 05 16 – Aggregates for Earthworks.
- .8 Section 31 23 33.01 – Excavating, Trenching and Backfilling.
- .9 Section 33 42 13 – Pipe Culverts.

PART 2 PRODUCTS

2.1 STONE

- .1 Rip-rap stone to meet the requirements as set out in Section 31 05 16 – Aggregates for Earthworks.

PART 3 EXECUTION

3.1 PLACING

- .1 Where rip-rap is to be placed on slopes, excavate trench at toe of slope to dimensions as indicated.
- .2 Fine grade area to be rip-rapped to uniform, even surface. Fill depressions with suitable material and compact to provide firm bed.
- .3 Place rip-rap to thickness and details as indicated.
- .4 Place stones in a manner approved by Engineer to secure surface and create a stable mass. Place larger stones at bottom of slopes.
- .5 Hand placing:
 - .1 Use larger stones for lower courses and as headers for subsequent courses.
 - .2 Stagger vertical joints and fill voids with rock spalls or cobbles.
 - .3 Finish surface even, free of large openings and neat in appearance.

- .6 Where required, install a geotextile filter fabric on a firm, compacted bed as recommended by the manufacturer. Place rip-rap in such a manner as to avoid damage to geotextile filter fabric.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCES

- .1 ASTM C117-04, Standard Test Methods for Material Finer Than 0.075 mm Sieve in Mineral Aggregates by Washing.
- .2 ASTM C131-06, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- .3 ASTM C136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .4 ASTM D422-63(2007), Standard Test Method for Particle-Size Analysis of Soils.
- .5 ASTM D698-07e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³).
- .6 ASTM D1557-09, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000ft-lbf/ft³) (2,700kN-m/m³).
- .7 ASTM D1883-07e2, Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils.
- .8 ASTM D4318-10, Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
 - .2 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
- .3 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Granular sub-base material: in accordance with the following requirements:
 - .1 Crushed, pit run or screened stone, gravel or sand.
 - .2 Gradations to be within limits specified when tested to [ASTM C136] and ASTM C117. Sieve sizes to CAN/CGSB-8.1.

.3 Table

ASTM Sieve Designation	% Passing			
	Granular A	Granular B	Granular C	Modified Granular C
200mm	-	-	100	-
100mm	-	100	-	-
75mm	-	95-100	-	-
50mm	-	-	-	-
38.1mm	-	-	-	-
25mm	100	45-100	50-100	-
19mm	85-100	-	-	-
12.5mm	65-90	-	-	-
9.5mm	50-73	-	-	100
4.75mm	35-55	25-70	20-100	55-100
1.8mm	15-40	-	10-100	30-100
0.425mm	-	4-50	-	-
0.300mm	5-22	-	2-65	10-50
0.075mm	2-8	0-8	0-8	0-10

- .1 Gradations to be within the limits specified when tested to ASTM C136-84a and ASTM c117-84 and are to have a smooth Curve without any sharp breaks when plotted on a semi-log gradient chart.
- .2 Granular A and Granular B to be crushed stone or Crushed Gravel and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials.
- .3 Granular C to be crushed stone or gravel or screened stone or gravel and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials.
- .4 Modified Granular C to be crushed stone or gravel or screened stone, gravel or sand and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials

.4 Other properties as follows:

- .1 Liquid Limit: to ASTM D4318, Maximum 25.
- .2 Plasticity Index: to ASTM D4318, Maximum 6.

PART 3 EXECUTION

3.1 PLACING

- .1 Place granular sub-base after subgrade is inspected and approved by Departmental Representative.
- .2 Construct granular sub-base to depth and grade in areas indicated.
- .3 Ensure no frozen material is placed.
- .4 Place material only on clean unfrozen surface, free from snow or ice.
- .5 Place granular sub-base materials using methods which do not lead to segregation or degradation.
- .6 Place material to full width in uniform layers not exceeding 150 mm compacted thickness.
- .7 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.
- .8 Remove and replace portion of layer in which material has become segregated during spreading.

3.2 COMPACTION

- .1 Compaction equipment to be capable of obtaining required material densities. For compaction below new asphalt, a single drum vibratory roller is required.
- .2 Compact to density of not less than 98% maximum dry density in accordance with ASTM D698.
- .3 Shape and roll alternately to obtain smooth, even and uniformly compacted sub-base.
- .4 Apply water as necessary during compaction to obtain specified density.
- .5 In areas not accessible to rolling equipment, compact to specified density with mechanical tampers approved by Departmental Representative.
- .6 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

3.3 CLEANING

- .1 Progress Cleaning:
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.4 SITE TOLERANCES

- .1 Finished sub-base surface to be within 10 mm of elevation as indicated but not uniformly high or low.

3.5 PROTECTION

- .1 Maintain finished sub-base in condition conforming to this section until succeeding base is constructed, or until granular sub-base is accepted by Departmental Representative.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCES

- .1 ASTM International
 - .1 ASTM C117-04, Standard Test Methods for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C131-06, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
 - .3 ASTM C136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .4 ASTM D698-07e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³).
 - .5 ASTM D1557-09, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000ft-lbf/ft³) (2,700kN-m/m³).
 - .6 ASTM D1883-07e2, Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils.
 - .7 ASTM D4318-10, Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
 - .2 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
- .3 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Granular base: material in accordance with the following requirements:
 - .1 Crushed stone or gravel.
 - .2 Gradations to be within limits specified when tested to ASTM C136 and ASTM C117. Sieve sizes to CAN/CGSB-8.1.

.1 Gradation

ASTM Sieve Designation	% Passing			
	Granular A	Granular B	Granular C	Modified Granular C
200mm	-	-	100	-
100mm	-	100	-	-
75mm	-	95-100	-	-
50mm	-	-	-	-
38.1mm	-	-	-	-
25mm	100	45-100	50-100	-
19mm	85-100	-	-	-
12.5mm	65-90	-	-	-
9.5mm	50-73	-	-	100
4.75mm	35-55	25-70	20-100	55-100
1.8mm	15-40	-	10-100	30-100
0.425mm	-	4-50	-	-
0.300mm	5-22	-	2-65	10-50
0.075mm	2-8	0-8	0-8	0-10

- .2 Gradations to be within the limits specified when tested to ASTM C136-84a and ASTM c117-84 and are to have a smooth Curve without any sharp breaks when plotted on a semi-log gradient chart.
- .3 Granular A and Granular B to be crushed stone or Crushed Gravel and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials.
- .4 Granular C to be crushed stone or gravel or screened stone or gravel and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials.
- .5 Modified Granular C to be crushed stone or gravel or screened stone, gravel or sand and shall be free of clay lumps, cementation, organic material, frozen material, and other deleterious materials
- .6 Liquid limit: to ASTM D4318, maximum 25
- .7 Plasticity index: to ASTM D4318, maximum 6.
- .8 Los Angeles degradation: to ASTM C131. Max. % loss by weight: 45
- .9 Soaked CBR: to ASTM D1883, minimum 100, when compacted to 100% of ASTM D1557.

PART 3 EXECUTION

3.1 PLACEMENT AND INSTALLATION

- .1 Place granular base after sub-base surface is inspected and approved in writing by Departmental Representative.
- .2 Placing:
 - .1 Construct granular base to depth and grade in areas indicated.
 - .2 Ensure no frozen material is placed.
 - .3 Place material only on clean unfrozen surface, free from snow and ice.
 - .4 Place material using methods which do not lead to segregation or degradation of aggregate.
 - .5 Place material to full width in uniform layers not exceeding 150 mm compacted thickness.
 - .6 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.
 - .7 Remove and replace that portion of layer in which material becomes segregated during spreading.
- .3 Compaction Equipment:
 - .1 Ensure compaction equipment is capable of obtaining required material densities. For compaction below new asphalt, a single drum vibratory roller is required.
- .4 Compacting:
 - .1 Compact to density not less than 100% maximum dry density to ASTM D698.
 - .2 Shape and roll alternately to obtain smooth, even and uniformly compacted base.
 - .3 Apply water as necessary during compacting to obtain specified density.
 - .4 In areas not accessible to rolling equipment, compact to specified density with mechanical tampers approved in writing by Departmental Representative.
 - .5 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

3.2 SITE TOLERANCES

- .1 Finished base surface to be within plus or minus 10 mm of established grade and cross section but not uniformly high or low.

3.3 CLEANING

- .1 Progress Cleaning:
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

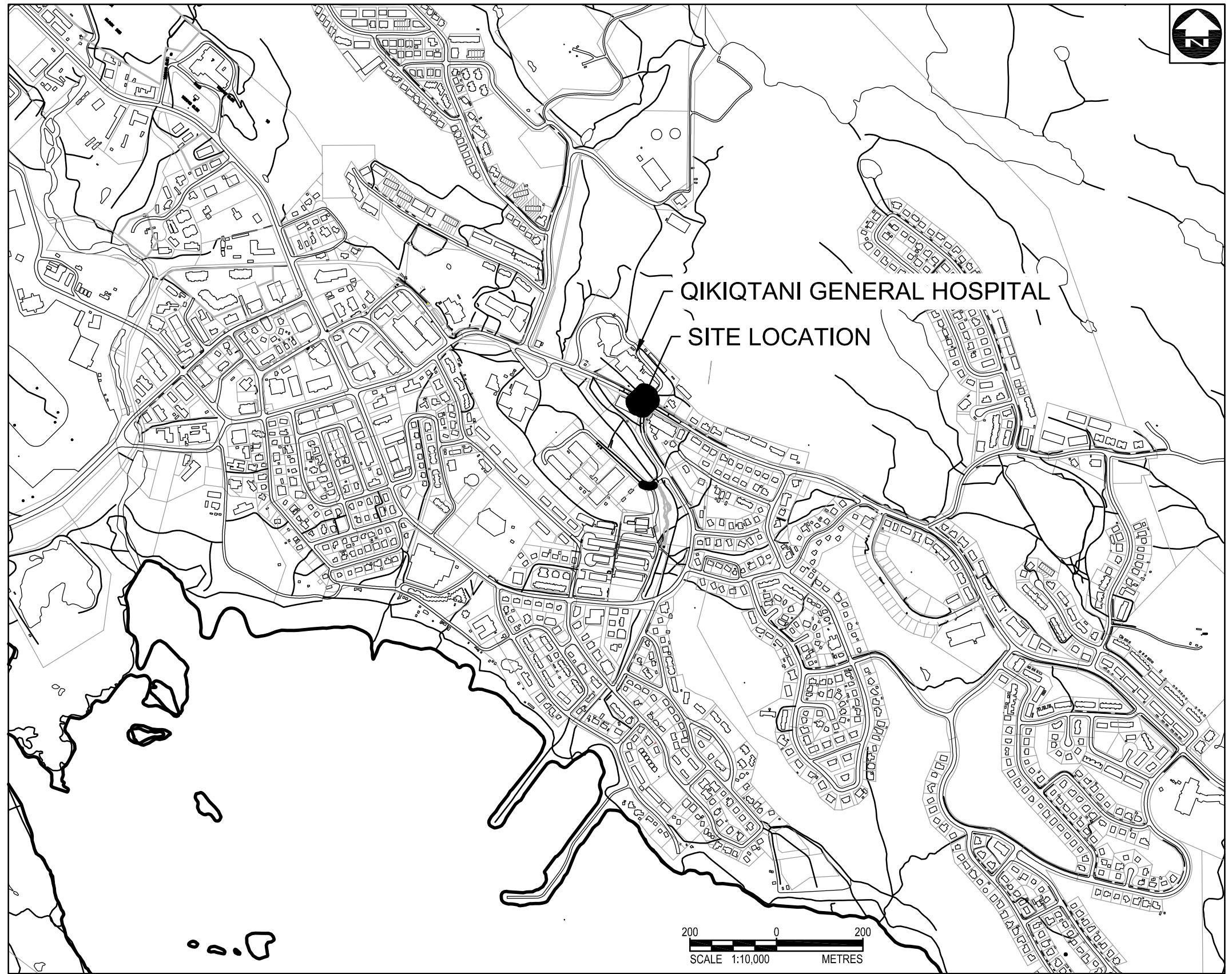
3.4 PROTECTION

- .1 Maintain finished base in condition conforming to this Section until succeeding material is applied or until acceptance by Departmental Representative.

END OF SECTION

**REQUEST FOR TENDER
FOR THE PROVISION OF CONSTRUCTION SERVICES FOR
APEX ROAD CROSSWALK**

PART VI – DRAWINGS



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C0	COVER SHEET
C1	EXISTING CONDITIONS AND REMOVALS
C2	SITE PLAN, PAVEMENT MARKING PLAN & DETAILS
EL 1	GENERAL LOCATION PLAN, SITE ELECTRICAL LAYOUT
EL 2	GENERAL LOCATION PLAN, SITE ELECTRICAL WIRING DIAGRAM
EL 3	ELECTRICAL SPECIFICATIONS
EL 4	ELECTRICAL DETAILS

APEX ROAD CROSSWALK DESIGN

Conditions of Use

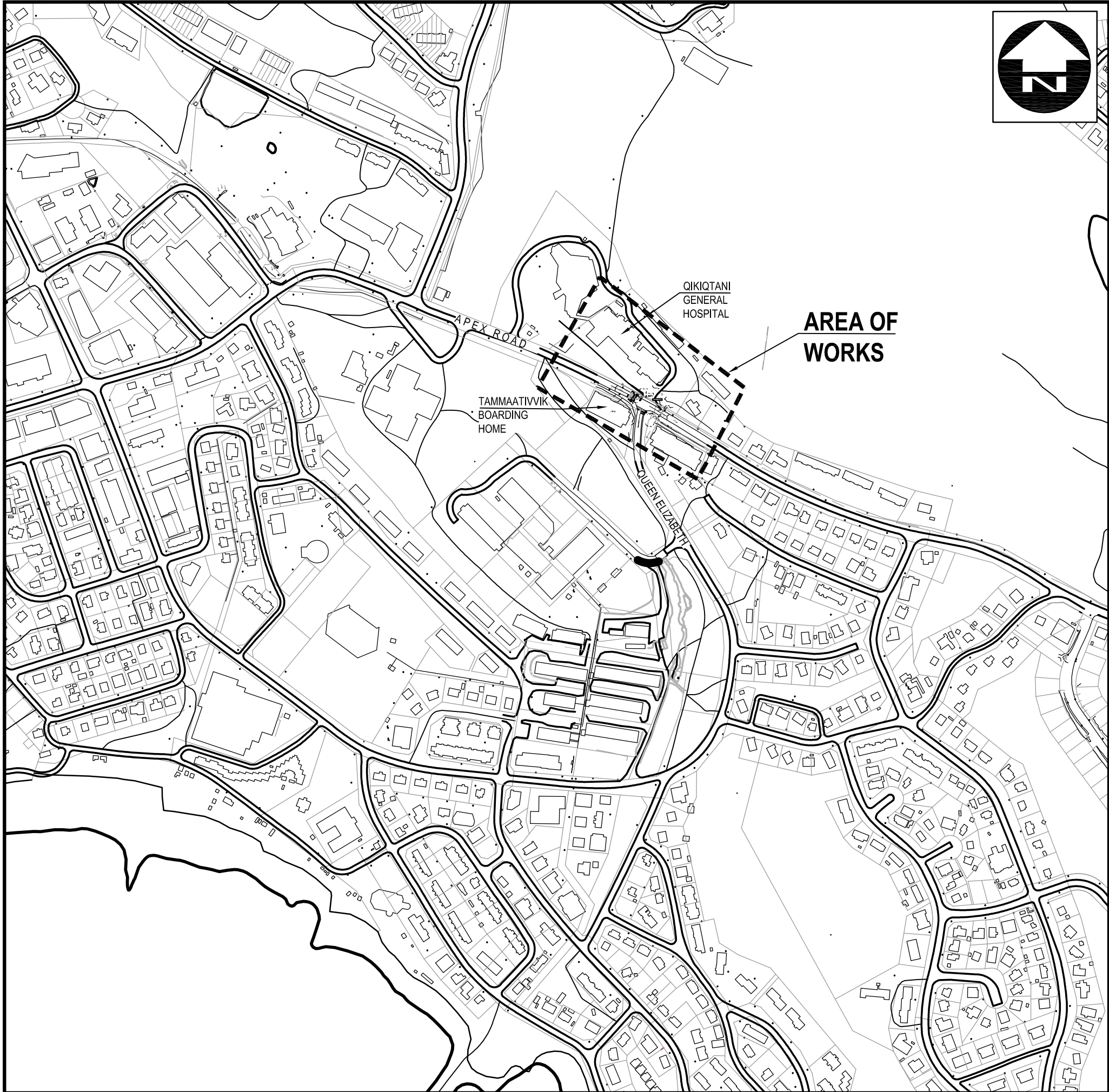
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Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

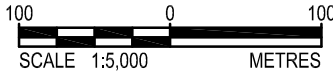
Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

CITY PROJECT: -----
DILLON PROJECT: 22-4563
DATE: DECEMBER 16, 2022
ISSUED FOR TENDER





1 PROJECT LOCATION PLAN
C1 1:5000

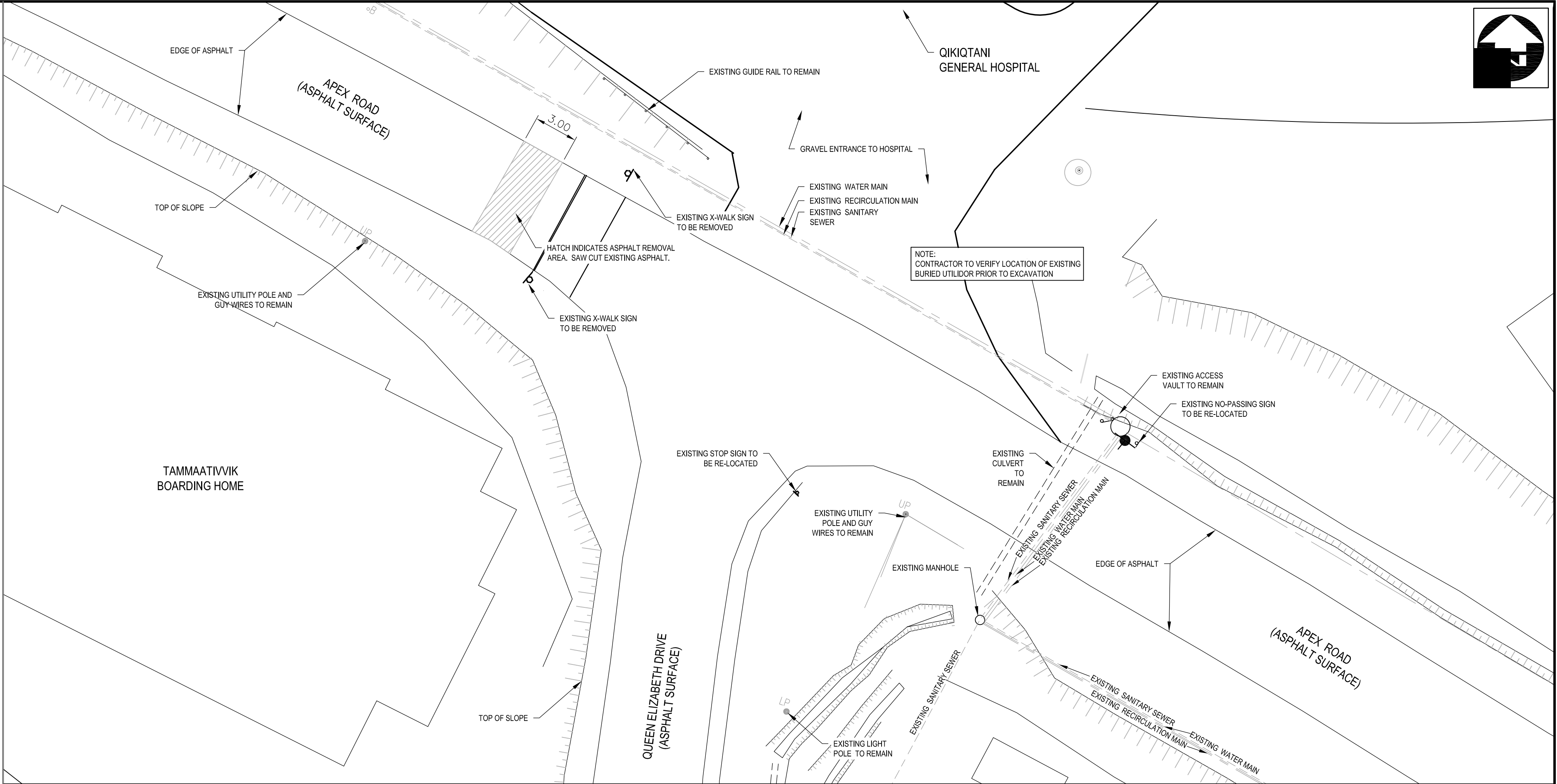


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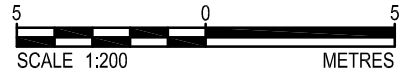
NORTHING	EASTING	ELEVATION	CONTROL MONUMENT NO.
7068349.224	522488.479	38.71	CCM3
7067616.303	522955.168	35.208	CCM4
7070285.229	522960.332	55.231	CCM6
7069841.593	523217.707	26.499	CCM8
7069091.491	524068.735	55.817	CCM17
7068685.633	524389.529	40.566	CCM21
7069061.855	524652.711	71.837	CCM23A
7068768.253	524890.145	86.677	CCM25
7068443.017	525103.656	102.456	CCM26
7068622.873	525561.309	117.526	CCM28
7068019.707	526047.243	119.397	CCM29
7066445.991	527146.353	62.088	CCM30
7068512.444	524504.331	59.186	CCM47
7069296.29	523858.192	32.278	CCM48

GENERAL NOTES:

- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
- ALL SURVEY MONUMENTS DISTURBED BY CONSTRUCTION SHALL BE REINSTATED.
- CONTRACTOR SHALL PROVIDE ALL TEMPORARY SIGNAGE FOR PEDESTRIAN AND TRAFFIC REROUTING AS REQUIRED.
- ACCESS TO EXISTING PROPERTIES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES.
- LOCATION OF EXISTING SERVICES, UNDERGROUND INFRASTRUCTURE, STRUCTURES, AND BUILDINGS ARE APPROXIMATE ONLY AND ARE TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS.
- CONTRACTOR TO CONTACT UTILITY COMPANIES REGARDING ANY UNDERGROUND UTILITIES IN THE AREA OF WORKS. CONTRACTOR SHALL USE CAUTION TO LOCATE EXISTING UNDERGROUND POWER AND TELECOMMUNICATIONS LINES. LINES SHALL BE KEPT IN SERVICE WHERE TRENCHING CROSSES UNDERGROUND LINES. CONTRACTOR SHALL SUBMIT SUPPORT AND BRACING DETAILS TO ENGINEER FOR APPROVAL PRIOR TO UNDERMINING POWER AND TELECOMMUNICATION LINES.
- ALL DEMOLISHED CONCRETE, PIPE, CONTAMINATED SOILS, AND OTHER UNSUITABLE MATERIALS MUST BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT A DISPOSAL SITE APPROVED BY THE GOVERNMENT OF NUNAVUT.
- ROCK REMOVAL, IF REQUIRED, SHALL BE CARRIED OUT BY MECHANICAL MEANS ONLY. THE USE OF EXPLOSIVES IS NOT PERMITTED ON SITE.
- ALL EXISTING AREAS AND INFRASTRUCTURE DISTURBED BY CONTRACTOR'S OPERATIONS WHICH ARE NOT DESIGNATED TO BE RELOCATED OR RECONSTRUCTED SHALL BE REINSTATED TO PRE-CONSTRUCTION CONDITION OR BETTER. THERE SHALL BE NO ADDITIONAL PAYMENT FOR REINSTATEMENT OF SUCH.



2 EXISTING CONDITIONS AND REMOVALS
C1 1:200



- THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE CONSTRUCTION AND COMMISSIONING PLAN. AT A MINIMUM, THE PLAN SHALL INCLUDE:
 - CONSTRUCTION PHASING PLANS
 - COMMISSIONING PHASING PLANS
 - TRAFFIC CONTROL PLANS
- THE CONTRACTOR SHALL DISPOSE OF ALL EXISTING EXCAVATED MATERIALS.
- PROVIDE DRAINAGE AT 2-5% SLOPE AWAY FROM EXISTING ACCESS VAULTS AT 350mm-400mm BELOW RIM. (TYP. FOR ALL ACCESS VAULTS).

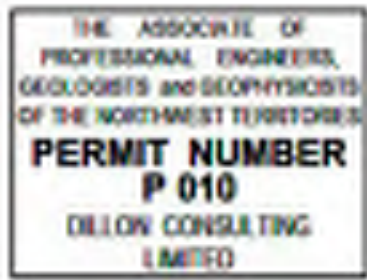
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Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.



No.	ISSUED FOR	DATE	BY
0	ISSUED FOR TENDER	16-DEC-22	SJG
B	ISSUED FOR 100% REVIEW	04-NOV-22	SJG
A	ISSUED FOR 90% REVIEW	02-SEPT-22	SJG

DESIGN	REVIEWED BY
SJG	SJG
DRAWN	CHECKED BY
LJM	SJG
DATE	AUGUST
SCALE	AS NOTED

CITY OF IQALUIT
APEX ROAD CROSSWALK DESIGN

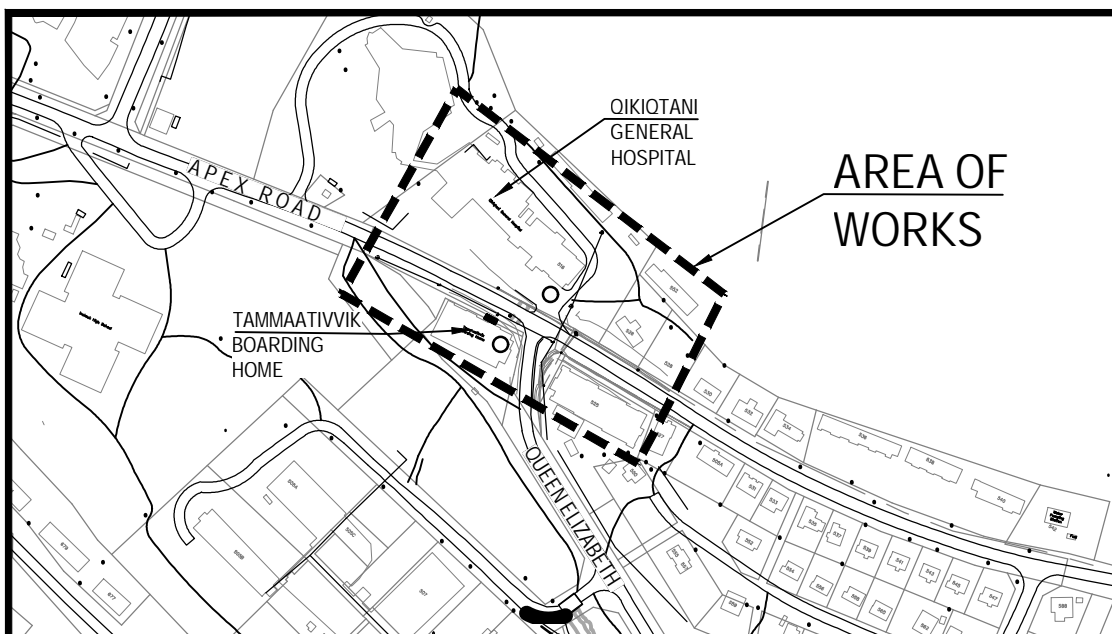
EXISTING CONDITIONS &
REMOVALS PLAN

PROJECT NO.

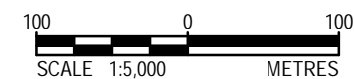
22-4563

SHEET NO.

C1

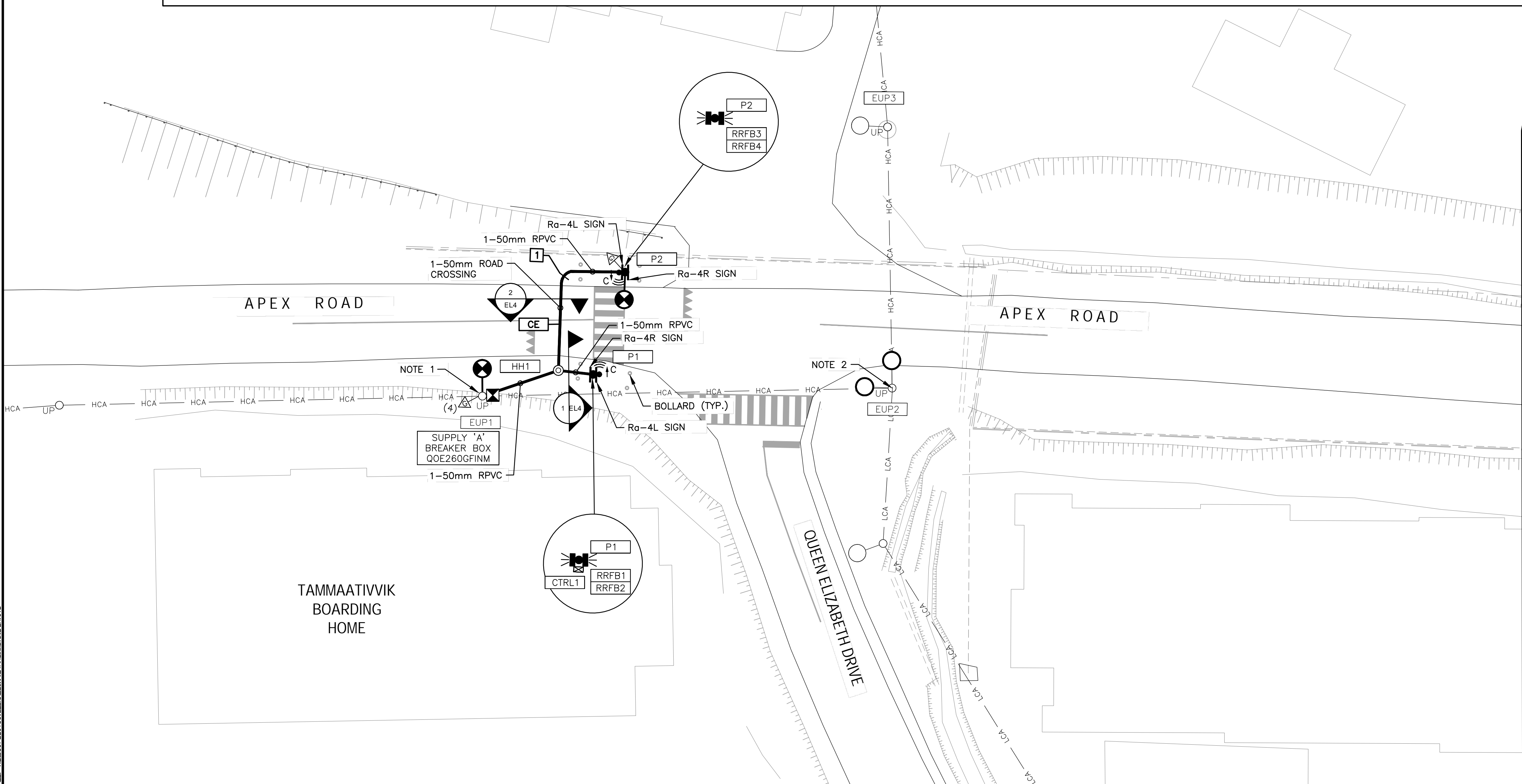


GENERAL SITE PLAN

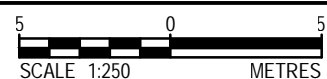


HANDHOLE CHART				
HANDHOLE ID	LOCATION	NORTHING	EASTING	HANDHOLE TYPE
HH1	APEX ROAD	7069167.611	524256.892	SYNERTECH POLYMER COMPOSITE MODEL #SYN118T 12 Duo (18" x 11" x 12") WITH TIER 22 RATED LID WITH "ELECTRIC" LABEL

POLE CHART									
POLE ID	LOCATION	NORTHING	EASTING	POLE LENGTH	POLE TYPE	LUMINAIRE INFORMATION	LUMINAIRE WATTAGE	ARM LENGTH	REMARKS
P1	APEX ROAD	7069165.619	524259.805	10.7m	WOOD	-	-	-	AUDIBLE PUSHBUTTONS, FLASHER BEACONS, Ra-4R, Ra-4L & CONTROLLER CABINET
P2	APEX ROAD	7069173.245	524267.475	10.7m	WOOD	LIVEABLE CITIES NXT-72M-700mA-2LB-4000K (EXISTING TO BE RELOCATED)	158 W	2.4	AUDIBLE PUSHBUTTONS, FLASHER BEACONS, Ra-4R, Ra-4L, RELOCATED LUMINAIRE AND NEW BRACKET & GROUND ROD. LUMINAIRE TO BE MOUNTED 8.0m ABOVE FINISHED GRADE.
EUP1	APEX ROAD	EX.	EX.	EX.	WOOD	LIVEABLE CITIES NXT-72M-700mA-2LB-4000K (EXISTING TO BE RELOCATED)	158 W	2.4	RELOCATED LUMINAIRE AND NEW BRACKET AND SUPPLY DISCONNECT BOX
EUP2	APEX ROAD	EX.	EX.	EX.	WOOD	TWO (2) CREE LIGHTING XSPMD-D-HT-3ME-12L-40K7-UL-SV-N OR TWO (2) LIVEABLE CITIES NXT-72M-450mA-3LB-4000K	101 W	EX.	REPLACE EXISTING 158W LUMINAIRES WITH NEW 101W LUMINAIRES



ELECTRICAL PLAN



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.



THE ASSOCIATE OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
P 010
DILLON CONSULTING
LIMITED



						DESIGN	REVIEWED BY
						NM	SPW
						DRAWN	CHECKED BY
						NM	SPW
						DATE	November 2, 2022
0	ISSUED FOR TENDER		16-DEC-22	NM		SCALE	AS NOTED
B	ISSUED FOR 100% REVIEW		04-NOV-22	NM			
A	ISSUED FOR 90% REVIEW		05-SEPT-22	NM			
No	ISSUED FOR		DATE	BY			

DESIGN NM	REVIEWED BY SPW
DRAWN NM	CHECKED BY SPW
DATE November 2, 2022	
SCALE AS NOTED	

CITY OF IQALUIT
APEX ROAD CROSSWALK DESIGN

PROJECT NO.
22-4563

GENERAL LOCATION PLAN SITE ELECTRICAL ELECTRICAL LAYOUT

SHEET NO.

EL1

GENERAL NOTE(S):

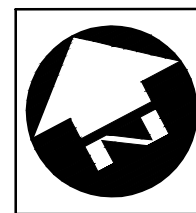
- A. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
- B. ALL SURVEY MONUMENTS DISTURBED BY CONSTRUCTION SHALL BE REINSTATEMENT.
- C. ACCESS TO EXISTING PROPERTIES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES.
- D. LOCATION OF EXISTING SERVICES, UNDERGROUND INFRASTRUCTURE, STRUCTURES, AND BUILDINGS ARE APPROXIMATE ONLY AND ARE TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS.
- E. ALL EXISTING AREAS AND INFRASTRUCTURE DISTURBED BY CONTRACTOR'S OPERATIONS WHICH ARE NOT DESIGNATED TO BE RELOCATED OR RECONSTRUCTED SHALL BE REINSTATEMENT TO PRE-CONSTRUCTION CONDITION OR BETTER. THERE SHALL BE NO ADDITIONAL PAYMENT FOR REINSTATEMENT OF SUCH.
- F. THE CONTRACTOR SHALL DISPOSE OF ALL EXISTING EXCAVATED MATERIALS.

NOTE(S):

1. SUPPLY AND INSTALL RISER CONDUIT COMPLETE WITH WEATHER HEAD. LEAVE SUFFICIENT CABLES COILED FOR FINAL TERMINAL BY QULLIQ ENERGY CORPORATION (QEC).
2. REPLACE EXISTING 158W LUMINAIRES WITH NEW 101W LUMINAIRES. RELOCATE THE EXISTING 158W LUMINAIRES ON P2 AND EUPI RESPECTIVELY. COORDINATE THIS WORK WITH QEC.

ELECTRICAL LEGEND

- | | | |
|--|-----|--|
| | HCA | EXISTING HIGH VOLTAGE AERIAL CABLE |
| | LCA | EXISTING STREET LIGHTING AERIAL CABLE |
| | HH | PROPOSED HANDHOLE WITH IDENTIFICATION |
| | P | PROPOSED 10.7m WOOD POLE WITH IDENTIFICATION (SUPPLIED BY QEC) |
| | EUP | EXISTING UTILITY POLE WITH IDENTIFICATION |
| | | PROPOSED LED LUMINAIRE AND NEW BRACKET ARM |
| | | PROPOSED LED LUMINAIRE AND EXISTING BRACKET ARM |
| | | EXISTING LED LUMINAIRE AND EXISTING BRACKET ARM |
| | | PROPOSED POWER SUPPLY (SQUARE D 'QOE260GFNM' WITH NEMA 3R RATED ENCLOSURE) |
| | | PROPOSED POWER SUPPLY IDENTIFICATION |
| | | PROPOSED GROUND ROD |
| | | PROPOSED REGULATORY SIGN |
| | | PROPOSED AUDIBLE PUSHBUTTON |
| | | PROPOSED RAPID RECTANGULAR FLASHER BEACON WITH IDENTIFICATION |
| | | PROPOSED CONTROL CABINET WITH IDENTIFICATION |
| | | REFERENCE POINT |
| | | RIGID PVC DUCT, CONCRETE ENCASED |
| | | RIGID PVC DUCT, DIRECT BURIED |



FILENAME: C:\PW WORKING DIRECTORY\PROJECTS 2022\DILLON_20NUM\DNS44126\224563-04-ELEC.DWG PLOTTED BY: MAHABIR, NATALIA
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GENERAL SPECIFICATIONS

THE CONTRACTOR SHALL COMPLETE THE INSTALLATION IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE CSA C22.1-09 INCLUDING LOCAL AMENDMENTS AND BY-LAWS, FEDERAL, PROVINCIAL AND MUNICIPAL CODES, AND APPLICABLE ULC STANDARDS.

THE CONTRACTOR SHALL COMPLETE OVERHEAD AND UNDERGROUND SYSTEMS IN ACCORDANCE WITH CAN/CSA-C22.3 NO. 1-M87 EXCEPT WHERE SPECIFIED OTHERWISE.

UNDER NO CIRCUMSTANCES WILL THE APPLICATION OF THE REFERENCED CODES AND STANDARDS REDUCE THE STANDARDS ESTABLISHED BY THE DRAWINGS AND SPECIFICATIONS HEREIN.

ALL WORK SHALL FOLLOW ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) AS SHOWN BELOW UNLESS OTHERWISE NOTED:

- 106 GENERAL SPECIFICATION FOR ELECTRICAL WORK NOVEMBER 2019.
107
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PERMITS, FEES AND INSPECTION

THE CONTRACTOR SHALL NOTE THAT ALL STREET LIGHTING WILL REQUIRE ELECTRICAL SAFETY AUTHORITY INSPECTION. ALL FEES IN COORDINATION WITH THIS INSPECTION TO BE COVERED BY THE CONTRACTOR.

THE CONTRACTOR SHALL SUBMIT TO THE ELECTRICAL SAFETY AUTHORITY AND SUPPLY AUTHORITY THE NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK AND PAY ASSOCIATED FEES. CONTRACTOR TO PROVIDE RED LINE MARKUPS AND ESA DOCUMENTATION. THESE SHALL BE PROVIDED TO THE SITE INSPECTOR. THE CONTRACTOR SHALL COORDINATE THE FINAL CONNECTION OF THE POWER SUPPLY DISCONNECT WITH QULLIQ ENERGY CORPORATION (QEC).

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF CHANGES REQUIRED BY THE ELECTRICAL SAFETY AUTHORITY OR SUPPLY AUTHORITY PRIOR TO MAKING CHANGES.

THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR THE TIMELY INSPECTION OF THE WORK BY AUTHORITIES HAVING JURISDICTION.

THE CONTRACTOR SHALL FURNISH FINAL CERTIFICATES OF ACCEPTANCE FROM THE ELECTRICAL SAFETY AUTHORITY HAVING JURISDICTION ON COMPLETION OF WORK TO THE ENGINEER AND INCLUDE COPIES IN THE OPERATION AND MAINTENANCE MANUAL.

SCOPE OF WORK

THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL ELECTRICAL INFRASTRUCTURES IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND THE REQUIREMENTS OF THE POWER AUTHORITY. REFER TO DRAWINGS FOR A COMPLETE DESCRIPTION OF ALL LUMINAIRES, POLES AND ACCESSORIES. THE CONTRACTOR TO SUBMIT AS-BUILT DRAWINGS TO THE CITY OF IQALUIT.

THE CONTRACTOR SHALL SUPPLY ALL UNDERGROUND AND ABOVE-GROUND MATERIALS INCLUDING: WIRING, ELECTRICAL HOOK-UP, TESTING, RESTORATION AND INSPECTION AS REQUIRED TO PROVIDE AN OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DRAWINGS.

PEDESTRIAN CROSSOVER (TYPE C) SPECIFICATIONS

PEDESTRIAN CROSSOVER (TYPE C) SYSTEM

AMENDMENT TO OPSS 623, NOVEMBER 2018

623.05 MATERIALS

SUBSECTION 623.05 OF OPSS 623 IS AMENDED BY THE ADDITION OF THE FOLLOWING CLAUSES:

623.05.16 PEDESTRIAN CROSSOVER SYSTEM

CONTRACTOR SHALL SUPPLY AND INSTALL CARMANAH SC315-G PEDESTRIAN CROSSOVER CONTROL EQUIPMENT FOR APEX ROAD PEDESTRIAN CROSSING IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS AS DESCRIBED BELOW::

CARMANAH SC315-G CROSSING WITH IDETECT COMPLETE WITH:
ONE (1) 120 VAC POLE MOUNTED CONTROLLER CABINET WITH NATURAL FINISH,
TWO (2) PEDIESTRIAN PUSHBUTTONS (POLARA INS2 23VWRE OPT "B") WITH YELLOW FINISH
TWO (2) DUAL SIDED RAPID RECTANGULAR FLASHER BEACONS WITH YELLOW LEDS
ONE (1) - RA-4R MOUNTED BACK TO BACK ON POLE WITH ONE (1) - RA-4L, PER POLE

LOCATION AS SPECIFIED IN THE CONTRACT DRAWINGS.

THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NECESSARY MOUNTING HARDWARE, CLASPS, BRACKETS AND ASSOCIATED PUSHBUTTON AND FLASHER CABLES REQUIRED FOR A FUNCTIONAL PEDESTRIAN CROSSOVER SYSTEM.

PEDESTRIAN CROSSOVER SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS.

623.09 MEASUREMENT FOR PAYMENT

623.09.01 ACTUAL MEASUREMENT

SUBSECTION 623.09.01 OF OPSS 623 IS AMENDED BY THE ADDITION OF THE FOLLOWING CLAUSES:

623.09.01.03 PEDESTRIAN CROSSOVER SYSTEM

FOR MEASUREMENT PURPOSES, A COUNT SHALL BE MADE OF THE NUMBER OF LOCATIONS WHERE PEDESTRIAN CROSSOVER SYSTEMS ARE INSTALLED. EACH LOCATION SHALL BE COUNTED ONLY ONCE, REGARDLESS OF THE NUMBER OF TIMES ALL OR PART OF THE PEDESTRIAN CROSSOVER SYSTEM IS RELOCATED.

623.10 BASIS OF PAYMENT

SUBSECTION 623.10 OF OPSS 623 IS AMENDED BY THE ADDITION OF THE FOLLOWING CLAUSES:

623.10.01 PEDESTRIAN CROSSOVER SYSTEM - ITEM

PAYMENT AT THE CONTRACT PRICE FOR THE ABOVE TENDER ITEMS SHALL BE FULL COMPENSATION FOR ALL LABOUR, EQUIPMENT, AND MATERIALS REQUIRED TO DO THE WORK, INCLUDING, BUT NOT LIMITED TO, INSTALLATION, REMOVAL, SALVAGE, RELOCATION, REINSTALLATION, REARRANGEMENT, AND RECALIBRATION OF ALL EQUIPMENT SYSTEM COMPONENTS.

				DESIGN	REVIEWED BY	CITY OF IQAALUIT APEX ROAD CROSSWALK DESIGN	PROJECT NO.	22-4563	
				NM	SPW		ELECTRICAL SPECIFICATIONS		SHEET NO.
				DRAWN	CHECKED BY				
				NM	SPW				
				DATE	November 2, 2022		EL3		
0	ISSUED FOR TENDER	16-DEC-22	NM	SCALE	AS NOTED				
B	ISSUED FOR 100% REVIEW	04-NOV-22	NM						
A	ISSUED FOR 90% REVIEW	05-SEPT-22	NM						
No.	ISSUED FOR	DATE	BY						



CONSTRUCTION SERVICES
PART VII – OTHER REFERENCE DOCUMENTS



Other Documents

1. COVID-19 – Standard Protocols for All Canadian Construction Sites
2. City of Iqaluit - Standard Road Cut Paving Details



COVID-19 - Standardized Protocols for All Canadian Construction Sites

Version 7
April 19, 2021

For inquiries: Contact Mary Ghobrial
at mghobrial@cca-acc.com

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COVID-19 - STANDARDIZED PROTOCOLS FOR ALL CANADIAN CONSTRUCTION SITES

The Standardized Protocols for All Canadian Construction Sites outlines the best practices for construction sites in order to maintain the health and safety of all workers required to perform duties during the COVID-19 crisis. The protocols, which include prevention, detection and response measures, will minimize the impacts of the crisis and ensure business continuity in the construction industry. This is not a legal document. Some provinces and municipalities have implemented stricter measures than those found in this document, and contractors are responsible for compliance with the rules, regulations and practices required by the applicable authorities. At the end of this document, there are links to information from some of our partner associations and other industry stakeholders that are further tailored to province specific requirements.

The objectives of the Standardized Protocols are to:

- Prioritize the health and safety of workers and of their surrounding communities;
- Apply recommendations and best practices from federal, provincial, and municipal public health authorities to construction site procedures;
- Establish and maintain a common COVID-19 Pandemic Response Plan across construction sites; and
- Foster open communication amongst stakeholders and ensure a respectful work environment.

Standardized Protocols for All Canadian Construction Sites

Prevention measures

Communication and awareness

- Clear signage is posted at entry points on the construction site and outline the commitment of the contractor to maintain health and safety measures during the COVID-19 crisis, with relevant updates from appropriate jurisdictions' public health authorities and self-identification screening tools.
- Worksite policies as they relate to the COVID-19 crisis are communicated to workers and made available on site.
- All workers exercise the following recommended practices for reducing the risk of transmission as identified by the Public Health Agency of Canada (PHAC), Health Canada, and Centers for Disease Control and Prevention, as well as provincial authorities:
 - o Avoid touching eyes, nose and mouth with unwashed hands;
 - o When coughing or sneezing:
 - Cough or sneeze into a tissue or the bend of your arm, not your hand;
 - Dispose of any tissues you have used as soon as possible in a lined waste basket and wash your hands afterwards;
 - o Clean and disinfect frequently touched objects and surfaces, including all reusable personal protective equipment (PPE);



- o Do not share personal items or supplies such as phones, pens, notebooks, tools, PPE, etc.;
- o Use and remove PPE with care, being mindful of which surfaces may be contaminated. Individuals must clean their hands after handling any used PPE;
- o Avoid common physical greetings, such as handshakes;
- o Maintain a minimum physical distance of two metres from others; and
- o Wash hands often with soap and water for at least 20 seconds after using the washroom, before handling food, after blowing nose, coughing, or sneezing, and before smoking. If hands are not visibly soiled, and soap and water are unavailable, alcohol-based hand sanitizer can be used.

Use of face masks

- All individuals on the site have facial respirators on hand at all times. N95 respirator masks, or the commercial-grade equivalent, should be worn as a potential mitigant to catching and transmitting the virus, but are not to be treated as substitutes for proper handwashing, physical distancing, and other protective measures. Masks should not be worn where they put an individual at risk (e.g. when it may get caught in machinery), however, physical distancing should be practiced in the alternative, whenever possible. Individuals working around an unmasked person without a shielding barrier should wear PPE.
- Such face masks are worn whenever individuals are:
 - o Unable to maintain two-metre distancing;
 - o Moving between zones, work areas, or other facilities;
 - o Indoors; or
 - o In non-open air environments or other areas with limited airflow.
- Individuals wash or sanitize their hands before and after applying, removing, or otherwise touching their face mask.
- Single-use facial respirators are disposed after use.

Business-related travel

- Non-essential business travel is not authorized. Business travel is limited and on an exceptional basis only.
- All individuals returning from out of country must undergo a 14-day self-isolation period, as mandated by the federal government and outlined here: Mandatory quarantine or isolation – [Travel restrictions in Canada – Travel.gc.ca](#).
- As some provincial governments impose similar restrictions for inter-provincial travel, any such requirements for self-isolation must be obeyed as applicable.

Working remotely

- Where practical, all office employees supporting a project work remotely. Meetings are held through teleconferencing or videoconferencing.
- Some provincial governments have imposed mandatory remote-working for employees, except for work that cannot be done remotely. Any such provincial requirements must be obeyed as applicable.



Access and movement to/from construction site

- Wherever possible, workers travel to site using individual modes of transportation (e.g., personal vehicle or bicycle). Additional parking arrangements are made as required.
- Whenever possible, workers should travel alone in their vehicles in order to practice physical distancing. Alternatively, the number of individuals inside a vehicle should be limited, and the number of trips should be increased to allow for physical distancing.
- If physical distancing within a vehicle cannot be respected, workers are encouraged to wear PPE.
- Workers are encouraged to change out of work clothes before entering their vehicle at the end of their shift. Work clothes should be handled carefully and washed upon arriving home.
- Entering and exiting of the worksite is monitored and controlled to ensure that the minimum physical distancing is not broken when shifts begin and end. Shift start and end times are staggered in five-minute intervals to accommodate this if needed.
- All non-essential individuals are not permitted access to the site.

Monitoring the status of workers

- Detailed tracking of worker's status on-site and off-site are kept at all times (e.g. fit to work, sick, off-work for family caring duties, etc.). A list of all quarantined workers is updated daily, with their privacy maintained.
- Records are kept of which individuals work together and when.
- Provide information, instruction, and supervision to workers to protect their health and safety.

Construction site and site trailer cleaning protocols

- All offices and jobsites implement additional cleaning measures of common areas. All door handles, railings, ladders, switches, controls, eating surfaces, shared tools and equipment, taps, toilets, and personal workstation areas are wiped down at least twice a day with a disinfectant, such as disinfectant wipes. Individuals are responsible for cleaning and disinfecting their workstations.
- Additional sanitary measures are implemented on site: hand washing stations with a posted hand washing protocol, hand sanitizer stations, provision of disinfectant wiping products. These types of facilities are made available at site entries, exits, washrooms, eating areas, offices, and any other areas with commonly touched surfaces.
- Commonly touched surfaces on vehicles and equipment are thoroughly cleaned and disinfected at the end of shifts and between users.
- All cleaning and disinfecting is carried out per PHAC's recommendations here: [COVID-19: Cleaning and disinfecting - Canada.ca](#).
- Offices and jobsites are also encouraged to develop a Cleaning and Disinfecting Program, as per CCOHS's recommendations at: [CCOHS: COVID-19 Health and Safety Resources](#).

Limiting and removing internal touch point areas

- Limit access and use of shared devices like coffee machines, water fountains, microwave ovens, and similar; and wash hands after handling such items. Means to clean and disinfect such devices between uses is to be provided.



- Limit use of common pens for sign-in sheets to construction sites. Supervisors are encouraged to sign-in for workers, or have workers sign-in through SMS, email, or other electronic means..
- Washroom modifications - Install more sinks and sinks with physical separation between users where feasible. Change out taps, paper towel dispensers and garbage cans to hands-free models.
- Remove doors/door handles - Look at all reasonable opportunities to remove doors or replace handles with hands-free options, such as foot-pull devices.
- Where touch points like door handles and water coolers remain, paper towels are provided to allow users to avoid skin contact.
- Gloves are worn whenever possible while on the worksite, but are treated the same as bare hands in terms of minimizing unnecessary touching of anything on site and the user's face.

Compartmentalization

- The construction site is to be segregated to the extent possible in zones or other methods to keep different crews/trades physically separated at all times. This promotes physical distancing and supports the containment of propagation should it arise.
- Eating is restricted to clearly identified dedicated eating areas with handwashing stations, cleaning and disinfectant materials, and adequate space to maintain minimum physical distancing.
- Upper limits are put on the number of people allowed in each zone and in facilities like washrooms, trailers, and eating areas at once to allow for the recommended minimum physical distancing.
- One-way staircases are established wherever practical to minimize worker contact.
- Freight elevators are operated/occupied by only one individual at a time or where feasible, by respecting the minimum physical distancing guidelines.

Working in close proximity

- Alternate arrangements are made as necessary to ensure workers avoid breaking the minimum physical distance with others for prolonged periods. Where this is not possible due to task-specific safety risks, a risk assessment is done to identify controls to protect the health and safety of workers. This can include methods to minimize the duration or proximity of the task, use of physical controls (such as the use of clear plastic barriers), and wearing of PPE.
- A record is kept of all tasks requiring close-proximity work, including the task-specific safety risks that justify close-proximity and all the control measures implemented to protect workers from the risk of infection. The record should be reviewed regularly to determine if there are any additional safety measures that can be implemented for each task.
- Whenever possible, allow for increased ventilation, including but not limited to keeping windows and doors open as much as possible, using portable ventilation fans, and continuing ventilation and air exchange after regular work hours.

Site operation

- The number of in person meetings is minimized. If required, meetings should involve only necessary individuals and include six people or fewer. Minimum physical distancing is maintained, and meetings are held in open



spaces when possible. If needed, 'Toolbox Talks' and similar meetings/updates are held in multiple sessions to accommodate this.

- The worksite is rearranged to reduce high-traffic areas and allow for the minimum physical distancing. Travel paths on worksites should be designated to account for physical distancing requirements.
- Site teams are encouraged to put forward split/alternating shifts to avoid extensive intermingling. Voluntary shift offset and implementing time gaps between shifts are highly encouraged.
- Vehicles, equipment, and tools are assigned to a single individual, or, to the minimum number of operators needed for safe use.
- Where work is done in crews, the work is planned to minimize or eliminate the crossover of workers between crews.
- Project teams stagger break and lunch schedules to minimize the number of people in close proximity to one another. Enclosed lunchrooms are only made available during inclement weather.
- Work schedules are adjusted to provide time for proper cleaning and disinfecting as required.

Deliveries

- Delivery zones are clearly identified and limited to receivers and deliverers only.
- When possible, nothing is passed between the deliverer and the receiver (e.g. shipment documents and pens for signatures). Deliveries are unloaded solely by receivers using proper PPE, while deliverers remain in their vehicles.

Work in occupied spaces

- When working in spaces currently occupied (e.g. private residences), the minimum physical distancing with any occupants is strictly enforced. Where possible, workers and occupants are segregated in different rooms.
- Non-emergency work should not be done in any occupied spaces where an occupant is suspected to have contracted COVID-19 or is under self-isolation (per the directions of the applicable authorities). Emergency work can be carried out provided workers are equipped with nitrile gloves, Tyvek suits or coveralls, and facial/respiratory protection.
- Hands and tools are thoroughly cleaned before entering the workplace and after leaving, and any surfaces or equipment in the occupied space are disinfected before work is done on them.

Protocol auditing

- The jobsite's safety officer is responsible for ensuring appropriate health and safety measures have been implemented, and that directions of the appropriate health authorities are followed with respect to workers returning to work following a presumed or confirmed case of COVID-19.
- Contractors are to conduct periodic audits (frequency to be determined based on project scale and scope) to verify that the appropriate measures have been implemented and are maintained.
- Display signage to reinforce health and safety policies and control measures on worksites.

Other

- Any other measures deemed to increase the safety or limit the propagation of the virus.



Detection measures

Screening at entry of construction site

- Before entering the site, individuals must confirm that:
 - o They are not currently exhibiting flu-like symptoms such as fever, tiredness, coughing, or congestion;
 - o They have not returned from outside of Canada within the past 14 days;
 - o To the best of their knowledge, they have not been in contact with someone with a confirmed or probable case of COVID-19; and
 - o They have not been working on a site that was shut down due to the virus.
- Individuals who are at increased risk of serious illness (due to age, pregnancy or other medical condition) are not to be permitted on site.
- Any responses or results of any screening measures, whether they permit an individual on site or not, are to be kept private and treated as sensitive medical information.
- Workers who are not authorized to access the site are to be safely transported directly back home, or to a preferred location of self-isolation. When unable to do so themselves, a vehicle and driver will be arranged for them.
- When transporting a potentially ill individual, both driver and passenger are to be given masks and nitrile gloves. The passenger is to sit in the backseat, and the driver is to open and close the doors for them.

Response measures

Possible cases of COVID-19

- Individuals who have been potentially exposed to the virus, or who are exhibiting flu-like symptoms such as fever, tiredness, coughing, or congestion are instructed to:
 - o Not come to work;
 - o Contact their supervisor and/or human resources department;
 - o Stay at home and self-isolate; and
 - o Contact local health authorities for further direction.

Such individuals are required to follow the directions of the local health authority and may not return to work until given approval by the proper health authorities.
- Individuals who begin to display flu-like symptoms on site are instructed to avoid touching anything, take extra care to contain coughs and sneezes, and return home immediately to undergo self-isolation as directed by the local health authority.
- All areas on site potentially infected by a confirmed or probable case are barricaded to keep individuals two metres away until the area is properly cleaned and disinfected.



- Employers must inform other workers that they may have been exposed to COVID-19 in the workplace, including details regarding the date and time of the potential exposure and where it took place. However, information that might identify the infectious person should not be shared.

Response plans

- All contractors are to complete an integrated continuity plan to respond to partial or complete shutdown of construction sites or in the case of a severe limitation of site operations.

Other

- Refer to canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html for the latest information.
-

The situation related to COVID-19 is changing rapidly. This Protocol will be updated on an as required basis to reflect the latest broadly adopted measures.

For province specific guidance, please review the resources linked below. Questions on province-specific health and safety matters can be directed to the listed contacts.

British Columbia

British Columbia Construction Association

bccassn.com/media/Guidance%20to%20Construction%20Sites%20Operating%20During%20COVID19.pdf

BC Construction Safety Alliance

Mike McKenna, Executive Director

mmckenna@bccsa.ca

Tammy Oliver, Senior Director

toliver@bccsa.ca

Alberta

Alberta Construction Association

albertaconstruction.net/wp-content/uploads/2020/04/PANDEMIC-PLANNING-FOR-THE-CONSTRUCTION-INDUSTRY.pdf

Alberta Roadbuilders and Heavy Construction Association

279e5ecb-ae4a-4a97-bda5-1b2fe77f0894.filesusr.com/ugd/77f1bc_683524748e3c482aac8a8f59e5a86218.pdf?index=true

Alberta Construction Safety Association

Dan MacLennan, CEO

dmaclennan@youracsa.ca

Tammy Hawkins, COO

thawkins@youracsa.ca



Saskatchewan*Saskatchewan Construction Association*scaonline.ca/third-party-information-bulletins.html*Saskatchewan Construction Safety Association*Thomas Archer, VP of Operations thomasa@scsaonline.caCollin Pullar, President collinp@scsaonline.ca*Heavy Construction Safety Association of Saskatchewan*Al Goldstone, Safety Director alg@hcsas.sk.ca**Manitoba***Winnipeg Construction Association*togetherwebuild.ca/*Construction Safety Association of Manitoba*Sean Scott, Executive Director sean@constructionsafety.caDerek Pott, Director of Operations derek@constructionsafety.ca*Manitoba Heavy Construction Association*Don Hurst, Director don@mhca.mb.ca**Ontario**

ORBA / OGCA / RESCON / OSPE / OHBA

orba.org/wp-content/uploads/2020/03/ORBA-branded-COVID19-resource-and-best-management-practices-document-Final.pdf*Infrastructure Health & Safety Association*Enzo Garritano, President egarritano@ihsa.caPaul Casey, Vice President pcasey@ihsa.ca**Quebec***L'Association de la construction du Québec*acq.org/coronavirus/sante-securite-du-travail/

Commission des normes, de l'équité, de la santé et de la sécurité du travail

cnesst.gouv.qc.ca/salle-de-presse/covid-19/Pages/trousse.aspx?utm_source=CNESST&utm_medium=Carrousel-accueil&utm_campaign=Trousse_doutils*ASP Construction*Sylvie L'Heureux, Executive Director slheureux@asp-construction.org

New Brunswick

New Brunswick Construction Association

nbcsa.ca/wp-content/uploads/2020/04/Construction-Site-COVID-19-Prevention-Procedures.pdf

New Brunswick Construction Safety Association

Roy Silliker, CEO rsilliker@nbcsa.ca

Shelley Poirier, Senior Safety Advisor spoirier@nbcsa.ca

Nova Scotia

Construction Association of Nova Scotia

cans.ns.ca/covid-19-managing-covid-19-on-the-worksite/

Construction Safety Association of Nova Scotia

MJ MacDonald, CEO mmacdonald@constructionsafetyns.ca

Damon Alcock, Chief Safety Officer dalcock@constructionsafetyns.ca

Prince Edward Island

Construction Association of PEI

capei.ca/member_access/LiveEditor/images/Public%20Health%20Order%20-%20March%202020.pdf

Newfoundland and Labrador

Newfoundland and Labrador Construction Association

nlca.ca/critical-information-covid-19/

Newfoundland and Labrador Construction Safety Association

Jackie Manuel, CEO jmanuel@nlcsa.com

Yukon

Northern Safety Network Yukon

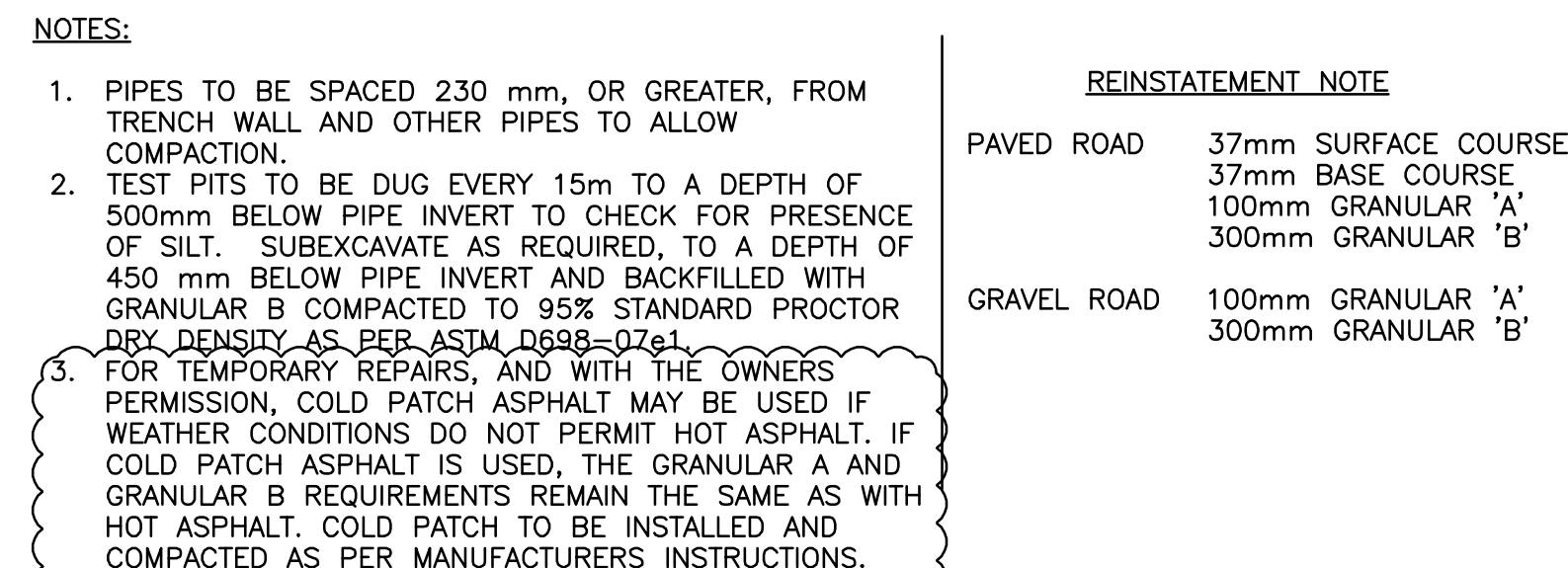
Sheila Sergy, Executive Director sheila@yukonsafety.com

Northwest Territories and Nunavut

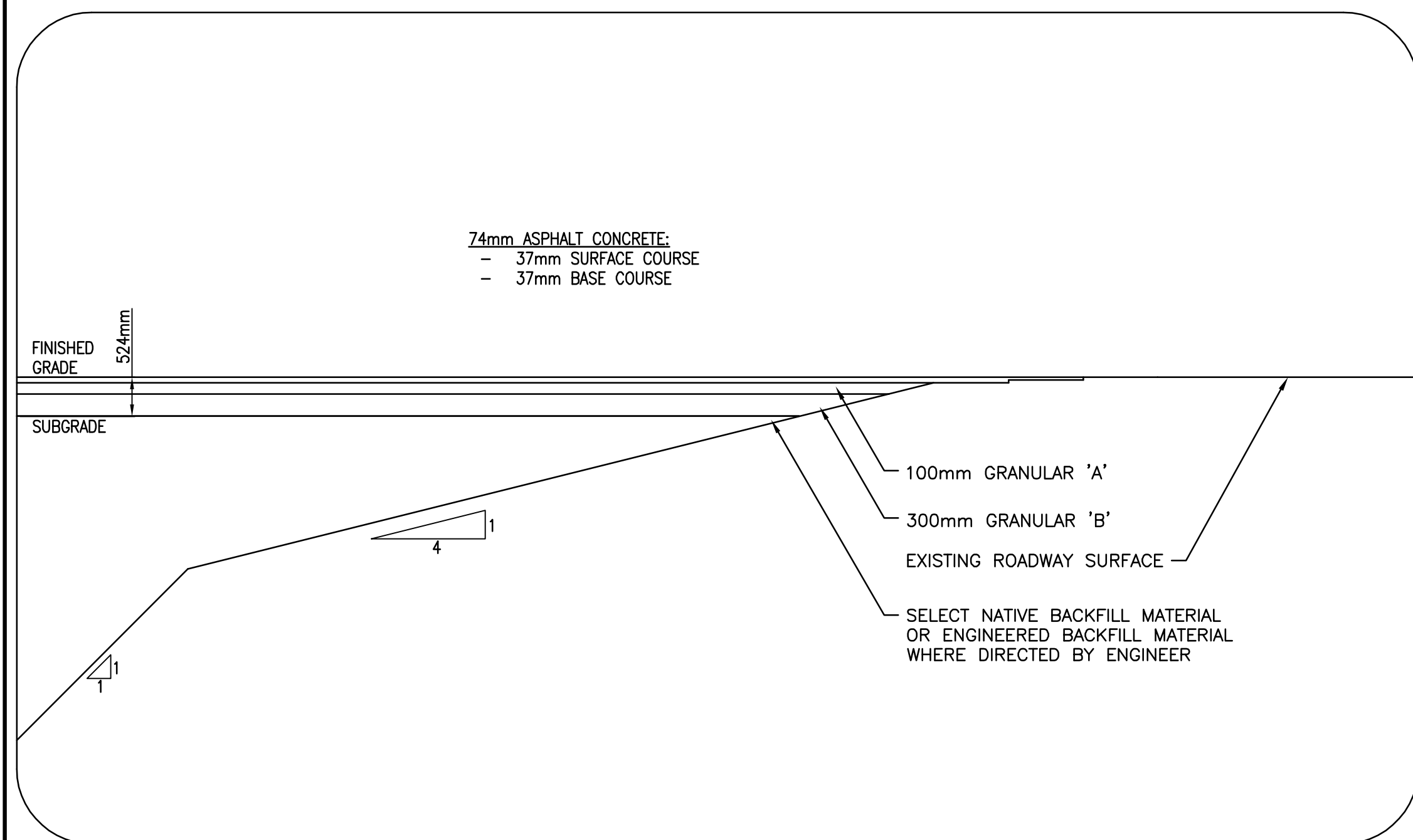
Northern Construction Safety Association

Chris Johnston, Executive Director chris@nsa-nt.ca

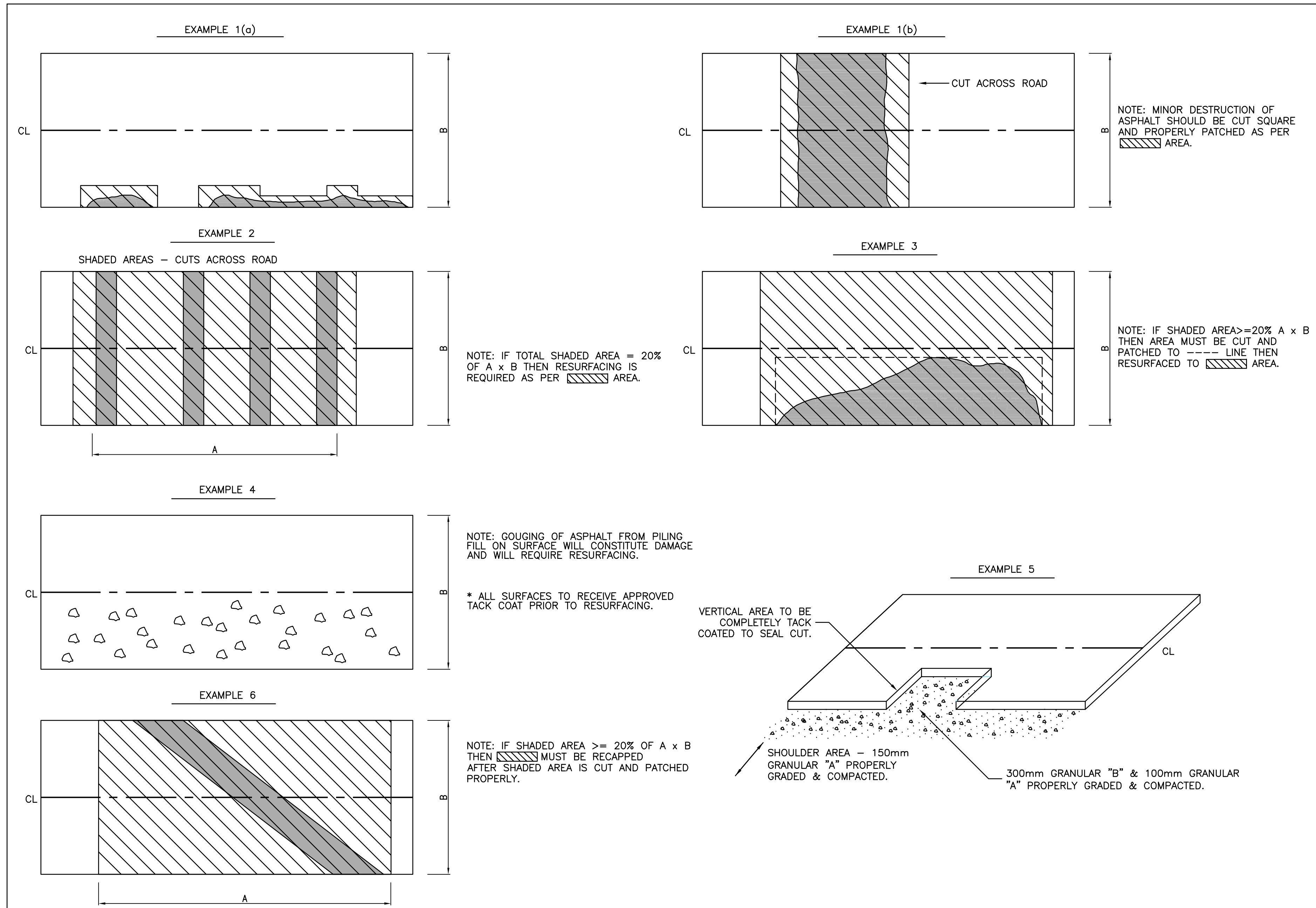




1 TYPICAL TRENCH DETAIL
C01 N.T.S.



1A TYPICAL APSHALT TRANSVERSE JOINT COLD-MILLING DETAIL
C01 N.T.S.



2 TYPES OF ASPHALT DAMAGE AND REPAIR EXAMPLES

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.



THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES

PERMIT NUMBER
P 010

DILLON CONSULTING
LIMITED

2022-07-06



						DESIGN S/JG	REVIEWED BY KB	CITY OF IQUALUIT 2021 ROAD IMPROVEMENTS AND PAVING		PROJECT NO. 212453
						DRAWN LM	CHECKED BY S/JG	ROAD CUT REPAIR DETAILS		SHEET NO.
						DATE JULY 2022				C01
1	COLD PATCH ASPHALT ADDED			2022/07/06	S/JG	SCALE AS NOTED				
0	ISSUED FOR USE			2022/04/19	S/JG					
NL	ISSUED FOR			DATE	BY					

FILENAME: C:\PW WORKING DIRECTORY\PROJECTS 2021\SS4\INSTR4\5\121453. ROAD CUT PAVING DETAILS.DWG PLOTTED BY: GREELEY, STEVEN
PLOT DATE: 2022-07-08 @ 5:19:50 PM PLOT SCALE: 1:2.585 PLOT STYLE: CANAL - MARY RIVER.CTB

ROAD CUT PROCEDURE

BACKGROUND

UTILITY UPGRADES ARE TYPICALLY COMPLETED IN ADVANCE OF ROAD UPGRADING; HOWEVER, UTILITY CONNECTIONS ARE A NECESSITY TO SERVICE DEVELOPMENTS. THIS MEANS PAVEMENT CUTS ARE INEVITABLE.

THE CITY OF IQALUIT, DEVELOPERS, AND PRIVATE UTILITY COMPANIES ALL CUT AND REPAIR EXISTING ROADS TO INSTALL UNDERGROUND SERVICES. RIDE QUALITY AND APPEARANCE IS REDUCED WITH A PATCHWORK OF REPAIRS COMPLETED ON A ROAD OVER A PERIOD OF TIME. TO REDUCE THESE EFFECTS THE FOLLOWING POLICY IS TO BE ADHERED TO.

OBJECTIVE/PURPOSE

THE PURPOSE OF ESTABLISHING A ROAD CUT PROCEDURE ALLOWS FOR A HIGH STANDARD THAT THE CITY AS WELL AS DEVELOPERS AND PRIVATE UTILITY COMPANIES MUST FOLLOW TO ENSURE SAFE AND MINIMALLY INTERRUPTED SERVICE. TO MITIGATE THE NEGATIVE EFFECTS OF ROAD CUTS, THE FOLLOWING PROCEDURES ARE TO BE ABIDED BY.

DEFINITIONS

'ROAD CUT' REFERS TO A SURFACE OR SUB-SURFACE CUT IN ANY PART OF THE ROADWAY MADE BY ANY MEANS, INCLUDING EXCAVATION, RECONSTRUCTION, CUTTING, SAW-CUTTING, OVERLAYING, CRACK SEALING, BREAKING, BORING, JACKING OR TUNNELING OPERATIONS.

POLICY STATEMENT

THE CITY REQUIRES THAT ALL APPLICANTS IN SUBDIVISIONS AND/OR IN-FILL LOTS REQUIRED TO MAKE ROAD CUTS TO INSTALL WATER AND SEWER SERVICES OR ANY OTHER SERVICE ADHERE TO THIS POLICY. FAILURE TO HAVE THE SERVICES INSTALLED, AS SET FORTH IN THIS POLICY, WILL RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND POSSIBLE REVOCATION OF THE PERMIT ISSUED FOR DEVELOPMENT.

GUIDELINES AND PROCEDURES

PART ONE: GENERAL ROAD CUTS

1. STREET EXCAVATION PERMIT

- (a)ANY PERSON WANTING TO PERFORM EXCAVATION IN THE CITIES ROAD RIGHT-OF-WAY WILL BE REQUIRED TO OBTAIN A STREET EXCAVATION PERMIT. THE COST OF THIS PERMIT WILL BE DETERMINED BY THE CITY. ONLY CONTRACTORS PRESENTING PROOF OF \$2 MILLION LIABILITY INSURANCE, WHSCC CERTIFICATE OF GOOD STANDING, AND BEING COR CERTIFIED ARE PERMITTED TO OBTAIN ROAD EXCAVATION PERMITS.
- (b) ROAD CUTS ARE NOT PERMITTED DURING THE WINTER SEASON BETWEEN NOVEMBER 1ST TO MAY 1ST OF THE FOLLOWING YEAR OR AS DIRECTED BY COUNCIL OR COUNCIL'S REPRESENTATIVES.
- (c)IN ADDITION TO THE PERMIT FEE, THE CITY WILL REQUIRE A SECURITY DEPOSIT TO BE SUPPLIED TO THE CITY IN ACCORDANCE WITH THE CITIES FEE STRUCTURE FOR THE CURRENT YEAR. FOR NEWLY PAVED ROADS LESS THAN 10 YEARS OLD, THIS DEPOSIT WILL BE HELD BY THE CITY FOR A PERIOD OF 24 MONTHS FROM THE DATE OF THE WORK BEING COMPLETED. THIS PERIOD WILL COVER TWO FULL WINTER SEASONS. AT THE END OF THE 24 MONTHS, THE SECURITY DEPOSIT WILL BE REFUNDED TO THE PAYEE PROVIDED THE ROAD CUT DOES NOT REQUIRE ANY REPAIRS. FOR ROADS THAT ARE OLDER THAN 10 YEARS OR WHERE THE CONDITION OF THE ROAD IS SUCH THAT THE TOWN DEEMS IT UNREASONABLE TO HOLD A DEPOSIT FOR AN EXTENDED PERIOD, THE DEPOSIT WILL BE HELD FOR 12 MONTHS FROM DATE THE WORK IS COMPLETED. THE CITY WILL THEN DETERMINE IF IT IS OKAY TO RELEASE.
- (d) IT IS THE RESPONSIBILITY OF THE PAYEE TO PERFORM ALL NECESSARY WORK/REPAIRS TO THE SATISFACTION OF THE CITY. THE REPAIRS WILL BE INSPECTED BY THE CITY AND IF SATISFACTORY, THE SECURITY DEPOSIT WILL BE RETURNED TO THE PAYEE. IN THE EVENT THAT THE PAYEE DOES NOT COMPLETE THE NECESSARY REPAIRS IN THE TIME AS STATED BY THE CITY, THE PAYEE WILL FORFEIT THE SECURITY DEPOSIT AND THE CITY WILL COMPLETE THE NECESSARY REPAIRS. THIS WILL INCLUDE INTERIM INSPECTIONS DURING THE SECURITY PERIOD OUTLINED IN (iii) ABOVE.

1.1 EMERGENCY CONDITIONS

SITUATIONS ARISE REQUIRING IMMEDIATE ACTION BY THE UTILITY COMPANY WHERE IT IS NOT POSSIBLE TO OBTAIN A STREET EXCAVATION PERMIT IN THE USUAL MANNER PRIOR TO THE COMMENCEMENT OF WORK WITHIN THE ROAD RIGHT-OF-WAY. IN THESE SITUATIONS, WORK MAY BE UNDERTAKEN WITHOUT PRIOR NOTICE; HOWEVER, THE INFRASTRUCTURE & PUBLIC WORKS DEPARTMENT MUST BE NOTIFIED BY PHONE IMMEDIATELY OF THE EMERGENCY SITUATION, AND A STREET EXCAVATION PERMIT APPLICATION FOR SUCH WORK MUST BE SUBMITTED THE SAME DAY.

2. ASPHALT REMOVAL PROCEDURE

THE PERMIT HOLDER SHALL ENSURE ALL REQUIRED TRAFFIC CONTROL SIGNAGE, PERSONNEL AND STANDARDS ARE IN PLACE. ASPHALT SHALL BE SAW-CUT, IN CLEAN STRAIGHT LINES A MINIMUM OF 1 METER BEYOND THE TOP OF THE BENCHING OF THE SERVICE TRENCH. BENCHING IS CALCULATED AS PER OHS REQUIREMENT FOR SAFE EXCAVATING AND TRENCHING.

3. BACKFILLING PROCEDURE (SEE DETAIL 1/C01)

WITH THE EXCEPTION OF THE TOP 375MM (15"), ALL REMAINING TRENCH DEPTH WILL BE BACKFILLED USING MATERIAL APPROVED BY THE CITY REPRESENTATIVE, FREE FROM DELETERIOUS MATERIALS, FROZEN MATERIAL AND ORGANIC MATERIAL. IN ALL CASES, A CITY REPRESENTATIVE SHALL BE ONSITE DURING BACKFILLING PROCEDURES.

4. ASPHALT REPAIR PROCEDURE (SEE DWG C01)

EXISTING ASPHALT ADJACENT TO THE STREET CUT SHALL BE COLD PLANED A MINIMUM DEPTH OF 25 MM AND A MINIMUM OF 0.5 METERS IN WIDTH BEYOND BENCHING FOR THE ENTIRE LENGTH OF THE ASPHALT CUT. THIS SHALL BE DONE ON ALL OF THE EXCAVATION. THE COLD PLANED AREA AND CUT EDGE OF THE ASPHALT SHALL BE 100% TACK COATED. A MINIMUM OF 76 MM OF ASPHALT (COMPACTED THICKNESS) WILL BE PLACED IN THE EXCAVATED AREA AND OVERLAPPED ONTO THE COLD PLANED AREA. THE COMPACTED ASPHALT SHALL BLEND INTO THE EXISTING ASPHALT SUCH THAT NO DEPRESSION OR HUMP EXISTS. THE NEW ASPHALT SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR. THE ASPHALT SHALL BE REPLACED IN TWO LIFTS AND 100% TACK COAT SHALL BE APPLIED BETWEEN LIFTS. WHERE ASPHALT THICKNESS EXCEEDS 76 MM, THE ASPHALT SHALL BE PLACED IN TWO (2) LIFTS OF EQUAL THICKNESS TO MATCH THE EXISTING TOTAL ASPHALT THICKNESS.

FOR TEMPORARY REPAIRS, AND WITH THE OWNERS PERMISSION, COLD PATCH ASPHALT MAY BE USED IF WEATHER CONDITIONS DO NOT PERMIT HOT ASPHALT. IF COLD PATCH ASPHALT IS USED, THE GRANULAR A AND GRANULAR B REQUIREMENTS REMAIN THE SAME AS WITH HOT ASPHALT. COLD PATCH TO BE INSTALLED AND COMPACTED AS PER MANUFACTURERS INSTRUCTIONS.

PART TWO: INSTALLATION OF WATER AND SEWER SERVICES

1. WATER AND SEWER PERMIT

CONTRACTORS ARE REQUIRED TO OBTAIN A WATER AND SEWER EXCAVATION PERMIT AND PAY AN ASSOCIATED SECURITIES PRIOR TO PERFORMING ANY WORK ON THE TOWN'S WATER AND SEWER INFRASTRUCTURE OR INSPECTIONS WILL NOT BE COMPLETED. THE SECURITIES WILL BE HELD FOR A MINIMUM OF ONE (1) YEAR UNLESS OTHERWISE SPECIFIED. TO QUALIFY AS A LICENSED CONTRACTOR, THE CONTRACTOR MUST PROVIDE A CURRENT COPY OF LIABILITY INSURANCE (\$2 MILLION), PROOF OF COR CERTIFICATION AND A 'LETTER OF GOOD STANDING' FROM WORKPLACE HEALTH AND SAFETY COMPENSATION COMMISSION (WHSCC).

(ORIGINAL DOCUMENTATION IS TO BE SUBMITTED TO THE CITY, FAXED COPIES WILL ONLY BE ACCEPTED IF SENT DIRECTLY FROM THE INSURANCE COMPANY OR WHSCC).

2. INSTALLATION OF SEWER SERVICES FROM PROPERTY BOUNDARY TO BUILDING

- a. ALL SERVICES TRENCHED ARE TO BE ADEQUATELY BENCHED AND DEWATERED PRIOR TO MAKING ANY SERVICE CONNECTIONS.
- b. EXCAVATE TO 150MM (6") BELOW THE INVERT OF THE SERVICE PIPES. BOTTOM OF TRENCH TO BE CLEAR OF ANY AND ALL SHARP OR LARGE ROCKS. PLACE AND COMPACT 150 MM (6") OF CLASS "A" ROAD GRAVEL. PLACE SERVICE PIPES IN TRENCH AND CONNECT AS PER MANUFACTURER'S INSTRUCTIONS.
- c. BACKFILL SERVICE PIPES WITH CLASS "A" ROAD GRAVEL. CLASS "A" TO EXTEND A MINIMUM OF 150 MM (6") ON BOTH SIDES OF THE SERVICE PIPES AND TO A MINIMUM OF 300 MM (12") ABOVE THE TOP OF THE PIPES AND BE ADEQUATELY COMPACTED.
- d. THE TOP OF THE SERVICE DITCHES BEYOND THE ROADWAY IS TO BE RE-INSTATED WITH A MINIMUM 150 MM (6") OF TOPSOIL AND SODDING OR MATCH THE EXISTING CONDITIONS
- e. ALL WORK TO BE INSPECTED BY CITY STAFF PRIOR TO BACKFILLING OR COVERING SERVICE LINES.

ROAD CUT PROCEDURE

CONTINUED

3. INSTALLATION OF SERVICES WITHIN THE CITY RIGHT OF WAY FROM THE CITY WATER AND SEWER LINES TO PROPERTY BOUNDARY INCLUDING ROAD SERVICE CUTS

- a. ALL SERVICE TRENCHES ARE TO BE ADEQUATELY BENCHED AND DEWATERED PRIOR TO MAKING ANY SERVICE CONNECTIONS.
- b. EXCAVATE TO 150 MM (6") BELOW THE INVERT OF THE SERVICE PIPES. BOTTOM OF TRENCH TO BE CLEAR OF ANY AND ALL SHARP OR LARGE ROCKS. PLACE AND COMPACT 150 MM (6") OF CLASS "A" ROAD GRAVEL. PLACE SERVICE PIPES IN TRENCH AND CONNECT TO MAIN LINE WITH PREAPPROVED CONNECTION DEVICE.
- c. BACKFILL SERVICE PIPES WITH CLASS "A" ROAD GRAVEL. CLASS "A" TO EXTEND A MINIMUM OF 150 MM (6") ON BOTH SIDES OF THE SERVICE PIPES AND TO A MINIMUM OF 300 MM (12") ABOVE THE TOP OF THE PIPES. CLASS "A" TO BE COMPACTED TO 95% DENSITY.
- d. FILL REMAINDER OF SERVICE TRENCH TO WITHIN 375 MM (15") OF THE RIGHT OF WAY FINISHED GRADE WITH MATERIAL APPROVED BY THE CITY REPRESENTATIVE, FREE FROM DELETERIOUS MATERIALS, FROZEN MATERIAL AND ORGANIC MATERIAL
- e. REINSTATE TOP 375 MM AS PER DWG C01 : 300 MM CLASS "B", 100 MM CLASS "A", 38 MM BASE COURSE ASPHALT AND 38 MM SURFACE COURSE ASPHALT OR TO MATCH EXISTING ASPHALT THICKNESS.

SHOULDER/DITCHES OR CURBS, GUTTERS, SIDEWALKS TO BE REINSTATED TO MATCH EXISTING AS PER CITY SPECIFICATION. ALL CONCRETE TO BE SAW CUT 0.5 M BEYOND EXTENT OF EXCAVATION.

SPECIFICATIONS

GENERAL:

- 1. SUBMIT SITE-SPECIFIC HEALTH AND SAFETY PLAN: WITHIN 7 DAYS AFTER DATE OF NOTICE TO PROCEED AND PRIOR TO COMMENCEMENT OF WORK.
- 2. CONTROL DISPOSAL OF RUNOFF OF WATER CONTAINING SUSPENDED MATERIALS OR OTHER HARMFUL SUBSTANCES IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.
- 3. MAINTAIN TEMPORARY EROSION AND POLLUTION CONTROL FEATURES, AS DIRECTED BY CITY ENGINEER.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE SURFACE DRAINAGE DURING CONSTRUCTION.
- 5. STEEL-TRACKED EQUIPMENT WILL NOT BE ALLOWED ON THE PAVEMENT AT ANY TIME, UNLESS THE PAVEMENT IS PROTECTED BY PLANKS, PADS, OR OTHER DEVICES.
- 6. BACKFILL MATERIAL SHALL BE SELECTED FROM MATERIALS TAKEN FROM THE EXCAVATION, IF IN THE OPINION OF THE ENGINEER OR CITY REPRESENTATIVE, THEY ARE SUITABLE.
- 7. CULVERT BEDDING MATERIALS SHALL BE SUPPLIED, PLACED, SPREAD, AND COMPACTED AS SHOWN IN CITY OF IQALUIT STANDARD DETAILS AND SPECIFICATIONS.

CULVERTS:

- 1. CULVERT SIZING IS THE RESPONSIBILITY OF THE DESIGN ENGINEER. CULVERTS SHALL BE DESIGNED TO ACCOMMODATE THE 1:25 YR RAINFALL EVENT. DITCHES SHALL BE ALLOWED TO BACK UP DURING SUCH AN EVENT TO THE HEIGHT OF THE SUBGRADE.
- 2. CULVERTS SHALL BE NEW GALVANIZED CORRUGATED STEEL PIPE WITH A MINIMUM WALL THICKNESS OF 1.6mm OR AS REQUIRED TO MEET THE DESIGN LOADING CRITERIA.
- 3. MINIMUM CULVERT SIZES ARE AS FOLLOWS:
 - 3.1. RESIDENTIAL DRIVEWAY CULVERT - 400mm DIA.
 - 3.2. INDUSTRIAL DRIVEWAY CULVERT - 450mm DIA.
 - 3.3. ROADWAY CENTRELINE CULVERTS - 450mm DIA
- 4. ALL CULVERTS SHALL HAVE APPROPRIATE END TREATMENTS DEPENDING ON APPLICATION. INVERTS SHALL BE EXTENDED TO THE TOE OF THE SIDE SLOPE.
- 5. THE CULVERT GRADE SHALL NOT BE LESS THAN THE DITCH GRADES AT THE INLET AND OUTLET.
- 6. CULVERTS SHALL HAVE A SUFFICIENT AMOUNT OF COVER TO PROTECT AGAINST DAMAGE FROM THE EXPECTED TRAFFIC LOADING. MINIMUM COVER SHALL BE 300mm OR ONE HALF THE DIAMETER OF THE CULVERT, WHICHEVER IS GREATER AS MEASURED FROM THE FINISHED SHOULDER GRADE TO THE TOP OF THE CULVERT.

SERVICE CONNECTIONS:

GENERAL

- 1. THESE GUIDELINES ARE INDENTED AS A GUIDE ONLY. THE DESIGN ENGINEER IS RESPONSIBLE TO ENSURE THAT THE WATER SYSTEM IS DESIGNED AND CONSTRUCTED ACCORDING TO ACCEPTED ENGINEERING PRACTICE
- 2. THESE GUIDELINES SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR A DETAILED MATERIAL AND CONSTRUCTION SPECIFICATION PREPARED BY THE DESIGN ENGINEER.
- 3. THESE GUIDELINES ONLY APPLY WHERE SERVICE CONNECTIONS ARE REQUIRED.

1. WATER SERVICE

GENERAL

- 1.1. SEPARATE WATER SERVICE CONNECTIONS SHALL BE PROVIDED FOR EACH SEPARATELY TITLED LOT.
 - 1.2. THE MINIMUM SIZE OF A RESIDENTIAL WATER SERVICE SHALL BE A 25mm SUPPLY AND A 25mm RETURN PLACED IN A 100mm INSULATED CARRIER PIPE. NON RESIDENTIAL SERVICE CONNECTIONS SHALL BE SIZED ACCORDING TO ANTICIPATED DEMAND.
 - 1.3. CARRIER PIPE FOR ALL WATER SERVICES SHALL BE INSTALLED TO THE PROPERTY LINE AT THE TIME OF INITIAL SUBDIVISION DEVELOPMENT.
 - 1.4. WATER SERVICES COMPLETED WITH SERVICE SADDLES AND ASSOCIATED CONNECTION KIT SHALL BE INSTALLED AT THE TIME OF HOUSE CONSTRUCTION.
 - 1.5. THE MINIMUM ALLOWABLE DISTANCE BETWEEN SERVICES WILL BE 1000mm.
 - 1.6. WATER SERVICES GREATER THAN 50mm SHALL BE CONNECTED AND VALVED INSIDE AN ACCESS VAULT.
 - 1.7. SERVICES SHALL BE LOCATED SUCH THAT THEY DO NOT CONFLICT WITH DRIVEWAY LOCATIONS.
- MATERIALS
- 1.1. WATER SERVICE PIPE SHALL BE SERIES 160 SDR9. POLYETHYLENE TUBING CONFIRMING TO AWAAC901 AND CSA B137.1.
 - 1.2. COMPRESSION CONNECTIONS WITH STAINLESS STEEL INSERTS ARE REQUIRED FOR ALL MATERIALS.
 - 1.3. ALL FITTINGS SHALL BE DESIGNED FOR AN OPERATING PRESSURE OF 1035KPA.
 - 1.4. WATER SERVICE SADDLES SHALL BE STAINLESS STEEL TYPE 304, BRONZE OR A COMBINATION. BRONZE COMPONENTS SHALL CONFORM TO ASTM B62. SINGLE OR DOUBLE BAND DESIGN.
 - 1.5. SERVICE SADDLES FOR USE ON POLYETHYLENE PIPES SHALL BE ROMAC TYPE 101, 202, 305 OR 306 SERIES. ROBAR 2706 OR APPROVED EQUAL
 - 1.6. OPERATING RODS SHALL BE TYPE 304 STAINLESS STEEL WITH BRASS COTTER PINS.

INSTALLATION

- 1.1. RESIDENTIAL WATER SERVICES SHALL BE INSTALLED IN A COMMON TRENCH WITH THE SANITARY SEWER SERVICE.
 - 1.2. TAPPING FOR RESIDENTIAL SERVICE CONNECTIONS SHALL BE DONE WITH FULL OPERATING PRESSURE IN THE MAIN. THE TAP SHALL BE MADE WITHIN 30 DEG OF THE PIPE CROWN AND GRADED TO SERVICE TRENCH LEVEL.
 - 1.3. A TAPPING VALVE AND SLEEVE MUST BE USED FOR SERVICES 100MM AND LARGER.
1. SANITARY SERVICE
- GENERAL
- 1.1. SEPARATE SANITARY SEWER CONNECTIONS SHALL BE PROVIDED FOR EACH SEPARATELY TITLED LOT.
 - 1.2. THE MINIMUM SIZE OF A RESIDENTIAL GRAVITY SANITARY SEWER SERVICE SHALL BE 100mm
 - 1.3. NON RESIDENTIAL SANITARY SEWER SERVICE CONNECTIONS SHALL BE SIZED ACCORDING TO ANTICIPATED USER REQUIREMENTS.
 - 1.4. THE SANITARY SERVICES, INCLUDING SEWER SADDLES SHALL BE INSTALLED TO THE PROPERTY LINE AT THE TIME OF THE INITIAL SUBDIVISION DEVELOPMENT.
 - 1.5. THE MINIMUM GRADE FOR GRAVITY SANITARY SEWER SERVICE LINE SHALL BE 2.0% FOR 100MM DIAMETER LINES AND 1.0% FOR 150mm DIAMETER LINES AND LARGER.
 - 1.6. SERVICES SHALL BE LOCATED SUCH THAT THEY DO NOT CONFLICT WITH DRIVEWAY LOCATIONS.
 - 1.7. RESIDENTIAL SANITARY SEWER SERVICES SHALL BE INSTALLED IN A COMMON TRENCH WITH THE WATER SERVICE.

MATERIALS

- 1.8. SANITARY SEWER SERVICE PIPE SHALL BE PVC DR 35 PIPE.
- 1.9. SANITARY SEWER SERVICE SADDLE TO BE ROBAR NO 6626 OUTLET SLEEVE SADDLE. SIZED TO FIT MAIN AND SERVICE LATERAL.

SPECIFICATION (CONT.)

EXCAVATING:

- 2. EXCAVATE TO LINES, GRADES, ELEVATIONS AND DIMENSIONS AS INDICATED ON THE DRAWINGS OR DESIGNATED BY THE ENGINEER OR CITY REPRESENTATIVE.
- 3. KEEP EXCAVATIONS SUFFICIENTLY FREE OF WATER TO COMPLETE WORK. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-ON. DISPOSE OF WATER IN A MANNER NOT DETRIMENTAL TO WORK COMPLETED OR UNDER CONSTRUCTION.
- 4. WHERE REQUIRED DUE TO UNAUTHORIZED OVER-EXCAVATION, FILL AREAS WITH TYPE A GRANULAR FILL, AS DIRECTED BY ENGINEER OR CITY REPRESENTATIVE, AND COMPACT TO A MINIMUM 95% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698.

BACKFILLING:

- 1. FOR BACKFILLING OPERATIONS, USE COMPACTION EQUIPMENT CAPABLE OF OBTAINING REQUIRED DENSITIES.
- 2. DO NOT PROCEED WITH BACKFILLING OPERATIONS UNTIL THE ENGINEER OR CITY REPRESENTATIVE HAS INSPECTED AND ACCEPTED EXCAVATION.
- 3. AREAS TO BE BACKFILLED ARE TO BE FREE FROM DEBRIS, SNOW, AND ICE, AND SUFFICIENTLY FREE OF WATER SO AS TO ALLOW BACKFILLING TO PROCEED WITHOUT DISPLACEMENT OF WATER OUTSIDE OF EXCAVATION, AND TO ALLOW FOR COMPACTION OF BACKFILL MATERIAL.
- 4. PLACE SPECIFIED BACKFILL MATERIAL IN UNIFORM HORIZONTAL LAYERS IN DEPTHS TO GRADES INDICATED. COMPACT EACH LAYER BEFORE PLACING SUCCEEDING LAYER.
- 5.

GRANULAR MATERIAL CLASSIFICATIONS:

- 1. THE FOLLOWING GRANULAR CLASSIFICATIONS WILL BE USED FOR ALL CITY OF IQALUIT PROJECTS:

ASTM Sieve Designation	Percent Passing			
	Granular A	Granular B	Granular C	Modified Granular C
200mm	-	-	100	-
100mm	-	100	-	-
75mm	-	95-100	-	-
50mm	-	-	-	-
38.1mm	-	-	-	-
25mm	100	45-100	50-100	-
19mm	85-100	-	-	-
12.5mm	65-90	-	-	-
9.5mm	50-73	-	-	100
4.75mm	35-55	25-70	20-100	55-100
1.8mm	15-40	-	10-100	30-100
0.425mm	-	4-50	-	-
0.300mm	5-22	-	2-65	10-50
0.075mm	2-8	0-8	0-8	0-10

- 1. GRADATIONS TO BE WITHIN THE LIMITS SPECIFIED WHEN TESTED TO ASTM C136-84a AND ASTM c117-84 AND ARE TO HAVE A SMOOTH CURVE WITHOUT ANY SHARP BREAKS WHEN PLOTTED ON A SEMI-LOG GRADING CHART.
- 2. GRANULAR A AND GRANULAR B TO BE CRUSHED STONE OR CRUSHED GRAVEL AND SHALL BE FREE OF CLAY LUMPS, CEMENTATION, ORGANIX MATERIAL, FROZEN MATERIAL AND OTHER DELETERIOUS MATERIALS.
- 3. GRANULAR C TO BE CRUSHED STONE OR GRAVEL OR SCREENED STONE OR GRAVEL AND SHALL BE FREE OF CLAY LUMPS, CEMENTATION, ORGANIX MATERIAL, FROZEN MATERIAL AND OTHER DELETERIOUS MATERIALS.
- 4. MODIFIED GRANULAR C TO BE CRUSHED STONE OR GRAVEL OR SCREENED STONE, GRAVEL OR SAND AND SHALL BE FREE OF CLAY LUMPS, CEMENTATION, ORGANIX MATERIAL, FROZEN MATERIAL AND OTHER DELETERIOUS MATERIAL

RIP-RAP:

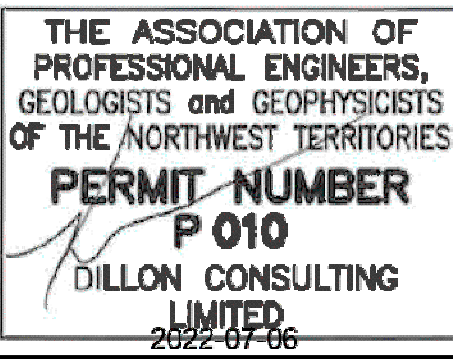
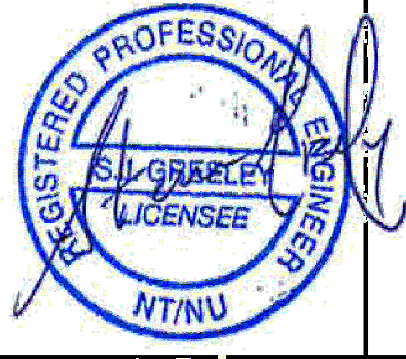
- 1. RIP-RAP IS TO BE USED FOR EROSION PROTECTION ON FINISHED SLOPES, CULVERTS OR WITHIN DRAINAGE DITCHES
- 2. RIP-RAP IS TO BE OBTAINED FROM BORROW AREAS BY SELECTIVE MINING OR SCREENING.
- 3. MATERIALS FOR ROCK RIP-RAP SHALL BE SOUND AND DURABLE FIELD STONE, NOMINAL DIAMETER OF 175 MM, CONFORMING TO THE FOLLOWING SIZE GRADATION AND WEIGHT RANGE:
SIEVE SIZE - PERCENT PASSING
300 MM - 0%
200 MM - 20% TO 50%
175 MM - 50% TO 80%
100 MM - 100%
1.18 MM - 10% TO 40%
0.3 MM - 5% TO 22%
0.075 MM - 0% TO 10%

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.



1	COLD PATCH ASPHALT ADDED	2022/07/06	SJG		
0	ISSUED FOR USE	2022/04/19	SJG		
No.	ISSUED FOR		DATE	BY	

DESIGN	SJG	REVIEWED BY	KB
DRAWN	LM	CHECKED BY	SJG
DATE	JULY 2021		
SCALE	AS NOTED		

CITY OF IQALUIT 2021 ROAD IMPROVEMENTS AND PAVING		PROJECT NO. 212453
ROAD CUT REPAIR PROCEDURE & SPECIFICATIONS		SHEET NO. C02