

SPECIFICATIONS

**JOHN BEER DRIVE SIDEWALK
MONTAGUE, PE**

Consultant:

**Coles Associates Ltd.
Charlottetown, PE
Project #261042**

Issued for Tender – September 16, 2026

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General

PROJECT NAME:

John Beer Street Sidewalk

LOCATION:

Montague, PE

OWNER:

Town of Three Rivers

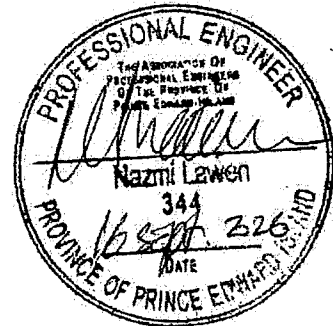
CONSULTANT:

Coles Associates Ltd.
201 - 85 Fitzroy Street, Charlottetown, PE
Engineer of Record: Nazmi Lawen, P. Eng., F.E.C.
Principal, Director of Civil & Structural Engineering

PRIME CONSULTANT PROJECT CONTACT:

Name: Michael MacKay, C.E.T,
Phone: 902-368-2300
Email: mmackay@colesassociates.com

PROFESSIONAL STAMPS:



NAZMI LAWEN, P. ENG.

END OF SECTION

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1 General

1.1 LIST OF DRAWINGS

- .1 C000 – Cover Sheet
- .2 C100 – Plan Profile Sta 0+000 – 0+200
- .3 C101 – Plan Profile Sta 0+200 – 0+400
- .4 C102 – Plan Profile Sta 0+400 – 0+600
- .5 C103 – Plan Profile Sta 0+600 – 0+660
- .6 C200 – Typical Details & Sections

END OF SECTION

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1 General

1.1 INVITATION - TENDER CALL

- .1 The Owner, the Town of Three Rivers, is issuing this tender as follows:
 - .1 Sealed tenders will be received as per TIMING REQUIREMENTS of this section.
 - .2 Tenders are to be clearly marked with the name of the project & the Bidder's name.
 - .3 Tenders documents will need to be received at location of tender closing, prior to the time of tender closing noted and on the date specified in the Tender. No submission will be accepted after that time.
 - .4 The tender opening will be public.
 - .5 Location of the Tender closing is as follows:

Town of Three Rivers
172 Fraser Street
Montague, PE, C0A 1R0
 - .6 Refer to Section 01 10 00 - Summary, for full summary of work.

1.2 QUERIES / ADDENDA

- .1 Direct all questions during the tender period to:

Coles Associates Ltd.
201-85 Fitzroy Street
Charlottetown, PEI C1A 1R6

Phone: (902) 368-2300
Email: mmackay@colesassociates.com
Attention: Michael MacKay, C.E.T.
- .2 Addenda may be issued during the bidding period. All addenda become part of the Contract Documents. Include costs in the Bid Price.
- .3 Verbal answers are only binding when confirmed by written addenda.
- .4 Clarifications requested by bidders must be in writing not less than four days before tender close. The reply will be in the form of an addendum, a copy of which will be issued two days prior to tender close.

1.3 TENDERING PROCEDURE

- .1 General Contractors:
 - .1 Submit their tender for the entire work of this Contract, INCLUDING the work of all subcontracts, directly to the Owner in accordance with the requirements of the Invitation to Tender and this specification.
- .2 Subcontractors:
 - .1 Submit their tenders directly to the General Contract bidders, for incorporation by the General Contractors into their General Contract tenders.
- .3 General Contract bidders shall take particular care to ensure that their tender is submitted on the proper tender form.

1.4 SPECIFICATION EXPLANATION

- .1 Whenever the words "as shown," "as noted," "as called for," "indicated," or similar phrases are used, they shall be understood to refer to this specification and/or the accompanying drawings and addenda.
- .2 The words "provided", "install" or similar words shall mean the work described shall be completely supplied, and erected or installed by the Contractor, unless otherwise noted.
- .3 All materials are to be new unless noted otherwise.

1.5 EXAMINATION OF SITE

- .1 All bidders submitting tenders for this work shall first examine the site and all conditions thereon and/or therein, including:
 - .1 John Beer Drive conditions visually evident at the time of tender upon which the Work of this Contract will be installed.
 - .2 Conditions attached to, abut against or in any other way affected by existing conditions.
- .2 All tenders shall take into consideration all such conditions as may affect the work under this Contract.
- .3 No extra payment will be made to the Contractor, above the Contract Price, for costs resultant from failure to determine the conditions that affect the Work.
- .4 A visit to the project site has been arranged for bidders as noted in the timing requirements of this section.

1.6 EXISTING CONDITIONS

- .1 If in the performance of the contract, subsurface or latent conditions at the site are found to be materially different from those indicated by the drawings and specifications, or unknown conditions not usually inherent in work of the character shown and specified, the attention of the Consultant shall be called immediately in writing to such conditions before they are disturbed. Upon such notice or resulting from their own observation of such conditions the Consultant shall promptly make such changes in the drawings and specifications as they find necessary to conform to the different conditions and any increase or decrease in the cost shall be adjusted as provided under Changes in the Work.

1.7 DOCUMENT INTERPRETATION

- .1 The Consultant's interpretation of Contract Documents shall be final.
- .2 Should the Bidder find discrepancies in, or omissions from the drawings, specifications or other tender documents, or be in doubt as to their meaning or interpretation, the Bidder should at once notify the Consultant in writing for clarification.
- .3 Any instructions or clarifications to Bidders issued during the period of bidding will be in the form of Addenda and are to be included in the tender. Addenda will form part of the Contract Documents.
- .4 The Owner, User Groups or Consultant will not be responsible for verbal instructions.
- .5 All addenda will be posted to the Province of Prince Edward Island tenders and procurement opportunities website and it is the bidders responsibility to make sure they are in receipt of all addenda. No addenda will be issued by email to bidders.

1.8 PREPARATION AND SUBMISSION OF BIDS

- .1 Contractors shall submit their bids on the Tender Form provided, which will be received at the time and place indicated on the Invitation to Tender. Late tenders will not be accepted and will be returned unopened to the bidder.
- .2 Bidders shall fill in all information requested on the Tender Form.
 - .1 This form must be completely filled out in ink, or be typewritten with the signature in longhand. The completed forms shall be without interlineation, alteration or erasure.
 - .2 Failure to fill in the Tender Form, as provided, in its entirety may result in the rejection of the bid; however, bidders are not obligated to provide alternative prices to products listed on the Appendix provided for that specific purpose, as part of the tender form.
 - .3 Tender amount shall be stated both in writing and in figures.
 - .4 Signatures shall be without alteration or erasure.
 - .5 Receipt of addenda for the project shall be acknowledged by filling in the addendum number and date of issue for each addendum on the appropriate line on the Tender Form. These lines shall be initialed by the person signing the tender after they have been filled in.

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- .3 Each tender submitted will be accepted on the understanding that it covers all the Work called for in the specifications and on the drawings, regardless of any notations by Bidder that certain parts of the required Work are omitted from their proposal.
 - .4 Each bid must:
 - .1 Give the full business address of the Bidder and be signed by the Bidder with their usual signature.
 - .2 Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name of one of the members of the partnership or by some authorized representative, followed by the signature and designation of the person signing.
 - .3 Bids by corporations must be signed with the legal name of the corporation, followed by the name of the Province of incorporation, and by the signature designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person signed shall also be typed or printed below the signature.
 - .4 A bid by a person who affixes to his signature the word "president," "secretary," or "agent," or other designation, without disclosing his principal, may be held to be the bid of the individual signing on behalf of the corporation.
 - .5 A bid of any individual or any group of individuals operating as co-partners or the bid of any corporation which may be submitted shall be executed and authorized so that it shall be and it will constitute a legal binding act of the persons, co-partners, or corporate entity making the bid.
 - .5 Bidders shall include with their tender, in the space designated in Section 00 41 13 - Bid Form, Appendix A, the name of each Subcontractor and/or Supplier, as designated, whose price has been included in their tender and who will perform the trade work. Substitution for another Subcontractor in the event that the listed Subcontractor is unable to do the work shall be subject to the approval of the Owner and contingent on evidence satisfactory to the Owner that the original Subcontractor's price was legitimately carried in the Tender, and that the original Subcontractor is now incapable of carrying out the work required under the subcontract, or that he refuses to carry out the work and provides documented reasons for such incapacity or refusal.
 - .6 The term "Own Forces," as a subcontractor, may be used by a Bidder where the Bidder is equipped to and in fact normally carries out the trade work using employees in the direct employment of the Contractor or a wholly owned subsidiary company. Other designations such as "Own Estimate" are unacceptable and may be cause for rejection of the tender by the Owner.
 - .7 When a Bidder indicates "Own Forces" as a subcontractor, the Bidder may be required to demonstrate to the Owner that he has the resources, experience and employees necessary, available and qualified to perform the trade work in a manner and quality satisfactory to fulfill the obligations of the Contract Documents and that the trade work is a normal and continual part of his business operation.
 - .8 A Bidder, whose tender is accepted, that included "Own Forces" for a subcontract will if requested, provide the Owner with payroll records verifying that the employees carrying out the "Own Forces" subcontract work are direct employees of the Contractor or of a wholly owned subsidiary company of the Contractor.
 - .9 Each bidder shall be prepared, if so requested by the Owner, prior to the award of the Contract to present evidence of his experience, qualifications and financial ability to carry out the terms of the Contract.
 - .10 The Owner will evaluate Tenders submitted for this project. The criteria to be considered by the Owner in awarding the Contract will include a combination of:
 - .1 Bid price;
 - .2 Scheduling;
 - .3 Compliance;
 - .4 Expertise;
 - .5 Qualifications of the Contractor and named Subcontractors / Suppliers and
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- .6 Any other such conditions as may be determined by the Owner to be in the best interests of the Owner. A decision on the acceptance of a Tender will be made by the Owner based on the results of the Owner's evaluation.
 - .11 Bidders may, at their own discretion, submit Alternatives to items identified as "Acceptable Material".
 - .1 All proposed Alternatives shall be listed in Appendix "B", ALTERNATIVE PRICES and be identified by name and model number where applicable and each Alternative shall have an associated tender price change "INCREASED BY" \$_____ or "DECREASED BY" \$_____ or "N/A," as compared with the "Acceptable Material" item carried in the tender amount.
 - .2 Alternate prices will include ALL related costs associated with charges from Accepted Material. No additional costs will be accepted for failure of the Contractor to identify the full impact of using alternate systems.
 - .3 Alternate prices will NOT be used in determining the tender price or as the basis for awarding the tender.
 - .12 Bidders are to complete any other appendices forming part of the Tender Form as directed under Section 00 41 13 - Bid Form.
 - .13 Tender Forms and accompanying documents shall be enclosed in a sealed envelope marked "TENDER" and bearing the following identification.
 - .1 Name of project.
 - .2 Name of Contractor submitting tender.
 - .14 Envelope to be addressed to the recipient of tenders indicated in the Invitation to Tender and delivered by hand, registered mail or courier.
 - .15 Submit one (1) only signed copy of Tender Form.
 - .16 Accompanying the Tender Form shall be:
 - .1 One (1) copy of Bid Guarantee, together with Surety's Letter of Consent, as specified.
 - .2 One (1) copy of a preliminary schedule demonstrating the full scope of work to be completed within the identified time for the completion of the contract work.
 - .3 One (1) copy of a letter from Bidder's insurance provider identifying a list of any claims made against the Bidder within the last five (5) years.
 - .17 Tender forms and securities must bear original signatures.
 - .18 Where the bid amount is shown in both written words and number and the two are in conflict, written words will take precedence.

1.9 BID GUARANTEES

- .1 Each tender submitted shall be accompanied by the following Security:
 - .1 For a General Contract Tender less than One Million Dollars (\$1,000,000.00):
 - .1 A Security Deposit in the form of a Certified Cheque or Bank Draft, in an amount not less than ten per cent (10%) of the Bid Amount; OR
 - .2 A Bid Bond as identified below.
 - .2 For a General Contract Tender One Million Dollars (\$1,000,000.00) or more:
 - .1 A Bid Bond only issued by a recognized bonding company, in an amount not less than ten per cent (10%) of the Bid Amount.
 - .3 The Certified Cheque, Bank Draft or Bid Bond shall be made payable to the Owner.
 - .4 The Certified Cheque, Bank Draft or Bid Bond will guarantee that:
 - .1 The Bidder will not withdraw the bid for the period indicated on the Tender Form, following the schedule closing time of the receipt of bids, and
 - .2 The Bidder will enter into a formal agreement with the Owner in accordance with the agreement included as part of the Contract Documents, and
 - .3 The required Certified Cheque, Bank Draft or Bid Bond as Contract Security will be provided to the Owner, and
 - .4 In the event of withdrawal of said bid within said period, or the failure to enter into said Agreement and give said contract security within ten (10) days after notice of the acceptance of the bid, the Bidder shall be liable to the Owner for the full amount of
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the bid guarantee as representing the liquidating damages to the Owner on account of the default of the Bidder in any particular hereof and shall not be construed as a penalty.

- .5 Bid Bonds or Security Deposits will be returned to all except the three (3) lowest Bidders within three (3) days after the opening of tenders. The remaining non-successful Bid Bonds or Security Deposits will be mailed to Bidders within forty-eight (48) hours after the Owner and the successful Contractor have executed the Contract and the duly executed Bonds or Certified Cheque representing the Contract Security have been received and accepted by the Owner from the successful Contractor.
- .6 Bonds and Letters of Surety, provided by General Contractors to the Owner shall be from a recognized Surety Company.
- .7 Only Bid Bonds issued by insurers, licensed in Canada and authorized to do business in the Province of Prince Edward Island, will be accepted.
- .8 Security Deposits provided by General Contractors:
 - .1 Must be in the form of a Certified Cheque or Canadian Bank Draft drawn on a bank to which the Bank Act applies or a Credit Union, payable to the Owner, OR
 - .2 Bonds of the Government of Canada, unconditionally guaranteed, as to the principal and interest by the Government of Canada if such Bonds are:
 - .1 Payable to the Bearer, or
 - .2 Accompanied by a duly executed Instrument of Transfer to the Owner in the form prescribed by the Domestic Bonds of Canada Regulations, or
 - .3 Negotiated as to principal or as to principal and interest in the name of the Owner, pursuant to the Domestic Bonds of Canada Regulations.
 - .3 Security Deposits submitted by Subcontractors to General Contractors, shall be in a form satisfactory to the General Contractor.
 - .4 No interest will be paid to either the successful or unsuccessful bidders for any form of Bid Guarantee.

1.10 CONTRACT SECURITY

- .1 Upon award of a Contract, the Contractor shall provide the following Contract Security:
 - .1 For a General Contract Tender less than One Million Dollars (\$1,000,000.00):
 - .1 A Performance Bond and a Labour and Materials Bond, each in the amount of fifty per cent (50%) of the total Contract Amount, or
 - .2 A Security Deposit in the form of a Certified Cheque or Bank Draft, in an amount not less than ten per cent (10%) of the total Contract Amount.
 - .2 For a General Contract Tender One Million Dollars (\$1,000,000.00) or more:
 - .1 A Performance Bond and a Labour and Materials Bond, each in the amount of fifty per cent (50%) of the total Contract Amount.
- .2 All Bonds provided by General Contractors, are to be made payable to the Owner.
- .3 Bonds shall be from a recognized Surety Company, licensed in Canada and authorized to do business in the Province of Prince Edward Island.
- .4 If a Performance Bond is utilized, it shall be maintained in force for a period of not less than twelve (12) months after the issuance of the Total Performance Certificate.
- .5 Security Deposits, provided by the General Contractor:
 - .1 Must be in the form of a Certified Cheque or Bank Draft drawn on a bank to which the Canadian Bank Act applies, or a Credit Union, payable to the Owner, OR
 - .2 Bonds of the Government of Canada, unconditionally guaranteed, as to the principle and interest by the Government of Canada if such Bonds are:
 - .1 Payable to the Bearer, or
 - .2 Accompanied by a duly executed Instrument of Transfer to the Owner, in the form prescribed by the Domestic Bonds of Canada Regulations, or
 - .3 Negotiated as to principle or as to principle and interest in the name of the Owner pursuant to the Domestic Bonds of Canada Regulations.

- .6 Contract Security shall be provided at the expense of the General Contractor. Cheques or Bank Drafts shall be drawn on an account with recognized Financial Institutions.
- .7 Contract Security submitted by Subcontractors to General Contractors, shall be in a form acceptable to the General Contractor.
- .8 No interest will be paid to the successful Contractor on any form of Contract Security.
- .9 If in accordance with the Contract Security requirements the successful Contractor has used a Certified Cheque or Bank Draft as Contract Security, the Certified Cheque or Bank Draft will be deposited in a safety deposit box in a bank until the date of Substantial Performance for the Contract as defined under Definitions and GC 5.4 of CCDC2-2020. Subject to the Work being acceptable to the Owner and Consultant it will be returned to the Contractor, without interest. The Certified Cheque or Bank Draft used as contract Security used through the construction period will be replaced with a Certified Cheque or Bank Draft in the amount of 20% of the original Contract Security during the Warranty Period. Subject to Warranty issues being addressed during the 1-year Warranty Period to the satisfaction of the Owner and Consultant it will be returned to the Contractor, without interest.

1.11 RECEIPT AND OPENING OF BIDS

- .1 Bids will be opened **publicly** at the time and place stated in the Invitation to Tender. The officer whose duty it is to open them will decide when the specified time has arrived. No responsibility will attach to any officer for the premature opening of a bid not properly addressed and identified.
- .2 Emailed, telephoned or facsimile transmitted bids will not be considered.
- .3 Any firm which has submitted a tender has the privilege of being present at the bid opening.

1.12 ADJUSTMENT AND WITHDRAWAL OF BIDS

- .1 Bids may be withdrawn or adjusted in writing by mail, delivered in person, or facsimile transmission delivered to the party to whom the bids were submitted, provided such withdrawal or adjustment is prior to the time fixed for the opening of the bids. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal or adjustment of the bid after the expiration of the time within which bids may be submitted.
 - .1 All withdrawals or adjustments to previously submitted tenders must be emailed to the Town of Three Rivers at the following email address:
dmacdonald@threeriverspei.com, prior to the time fixed for the opening of bids.
 - .2 Neither the Owner nor Coles Associates Ltd. accepts responsibility for the Contractors inability to submit faxed modifications within the allotted time for such circumstances, including but not limited to power and equipment failures, transmission failures, paper outages, busy fax line, etc.
 - .3 Adjustments must be signed by the same person who signed the original bid.

1.13 AWARD OF CONTRACT

- .1 The Contract, if awarded, will be awarded as promptly after the opening of bids as is possible, and at the discretion of the Owner. The award date will not extend beyond the period indicated on the Tender Form following the scheduled time of tender closing, without first obtaining permission of the three (3) low bidders, or low bidder only, at the discretion of the Owner.
- .2 The Form of Agreement, (Contract) which the successful Bidder will be required to enter into with the Owner, may be seen on application to the Consultant. The drawings, specifications and any addenda issued during the tender period, will be suitably marked for identification at the time the Form of Agreement is signed by both parties, shall be considered as being included in the Contract, together with the completed Tender form and are hereinafter referred to as the "Contract Documents." All of these documents shall be read together and construed as one document. Following execution of the Contract, the Contractor shall receive from the Owner one (1) complete signed set of Contract Documents.

- .3 Final award of Contract shall be subject to approval of all agencies having direct interest in the project.
- .4 Where identical bids are received, the low bidder will be selected on the basis of a coin toss by the Owner in the presence of the identical bidders.

1.14 REJECTION OF BIDS

- .1 The Owner reserves the right to reject any and all bids.
- .2 The lowest or any bid will not necessarily be accepted.
- .3 Bids submitted which indicate "own forces" for subcontract work, that in the opinion of the Owner cannot be successfully completed by the Contractor's employees will not be accepted.
- .4 Bids not submitted on the required form will be rejected.
- .5 Bids which are incomplete or qualified will be rejected.
- .6 All Bidders acknowledge that they shall have no claim against, or entitlement to damages from the Owner or Consultant by reason of the Owner's rejection of their individual bids or all bids.

1.15 SUBCONTRACT WORK

- .1 Contractor is to ensure that all Subcontractors understand the full extent of their responsibilities in order to complete the entire work of the project. Subcontract work may appear in various Sections of Specifications and on various Drawings.
- .2 Contractors and their Subcontractors are advised to become familiar with all specifications and drawings.

1.16 CONDITIONS OF WORK AND EMPLOYMENT IN PEI

- .1 All Construction Companies and Contractors and subcontractors submitting tenders for this work, or a portion thereof, are advised, in their own interest, to contact the Construction Association of Prince Edward Island, the accredited association for commercial and industrial sectors of the construction industry, to inquire and determine the terms and conditions of work and employment in the Province of Prince Edward Island.

1.17 LABOUR

- .1 No prospective employee in the Province of Prince Edward Island shall, with relation to his employment or eligibility for employment, be discriminated against or favored by reason of sex, racial origin, religious views, or political affiliations.
- .2 Contractors, to the extent possible, are encouraged to maximize the employment of the local labour force for the Work of this Contract.

1.18 HARMONIZED SALES TAX REQUIREMENTS

- .1 The Owner for this project must account for the Harmonized Sales Tax (HST).
- .2 All tenders submitted for the work of this Contract shall be calculated on the basis that the Owner is not exempt from HST. The bid will exclude HST but will show it as a separate line item.

1.19 ACCEPTABLE PRODUCTS

- .1 The Bidder shall carry in his tender the base bid product(s) identified in the specifications as "Acceptable Material", or Approved Equals as they are identified throughout the tender period.
- .2 The Bidder is also encouraged to carry the products of other manufacturers, that are not considered equals, as "Alternatives Prices," listing them by name on the Appendix provided for that specific purpose, as part of the Tender Form, together with the price difference compared to the specified products, when such Appendix is identified under Section 00 41 13 - Bid Form.

1.20 APPROVED EQUALS

- .1 Submission for an Approved Equal is to contain literature and descriptive information with full specification data. Where the requested item is contained on a printed document with other items, it is to be clearly identified.
- .2 The Consultant will not search catalogs, e-mails or websites or contact suppliers to obtain the necessary information for proper evaluation.
- .3 Submission by Bidders for evaluation of products requested to be considered as equal must be submitted to Consultant no less than five working days prior to closing of tenders. No consideration will be given to approving equals after the close of tenders, except when the specified product is found to have been discontinued by the manufacturer.
- .4 The consideration of a product(s) for Approved Equal status and the acceptance of individual products as approved equals is entirely at the discretion of the Consultant.
- .5 When products are given Approved Equal status these products may, at the discretion of bidders, be carried in their tender price, provided that ALL costs related to changes to the contract work required to incorporate the Approved Equal product are included in the tender price.
- .6 The acceptance of a product by the Consultant as an "Approved Equal," even where not specifically indicated on the Approved Equals listing in the Addendum, is to be understood as being contingent upon the provision of the particular series, model and/or type, complete with all options to meet the specified requirements of the Acceptable Material product.
- .7 Products given approved status that are found, during construction period, to not have all specified options available, or to have discontinued production of same, or to have made other design changes since the time of approval, will not be accepted for use on this project, except when financial compensation has been mutually agreed upon between the Contractor and the Owner and deemed acceptable by the Consultant. Compensation will not be paid to the Contractor for products acknowledged by the Consultant to be superior to the specified products.

1.21 ALTERNATIVES

- .1 Alternative products, when requested under Section 00 41 13 - Bid Form, must be listed in Appendix "B" provided as part of the Tender Form, and are to be understood as being offered only for the Owner's consideration as substitutes for the specified Acceptable Material products, at the amount of increase or decrease in the tender amount indicated in the Appendix. These products and related prices are not to be included in the tender amount.
- .2 Alternative products and their related increase or decrease in the base bid amount are not used as the basis for awarding tenders.
- .3 When alternative products are listed in Appendix "B", ALL costs related to changes to the contract work required to incorporate the alternative product into the work are to be included in the amount stated in Appendix "B".
- .4 Alternative products may or may not be accepted at the discretion of the Owner at the price difference quoted, without any other monetary consideration. If requested, bidders shall promptly supply full details of any or all Alternatives listed. Specific written direction from the Consultant must be given to the Contractor to substitute an alternative product.
- .5 Alternative prices shall include all fees, taxes and markups.

1.22 UNIT PRICES

- .1 Unit Prices, when requested under Section 00 41 13 - Bid Form, must be listed in Appendix "C", as part of the Tender Form and are to be understood as being offered only for the Owner's consideration; to be accepted or not accepted, at the Owner's discretion in a timely manner during the Work of the Contract, ONLY as a method of adjustment to the Contract Work for changes in the Work, should the Owner opt for the Unit Price Method.
- .2 Unit prices shall include all fees, taxes and markups.

1.23 SEPARATE PRICES

- .1 Separate Prices, when requested under Section 00 41 13 - Bid Form, must be listed in Appendix "D", as part of the Tender Form and are to be understood as being offered only for the Owner's consideration; to be accepted or, not accepted, in whole or in part, at the Owner's discretion. If used the Separate Prices may be incorporated into the Contract Work either at the time of Award of Contract or in a timely manner during the Work of the Contract, at the Owner's discretion.
- .2 Separate Prices shall include all fees, taxes (excluding HST) and markups.

1.24 GUARANTEES

- .1 The Contractor will be required to guarantee the work of this Contract in accordance with the requirements of GC12.3 of the Agreement.
- .2 Notwithstanding the above, the bidder's attention is directed to the fact that certain individual items on this project may be required to be guaranteed by the manufacturer for periods in excess of twelve months. These specific requirements are to be found in various Sections of the specifications for this project.

1.25 PAYMENT OF WORKERS

- .1 The Contractor shall, in addition to any fringe benefits, pay the workers employed by the Contractor on the work at wage rates, not less than those established by the Minimum Wage Order, issued under authority of the Labour Act, which is in effect. The Contractor shall pay workers employed on the work at intervals of not less than twice per month.
- .2 The Contractor shall require each Subcontractor, or person doing any part of the work, to covenant with the Owner that workers are employed at the wage rates and in the manner required by this provision.
- .3 Where any person employed by the Contractor or any Subcontractor, or other person engaged on the Work of this Contract, is paid less than the amount required to be paid under the provisions of this Contract, the Owner may deduct from any monies payable to the Contractor, under this or any other Contract, and pay to such person, a sum sufficient to bring the person's wages up to the amount required to be paid under this Contract.
- .4 No claim for extra payment from the Contractor will be considered by the Owner concerning any change in the Minimum Wage Order which may occur during prosecution of the Contract.

1.26 TIMING REQUIREMENTS

- .1 This project will require the achievement of the following project milestones:

.1 Tender Call	16 SEP 2026
.2 Pre-Tender Site Meeting	23 SEP 2026 @ 2:00 PM
.3 Tender Close	01 OCT 2026 @ 2:00 PM
	Refer to item TENDER CALL of this section for the address.
.4 Construction Start	TBD
.5 Construction Complete	TBD

END OF SECTION

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1 General

1.1 TENDER

.1 SUBMITTED BY:

_____(Name)

_____(Address)

_____(Contact)

DATE: _____

FOR: PROJECT NAME: John Beer Drive Sidewalk

LOCATION: Montague, PE

TO: PROJECT OWNER: Town of Three Rivers

LOCATION: 172 Fraser Street, Montague, PE, C0A 1R0

Having examined ALL the drawings and specifications for this project, as well as any addenda issued, as prepared by Coles Associates Ltd. and/or their consultants; WE HEREBY OFFER to furnish all materials, plant and labour necessary for the full and proper completion of the Contract work for:

PROJECT NAME: John Beer Drive Sidewalk

LOCATION: Montague, PE

INCLUDING all prime cost allowances and Government sales or other taxes in force at this date, EXCLUDING Harmonized Sales Tax (HST) but not any other additional or deductible allowances or taxes which may be applicable subsequent to this date, and which shall be payable by or to the Owner, in accordance with the above mentioned Documents, for the bid amount of:

_____(Dollars)
(\$ _____)

in lawful money of Canada.

In submitting this Tender we recognize the necessity to complete the information requested by any appendices, as well as, the right of the Owner to reject all Tenders or to accept any Tender at the price submitted, on the condition that revised Tenders will not be called for if minor changes are made.

In the event of this Tender being accepted within 60 calendar days of the time stated for the closing of Tenders, and our failing or declining to enter into a Contract, then our Bid Guarantee, submitted with our Tender shall be forfeited to the Owner in lieu of any damages which the Owner may suffer by reason of our failure or refusal to enter into such Contract.

In the event of our Tender not being accepted with 60 calendar days of the time stated for the closing of Tenders, our Bid Guarantee, submitted with our Tender will be returned to us forthwith, unless a satisfactory arrangement is made with us covering its retention for a further stated period.

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

- .1 Enter into a formal Contract Agreement with the Owner.
- .2 Furnish the Performance Bond and Labour and Materials Payment Bonds, or other form of Contract Security, when specifically permitted, as Contract Security in accordance with the requirements of the specifications.
- .3 Furnish a cost breakdown of the Contract sum, the total aggregating the amount of our Tender, in accordance with the requirements of the specifications.
- .4 Furnish a certified copy of all insurance policies.
- .5 Complete the entire work on or before the dates stated.
- .6 Provide and update as required a Construction Schedule which clearly shows the state of progress required to complete the work on the date specified.
- .7 Enter into subcontract agreements where applicable.

1.2 ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

- .1 Addendum No. _____ Issued: _____ initial
- Addendum No. _____ Issued: _____ initial
- Addendum No. _____ Issued: _____ initial
- Addendum No. _____ Issued: _____ initial
- Addendum No. _____ Issued: _____ initial

1.3 FORM OF TENDER APPENDICES

- .1 Appendix 'A' must be completed by bidders.
- .2 Appendix 'B' (only the items indicated) may be completed by bidders, any other items are at the bidder's discretion.
- .3 Appendix 'C' must be completed by bidders.
- .4 Appendix 'D' must be completed by bidders.

1.4 DOCUMENTS ACCOMPANYING BID FORM

- .1 As per Section 00 21 13 - Instructions to Bidders:
- One (1) copy of Bid Guarantee, together with Surety's letter of consent. _____ initial
- One (1) copy of preliminary schedule. _____ initial
- One (1) copy of letter from Bidders Insurance Provider identifying list of claims made against Bidder within last five (5) years. _____ initial

1.5 PROJECT MANAGER & SUPERINTENDENT

- .1 Name of Project Manager _____.
- .2 Years of Experience with Contractor _____.
- .3 Name of Superintendent _____.
- .4 Years of Experience with Contractor _____.

1.6 CONFLICT OF INTEREST

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

1.7 CONTRACTOR'S SIGNATURE

- .1 Signed sealed and submitted for and on behalf of:

(Company Name)

(Address)

(Authorized Signature)

(Witness)

(Name and Title)

(Name and Title)

(Date)

1.8 APPENDIX 'A'

- .1 Herewith are identified the Subcontractors we propose to use on this project.
Carrying Sub-Contractor options next to identified work, is not acceptable. The words TBD, own estimate, allowance and no bids received are also not acceptable and will be cause for rejection. All blanks shall be filled in with Subcontractor name or with the words Own Forces.

Site Demolition _____

Excavation & Backfilling _____

Landscaping _____

Concrete Sidewalks & Curbs _____

Drainage _____

Pavement _____

Material Testing _____

Others _____

Others _____

COMPANY: _____

AUTHORIZED SIGNATURE: _____

1.9 APPENDIX 'B'

.1 ALTERNATIVE PRICES

We herewith submit for consideration by the Owner the following systems or products as Alternatives to the Base Bid items indicated below and identify the increase or decrease, as applicable, in our tender price, for each item should it be selected by the Owner for installation in lieu of the Base Bid item. The change in tender price includes for all necessary modifications to the base bid systems.

Alternative prices shall include all fees and markups, and are to EXCLUDE Harmonized Sales Tax (HST).

SECTION ITEM BASE BID ALTERNATIVE:	TENDER PRICE INCREASED BY:	TENDER PRICE DECREASED BY:
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____

COMPANY: _____

AUTHORIZED SIGNATURE: _____

1.10 APPENDIX 'C'

.1 UNIT PRICE COMPONENT

We submit herewith our Unit Prices for the additions or deletions to the work listed below. The Unit Prices listed apply to performing the Units of Work, in accordance with the requirements of the appropriate specifications herein, only during the time scheduled for such work in the project work schedule.

Unit prices shall include all fees & markups and are to EXCLUDE Harmonized Sales Tax (HST).

UNIT OF WORK	ONE (1) UNIT PRICE ONLY FOR EITHER ADDITION OR DELETION
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.1 Concrete Sidewalk (SM)	\$ _____
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.2 Concrete Curb (LM)	\$ _____
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.3 Drainage Pipe -450mm (LM)	\$ _____
------------------------------	----------

.4 Concrete Catchbasin (each)	\$ _____
-------------------------------	----------

.5 Asphalt Paving-100mm (SM)	\$ _____
------------------------------	----------

.6 Catch Tee (each)	\$ _____
---------------------	----------

.7 Drainage Pipe - 300mm (LM)	\$ _____
-------------------------------	----------

.8 150mm Topsoil & Hydroseed (SM)	\$ _____
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COMPANY: _____

AUTHORIZED SIGNATURE: _____

1.11 APPENDIX 'D'

.1 SEPARATE PRICES

We submit herewith our Separate Price for the addition of the work listed below and amounts are NOT included in our Stipulated Price. In accordance with the requirements of the appropriate specifications herein, only during the time scheduled for such work in the project work schedule.

Separate prices shall include all fees & markups and are to EXCLUDE Harmonized Sales Tax (HST).

UNIT OF WORK	ONE (1) UNIT PRICE ONLY FOR EITHER ADDITION OR DELETION
.1 _____	\$ _____
.2 _____	\$ _____
.3 _____	\$ _____
.4 _____	\$ _____

COMPANY: _____

AUTHORIZED SIGNATURE: _____

END OF SECTION

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1 General

1.1 FORM OF AGREEMENT

- .1 The Form of Agreement between Contractor and Owner shall be Canadian Construction Documents Committee CCDC2-2020, "Stipulated Price Contract", including the Definitions and General Conditions therein including items GC1.1 inclusive to GC13.2, and the modifications to items GC1.1 to GC13.2 incorporated into Section 00 73 00 - Supplementary Conditions of this Specification.
- .2 Document CCDC2-2020 may be examined at the Construction Association office in Charlottetown, PEI.

END OF SECTION

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1 General

1.1 GENERAL

- .1 These Supplementary Conditions modify, delete and/or add to the Agreement between Owner and Contractor, the Definitions, and the General Conditions of the Stipulated Price Contract, Standard Construction Document CCDC 2 – 2020.
- .2 Where any Article or portion of Article conflicts with the Laws of the Province concerned, such Article or portion of the Article is hereby stricken.

1.2 SUPPLEMENTARY CONDITION 1; AGREEMENT BETWEEN OWNER AND CONTRACTOR

- .1 SC1.1; Article A-5 - Payment:
 - .1 Delete paragraph 5.2 and replace it with the following:
"5.2 Should either party fail to make payments as they become due under this Contract or in an award by arbitration, adjudication or court, interest will begin to accrue on the amount that is not paid from the date when it is due until the date it is paid at the prejudgment interest rate prescribed by the Provincial Court of PEI."

1.3 SUPPLEMENTARY CONDITION 2; CCDC2 - 2020, DEFINITIONS

- .1 Amend the following Definitions:
 - .1 Amend the Definition of "Consultant" by adding the following to the end:
 - .1 "For purposes of this Contract, the terms "Consultant", "Architect" and "Engineer", wherever used in the Contract Documents, shall be considered synonymous. The term "Consultant" means the Consultant or Consultants authorized representative.
The Consultant shall be the Owner's Prime Consultant, Coles Associates Ltd., 85 Fitzroy Street, Charlottetown, PEI."
 - .2 Amend the Definition of "Owner" by adding the following to the end:
 - .1 The Owner shall be "**Town of Three Rivers**"
 - .3 Amend the Definition of "Subcontractor" by adding the following to the end:
 - .1 All dealings with the Subcontractor shall be through the medium of the Contractor, who will be responsible for the proper coordination and execution of the Sub-contractor's work.
- .2 Add the following new Definitions:
 - .1 **Act**
"Act means the Construction Act (PEI), as amended."
 - .2 **As-Built Drawings**
"As-Built Drawings are the drawings prepared by the Contractor by marking on a copy of the Drawings the changes from the Drawings which occur during the course of the Work including, but not limited to, the exact location of major building components and structures that were shown generally on the Drawings. For certainty, As-Built Drawings shall be in computer-aided design (CAD) format approved by the Owner, as well as in paper and PDF formats."
 - .3 **Deficiency Rectification Security**
"Deficiency Rectification Security means the amount and the form of security to be delivered by the Contractor pursuant to GC 5.4A – DEFICIENCY RECTIFICATION SECURITY."
 - .4 **Engineer**
"The Engineer shall mean the designated engineering representative(s) of the Consultant."
 - .5 **OHSA**
"OHSA means the Occupational Health and Safety Act (PEI), as amended, and all rules and regulations passed under it."

- .6 **Proper Invoice**
"Proper Invoice means an application for payment given by the *Contractor* to the *Owner* that fully complies with the requirements of GC 5.1A – PROPER INVOICE."
- .7 **Provide**
"Provide means supplied and installed."
- .8 **Submittals**
"Submittals are documents or items required by the *Contract Documents* to be provided by the *Contractor*, such as:
 - .1 *Shop Drawings*, samples, models, manuals, mock-ups to indicate details or characteristics before the portion of the *Work* that they represent can be incorporated into the *Work*; and
 - .2 *As-Built Drawings* and manuals to provide instructions to the operation and maintenance of the *Work*."
- .9 **WCB**
"WCB means the PEI Workers Compensation Board."

1.4 SUPPLEMENTARY CONDITION 3; GENERAL CONDITIONS

- .1 GC 1.1 CONTRACT DOCUMENTS
 - .1 Amend paragraph 1.1.2 by adding the following to the end:
"The intent of the Contract Documents is to include all labour, Products, materials, Construction Equipment and services necessary or normally considered necessary for the performance of the Work in accordance with the Contract Documents. Any item of Work mentioned in the Contract Documents or reasonably inferable from the Contract Documents but not otherwise shown or described shall be provided by the Contractor as if shown or otherwise described or inferable. Any items omitted from the Contract Documents which are reasonably necessary or inferable for the completion of the Work shall be considered a portion of the Work and included in the scope of Work to be performed under this Contract."
 - .2 Amend paragraph 1.1.5 as follows:
 - .1 Amend paragraph 1.1.5.1 by changing the order of the first four bullet points so that, as reordered, the bullet points read as follows:
 - "1 the order of priority of documents, from highest to lowest, shall be
 - Supplementary Conditions,
 - the Agreement between Owner and the Contractor,
 - the Definitions,
 - the General Conditions"
 - .2 Amend paragraph 1.1.5 by adding the following new paragraph 1.1.5.6:
".6 Notwithstanding the foregoing, if there a conflict or discrepancy between Drawings or between Drawings and Specifications or any other Contract Documents in relation to the Products to be supplied or the amount of labour or materials required to complete a particular item of Work, the Contractor shall supply and shall include in the Work the Products, labour and materials which would provide the greatest benefit to the Owner, as determined by the Owner."
 - .3 Amend paragraph 1.1.9 by adding new paragraphs 1.1.9.1 and 1.1.9.2 as follows:
 - ".1 The Specifications shall be read as a whole and are the minimum construction requirements. Neither the organization nor the division of the Specifications nor anything else contained in the Contract Documents will be construed to place responsibility on the Consultant to settle disputes among the Subcontractors and Suppliers in respect to such organization or division.

-
- .2 The Drawings are intended to convey the scope of the Work and indicate elevations and general and approximate locations, arrangement and sizes of fixtures, equipment, outlets, utilities and underground services. The Contractor shall obtain more accurate information and shall satisfy itself as to the conditions of the pre-grade elevations and the locations, arrangement and sizes of fixtures, equipment, outlets, utilities and underground services from study and coordination of the Drawings, including Shop Drawings, and shall satisfy itself and become familiar with conditions and spaces affecting these matters before proceeding with the Work. Where site conditions require reasonable minor changes to indicated locations and arrangements, the Contractor shall make such changes at no additional cost to the Owner. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the Contractor shall include such relocation in the Work at no additional cost to the Owner. The Contractor shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible."
- .4 Amend paragraph 1.1.11 as follows:
- .1 Delete the words "at the Owner's expense".
- .5 Add new paragraphs 1.1.12 to 1.1.15 as follows:
- "1.1.12 The Contract Documents and are intended solely for use by the party with whom the Consultant has entered into a Contract, and there are no representations of any kind made by the Consultant to any party with whom the Consultant has not entered into a Contract.
- 1.1.13 If the Contractor finds any error, inconsistency or omission in the Contract Documents or has any doubt as to the meaning or intent of any part thereof, the Contractor shall immediately notify the Consultant, who will provide written instructions or explanations. Neither the Owner nor the Consultant will be responsible for oral instructions.
- 1.1.14 Electronic documents are and shall remain the Consultant's property. Copies of electronic documents may be made available for the preparation of Shop Drawings at the Consultant's sole discretion and for a fee.
- 1.1.15 The Contractor shall keep one copy of the current Contract Documents, Supplemental Instructions, proposed or Contemplated Change Notices, Change Orders, Change Directives, Record Drawings marked up with any changes to be included in As-Built Drawings, cash allowance disbursement authorizations, reports, records meetings, and reviewed Shop Drawings at the Place of the Work, in good order and available to the Owner and Consultant."
- .2 GC 2.2 ROLE OF THE CONSULTANT
- .1 Add new paragraph 2.2.19 as follows:
- "2.2.19 The Consultant will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the Work in accordance with the applicable construction safety legislation, other regulations or general construction practice.
-

The Consultant will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Consultant will not have control over, charge of or be responsible for the acts or omissions of the Contractor, Subcontractors, Suppliers, or their agents, employees, or any other persons performing portions of the Work."

.3 GC 2.4 DEFECTIVE WORK

.1 Amend paragraph 2.4.1 by inserting the words ", at the Contractor's sole cost and expense," after the words "The Contractor shall" in the first line of the paragraph.

.2 Add new paragraphs 2.4.4 and 2.4.5 as follows:

"2.4.4 The Contractor shall rectify, in a manner acceptable to the Owner and the Consultant and without cost or expense to the Owner, all defective Work and deficiencies throughout the Work, whether or not they are specifically identified by the Consultant.

2.5.5 The Contractor shall give priority to the correction of any defective work or deficiencies identified as priorities by the Owner or the Consultant."

.4 GC 3.1 CONTROL OF THE WORK

.1 Amend paragraph 3.1.1 by adding the following new paragraphs 3.1.1.1 and 3.1.1.2 as follows:

"1 The Contractor shall co-ordinate his own work and the work of all Subcontractors so as to facilitate and expedite the progress of the work.

2 It is the responsibility of the Contractor to immediately notify the Consultant of any signs of distress or any other indications of actual or potential damage to the contract work, without regard to his awareness of any errors, inconsistencies or omissions in the Contract Documents."

.2 Add new paragraphs 3.1.3 through 3.1.7 as follows:

"3.1.3 The Contractor is solely responsible for the quality of the Work and shall undertake any quality control activities specified in the Contract Documents or, if none are specified, as may be reasonably required to ensure such quality. The Contractor shall perform the Work in accordance with modern practice and in accordance with applicable laws, ordinances, rules, regulations, or codes relating to the performance of the Work. Without limiting the generality of the foregoing, the Contractor is responsible for coordinating the Work so that no part shall be left in an unfinished or incomplete condition.

3.1.4 The Contractor shall abide by and shall enforce directives and policies regarding signs, advertisements, fires, smoking and vaping at the Place of the Work as directed by the Owner.

3.1.5 The Contractor, without in any way limiting its responsibilities under this Contract, shall:

.1 perform the Work so as to avoid disturbing the occupants of any structures at the Place of the Work or any adjacent structures or the public in general,

.2 respect and comply with local regulations and all Owner's requirements regarding permitted work hours, noise levels and work conditions,

-
- .3 take all reasonable steps to avoid interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise, to avoid conditions likely to propagate mould or fungus of any kind, and shall take all other steps reasonably necessary to promote and maintain the safety and comfort of the users and occupants of any structures at the Place of the Work or any adjacent structures and the public in general, and/or to maintain access to and the operation of such structures,
 - .4 take precautions not to allow any unauthorized visitors entry to the Place of the Work.
 - 3.1.6 Prior to commencing the Work the Contractor shall verify, at the Place of the Work, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the Work and shall further carefully compare such field measurements and conditions with the requirements of the Contract Documents. Where dimensions are not included or exact locations are not apparent in the Contract Documents, the Contractor shall immediately notify the Consultant in writing and shall obtain written instructions before proceeding with any part of the affected Work. Failure to do so shall be at the sole risk and cost of the Contractor.
 - 3.1.7 Before ordering any materials or doing any Work, Contractor shall verify all compensation has been allowed on account of differences between actual site dimensions and the measurements indicated on the drawings. Any difference, which may be found, shall be submitted to the Consultant for consideration before proceeding with the work.
 - 3.1.8 The Contractor will be responsible for effecting the removal from the site of any trade, firm, group or person who is delaying the Work, or whose Work is unsatisfactory. The Contractor will arrange for other competent trades people to complete the Work at no expense to the Owner."
 - .5 GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS
 - .1 Amend paragraph 3.2.2 by deleting the word "Owner" in the second line and replacing it with the word "Contractor".
 - .2 Delete paragraphs 3.2.2.2 and 3.2.2.3 in their entirety.
 - .3 Amend paragraph 3.2.3.4 by adding the following to the end:
 - .1 "Failure by the Contractor to so report shall invalidate any claims against the Owner by reason of the deficiencies in the work of Other Contractors or Owner's own forces except for those deficiencies not then reasonably discoverable; and".
 - .6 GC 3.4 CONSTRUCTION SCHEDULE
 - .1 Delete paragraph 3.4.1 and replace it with the following:

"3.4.1The Contractor shall:

 - .1 within ten (10) Working Days of signing this Contract submit to the Owner and the Consultant, for the Owner's approval, a construction schedule that indicates the timing of major activities and critical milestone dates for the Work, demonstrating that the Work will be performed in conformity with the Contract Time. Such schedule:
-

-
- .1 shall provide sufficient detail of the critical events and their inter-relationship and shall include a baseline schedule indicating the critical path for the Project; and
 - .2 at each site meeting, provide to the Owner and the Consultant a look-ahead schedule indicating the major activities to be undertaken in the next month."
 - .2 Amend paragraph 3.4 by adding the following new paragraph 3.4.2 as follows:
"3.4.2 The Contractor shall not change the scheduled Ready-for-Takeover date."
 - .7 GC 3.5 SUPERVISION
 - .1 Amend paragraph 3.5 by adding the following new paragraph 3.5.3 as follows:
"3.5.3 The Consultant may require the Contractor to inform him, in writing, of the name and experience of the supervisory personnel he intends to use on the project."
 - .8 GC 3.7 LABOUR AND PRODUCTS
 - .1 Amend paragraph 3.7 by adding the following new paragraph 3.7.4 as follows:
"3.7.4 All manufactured articles, materials and equipment shall be installed, applied, connected, erected, used, cleaned, conditioned and commissioned as directed by the manufacturer unless specified to the contrary."
 - .9 GC 3.8 SHOP DRAWINGS AND OTHER SUBMITTALS
 - .1 Delete the title of GC 3.8 as written and replace with the following wording "SHOP DRAWINGS AND OTHER SUBMITTALS".
 - .2 Amend paragraphs 3.8.1, 3.8.2, 3.8.3, 3.8.5, 3.8.6 and 3.8.7 by adding the words "and Submittals" after the words "Shop Drawings" wherever they appear in those paragraphs; and amend paragraphs 3.8.3.2 and 3.8.5 by adding the words "and Submittal" after the words "Shop Drawing" wherever they appear in those paragraphs.
 - .3 Add new paragraph 3.8.8 as follows:
"3.8.8 The Consultant's review of Shop Drawings and Submittals will be for general detail and arrangement only. The Consultant's review shall not relieve the Contractor from its responsibility for deviations from the Contract Documents, unless the Contractor in writing has notified the Consultant of such deviations at the time of submission of the Shop Drawings and Submittals and the Consultant has given written approval to the specific deviations. The Consultant's review shall not relieve the Contractor from responsibility for defective Work resulting from errors or omissions of any kind on the reviewed Shop Drawings and Submittals and shall not constitute authorization to the Contractor to perform additional Work or changed Work. The Contractor is solely responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes, and for techniques of construction and installation."
 - .10 GC 3.9 DOCUMENTS AT THE SITE
 - .1 Add new paragraph "3.9 DOCUMENTS AT THE SITE" as follows:
3.9 DOCUMENTS AT THE SITE
3.9.1 Contractor is to maintain at job site, one (1) copy of each document as follows:
-

-
- .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed Shop Drawings.
 - .5 List of Outstanding Shop Drawings.
 - .6 Notice of Change.
 - .7 Change Orders.
 - .8 Other Modifications to Contract.
 - .9 Field Test Reports.
 - .10 Approved Work Schedule.
 - .11 Health and Safety Plan and Other Safety Related Documents.
 - .12 CSA Z317.13-07 - Infection Control Guidelines (if applicable).
 - .13 Other documents as specified."
- .11 GC 4.1 CASH ALLOWANCES
- .1 Delete paragraphs 4.1.4 and 4.1.5 and replace them with the following:
 - "4.1.4 Where the actual cost of the Work under any cash allowance exceeds or is expected to exceed the amount of the allowance, the Contractor shall notify the Owner and the Consultant in writing indicating the amount of additional funds required and, in such case, the Contractor shall not proceed with the cash allowance Work until the Contractor receives written instructions from the Consultant. Un-expended amounts from other cash allowances may be reallocated at the Owner's direction to cover the shortfall and, in that case, the Contractor is not entitled to any amount for overhead and profit. Where no such direction is given, or where the actual cost exceeds the allowance even after reallocation of un-expended amounts from other cash allowances, the Contractor shall be compensated for the excess incurred and substantiated, plus an amount for overhead and profit as set out in paragraph 6.2.3.3 of GC 6.2 – CHANGE ORDER, but on the excess only.
 - 4.1.5 The net amount of any un-expended cash allowances, after providing for any re-allocations as contemplated in paragraph 4.1.4, shall be deducted from the Contract Price without any adjustment for the Contractor's overhead and profit on such amount."
 - .2 Add a new paragraph 4.1.8 as follows:
 - "4.1.8 The Owner reserves the right to call, or to have the Contractor call, for competitive bids for portions of the Work to be paid for from cash allowances."
- .12 GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER
- .1 Delete "GC 5.1. Financing Information Required of the Owner" in its entirety.
- .13 GC 5.1A PROPER INVOICE
- .1 Add a new "GC 5.1A Proper Invoice" as follows:
 - "5.1A Proper Invoice
 - .1 In this Contract a Proper Invoice shall mean an application for payment made by the Contractor that:

-
- .1 is given to the Owner monthly by e-mail sent to “.com” and is sent concurrently to the Consultant or as the Owner may otherwise direct; and includes all of the following:
- .1 the *Contractor's* name and address and HST registration number;
 - .2 the date of the application for payment and the period during which the services or materials were supplied;
 - .3 information identifying the authority, whether in the *Contract* or otherwise, under which the services or materials were supplied, including the applicable RFT or purchase order number;
 - .4 a description, including quantities where appropriate, of the services and materials that were supplied;
 - .5 the amount payable for the services or materials that were supplied, and the payment terms. Ensure the amounts align with the *Contractor's* pricing form;
 - .6 the name, title, telephone number and mailing address of the person to whom payment is to be sent;
 - .7 copies of all *Change Orders* and *Change Directives* for which the *Contractor* is claiming payment together with all backup documentation;
 - .8 a statement based on the schedule of values for the *Work*;
 - .9 for all applications for payment except the final payment, the monthly report required by GC 3.4A – CONTRACTOR'S MONTHLY REPORTS, including an updated construction schedule which complies with the requirements of paragraph 3.4.1.1 of GC 3.4 – CONSTRUCTION SCHEDULE;
 - .10 a current valid clearance certificate issued by the WCB;
 - .11 for the second and all subsequent applications for payment, a CCDC 9A Statutory Declaration stating that all accounts for services and materials and other indebtedness incurred by the Contractor for which the Owner may in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified matter in dispute.”
- .14 GC 5.2 APPLICATIONS FOR PAYMENT
- .1 Amend paragraph 5.2.2 by adding paragraphs 5.2.2.1 and 5.2.2.2 as follows:
 - "5.2.2.1 Payment shall be less any holdback release, which may have been made in accordance with the specific terms of this Agreement as dictated by GC 5.6. Any such holdback release by the Owner to the Contractor shall be a payment to the Contractor in trust for the specific Subcontractor in respect of whose work the release is made.
 - 5.2.2.2 Payments shall be less 15% Mechanics' Lien Holdback amount claimed against each progress claim."
 - .2 Delete paragraph 5.2.7 in its entirety.
 - .3 Amend paragraph 5.2.8 by adding the following wording to the end:
-

"Payment for materials will be considered only if such materials are properly stored on site in a secure enclosure acceptable to the Consultant. Security of materials so stored is the responsibility of the Contractor."

.4 Add new paragraphs 5.2.9 to 5.2.11 as follows:

"5.2.9 Authorized Change Orders shall be listed on the application for payment indicating the amount claimed against each to date of claim.

5.2.10 For the second and all subsequent applications for payment, a CCDC 9A Statutory Declaration stating that all accounts for services and materials and other indebtedness incurred by the Contractor for which the Owner may in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified matter in dispute.

5.2.11 A current valid clearance certificate issued by the WCB;."

.15 GC 5.3 PAYMENT

.1 Delete paragraph 5.3.1 and replace it with the following:

"5.3.1 The *Consultant* will issue to the *Owner* and copy to the *Contractor* a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due.

.2 Add new paragraphs 5.3.1.3 and 5.3.1.4 as follows:

"3 When any claim for payment during the course of construction includes for completed or partially completed Work, which in the opinion of the Consultant is defective or otherwise unacceptable, a sum of monies determined by the Consultant to be ten (10) times the value of the defective or unacceptable Work, or ten (10) times the value of the Work required to correct the defect or an amount solely at the Consultants discretion, will be withheld from the claim.

.4 Deficiency monies may be held back at any time during the course of the project for Work deemed incomplete or unacceptable.

.5 It remains the Contractor's responsibility to undertake his own deficiency reviews and ensure the entire Work conforms to the Contract including quality, completeness and commissioning.

.6 Two final deficiency reviews will be conducted by the Consultant. The first review with the Owner and Contractor will identify any minor items which may remain outstanding, and the second review will confirm that these items have been completed. All other deficiency reviews where deficiencies are incomplete or not ready for requested inspections, will be charged at cost to the Contractor. The invoice for the additional reviews will be submitted to the Owner with a corresponding amount deducted from the Contractor's progress payment."

.16 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

.1 Add new paragraphs 5.4.1.3 as follows:

"3 Submit with application for payment letter of clearance from The Workers Compensation Board to the Owner stating that the Contractor is in good standing with the Board."

.17 SC 3.26 GC 5.5 FINAL PAYMENT

.1 Amend paragraph 5.5.2 by adding the following to the end:

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- .1 "Any delay in delivering the required Project Record Drawings (As-Builts) as described in Section 01 78 00 - Closeout Submittals will have the effect of delaying the final payment to the Contractor until the Consultant has received them complete and in good condition."
- .18 GC 5.8 WITHHOLDING OF PAYMENT
- .1 Add a new "GC 5.8 Withholding of Payment: as follows:
"GC 5.8 WITHHOLDING OF PAYMENT
- 5.8.1 Notwithstanding any provision in the *Contract Documents* to the contrary, the *Owner* may withhold payment of any amount claimed in an application for payment, in a *Proper Invoice*, or in any certificate for payment to the extent required to offset any claims the *Owner* may have against the *Contractor*, or to offset previous overpayment made to the *Contractor*, or for damages or costs incurred by the *Owner*, or to the extent as may be necessary to protect and/or indemnify the *Owner* from loss, claims or damage, including as a result of:
- .1 the *Contractor's* failure to perform any of its material obligations or where the *Contractor* is otherwise in default under the *Contract Documents*;
- .2 defective portions of the *Work* not remedied;
- .3 damage done by the Contractor to work performed by Other Contractors or by the Owner's own forces;
- .4 the Contractor's failure to make prompt payments to its Subcontractors and Suppliers respecting Work for which the Owner has made payment to the Contractor;
- .5 claims or reasonable evidence indicating possible commencement of claims for which the Contractor may be responsible to indemnify the Owner;
- .6 the Contractor's failure to remove any liens arising from the Work or otherwise to satisfy its obligations under GC 14.2 – LIENS AND ACTIONS;
- .7 reasonable evidence the Work will not achieve Ready-for-Takeover in accordance with the construction schedule or within the Contract Time;
- .8 any claim for which the *Owner* is entitled to indemnification from the *Contractor* pursuant to the *Contract Documents*.
- 5.8.2 Where the *Owner* has withheld payment to the *Contractor* pursuant to the provisions of this *Contract*, the *Owner* shall be entitled to apply the amount toward the costs of any required remedial work, completion costs or toward damages or losses suffered and for which the *Owner* is entitled to compensation under this *Contract*, including legal costs and expenses."
- .19 GC 6.2 CHANGE ORDER
- .1 Delete paragraph 6.2.1 and replace it with the following:
"6.2.1 When a change in Work is proposed or required:
- .1 The Consultant will provide the Contractor with a written description of the proposed change in the Work. The Contractor shall promptly present, in forms acceptable to the Consultant, a detailed breakdown of
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the costs associated with the change, if any; and the adjustment in the Contract Time, if any. The breakdown shall include:

- .1 Actual (not list) costs of material, as well as Subtrade and Supplier costs.
 - .2 Labour costs, including fringe benefits and wage levies.
 - .3 Equipment rental (excluding hand and small power tool).
 - .2 Change Orders calling for normal changes or additions to the Work will be priced in detail giving actual material trade prices (not list prices) and actual labour costs and wage levies (including Employment Insurance, Worker's Compensation, Holiday Pay) and actual equipment rental.
 - .3 Each Change Order will be considered as a whole to complete the work, inclusive of all Sub- Contract and/or General Contract work.
 - .4 To these prices, the Contractor will add:
 - .1 For Work involving the General Contractor only, the General Contractor adds 15% to his costs
 - .2 For Work involving the General Contractor and a Subcontractor, the Subcontractor adds 15% to his cost, submits this price to the General Contractor who adds 5%; to this amount the General Contractor adds the cost of his own Work plus 15% of the cost of his own Work only. The General Contractor does NOT add a further 5% to the cost of his own Work.
 - .3 Deletions to Contract: A mark-up by either Sub-Contractor or General Contractor shall not be charged or credited on credit Change Orders.
 - .4 Supervision related to Change Orders shall be considered as included in the allowable mark-up, and shall not be added as additional charges for a Change order.
 - .5 Note: Costs related to management, supervision, estimating, scheduling, bonding, insurance, as built drawings, copying, courier, safety, cleaning, site overhead, site vehicle, hand and small power tools etc. are covered by the mark up indicated and shall not be included on Change Orders.
- .2 Add new paragraphs 6.2.3 to 6.2.5 as follows:
- "6.2.3 The mark-ups referred to in paragraph 6.2.1.4 shall constitute the only compensation the *Contractor* shall be entitled to for any and all overhead, profit, general expenses, incidental and administrative costs whatsoever related to a change including, but not limited to, costs relating to superintendence and supervision, general cleanup, *Shop Drawing* production, estimating, site office and head office expenses and personnel, administration costs, workers' tools, temporary facilities and controls, record drawings, *As-Built Drawings*, warranty, insurance, bonding, job safety costs, and coordination of any and all *Work*-related activities.
- 6.2.4 An adjustment to the *Contract Time* will be considered only when the *Contractor* demonstrates to the *Owner* that a change in the *Work* affects the critical path of the *Work*. Any costs associated with an adjustment to the *Contract Time* shall be identified by the *Contractor* and shall be limited to the

reasonable direct costs directly attributable to the adjustment to the *Contract Time*.

- 6.2.5 The *Contractor* shall not be entitled to any additional compensation or an adjustment to the *Contract Time* arising out of changes to the *Work* aside from the amounts stated in a *Change Order*. In no event shall the *Owner* be liable to the *Contract* for any costs, including indirect, impact or consequential costs, arising out of changes to the *Work* beyond the agreed upon amount of the *Change Order*."

.20 GC 6.3 CHANGE DIRECTIVE

- .1 Delete paragraph 6.3.6 and replace it with the following:

"6.3.6 The adjustment in the Contract Price for a change carried out by way of a Change Directive shall be determined on the basis of cost of the Contractor's actual expenditures and savings attributable to the Change Directive, valued in accordance with paragraph 6.3.7 and as follows:

- .1 The Owner or the Consultant, without invalidating the contract, may make changes by altering, adding to, or deducting from the work, the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the Contract.
- .2 Where work is required to proceed immediately, work may proceed under a Change Directive. The Contractor will be instructed to proceed on a time and materials basis and maintain accurate accounting records for the cost of the change.
- .3 Change Directives calling for changes to the Work will be priced in detail giving actual material trade prices (not list prices) and actual labour costs and wage levies (including Employment Insurance, Worker's Compensation, Holiday Pay) and actual equipment rental.
- .4 Each Change Directive will be considered as a whole to complete the work, inclusive of all Sub-Contract and/or General Contract work.
- .6 To these prices, the Contractor will add:
 - .1 For Work involving the General Contractor only, the General Contractor adds 15% to his costs.
 - .2 For Work involving the General Contractor and a Subcontractor, the Subcontractor adds 15% to his cost, submits this price to the General Contractor who adds 5%; to this amount the General Contractor adds the cost of his own Work plus 15% of the cost of his own Work only. The General Contractor does NOT add a further 5% to the cost of his own Work.
 - .3 Deletions to Contract: A mark-up by either Sub-Contractor or General Contractor shall not be charged or credited on credit Change Orders
 - .4 Supervision related to Change Orders shall be considered as included in the allowable mark-up, and shall not be included in the labour changes for a Change order."

.21 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- .1 Add a new paragraph 6.4.0 as follows:

".0 The Contractor confirms that, before signing this Contract, it carefully investigated and examined the Place of the Work, the Contract Documents and any other documents made available by the Owner, and has satisfied itself as to the conditions, circumstances, limitations and requirements necessary for the Contractor to perform the Work in accordance with the Contract Documents. No allowances will be made for additional costs and no claims by the Contractor will be considered for an adjustment in the Contract Price or Contract Time in connection with conditions which were reasonably apparent or which could reasonably have been discovered before the signing of this Contract."

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

.1 Add a new paragraph 7.1.7 as follows:

".7 The Owner may terminate this Contract for convenience at any time for any or no reason. In such event, the Owner shall pay for the Work performed up to the effective date of termination, including demobilization costs, and for such additional reasonable direct costs directly flowing from and which are a reasonable consequence of the termination, but excluding the costs of the Contractor's head office personnel and overhead costs, any consequential, indirect or special damages, and any loss of profit or loss of opportunity costs and damages arising from or caused by such termination, regardless of whether any such excluded costs, damages or claims are made or incurred by the Contractor or any Subcontractor or Supplier. The Owner shall not be liable for any other claims, costs or damages whatsoever arising from such termination of this Contract."

.23 GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

.1 Amend paragraph 7.2.3 as follows:

.1 Delete paragraphs 7.2.3.1 and 7.2.3.2;

.2 Amend paragraph 7.2.4 as follows:

.1 Delete "5" in the second line and replace with "10".

.3 Delete paragraph 7.2.5 and replace it with the following:

"7.2.5 If the default cannot be corrected within the 10 Working Days specified in paragraph 7.2.4, the Owner shall be deemed to have cured the default if it:

.1 commences the correction of the default within the specified time; and

.2 provides the Contractor with an acceptable schedule for such correction;
and

.3 completes the correction in accordance with such schedule.

.24 GC 9.1 PROTECTION OF WORK AND PROPERTY

.1 Add a new paragraphs 9.1.5 and 9.1.6 as follows:

"9.1.5 Without in any way limiting the Contractor's obligations under this GC 9.1, should the Contractor or any Subcontractor or Supplier cause loss or damage to property, including roads, buildings, structures, paving, grass, sod, trees or other plantings, whether owned by the Owner or others, and whether at the Place of the Work or adjoining it, the Contractor shall be liable for the cost of making good such damage and for the repair and any

replacement cost of the grass, sod, trees or other plantings damaged, including the cost of any arborist or other consultant, and such costs may be deducted by the Owner from amounts otherwise owing to the Contractor. If there is no amount owing by the Owner to the Contractor at that time, then the Contractor shall reimburse the Owner for all of the said costs.

- 9.1.6 The Contractor shall be responsible for implementing all necessary security measures required to protect the areas of Work under his control and shall be responsible for damage which may arise from the failure of, or the failure to implement such security measures."

.25 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- .1 Amend paragraph 9.2.3 as follows:

.1 Delete the words "The Owner" in the first line and replace them with "The Contractor".

- .2 Add new paragraphs 9.2.5.5 and 9.2.5.6 as follows:

.5 take all reasonable steps necessary to mitigate or stabilize any conditions resulting from encountering toxic or hazardous substances, and

.6 take all necessary steps to mitigate the impact on Contract Time and Contract Price."

- .3 Amend paragraph 9.2.7.3 by adding the following after the words "as a result of the delay" at the end:

" , but excluding the costs of the Contractor's head office personnel and overhead costs, any consequential, indirect or special damages, and any loss of profit or loss of opportunity costs and damages arising from or caused by such delay, regardless of whether any such excluded costs, damages or claims are made or incurred by the Contractor or any Subcontractor or Supplier"

- .4 Delete paragraph 9.2.7.4.

- .5 Add new paragraphs 9.2.10 and 9.2.11 as follows:

"9.1.10 The Contractor shall, immediately upon becoming aware of any environmentally toxic and hazardous substance or materials (within the meaning of applicable environmental legislation), notify the Owner in writing setting out particulars concerning the type of the environmentally toxic and hazardous substance or materials, where it was discovered, and all other information that the Contractor has at the time of the notice.

9.1.11 The Contractor shall indemnify the Owner and its manager, officers, directors, employees, agents and elected officials in respect of any loss, costs, expense or fine which might be imposed in respect of any failure by the Contractor to satisfy its obligations under this GC 9.2 and, without limiting the general nature of this indemnity, the Contractor shall indemnify the Owner and its manager, officers, directors, employees, agents and elected officials in respect of any loss, costs, expense or fine if the Project is made subject to an order from a court or government agency requiring remediation of any contamination caused as a result of the Work performed by the Contractor or its Subcontractors or Suppliers."

.26 GC 9.5 MOULD

- .1 Amend paragraph 9.5.2.3:

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- .1 Add the words "and for any delay" immediately before the comma near the end.
- .2 Amend paragraph 9.5.3.3 by adding the following after the words "as a result of the delay" at the end:
" , but excluding the costs of the Contractor's head office personnel and overhead costs, any consequential, indirect or special damages, and any loss of profit or loss of opportunity costs and damages arising from or caused by such delay, regardless of whether any such excluded costs, damages or claims are made or incurred by the Contractor or any Subcontractor or Supplier, and"
- .27 GC 10.1 TAXES AND DUTIES
- .1 Amend paragraph 10.1.1 as follows:
- .1 Delete the words "...at the time of closing except for Value Added Taxes" ...and replace with the words "...at the time of closing including Value Added Taxes"...
- .2 Amend paragraph 10.1.2 by adding the following to the end:
"For greater certainty, the Contractor shall not be entitled to any mark-up for overhead or profit on any increase in such taxes and duties."
- .28 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES
- .1 Delete paragraph 10.2.2 and replace with the following:
"10.2.2 The Owner shall obtain and pay for development approvals, permanent easements, rights of servitude, and all necessary approval and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the Contract Documents specify as the responsibility of the Contractor.
.1 The Contractor shall apply for, obtain and pay for the building permit."
- .2 Amend paragraph 10.2.4 by adding the following to the end:
"The Contractor shall notify the Consultant and the chief building official or the registered code agency where applicable, of the readiness, substantial completion, and completion of the stages of construction set out in the applicable Building Code. The Contractor shall be present at each site inspection by an inspector or registered code agency. If any laws, ordinances, rules, regulations, or codes conflict, the more stringent shall govern."
- .29 GC 11.1 INSURANCE
- .1 Delete GC 11.1.1 in its entirety and replace it with the following:
"11.1.1 The Contractor shall obtain, maintain, pay for and provide to the Owner evidence of the insurance coverage required under this Contract. Any deductible and/ or self-insured retention are the responsibility of the Contractor and shall not constitute a Project expense chargeable back to the Owner in any way.
.1 Commercial General Liability Insurance
General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Ready-for-Takeover*. Liability coverage shall be provided for completed operations hazards from the date of *Ready-for-Takeover*, as set out in the certificate of *Ready-for-Takeover*, on an ongoing basis for a period of 6 years following *Ready-for-Takeover*
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Commercial General Liability, underwritten by an insurer licensed to conduct business in the Province of PEI, for a limit of not less than \$5,000,000 per occurrence, an aggregate limit of not less than \$10,000,000, within any policy year with respect to completed operations and a deductible of not more than \$50,000. The insurance coverage shall not be less than the insurance provided by IBC Form 2100 and IBC Form 2320. The policy shall include an extension for a standard provincial and territorial form of non-owned automobile liability policy. This policy shall include but not be limited to:

- .1 Name the Owner as an additional insured;
- .2 Cross-liability and severability of interest;
- .3 Blanket Contractual;
- .4 Products and Completed Operations;
- .5 Premises and Operations Liability;
- .6 Personal Injury Liability;
- .7 Contingent Employers Liability;
- .8 Owners and Contractors Protective;
- .9 Broad Form Property Damage;
- .10 Firefighting Expenses;
- .11 Elevator and Hoist Liability;
- .12 Attached Machinery – while loading and unloading

The following also applies:

- .13 If applicable to the *Project*, coverage shall include shoring, blasting, excavation, underpinning, demolition, pile driving, caisson work and work below ground surface including tunneling and grading.
- .14 If the Work involves asbestos removal, the policy shall provide coverage for this exposure.
- .15 If the Work involves the use or operation of an owned or non-owned manned aircraft or watercraft, the policy shall provide coverage for this exposure.
- .16 To achieve the desired limits, umbrella or excess liability insurance may be used.
- .17 The Owner reserves the right to request in addition to Commercial General Liability Insurance coverage Wrap-up Liability. The Wrap-up shall be in the names of the Owner, Contractor, all Subcontractors, the Consultant and all other architects, engineers, consultants, planners and project managers. Limits and coverages shall comply with the requirements outlined above.

.2 Automobile Insurance

Standard Form Automobile Liability Insurance that complies with all requirements of the current legislation of the Province of PEI, having an inclusive limit of not less than \$5,000,000 per occurrence for third party liability, in respect of the use or operation of vehicles owned operated or leased by the Contractor.

.3 Builders Risk Insurance

Broad Form Builders' Risk Insurance written in the joint names of the *Contractor, Owner, Subcontractors, Consultants*, and underwritten by an insurer licensed to conduct business in the Province of PEI. The policy shall have limits of not less than 1.1 times the *Contract Price*. Should the *Owner* provide any property to be incorporated into the *Project*, the policy must be endorsed to include the *Owner's* property. Coverage shall be maintained during the term of the *Contract* and until 10 calendar days after the date of *Ready-for- Takeover*.

The Builders' Risk shall:

- .1 Be endorsed to grant permission to occupy prior to the completion or acceptance of the entire *Work*.
- .2 Not be less than the insurance coverage provided by IBC Forms 4042 and 4047 or their equivalent replacement.
- .3 Include the installation, testing, commissioning and subsequent use of any machinery and equipment including boilers, pressure vessels or vessels under vacuum.
- .4 Apply to all *Products*, labour, equipment and supplies of every nature, the property of the *Owner* or *Contractor* or for which the *Owner* or *Contractor* may have assumed responsibility (whether on site or in transit), that is to be used in or pertaining to site preparation, erection, fabrication, construction or reconstruction of the structure.
- .5 Be subject to a waiver of coinsurance.
- .6 Include coverage for materials while in transit, awaiting installation or stored at off-site locations. Coverage shall be in an amount equal to the value of the material.
- 7 Provide that in the case of a loss or damage payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. The *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurer. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to a reasonable extension of *Contract Time*.
- .4 Boiler and Machinery Insurance
The Boiler and Machinery Policy shall be written in the joint names of the *Contractor, Owner, Consultants* and *Subcontractors* and underwritten by an insurer licensed to conduct business in the Province of PEI. The policy limit shall equal the replacement value of all permanent or temporary boilers and pressure vessels and other insurable objects forming part of the *Work*. The *Contractor* may elect to carry the testing, commissioning and subsequent use of these objects under the Boiler and Machinery Policy.
- .5 Contractor's Equipment Floater
The *Contractor* shall provide and maintain coverage for all equipment used on the *Project* during the term of this *Contract*. Coverage will be

provided, on a broad form basis, for construction machinery, equipment, tools and stock that will be used by the *Contractor* in the performance of the *Work*. The coverage will also include rental expense. Coverage is to be carried from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.

.6 Contractor's Pollution Liability

The *Contractor* shall carry a Contractor's Pollution Liability Policy, underwritten by an insurer licensed to conduct business in the Province of PEI for a limit of not less than \$2,000,000. Coverage shall include bodily injury, property damage, clean-up and remediation costs

.7 Proof of Insurance

- .1 The *Contractor* shall provide the *Owner* with an executed certificate of insurance and a renewal replacement as may be necessary, stating any pertinent exclusions as applicable contained in the policies which may affect coverage as outlined in this *Contract*. The certificate will be delivered prior to the commencement by the *Contractor* of the *Work* or upon renewal of the policy. The *Contractor's* insurance carriers and the insurance policy provisions must be acceptable to the *Owner*. All lines of coverage required by this *Contract* must be shown on the certificate of insurance. The *Contractor* will make available complete certified copies of all applicable insurance policies for examination if required by the *Owner*.
- .2 The *Contractor* shall ensure that each *Subcontractor* requires adequate insurance in accordance with the work being performed under the terms of their engagement. It is the *Contractor's* responsibility to ensure this exposure is insured adequately and at no time will costs associated with this exposure be transferred to the *Owner*.
- .3 Delivery to and examination or approval by the *Owner* of any certificates of insurance or policies of insurance or other evidence of insurance shall not relieve the *Contractor* of any of its indemnification or insurance obligations under this *Contract*. The *Owner* shall be under no duty to either ascertain the existence of or to examine such certificate of insurance or policies of insurance or to advise the *Contractor* in the event that such insurance coverage is not in compliance with the requirements set out in this *Contract*. The *Contractor* is responsible for ensuring such compliance.
- .4 All policies of insurance shall:
 - .1 Be recorded as being a primary policy and shall be in a form and issued by an insurance company satisfactory to the *Owner* and that is licensed to carry on business in PEI;
 - .2 Be maintained continuously during the course of the *Work* or for such period of time as may be required after completion of the *Work* as may be deemed necessary by the *Owner*;

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- .3 The *Contractor* shall ensure that any self-insured and deductible limits are prudent and responsible for the type of work being undertaken under the *Contract*. Any and all claim costs are borne by the *Contractor* including, but not limited to, deductibles, adjusting fees, legal costs, disbursements, and settlements;
 - .4 Ensure that, except in the case of automobile liability insurance, non-owned automobile liability insurance, the *Owner* and the *Consultant* is to be added to the policy as an additional insured and/or loss payee;
 - .5 Contain a cross-liability and severability of interest provisions, as may be applicable;
 - .6 Provide that at least thirty (30) days prior written notice, fifteen (15) days in the case of automobile liability insurance, and ten (10) days in the event of non- payment of premiums, shall be given to the *Owner* by the insurer before the insurer or the *Contractor* takes any steps to cancel, terminate, fail to renew, amend or otherwise change or modify the insurance or any part thereof.
 - .7 Necessary notification to insurers is required to ensure continuous coverage is in place at all times. This will include, but is not limited to, transfer of coverage from one policy to another (i.e. completion of a building constructed under a Builder's Risk Policy being transferred to a Property policy once *Ready-for-Takeover* has been achieved)."
- .2 Delete paragraph 11.1.2 in its entirety and replace it with the following:
"11.1.2 The Contractor shall not commence work under this contract until he has obtained all of the liability insurance specified and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his sub-contract until all similar insurance required of the sub-contractors has been obtained. Approval of the insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder nor shall such approval imply the contractor has fulfilled all the terms and conditions of this Contract. Upon expiration of any policies during the period of this Contract, new Certificates of Insurance showing renewal shall be forwarded. In the event, that the Contractor carried a blanket-type policy, an endorsement by the insurance company is required confirming coverage of this specified project and indicating the extent of coverage.
- .3 Amend paragraph 11.1 by adding paragraphs 11.1.9 and 11.1.10 as follows:
"11.1.9 Indemnity/Hold Harmless:
.1 The Contractor shall be liable for all injuries to persons and for damage to property caused by his operations, and those of his sub-contractors, and his and their employees, engaged on all operations in connection with the contract both on and off the site, and he shall indemnify and save harmless the Owner from all suits, claims, expenses, costs, demands, losses and damages to which the Owner
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may be put to reason of injury including death, to persons, and damages to property of the Owner and others, resulting from negligence, carelessness and any other cause whatsoever in the performance of the work.

- .2 The Contractor shall, until the date of issue of the final Certificate of Approval of the work by the Consultant, indemnify and save harmless the Owner, and protect his own interests against:
 - .1 Theft, burglary or robbery of, and loss or damage to, all materials and equipment brought to the site for use in the work, whether or not such material and equipment are incorporated in the work at the time that any such theft, burglary, robbery, loss or damage occurs.
 - .2 Theft or burglary of, and loss or damage to, any of his own plant and equipment being used on the project and/or stored on the site.

11.1.10 In all insurance policies required under this agreement:

- .1 There shall be an endorsement stating that the insurer will provide 30 days' notice to the Province's Risk Manager (or the acting or assistant) of cancellation or material change in coverage;
- .2 The insurer shall acknowledge that the policy is primary and any other insurance policies that may be in effect or any other sources of recovery including the Government of Prince Edward Island's Self Insurance and Risk Management Fund shall not contribute in any way to any judgments, awards, payments, or costs or expenses of any kind whatsoever made as a result of actual or alleged claims. The Ultimate Recipient shall provide the Province with current certificates of insurance, in a form and content reasonably acceptable to the Province, evidencing the required insurance policies hereunder within 10 days of the Effective Date and on each renewal of the insurance policies thereafter. Umbrella insurance may be used to achieve the required insured limits above."

.30 GC 12.1 READY-FOR-TAKEOVER

- .1 Delete paragraphs 12.1.1.4 and 12.1.1.5 and replace them with the following:
 - ".4 The delivery to the *Owner* of guarantees, warranties, certificates, testing and balancing reports and spare parts, distribution system diagrams, *Shop Drawings*, maintenance and operating manuals, instructions, samples, existing reports and correspondence from authorities having jurisdiction, and all other close-out materials or documents specified in the *Contract*.
 - .5 The delivery to the *Owner* of the final *As-Built Drawings*."
- .2 Add new paragraph 12.1.1.9 as follows:
 - ".9 Confirmation by the *Consultant* that the aggregate cost of completing the remaining *Work* and correcting known defects and deficiencies is the lesser of \$5,000 and 1% of the *Contract Price*."
- .3 Delete paragraph 12.1.2 and replace with the following:

"12.1.2 If any prerequisites set forth in paragraphs 12.1.1.3 to 12.1.1.6 are deferred by agreement between the *Owner* and the *Contractor*, *Ready-for-Takeover* shall not be delayed."

.4 Delete paragraph 12.1.6 in its entirety.

.31 GC 12.2 EARLY OCCUPANCY BY THE OWNER

.1 Delete paragraphs 12.2.1 through 12.2.4 and replace them with the following:

"12.2.1 The *Owner*, its agents, and *Other Contractors* shall have the right to enter, occupy and take possession of any portion or all of the undelivered portion of the *Project*, even though *Ready-for-Takeover* may not have been attained, provided that such entry, occupation, taking of possession or use will not interfere, in any material way, with the progress of the *Work*. The entry, occupation, taking of possession or use of any such portion of the *Project* or *Work* shall not be deemed to be the *Owner's* acknowledgement or acceptance of the *Work* or the *Project*, nor shall it be deemed to be an acknowledgement or acceptance by the *Owner* that such *Work*, or portions of the *Work*, have met the *Ready-for-Takeover* requirements described in the *Contract Documents*.

12.2.2 The *Contractor* shall, as directed by the *Consultant*, give priority to certain parts of the *Work* and bring such parts to a "ready for use" status. Such instructions may require installation of temporary stairs and exits and temporary services, all of which shall be provided and subsequently removed.

12.2.3 The *Contractor* shall maintain full access to the *Work* for the *Owner's* use, as required. The *Contractor* shall maintain or restore heat and power to areas when necessary or as scheduled and keep existing utilities and services functional.

12.2.4 The entry, occupation, taking of possession or use of any portion of the *Project* by the *Owner*, its agents or *Other Contractors* pursuant to this GC 12.2 – EARLY OCCUPANCY BY THE OWNER shall not relieve the *Contractor* of any of its obligations under the *Contract*, including the *Contractor's* designation and obligations as "constructor" under *OHSA* and the *Contractor's* obligations respecting construction health and safety, and all the *Contractor's* obligations, rules, regulations and practices shall continue to apply notwithstanding such entry, occupation, taking of possession or use."

.32 GC 12.3 WARRANTY

.1 Amend paragraph 12.3.1 by adding the following to the end:

"Notwithstanding the foregoing, if an item of *Work* is not completed at *Ready-for-Takeover*, except for extended warranties as described in paragraph 12.3.6, the warranty period for such item of *Work* shall be one year from the date that such item of *Work* has been completed and accepted in writing by the *Owner*."

.2 Add a new paragraph 12.3.1A as follows:

"12.3.1A If the *Contractor* has been permitted to make use of permanent equipment or systems, as provided in GC 3.12 – CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS, such permanent equipment

or system shall be subject to the same warranty as described in this GC 12.3 and shall be judged, for purposes of assessing compliance with the warranty, as though the equipment or system was new, clean and unused by the Contractor, except for normal commissioning and start-up activities, prior to Ready-for-Takeover.”.

- .3 Amend paragraph 12.3.4 by adding the following to the end:
“The Contractor shall perform all remedial and warranty work at its own cost and expense and at a time convenient to the Owner, which may be outside of normal working hours. Before performing the remedial and warranty work the Contractor shall provide, for the Owner's review and approval, a proposed schedule for the performance of such work. Except for any extended warranties provided for in the Contract Documents, the warranty period for any corrective work performed by the Contractor pursuant to GC 12.3 – WARRANTY shall commence on the date that such corrective Work was completed.”
- .4 Add new paragraphs 12.3.5A and 12.3.5B immediately after paragraph 12.3.5 as follows:
"12.3.5A If the *Contractor* fails to perform the remedial and warranty work and/or fails to correct the defects, deficiencies or items of non-compliant *Work* or is not diligently working towards completion of the same to the satisfaction of the *Consultant*, or if the *Contractor* fails to correct or pay for damage resulting from corrections made, as required in paragraph 12.3.5, the *Owner* may engage others to perform the work necessary to complete and correct the outstanding defects, deficiencies or items of non-compliant *Work* at the risk and cost of the *Contractor*, and may deduct such costs and may pay such costs and damage from the *Deficiency Rectification Security*. If the costs of completion and correction of such defects, deficiencies and/or non-compliant *Work* exceed the amount of the *Deficiency Rectification Security*, the *Contractor* shall reimburse the *Owner* for all excess costs and damages. The *Owner's* rights under this paragraph are in addition to any other rights the *Owner* may have pursuant to the *Contract* and/or at law.
- 12.3.5B Provided that the *Contractor* has completed all outstanding remedial and warranty work and has corrected all defects and deficiencies and has completed all items of non-compliant *Work* and has corrected or paid for all damage resulting from corrections made, all to the satisfaction of the *Consultant*, the *Owner* shall return to the *Contractor* the balance of the *Deficiency Rectification Security*, if any, without interest, 10 *Working Days* after the date that is the later of (a) the date of total completion of the *Contract*, and (b) the date on which the warranty period ends.”

.33 GC 13.1 INDEMNIFICATION

- .1 Delete GC 13.1 and replace it with the following:
"GC 13.1 INDEMNIFICATION
13.1.1 The Contractor shall indemnify and shall defend and save harmless the Owner, its manager, officers, directors, agents, representatives, elected officials, successors, and employees harmless from and against any claims, causes of action, demands, losses, charges, fees, duties, accounts, fines,

penalties, expenses and costs (including legal costs on a solicitor and client basis), or other proceedings of every kind or nature whatsoever at law or in equity brought against, suffered by, or imposed on the reason of,

- .1 the Contractor carrying out or failing to carry out any obligation to which it is subject including the performance of the Work, or exercising any right to which it is entitled, under the Contract except to the extent that the same are caused by the negligence or deliberate wrong-doing of the Owner or other person entitled to indemnification under this section, or
- .2 any patent, trademark, copyright infringement or other breach of any intellectual property right of any person, for which the contractor or any Subcontractor to the Contractor is responsible.

13.1.2 The Contractor shall indemnify and hold harmless the Owner's agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceedings by third parties that arise out of, or are attributable to, the Contractor's performance of the Contract, provided such claims are attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, and caused by negligent acts or omissions of the Contractor or anyone for whose acts the Contractor may be liable, and made in writing within a period of 6 years from the date of Ready-for-Takeover as set out in the certificate of Ready-for- Takeover, or within such shorter period as may be prescribed by any limitation statute or the province or territory of the Place of the Work."

.34 PART 14 – OTHER PROVISIONS

- .1 Add a new "**PART 14 – OTHER PROVISIONS**" as follows:

"PART 14 OTHER PROVISIONS

GC 14.1 LIENS AND ACTIONS

- 14.1.1 The *Contractor* shall save and keep the *Owner* and the *Place of the Work* free from all construction liens and all other liens whatsoever arising out of the *Work*. If any lien is claimed, filed or registered or any written notice of a lien is received by reason of any *Work* supplied or claimed to have been supplied by or through a *Subcontractor* or *Supplier*, the *Contractor* shall, at its own expense, within ten (10) *Working Days* of being notified of the lien or written notice of a lien, secure the discharge, release, vacating or withdrawal of such lien or written notice of a lien by payment or by giving security or in such other manner as is or may be required or permitted by law, failing which the *Owner* may, but shall not be required, take such steps as it, in its absolute discretion, may deem necessary to release, vacate or discharge the lien or written notice of a lien.
- 14.1.2 If a lien action is commenced arising out of a lien described in paragraph 14.1.1, the *Contractor* shall take all reasonable steps to remove the *Owner* from such action and shall indemnify the *Owner* and hold it harmless in such action.
- 14.1.3 All amounts, including legal costs on a full indemnity basis, disbursements, interest, borrowing, premium or other bonding costs

and/or charges incurred by the *Owner* in releasing, vacating, discharging and/or otherwise dealing with a *Subcontractor* or *Supplier* lien, written notice of a lien and/or defending or otherwise dealing with a lien action, shall be charged to the *Contractor* and shall be set off and deducted from any amount owing to the *Contractor*. If there is no amount owing by the *Owner* to the *Contractor* at that time, then the *Contractor* shall reimburse the *Owner* for all amounts incurred by the *Owner*.

GC 14.2 CONTRACTOR'S DISCHARGE OF LIABILITIES

14.2.1 In addition to the obligations assumed by the *Contractor* pursuant to GC 3.6 – SUBCONTRACTORS AND SUPPLIERS, the *Contractor* agrees to discharge all liabilities incurred by it for services, materials, *Subcontractors* and *Products*, used or reasonably required for use in the performance of the *Work*, except for amounts withheld by reason of legitimate dispute and which have been identified to the party or parties, from whom payment has been withheld.

GC 14.3 OWNERSHIP OF MATERIALS

14.3.1 Unless otherwise specified, all materials existing at the *Place of the Work* at the time of execution of the *Contract* shall remain the property of the *Owner*. All *Work* and *Products* delivered to the *Place of the Work* by the *Contractor* shall be the property of the *Owner*. The *Contractor* shall remove all surplus or rejected materials from the *Place of the Work*.

GC 14.4 DAILY REPORTS/DAILY LOGS

14.4.1 The *Contractor* shall cause its supervisor, or such competent person as it may delegate, to prepare and maintain a daily site log with descriptions of Project activities. Make available to *Owner* for inspection and copying all of the records.

GC 14.5 ADVERTISING AND PUBLIC STATEMENTS

14.5.1 The *Contractor* shall not publish, issue or make any statements or news release, electronic or otherwise, concerning the *Contract*, the *Work*, or the *Project*, and shall not use the *Owner's* name, logo, etc. without the prior express written consent of the *Owner*."

END OF SECTION

1 General

1.1 REFERENCES

- .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 Province of Prince Edward Island
 - .1 Occupational Health and Safety Act, R.S.P.E.I. 1988.
- .4 CSA C22.1-21 - Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.
- .5 CSA C22.3 No. 1-M87 (R2001) - Overhead Systems.
- .6 CSA C22.3 No. 7-94 (R2000) - Underground Systems.
- .7 CSA - S269.1 - 1975 Falsework for Construction Purposes.
- .8 CAN/CSA - S269.2 - M87 Access Scaffolding for Construction Purposes.
- .9 COSH, Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .10 Fire Protection Standards issued by Fire Protection Services of Human Resources Development Canada as follows:
 - .1 FCC No. 301 - June 1982 Standard for Construction Operations.
 - .2 FCC No. 302 - June 1982 Standard for Welding and Cutting.
 - .3 FCC standards, may be viewed at the Regional Fire Protection Services' office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8th Floor, Dartmouth, NS, Tel: (902) 426-6053.

1.2 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within seven days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Part 1: List of individual health risks and safety hazards identified by hazard assessments.
 - .2 Part 2: List specific measures to control or mitigate each hazard and risk identified in part one of Plan. State engineering controls, personal protective equipment and safe work practices to be used for work having identified hazard(s) or risk(s).
 - .3 Part 3: Emergency and Communications Measures as follows:
 - .1 Emergency Procedures: standard operating procedures, evacuation measures and emergency response implemented on site during an accident or incident. State step by step procedures, applicable to each identified hazard.
 - .2 Emergency Communications: list names and telephone numbers of officials, to be contacted if incident, accident or emergency situation occurs, including:
 - .1 General Contractor and all Subcontractors.
 - .2 Provincial Departments and resources from local emergency organizations, based on type of hazard, incident or accident which might occur and as stipulated in applicable laws and regulations.
- .3 Submit 2 copies of Contractor's authorized representative's work site health and safety inspection reports to Consultant.
- .4 Submit copies of incident and accident reports.
- .5 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures.
- .6 Consultant will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within five days after receipt of plan. Revise plan as appropriate and resubmit plan to Consultant within two days after receipt of comments from Consultant.

- .7 Consultant'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.
- .8 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.
- .9 Maintain Worker's Compensation Coverage for duration of contract. Submit Letter of Good Standing to Consultant.

1.3 DEFINITIONS

- .1 Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.
- .2 Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment is isolated.
- .3 De-energize: in the electrical sense, that a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).
- .4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any person who might touch or go near such item.
- .5 Isolate: means that an electrical facility, mechanical equipment or machinery is separated or disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.
- .6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.

1.4 PERMITS

- .1 Obtain permits, licenses and compliance certificates, at appropriate times and frequency as stipulated by authorities having jurisdiction.
- .2 Post all permits on site. Submit copies to Consultant.

1.5 FILING OF NOTICE

- .1 File Notice of Project and other Notices with Provincial authorities prior to commencement of Work.

1.6 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 Province having jurisdiction, and in consultation with Consultant.

1.7 CORRECTION OF NON-COMPLIANCE

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

1.8 MEETINGS

- .1 Preconstruction Conference:

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- .1 The safety officer shall attend and chair the preconstruction conference and prepare a comprehensive agenda for the conference.
 - .2 Meeting On Work Procedures:
 - .1 Meet with Contracting Officer to discuss work procedures and safety precautions. Ensure the participation of the Contractor's superintendent, the quality control, officer and representatives of each subcontractor or trade performing work at the site.
 - .3 Weekly Safety Meetings:
 - .1 Hold weekly at the project site. Prepare minutes showing contract title, signatures of attendees, a list of topics discussed and meeting minutes.
 - .4 Work Phase Meetings:
 - .1 The appropriate activity hazard analysis shall be reviewed and attendance documented by the Contractor at the preparatory, initial, and follow-up phases of quality control inspection.
 - .5 Prior to commencement of work hold Health and Safety meeting. Have Contractor's Site Superintendent in attendance.
 - .6 Provide site safety orientation session to all workers, all workers new to the site and other authorized persons prior to granting them access to work site. Brief persons on site conditions and on the minimum site safety rules in force at site. Maintain records of orientation on site.
 - .7 Conduct site specific occupational health and safety meetings for the duration of the work as follows:
 - .1 Formal meetings on a minimum monthly basis.
 - .2 Informal tool box meetings on a regular basis from a predetermined schedule.
 - .8 Keep workers informed of anticipated hazards, on safety practices and procedures to be followed and of other pertinent safety information related to:
 - .1 Progress of Work;
 - .2 New sub-trades arriving on site and;
 - .3 Changes in site and project conditions.
 - .9 Record and post minutes of meetings. Make copies available to Consultant upon request.

1.9 SITE SAFETY OFFICER (SSO)

- .1 Employ and assign to Work, competent and authorized representative as Site Safety Officer (SSO). The SSO must:
 - .1 Have minimum 2 years site-related working experience specific to activities associated with Construction.
 - .2 Have working knowledge of occupational safety and health regulations.
 - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
 - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
 - .2 The selection of the SSO will be subject to the approval of the Consultant, and changes shall be made as requested by the Consultant.
 - .3 The SSO shall be responsible for ensuring that all provisions of the Health and Safety Plan and relevant legislation are implemented.
 - .4 The SSO shall ensure that all monitoring and testing, as specified and at the direction of the Consultant, are conducted.
 - .5 The SSO shall maintain records of all readings that are taken by the Contractor report and any abnormal or dangerous situation to the Consultant and the Municipality, after having implemented emergency measures, as required, work shall not continue or proceed until the situation has been rectified.
 - .6 The Safety Officer shall be at the work site at all times whenever work or testing is being performed, shall conduct daily safety inspections.
 - .7 The SSO shall be authorized to act on behalf of the Contractor on all matters related to Health and Safety.
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- .8 Qualifications of Site Safety Officer:
 - .1 Ability to manage the on-site Contractor safety program through appropriate management controls.
 - .2 Ability to identify hazards and have the capability to expend resources necessary to abate the hazards.
 - .3 Must have worked on similar types of projects that are equal to or exceed the scope of the project assigned with the same responsibilities.
 - .4 Shall, as a minimum, have attended a recognized training qualification program including at least 40 hours of classroom instruction.
 - .9 Qualifications of Qualified Person, Confined Space Entry:
 - .1 The qualified person shall be capable (by educations and specialized training) of anticipating, recognizing, and evaluating employee exposure to hazardous substances or other unsafe conditions in a confined space. This person shall be capable of specifying necessary control and protective action to ensure worker safety.

1.10 RECORD KEEPING

- .1 ALL activities associated with Health and Safety shall be recorded daily in a bound notebook. Include as a minimum: activity date, time, location of occurrence, mitigation action taken and results. Records shall be assessed by the Consultant.

1.11 SUSPENSION OF ACTIVITIES

- .1 Exposure to contaminants shall be controlled so that no worker is exposed to contaminants at a concentration greater than the Time Weighted Average (TWA) concentration for the contaminant, for up to a 10 hour workday, 40 hour work week.
- .2 The Contractor will halt activities immediately during unsafe conditions. All costs relating to suspension of work for Contractor's failure to maintain Health and Safety procedures shall be borne by the Contractor.
- .3 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

1.12 HEALTH AND SAFETY PLAN

- .1 Prior to commencement of the work, submit to the Consultant a detailed Health and Safety Plan for review. The Health and Safety Plan shall comply with the provisions of this section, and shall illustrate the Contractor's knowledge and understanding of health and safety aspects of the work, the Contractor's intention to maintain a high level of safety on-site, and shall include, but not be limited to:
 - .1 Description of Work.
 - .2 Description of Site-specific Hazards:
 - .1 Physical
 - .2 Chemical
 - .3 Environmental
 - .3 Protective Equipment:
 - .1 Respiratory
 - .2 Contact
 - .4 Decontamination Procedures:
 - .1 Personal protective equipment (PPE)
 - .2 Equipment
 - .3 Infection Control personal protective equipment required by CSA Z317.13-03.
 - .5 Medical - Monitoring:
 - .1 Workers medical profile and suitability to work at the site.
 - .6 Air - Monitoring Procedures:
 - .1 Action levels
 - .2 Site monitoring

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- .3 Perimeter monitoring
 - .7 Emergency Procedures:
 - .1 Emergency Equipment
 - .2 Contingency Plans:
 - .1 Spill control
 - .2 Fire
 - .3 Ventilation
 - .4 Medical Emergency
 - .8 General Safety:
 - .1 Designation of site-safety officer
 - .1 Safety log
 - .2 Trenching, digging, excavations
 - .3 Storage of flammables, compressed gases
 - .4 Safety inspections
 - .9 Site Training:
 - .1 Initial hazard
 - .2 Daily safety
 - .2 All workers shall be trained and be familiar with the Health and Safety Plan and the use of personal protective equipment.
 - .3 Safety Document Submission:
 - .1 Ensure Safety Document Submission applies to Work of this specific project and site.
 - .2 Submit two copies of Safety Document at the Pre-Construction Meeting. Do not commence Work nor deliver material on-site prior to submission.
 - .3 Included in Safety Document submission specific information detailing the methods and procedures to be implemented ensuring adherence to the acts, regulations, codes and policies specified in this section and to:
 - .1 Ensure the health and safety of persons at or near the Work; including, but not limited to, the Public.
 - .2 Ensure the measures and procedures of the regulatory agencies specified are carried out.
 - .3 Ensure every employee, self-employed person and employer performing Work under this contract complies with the regulatory agencies specified.
 - .4 Where changes to the methods and procedures in the execution of work change submitted safety methods and procedures, modify submitted Safety Documentation and submit modifications, in writing to the Consultant and Minister prior to implementation.
 - .4 Safety Document Organization:
 - .1 Organize information in the form of an instructional manual as follows:
 - .1 Place in binders of commercial quality, 8-1/2" x 11" x 3" maximum ring size.
 - .2 Cover: Identify binder with typed or printed title "Project Safety Document" and list the title of the project.
 - .3 Provide tabbed fly leaf for each separate heading, with typed heading on tab.
 - .4 Where drawings are within the safety document, provide with reinforced punched binder tab. Bind in with text; fold in larger drawings to size text pages.
 - .5 Arrange content under Safety Document headings specified herein.
 - .5 Safety Document Headings:
 - .1 Employee Safety Training:
 - .1 Place, under this heading, a statement indicating employees working on this specific project have met specified training requirements.
 - .2 Company Safety Policy
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- .1 Place, under this heading, information pertaining to the company's policy and commitment to Occupational Health and Safety, including the responsibilities of management, supervisors and works.

1.13 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.
- .2 Perform on-going hazard assessments during the progress of Work identifying new or potential health risks and safety hazards not previously known. As a minimum hazard assessments shall be carried out when:
 - .1 New subtrade work, new subcontractor(s) or new workers arrive at the site to commence another portion of work.
 - .2 The scope of work has been changed by Change Order.
 - .3 Potential hazard or weakness in current health and safety practices are identified by Consultant or by an authorized safety representative.
- .3 Each hazard assessment to be made in writing. Keep copies of all assessments on site for duration of Work. Upon request, make available to Consultant for inspection.
- .4 Contractor to conduct a hazard assessment in conjunction with the Owner's maintenance staff as part of the planning process including isolating existing equipment where applicable and identification of hidden services where anchoring is required. Hazard Assessments to conform with requirements of Health and Safety Section 01 35 29 - Health, Safety, and Emergency Response Procedures.

1.14 COMPLIANCE REQUIREMENTS

- .1 Observe and enforce construction safety measures required by National Building Code, latest edition, National Fire Code, Provincial Building Code Act, Worker's Compensation Act and Municipal Statutes and Authorities.
- .2 Comply with Canada Labour Code and Canada Occupational Health and Safety Act.
- .3 Latest edition of the Occupational Health & Safety Act Statutes of Prince Edward Island (including any amendments to and regulations).
- .4 Fire Prevention Act.
- .5 Dangerous Goods Transportation Act.
- .6 Industrial Best Practices for Equipment Isolation and Lockout Policy.
- .7 In case of conflict or discrepancy the more stringent requirement shall apply.
- .8 Maintain clear emergency exit paths.
- .9 Ensure that employees working on this specific project have met training requirements as legislated by the Prince Edward Island Occupational Health and Safety Act and its regulations.
- .10 Where reference is made to jurisdictional authorities, it shall mean all authorities who have within their constituted powers the right to enforce the laws of the place of the building and workplace.
- .11 Provide Consultant with Material Safety Data Sheets (MSDS).
- .12 Provide and maintain first aid equipment, supplied and medications appropriate to the work and its location in accordance with the First Aid Regulations. Obtain and implement recommendations from Occupational Health and Safety Division specific to the project work site.

1.15 WHMIS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labeling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada and Provincial Department of Labour.
- .2 Submit WHMIS data sheets to Consultant in accordance with Section 01 33 00 - Submittal Procedures.

- .3 Maintain WHMIS information station and ensure designated personnel are trained in its use.
- .4 Submit copies of all Tool Box or Safety Meeting notes.
- .5 Submit copies of all Worksite Safety Inspections.

1.16 SMOKING, ALCOHOL & RESTRICTED SUBSTANCES

- .1 Worksites are inherently dangerous, including travelling to and from the site.
- .2 Alcohol, medical and recreational cannabis are restricted substances governed by Federal and Provincial laws as are other forms of illegal drugs.
- .3 The smoking of or use of tobacco products, including e-cigarettes, the use of alcohol and restricted substances including cannabis in any form in the building or on the work site is strictly prohibited.
- .4 Where workers have a prescription for medical cannabis, or other prescription drugs that may cause drowsiness, they are to advise their supervisor and discuss with their supervisor safe and appropriate task(s) while under the influence of these prescriptions on the worksite.
- .5 Workers who violate this requirement will be removed from the worksite.

1.17 SITE CONTROL AND ACCESS

- .1 Control work site and entry points. Grant and allow entry to only workers and other persons so authorized. Immediately stop non-authorized persons from circulating within construction areas and remove from site.
- .2 Prior to gaining access to the site, all contractors, subcontractors and suppliers shall file with the General Contractor their proof of Workers Compensation coverage, proof of required Insurance and proof of contract. Upon request, proof of these documents will be provided to the Owner and Consultant.
- .3 Delineate and isolate construction areas from other areas of site by use of appropriate means. Erect barricades, fences, hoarding and temporary lighting as required. See Section 01 50 00 - Facilities and Controls for minimum type of barriers acceptable.
- .4 Erect signage at entry points and at other strategic locations around site, clearly identifying construction area(s) as being "off limits" to non-authorized persons. Signage must be professionally made.

1.18 PROTECTION

- .1 Provide temporary facilities for protection and safe passage of building occupants, public pedestrian and vehicular traffic around and adjacent to work site.
- .2 Provide safety barricades, lights and signage on work site as required to provide a safe working environment for workers.
- .3 Use personal protection equipment as required by Occupational Health and Safety Act and as required by this site.
- .4 Training of workers in the proper use, fitting, inspection and storage of personal protective equipment shall be done prior to use of the equipment.

1.19 UNFORESEEN 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 Province having jurisdiction and advise Consultant verbally and in writing.

1.20 TESTING AND MONITORING

- .1 Test and monitor for hazardous conditions, as required to demonstrate compliance with provincial regulations.
- .2 If multiple locations are being worked simultaneously, provide monitoring at all locations where work is being carried out, including providing additional monitoring instruments.

1.21 ISOLATION OF EXISTING SERVICES

- .1 Obtain Consultant's written authorization prior to conducting work on an existing active, energized service or facility required as part of the work and before proceeding with lockout of such services or facility.
- .2 To obtain authorization, submit to Consultant following documentation:
 - .1 Written Request two weeks in advance of work for Isolation of the service or facility and;
 - .2 Copy of Contractor's Lockout Procedures.
 - .3 Make a Request for Isolation for each event, unless directed otherwise by Consultant, and as follows:
 - .1 Fill-out standard forms in current use at the Facility when so directed by Consultant or;
 - .2 Where no form exist at Facility, make request in writing identifying:
 - .1 Identification of system or equipment to be isolated, including it's location;
 - .2 Time duration, indicating Start time & date and Completion time & date when isolation will be in effect.
 - .3 Voltage of service feed to system or equipment being isolated.
 - .4 Name of person making the request.
 - .3 Document to be in typewritten format.
 - .4 Do not proceed until receipt of written notification from Consultant granting the Isolation Request and authorization to proceed with the isolation of designated equipment or facility. Consultant may designate other individual at the Facility as the person authorized to grant the Isolation Request.
 - .5 Conduct safe, orderly shut down of equipment or facilities, de-energize and isolate power and other sources of energy and lockout items in accordance with requirement of clause 1.8 below.
 - .6 Plan and schedule shut down of existing services in consultation with the Consultant and the Facility Manager. Minimize impact and downtime of facility operations.
 - .7 Determine in advance, as much as possible, in cooperation with the Consultant, the type and frequency of situations which will require a Request for Isolation. Follow Consultant's directives in this regard.
 - .8 Conduct hazard assessment as part of the planning process of isolating existing equipment and facilities. Hazard Assessments to conform with requirements of Health and Safety Section 01 35 29 - Health, Safety and Emergency Response Procedures.

1.22 LOCKOUTS

- .1 Perform lockouts in compliance with:
 - .1 Canadian Electrical Code
 - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 29 - Health, Safety, and Emergency Response Procedures.
 - .3 Regulations and code of practice as applicable to mechanical equipment or other machinery being de-energized.
 - .4 Procedures specified herein.
 - .2 Isolate and lockout electrical facilities, mechanical equipment and machinery from all potential energy sources prior to starting work on such items.
 - .3 Develop and implement lockout procedures to be followed on site as an integral part of the Work.
 - .4 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.
 - .5 Use industry standard lockout tags.
 - .6 Provide appropriate safety grounding and guards as required.
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- .7 Prepare Lockout Procedures in writing. Describe safe work practices, work functions and sequence of activities to be followed on site to safely isolate all potential energy sources and lockout/tagout facilities and equipment.
 - .8 Include within procedures a system of worker request and issuance of individual lockout permit by a person, employed by Contractor, designated to be "in-charge" and being responsible for:
 - .1 Controlling issuance of permits or tags to workers.
 - .2 Determining permit duration.
 - .3 Maintaining record of permits and tags issued.
 - .4 Submitting a Request for Isolation to Consultant when required by Contractors and / or Owners safety plan.
 - .5 Designating a Safety Watcher, when one is required based on type of work.
 - .6 Ensuring equipment or facility has been properly isolated, providing a Guarantee of Isolation to worker(s) prior to proceeding with work.
 - .7 Collecting and safekeeping lockout tags, returned by workers, as a record of the event.
 - .9 Clearly establish, describe and allocate, within procedures, the responsibilities of:
 - .1 Workers.
 - .2 Designated person controlling issuance of lockout tags/permits.
 - .3 Safety Watcher.
 - .4 Subcontractors and General Contractor.
 - .10 Procedures shall meet the requirements of Provincial and Federal Codes and Regulations.
 - .11 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the procedures applicable to this contract.
 - .1 Incorporate site specific rules and procedures established by Facility Manager and in force at site. Obtain such procedures through Consultant.
 - .12 Procedures to be in typewritten format.
 - .13 Submit copy of Lockout Procedures to Consultant, in accordance with submittal requirements, prior to commencement of work.

1.23 CONFORMANCE

- .1 Ensure that lockout procedures, as established for project on site, are stringently followed. Enforce use and compliance by all workers.
- .2 Brief all persons working on electrical facilities, mechanical and other equipment fed by an energy source on requirements of this section.
- .3 Failure to perform lockouts in accordance with regulatory requirements or follow procedures specified herein may result in the issuance of a Non-Compliance Notification at Consultant's discretion with possible disciplinary measures imposed as specified in Section 01 35 29 - Health, Safety, and Emergency Response Procedures.

1.24 FIRE SAFETY REQUIREMENTS

- .1 Comply with requirements of latest standard for Building Construction Operations issued by the Fire Commissioner of Canada and Fire Safety Regulations of Local Authority.
- .2 Enforce fire protection methods, good housekeeping and adherence to local and underwriter's fire regulations including, but not limited to, Fire Protection Act and the Provincial Building Code Act. Provide UL approved fire extinguishers, and other fire fighting services and equipment, except where more explicit requirements are specified as the responsibility of individual Sections.
- .3 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code, 2015.
 - .2 Fire Protection Standards FCC 301 and FCC 302.

- .3 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 29 - Health, Safety, and Emergency Response Procedures.
- .4 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Consultant will advise on the course of action.
- .5 Advise the Fire Chief in the area of Work of any work that would impede fire apparatus response, including but not limited to violation of minimum overhead clearance prescribed by the fire chief, erecting of barricades and digging of trenches.
- .6 Fire Separations:
 - .1 Ensure that fire separations are installed to maintain total integrity and that they are not breached by Work following their installation.
 - .2 Replace fire separations which have suffered a lessening of their required rating during construction.
- .7 Ensure nothing subverts the integrity of fire protection provided for the building structure.
- .8 Coordinate work of all sections so that they do not encroach on space required for fire protection and its installation. Ensure that fire protection damage during construction is totally replaced.

1.25 FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut-off, unless approved by Consultant.
 - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than fire fighting.
- .3 Costs incurred, from the fire department, Facility owner and tenants, resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

1.26 FIRE SAFETY

- .1 The Sub-Contractors are to participate on the Fire Safety Committee under the Joint Health and Safety Committee. The Fire Safety Committee under the direction of the Contractor is responsible for implementation and maintenance of the Construction Fire Safety Plan.
- .2 Construction Fire Safety Plan:
 - .1 The Construction Fire Safety Plan will include the following:
 - .1 Introduction of plan and purpose
 - .2 Fire Safety Committee
 - .3 Terms of reference.
 - .2 Committee composition.
 - .3 Emergency Procedures.
 - .4 Fire protection equipment.
 - .5 Building description.
 - .6 Provisions for fire fighting.
 - .7 Portable extinguishers.
 - .8 Exits.
 - .9 Emergency Lighting.
 - .10 Reduced drawings.
 - .11 Fire safety maintenance schedule:
 - .1 General.
 - .2 Maintenance levels.
 - .3 Skill categories.
 - .4 Frequency.
 - .5 Checklists.
 - .12 Other information:

-
- .1 Instruction on use of fire extinguishers.
 - .2 Emergency Fire Drill procedures.
 - .3 Portable Fire Extinguishers:
 - .1 During construction, Contractor is to provide and maintain on the site at all times, ULC listed 25 lb ABC dry chemical type portable fire extinguishers.
 - .4 Blockage of Roadways:
 - .1 The Fire Department shall be advised of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by the Fire Department, erecting of barricades and the digging of trenches.
 - .5 Rubbish and Waste Materials:
 - .1 Rubbish and waste materials are to be kept to a minimum.
 - .2 The burning of rubbish is prohibited.
 - .3 Removal:
 - .1 All rubbish shall be removed from the work site at the end of the workday or shift or as directed by Consultant.
 - .4 Storage:
 - .1 Extreme care is required where it is necessary to store oily waste in work areas to ensure maximum possible cleanliness and safety.
 - .2 Greasy or oily rags or materials subject to spontaneous ignition shall be deposited and kept in an approved receptacle and removed as required in 1.7.3.1.
 - .6 Flammable Liquids:
 - .1 The handling, storage and use of flammable liquids are to be governed by the current National Fire Code of Canada.
 - .2 Flammable liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 liters provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable liquids exceeding 45 liters for work purposes, requires the permission of the Fire Department.
 - .3 Transfer of flammable liquids having a flash point below 38°C is prohibited within buildings.
 - .4 Transfer of flammable liquids shall not be carried out in the vicinity of open flames or any type of heat-producing devices.
 - .5 Flammable liquids having a flash point below 38°C, such as naphtha or gasoline, shall not be used as solvents or cleaning agents.
 - .6 Flammable waste liquids, for disposal, shall be stored in approved containers located in a safe ventilated area. Quantities are to be kept to minimum and the Fire Department is to be notified when disposal is required.
 - .7 Fire Inspection:
 - .1 The Fire Department shall be allowed unrestricted access to the work site.
 - .2 The Contractor shall cooperate with the Fire Department during routine inspections of the work site.
 - .3 The Contractor shall immediately remedy all unsafe fire situations observed by the Fire Department.
 - .8 Reporting Fires:
 - .1 Know the location of the nearest fire alarm box and telephone, including the emergency phone number.
 - .2 Report immediately all fire incidents to the fire department as follows:
 - .1 Activate nearest fire alarm box, or
 - .2 Telephone 911.
 - .3 Where fire alarm box is exterior to building, the person activating the fire alarm box shall remain at the box to direct Fire Department to scene of the fire.
-

- .4 When reporting a fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

1.27 WELDING AND CUTTING

- .1 Use noncombustible shields for electric and gas welding or cutting executed within two meters of combustible material or in occupied space.
- .2 Place tanks supplying gases as close to work as possible. Fix in upright position, free from exposure to sun or high temperatures.
- .3 Locate fire extinguishing equipment near all welding and cutting operations.

1.28 OPEN FLAMES, SPARKS, EXPLOSION PROTECTION

- .1 Keep open flames and sparks to minimum. When flame or sparks are required, follow proper procedures to prevent fire or explosion.

1.29 HOT WORK AUTHORIZATION

- .1 Hot Work will not be permitted on or within the building structure, tanks, or confined spaces, except as outlined herein.
- .2 Obtain Consultant's written "Authorization to Proceed" before conducting any form of Hot work on site.
- .3 To obtain authorization submit to Consultant:
 - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
 - .2 Description of the type and frequency of Hot Work required.
 - .3 Sample Hot Work Permit to be used. Shall be included in the safety documentation submission.
- .4 Upon review and confirmation that effective fire safety measures will be implemented during performance of hot work, Consultant will provide authorization to proceed as follows:
 - .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
 - .2 Separate work, or segregate certain parts of work, into individual entities. Each entity requiring a separately written "Authorization to Proceed" from Consultant. Follow Consultant's directives in this regard.
- .5 Requirement for individual authorization based on:
 - .1 Nature or phasing of work;
 - .2 Risk to Facility operations;
 - .3 Quantity of various trades needing to perform hot work on project or;
 - .4 Other situation deemed necessary by Consultant to ensure fire safety on premises.
- .6 Do not perform any Hot Work until receipt of Consultant's written "Authorization to Proceed" for that portion of work.
- .7 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Consultant. When directed, perform Hot Work only during non-operative hours of Facility. Follow Consultant's directives in this regard.

1.30 HOT WORK PROCEDURES

- .1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.
- .2 Procedures to include:
 - .1 Requirement to perform hazard assessment of site and immediate hot work area for each hot work event in accordance with Hazard Assessment and Safety Plan requirements of Section 01 35 29 - Health, Safety, and Emergency Response Procedures.
 - .2 Use of a Hot Work Permit system for each hot work event.
 - .3 The step by step process of how to prepare and issue permit.

- .4 Permit shall be issued by Contractor's site Superintendent, or other authorized person designated by Contractor, granting permission to worker or subcontractor to proceed with hot work.
- .5 Maintain a fire extinguisher in the immediate area where hot work is being undertaken.
- .6 Provision of a designated person to carryout a Fire Safety Watch for a minimum of 2 hours immediately upon completion of the hot work.
- .7 Compliance with fire safety codes and standards specified herein and Occupational Health and Safety regulations specified in Section 01 35 29 - Health, Safety, and Emergency Response Procedures.
- .3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Clearly label as being the Hot Work Procedures applicable to this contract.
- .4 Hot Work Procedures shall clearly establish worker instructions and allocate responsibilities of:
 - .1 Worker(s),
 - .2 Authorized person issuing the Hot Work Permit,
 - .3 Fire Safety Watcher,
 - .4 Subcontractors and Contractor.
- .5 Brief all workers and Subcontractors on Hot Work Procedures and Permit system established for project. Stringently enforce compliance.
 - .1 Failure to comply with the established procedures may result in the issuance of a Non-Compliance Notification at Consultant's discretion with possible disciplinary measures imposed as specified in Section 01 35 29 - Health, Safety, and Emergency Response Procedures.

1.31 HOT WORK PERMIT

- .1 Hot Work Permit to include, as a minimum, the following data:
 - .1 Project name and project number;
 - .2 Building name, address and specific room or area where hot work will be performed;
 - .3 Date when permit issued
 - .4 Description of hot work type to be performed;
 - .5 Special precautions required, including type of fire extinguisher needed;
 - .6 Name and signature of person authorized to issue the permit.
 - .7 Name of worker (clearly printed) to which the permit is being issued.
 - .8 Time Duration that permit is valid (not to exceed 8 hours). Indicate start time & date and completion time & date.
 - .9 Worker signature with date and time upon hot work termination.
 - .10 Specified time period requiring safety watch.
 - .11 Name and signature of designated Fire Safety Watcher, complete with time & date when safety watch terminated, certifying that surrounding area was under his continual surveillance and inspection during the full watch time period specified in Permit and commenced immediately upon completion of Hot Work.
- .2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.
- .3 Each Hot Work Permit to be completed in full and signed as follows:
 - .1 Authorized person issuing Permit before hot work commences;
 - .2 Worker upon completion of Hot Work;
 - .3 Fire Safety Watcher upon termination of safety watch;
 - .4 Returned to Contractor's Site Superintendent for safe keeping.
 - .5 The permit shall describe compliance with the following procedures. After tank or confined space interiors or building areas have been decontaminated, hot work may be conducted only when the tank or confined space is inverted. Hot work shall not be performed unless monitoring indicates atmospheres within and immediately

surrounding are less than eight percent (8%) oxygen inside less than ten percent (10%) of the LFL outside; continuous monitoring shall continue until the hot work is completed. The hot work prohibition includes welding, cutting, grinding, sawing, or other similar operations which could be expected to potentially generate combustion-producing temperatures or sparks, or which could produce potentially hazardous fumes or vapours. An individual at each hot work site shall be designated as a fire watch. This person's sole responsibility shall be to monitor the hot work and have immediate access to at least two (2) twenty (20) pound fire extinguishers located at each hot work site. All extinguishers shall be currently inspection tagged, approved safety pin and tamper resistant seal. A new permit shall be obtained at the start of each work shift during which hot work will be conducted.

1.32 BLASTING

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instruction by Consultant.

1.33 POWER ACTUATED DEVICES

- .1 Use power actuated devices only after receipt of written permission from Consultant.

1.34 HANDLING AND TRANSPORTATION OF DANGEROUS GOODS

- .1 Observe and enforce all measures required by the regulatory agencies including but not limited to Environment Canada, Prince Edward Island Department of Environment, and Transport Canada.
- .2 Most current regulatory guidelines and Acts will apply to the work.
- .3 In case of any conflict, the more stringent requirements will apply.

1.35 OPEN EXCAVATIONS

- .1 If open foundations or demolition areas are to be left at the end of a work day, protective fencing must be placed around the entire perimeter to limit access by others. Fencing to be self-supporting, approved by the Department of Labour and the Construction Safety and Industrial Safety Regulations.

1.36 POTENTIAL HAZARDS

- .1 Hazards include, but are not limited to, toxic, flammable and explosion hazards associated with cleaning solvents.
- .2 The Contractor shall become familiar with all potential hazards associated with the work, and shall take necessary measures to avoid injury or damage of any kind.

1.37 HAZARDOUS MATERIALS

- .1 Should material resembling hazardous materials, other than those identified with the Contract Documents, including but not limited to spray or trowel applied asbestos, be encountered in course of work; stop work immediately. Do not proceed until written instructions have been received from Consultant.
- .2 Any material which contains asbestos that is disturbed or removed during construction work, shall be removed in accordance with the regulations set out by the Occupational Health and Safety Act. All costs for proper cutting, removal and disposal of all asbestos identified in this contract shall be included in Tender.
- .3 Where work entails use, storage, or disposal of toxic or hazardous materials, chemicals and/or explosives, or otherwise creates a hazard to life, safety, health, or the environment; work shall be in accordance with the Authority Having Jurisdiction (AHJ).

1.38 ENVIRONMENTAL PROTECTION

- .1 Ensure that pollution and environmental control of construction activities are exercised during the Work to requirements of the federal and provincial environmental acts; including, but not limited to, the Prince Edward Island Environmental Protection Act.

1.39 SANITATION / DECONTAMINATION PRACTICES

- .1 After each use, all disposable protective equipment shall be collected in a dedicated container for disposal.
- .2 All respiratory equipment shall be decontaminated daily after use.
- .3 All tools, pumps and equipment used during cleanup should be dedicated to the handling of contaminants and labeled as such and thoroughly decontaminated at the completion of the project.
- .4 Contaminated work clothing shall not be worn outside of regulated areas.
- .5 Workers shall wash their hands and exposed skin before eating, drinking, smoking or using toilet facilities during work shift, and at the completion of a work shift.
- .6 Food, drink and tobacco products shall not be permitted in regulated areas.

1.40 WORK PRACTICES AND ENGINEERING CONTROLS

- .1 Access to work areas shall be regulated and limited to authorized persons. A daily roster shall be kept of persons entering such areas.
- .2 Handling Contaminants and General Work Practices.
 - .1 Transportation and handling of contaminants to meet applicable local, provincial and federal regulations.
 - .2 Emergency respiratory equipment shall be located in readily accessible locations which will remain minimally contaminated with contaminants in an emergency.
 - .3 Containers and systems shall be handled and opened with care. Approved protective clothing shall be worn by all employees engaged in regulated areas.
 - .4 All wastes and residues containing contaminants shall be collected in appropriate containers.
- .3 Confined or Enclosed Spaces
 - .1 Entry into confined or enclosed spaces, where there is limited egress, shall be controlled by a permit system. Permits shall be signed by an authorized representative of the employer and shall certify that appropriate measures have been taken to prevent adverse effects on the worker's health as a result of his or her entry into such space.
 - .2 Confined or enclosed spaces which have contained contaminants shall be thoroughly ventilated to assure an adequate supply of oxygen, tested for contaminants, and inspected for compliance with these requirements prior to each entry. Adequate ventilation shall be maintained while workers are in such spaces. Each individual entering such confined or enclosed space shall be furnished with appropriate personal protective equipment and clothing and be connected by a lifeline harness to standby worker stations outside of the space. The standby worker shall also be equipped for entry with approved personal protective equipment and clothing and have contact with a third person. The standby person shall maintain communication (visual, voice, signal line, telephone, radio, or other suitable means) with the employee inside the confined or enclosed space.
 - .3 Workers entering confined spaces and standby workers shall be trained at a recognized confined space training program.

1.41 PRE-CONSTRUCTION CONTRACTOR SAFETY CHECKLIST

- .1 Use this text as a guideline for completing the following checklist. This checklist is a general, pre-construction review of the Contractor safety program, as well as an information session to

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- identify what the Owner requires of the Contractor. Where the item requires a submission, ensure that it is received. If the item does not apply, enter N/A for not applicable.
- .2 The following information will assist in establishing what will be reviewed in each section:
- .1 Safety Policy: Each employer is required by law (in Prince Edward Island) to have a safety policy and program and to implement that policy. The Owner will ask for a copy of that program.
 - .2 Safety Representative: Each Contractor is required to advise the Owner who their safety representative is. That representative has duties as described in the Occupational Health and Safety Act.
 - .3 Emergency Procedure: Each Contractor must have a site specific layout and emergency plan complete with emergency phone numbers.
 - .4 Employee Orientation: Each and every person working for a Contractor, including Sub-Contractors, will be given an orientation to familiarize them with the site safety program. Unless otherwise specified, each Sub-Contractor is responsible for the orientation of their workers.
 - .5 Safe Work Plan: Most Contractors are involved in tasks that subject workers to hazards. In order to ensure that these workers are secured from hazard, the Contractor will supply the Owner with a written safe work plan which affords protection against the hazards. This plan must be signed by a company representative and communicated to the workers involved in the task.
 - .6 Personal Protective Equipment Review: Advise that all workers require CSA Class "B" hard-hat, CSA "Green Patch" (eight inch) footwear, eye, ear and respiratory protection as required (boots and hats at all times).
 - .7 Fall Protection: Fall restraint or fall arrest protection required where a fall of 2.4 meters or more is possible. NO EXCEPTIONS.
 - .8 Housekeeping: Advise of daily, or as needed, clean-up requirements.
 - .9 Tool Box Talks: Each Contractor is required to conduct weekly safety meetings with their forces and advise the Owner they have been done.
 - .10 Material Handling / Storage: Advise Contractor about storage areas and handling of material so as not to endanger their worker or another worker. Stacked material to be banded, chained, blocked or otherwise secured.
 - .11 Landing Platform: Advise Contractor about movement of material on or off platforms. All material to be secured. Platform gates or chains to be kept closed at all times workers are on platform. If not possible, worker to be tied off with fall restraint system independent of platform.
 - .12 WHMIS Training: Receive verification that all workers are trained and that the Contractor submits their MSDS.
 - .13 GFCI: Advise Contractor that all tools are required to have ground fault circuit interrupters (where electricity is supplied by Contractor).
 - .14 Accident Investigations: Any injury to any of their workers must be investigated and reported to the Owner.
 - .15 Verbal, Written, Gone: Explain Zero Tolerance Program.
 - .16 Joint / Worker Safety Committee: Sites of over 20 workers must establish a safety committee; over 50 workers, an additional worker committee. Workers required to attend committee meetings will do so and not be prevented by employers.
 - .17 Fire Protection: All trades involved in performing hot work of any kind are required to provide fire protection at the work location.
 - .18 Guardrails: Advise Contractor that where temporary removal guardrails required, guardrails must be replaced as soon as possible.
 - .19 First Aider: Each Contractor is required to have a first aid kit and trained first aider. Employer must name their first aider.
 - .20 Visitors: Advise Contractor that any visitors to site must be suitably protected from hazard. They must wear hard hat, safety vest, and proper safety footwear while on site.
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- .21 Task Lighting: Review responsibilities of task specific lighting (who provides it).
- .22 Swamper / Rigger Competency: Where cranes are used, the Contractor must use a swamper / rigger. They shall provide the Owner with a written statement identifying, by name(s) their rigger and that the named person is a competent work as described in the Construction regulation.
- .23 Scaffolds: Review scaffold building requirement:
 - .1 Use all braces required by design.
 - .2 Access ladder for platform over 1.5 meters.
 - .3 Full width platform if height over 3 meters.
PEI Regulations require double planks.
 - .4 Tied in three time base dimension or use of outriggers.
 - .5 Engineered over 16 meters in height (standard frame type).
- .24 Elevating Work Platforms:
 - .1 All boom and scissors lifts required to be CSA approved and have approval on machine.
 - .2 Operators manual required on machine at all times.
 - .3 Maintenance record on machine at all times.
 - .4 Operator must receive training in operation of equipment.
 - .5 Fall protection must be used at all times on a boom lift.
 - .6 Fall protection required to be used on scissors lift when unit is being moved.
- .25 Protruding Rebar: Installers of reinforcing steel must protect the protruding hazard or make arrangements to have it protected. Removal of protective coverings for task purposes only is allowed, however, protective covering must be replaced as soon as possible.
- .26 WCB Clearance Certificates: Advise Contractor that the Owner will not release any funds for payment until Workers Compensation Board Clearance Certificate has been received by the Owner.
- .3 The following checklist is a general pre-construction review of the Contractor's safety program as required by the Owner.

PROJECT: _____ DATE: _____

CONTRACTOR: _____

WORK BEING PERFORMED: _____

Checkmark means YES / X means NO

- .1 ☐ Safety Policy Submitted
- .2 ☐ Safety Representative
- .3 ☐ Emergency Procedure Review
- .4 ☐ Employee Orientation
- .5 ☐ Written Safe Work Plan
- .6 ☐ Personal Protective Equipment Review
 - .1 ☐ Hard Hat & Footwear
 - .2 ☐ Safety Glasses & Hearing
- .7 ☐ Dust & Fumes
- .8 ☐ Fall Protection
- .9 ☐ Housekeeping
- .10 ☐ Tool Box Safety Talks (Weekly)
- .11 ☐ Material Handling / Storage
- .12 ☐ Landing Platforms
- .13 ☐ WHMIS Training Verification
- .14 ☐ GFCI Requirements

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- .15 _____ Accident / Incident Investigations Notification
 - .16 _____ Verbal, Written, Gone
 - .17 _____ Joint / Worker Safety Committee
 - .18 _____ Fire Protection
 - .19 _____ Guardrails
 - .20 _____ First Aider on Staff - Name Supplied
 - .21 _____ Visitors & Safety Equipment
 - .22 _____ Task Lighting
 - .23 _____ Swampers / Riggers Competency (in writing)
 - .24 _____ Scaffolds
 - .25 _____ Elevating Work Platforms
 - .26 _____ Protruding Rebar Protection - MSDS Received
 - .27 _____ WCB Clearance Certificate.

(Print name and title)

(Print name and title)

Owner Representatives (Signature)

Contractor Representatives (Signature)

(Date)

(Date)

END OF SECTION

1 General

1.1 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.2 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.3 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

1.4 SITE CLEARING AND PLANT PROTECTION

- .1 Protect trees and plants on site and adjacent properties.
- .2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
- .3 Protect roots of designated trees to drip line during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .4 Minimize stripping of topsoil and vegetation.
- .5 Restrict tree removal to areas indicated or designated by Consultant.

1.5 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 Design and construct temporary crossings to minimize erosion to waterways.

1.6 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.7 SMOKING RESTRICTIONS

- .1 Smoking is not permitted inside the building at any time or at any stage of construction.

1.8 ENVIRONMENTAL PERMIT APPROVAL

- .1 Comply with requirements contained in the Transportation and Public Works Environmental Management Division environmental approval permit for the project.

END OF SECTION

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1 General

1.1 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
- .1 CCDC 2-2020, Stipulated Price Contract.

1.2 INSPECTION

- .1 Allow Consultant 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 Consultant 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 Consultant may order any 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, Owner shall pay cost of examination and replacement.

1.3 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies are to be engaged by Owner for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Owner.
- .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 may request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Consultant at no cost to Owner. Pay costs for retesting and re inspection.

1.4 PROCEDURES

- .1 Notify appropriate agency and Consultant 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 an orderly sequence so as not to cause delay 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 Consultant 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 Consultant it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Consultant.

1.6 REPORTS

- .1 Submit digital copies of inspection and test reports to Consultant.
- .2 Provide digital copies to Subcontractor of work being inspected or tested.

1.7 TESTS AND MIX DESIGNS

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

1.8 MOCK-UPS

- .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
- .2 Construct in all locations acceptable to Consultant.
- .3 Prepare mock-ups for Consultant's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 Failure to prepare mock-ups 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.
- .5 If requested, Consultant will assist in preparing a schedule fixing dates for preparation.
- .6 Remove mock-up at conclusion of Work or when acceptable to Consultant.
- .7 Mock-ups may remain as part of Work as directed by Consultant.

1.9 MILL TESTS

- .1 Submit mill test certificates as requested.

1.10 EQUIPMENT AND SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

END OF SECTION

1 General

1.1 REFERENCE STANDARDS

- .1 Manual of Uniform Traffic Control Devices for Streets and Highways - 2009 Edition with 2012 Revisions.
- .2 Prince Edward Island Transportation and Public Works
 - .1 Temporary Workplace Traffic Control Manual - 2016.

1.2 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 Review with City Public Works Manager all precautions to be taken and safety measures to be put in place and obtain acceptance before proceeding with work.
- .3 When working on traveled 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 traveled way.
 - .3 Do not leave equipment on traveled way overnight.
- .4 Do not close any lanes of road without approval of Town of Three Rivers Public Works Manager. Before re-routing traffic erect suitable signs and devices in accordance with instructions contained in Part D of UTCD.
- .5 Keep traveled way graded, free of pot holes and of sufficient width for required number of lanes of traffic.
 - .1 Provide minimum 7 m wide temporary roadway for traffic in two-way sections through Work and on detours.
 - .2 Provide minimum 5 m wide temporary roadway for traffic in one-way sections through Work and on detours.
- .6 As indicated, provide graveled detours or temporary roads to facilitate passage of traffic around restricted construction area.
- .7 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, unless other means of road access exist that meet approval of Consultant.

1.3 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 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 UTCD manual.
- .3 Place signs and other devices in locations recommended in UTCD manual.
- .4 Meet with Consultant prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Consultant.
- .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.

1.4 CONTROL OF PUBLIC TRAFFIC

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

-
- .1 When public traffic is required to pass working vehicles or equipment that block all or part of traveled 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 workmen or equipment are employed on traveled 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 Provide full time flag person during daylight hours to control both construction activities and public traffic and to permit pedestrians safe passage.
 - .6 For emergency protection when other traffic control devices are not readily available.
 - .7 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
 - .8 Delays to public traffic due to contractor's operators: maximum 10 minutes.
 - .9 Flag person to have two-way radio communications at all times.

END OF SECTION

1 General

1.1 INSPECTION AND DECLARATION

- .1 Contractor's Inspection:
 - .1 Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Consultant in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Consultant's Inspection.
- .2 Consultant's Inspection:
 - .1 Consultant, Owner and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and are fully operational.
 - .4 Certificates required by authorities having jurisdiction have been submitted.
 - .5 Systems have been commissioned.
 - .6 Operation of systems have been demonstrated to Owner's personnel.
 - .7 Work is complete and ready for Final Inspection.
- .4 Final Inspection:
 - .1 When items noted above are completed, request final inspection of Work by Owner and Consultant. If Work is deemed incomplete by Consultant complete outstanding items and request re inspection.
- .5 Declaration of Substantial Performance:
 - .1 When Consultant consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for Certificate of Substantial Performance. Refer to CCDC 2, General Conditions Article for specifics to application.
- .6 Commencement of Lien and Warranty Periods:
 - .1 Date of Owner's acceptance of submitted declaration of Substantial Performance shall 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 Consultant consider final deficiencies and defects have been corrected and it appears requirements of Contract have been totally performed, make application for final payment. Refer to CCDC 2. If Work is deemed incomplete by Owner, complete outstanding items and request re inspection. Cost of re inspection will be deducted from final payment.
- .8 Payment of Holdback:
 - .1 After issuance of Certificate of Substantial Performance of Work, submit an application of payment of holdback amount in accordance with CCDC2.

1.2 CERTIFICATE OF SUBSTANTIAL PERFORMANCE

- .1 Upon approval, a Certificate of Substantial Performance will be issued to the Contractor by the Consultant. Upon receipt of fully executed certificate, a copy shall be emailed to the Owner for their records.
- .2 The Certificate of Substantial Performance will establish the date of the Consultant's inspection as the date of Substantial Performance of the Contract, and will commence the required 60-day period before release of the lien holdback amount.
- .3 During the 60-day period, Contractor shall continue to complete the work.

- .4 The Contractor shall immediately deliver to the Consultant specified submissions upon receipt of the Certificate of Substantial Performance.

1.3 ESTABLISHMENT OF WARRANTIES

- .1 Warranties shall commence at date of Substantial Performance of the Work.

1.4 CERTIFICATE FOR PAYMENT OF LIEN HOLDBACK AMOUNT

- .1 The Contractor shall submit statement and supporting documents for application of Release of Lien Holdback amount. These documents include those listed in Paragraph 2.2.2 and 2.2.3 and the Statutory Declaration Form CCDC 9A.
- .2 Within five working days of receipt of application for Release of Lien Holdback amount and if approved, the Consultant will prepare a Certificate for Payment of the Lien Holdback amount. This Certificate dated on the day following termination of the 60 day period will be issued to the Owner with a copy delivered to the Contractor.
- .3 The Owner will before the date of this Certificate ensure that no liens related to the Contract are registered and that no notice of liens has been received at the end of the 60-day period.
- .4 Should no liens exist, the Lien Holdback will be due and payable one day after termination of the 60-day period in the amount indicated on the approved application for Certificate of Substantial Performance.
- .5 The Owner will review jointly with the Contractor's Insurance related to the Contract before the 60-day period is terminated to ensure that all parties are adequately covered.

1.5 TOTAL PERFORMANCE

- .1 The Contractor shall inspect the work to establish its completion in accordance with the Contract Documents and when satisfied of this completion request of the Consultant a final inspection.
- .2 The Consultant will compile a final deficiency list at this inspection and issue it to the Contractor and Owner.
- .3 The Contractor shall correct final deficiencies before a date agreed upon by the Contractor and Consultant.
- .4 When the Contractor has satisfied himself that these corrections have been completed in a satisfactory manner by his inspection, he shall schedule a re-inspection by the Consultant, and the Owner's representatives if required, within five working days of the Contractor's request.
- .5 When the Consultant is satisfied that all deficiencies have been rectified and the work is complete, the Contractor shall submit an application for the final progress payment.
- .6 When "seasonal deficiencies", as determined by the Owner and/or Consultant exist, a sum of money will be withheld in accordance with the requirements of CCDC2 2020-GC5.6.

1.6 WARRANTY PERIOD

- .1 The Owner will advise the Consultant of defects observed during Warranty periods.
- .2 The Consultant will notify the Contractor of these defects and request him to remedy the defects in accordance with the Contract Documents.
- .3 Thirty (30) days before expiration of Warranties the Owner's representatives, the Consultant and the Contractor will review the work as arranged by the Contractor noting defects of products and workmanship.
- .4 The Contractor shall immediately remedy such noted defects.

END OF SECTION

1 General

1.1 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C117, Standard Test Method for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C136, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .3 ASTM D422, Standard Test Method for Particle-Size Analysis of Soils.
 - .4 ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³) (600 kN-m/m³).
 - .5 ASTM D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³) (2,700 kN-m/m³).
 - .6 ASTM D4318, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.2, Sieves, Testing, Woven Wire, Metric.
- .3 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-A3000, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
 - .1 CSA-A3001, Cementitious Materials for Use in Concrete.
 - .2 CSA A23.1/A23.2, Concrete Materials and Methods of Concrete Construction/ Methods of Test and Standard Practices for Concrete.

1.2 DEFINITIONS

- .1 Excavation classes: two classes of excavation will be recognized; common excavation and rock excavation.
 - .1 Rock Excavation: Excavation of material from solid masses of igneous, sedimentary or metamorphic rock which, prior to its removal, was integral with its parent mass, and boulders or rock fragments having individual volume in excess of 1 m³. Frozen material not classified as rock.
 - .2 Common Excavation: Excavation of materials of whatever nature, which are not included under definitions of rock excavation.
- .2 Unclassified excavation: excavation of deposits of whatever character encountered in work.
- .3 Topsoil: material capable of supporting good vegetative growth and suitable for use in top dressing, landscaping and seeding.
- .4 Waste material: excavated material unsuitable for use in work or surplus to requirements.
- .5 Borrow material: material obtained from locations outside area to be graded, and required for construction of fill areas or for other portions of work.
- .6 Unsuitable materials:
 - .1 Weak and compressible materials under excavated area
 - .2 Frost susceptible materials under excavated areas.
 - .3 Frost susceptible materials:
 - .1 Fine grained soils with plasticity index less than 10 when tested to ASTM D4318, and gradation within limits specified when tested to ASTM D422 and ASTM C136: Sieve sizes to CAN/CGSB 8.1, as per following table:

SIEVE DESIGNATION	% PASSING
2.00mm	100
0.10mm	45-100
0.02mm	10-80
0.005mm	0-45

- .2 Coarse grained soils containing more than 20% by mass passing 0.075 mm sieve.

1.3 SUBMITTALS

- .1 Inform Owner's Representative at least four (4) weeks prior to commencing work, of proposed source of fill materials and provide access for sampling.
- .2 Submit 70 kg samples of type of fill specified including representative samples of excavated material.
- .3 Ship samples as directed by Owner's Representative in tightly closed containers to prevent contamination.

1.4 QUALITY ASSURANCE

- .1 Submit design and supporting data at least 2 weeks prior to commencing work.
- .2 Design and supporting data submitted to bear stamp and signature of qualified professional engineer registered or licensed in the province of Newfoundland and Labrador.
- .3 Keep design and supporting data on site.
- .4 Engage services of qualified professional engineer who is registered or licensed in Province of Newfoundland and Labrador to design and inspect cofferdams, shoring, bracing and underpinning required for work.
- .5 Do not use soil material until written report of soil test results are reviewed and approved by Owner's Representative.

1.5 EXISTING CONDITIONS

- .1 Buried services:
 - .1 Before commencing work verify location of buried services on and adjacent to site.
 - .2 Arrange with appropriate authority for relocation of buried services that interfere with execution of work: pay costs of relocating services.
 - .3 Remove obsolete buried services within 2 m of foundations: cap cut offs.
 - .4 Size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.
 - .5 Prior to commencing excavation work, notify applicable Owner or authorities having jurisdiction, establish location and state of use of buried utilities and structures. Owners or authorities having jurisdiction to clearly mark such locations to prevent disturbance during work.
 - .6 Confirm locations of buried utilities by careful test excavations.
 - .7 Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered as indicated.
 - .8 Where utility lines or structures exist in area of excavation, obtain direction of Owner's Representative before removing or re routing.
 - .9 Record location of maintained, re routed and abandoned underground lines.
 - .10 Confirm locations of recent excavations adjacent to area of excavation.

2 Products

2.1 MATERIALS

- .1 Backfill Type 1 and Type 2 fill: properties to PEI Department of Transportation and Infrastructure General Provision and Contract Specifications for Highway & Bridge Construction and 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.

SIEVE DESIGNATION	% PASSING TYPE	% PASSING TYPE 2
75 mm	-	100
50 mm	-	-
35.5 mm	-	-
25 mm	100	-
19 mm	75-100	-
12.5 mm	-	-
9.5 mm	50-100	-
4.75 mm	30-70	22-85
2.00 mm	20-45	-
0.425 mm	10-25	5-30
0.180 mm	-	-
0.075 mm	3-8	0-10

- .2 Type 3 Fill: selected material from excavation or other sources, approved by Owner's Representative for use intended, unfrozen and free from rocks larger than 75 mm, cinders, ashes, sods, refuse or other deleterious materials.

3 Execution

3.1 SITE PREPARATION

- .1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.

3.2 PREPARATION/PROTECTION

- .1 Protect existing features in accordance with Division 01 - General Requirements and applicable local regulations.
.2 Keep excavations clean, free of standing water, and loose soil.
.3 Where soil is subject to significant volume change due to change in moisture content, cover and protect to Owner's Representative's approval.
.4 Protect natural and man made features required to remain undisturbed. Unless otherwise indicated or located in an area to be occupied by new construction, protect existing trees from damage. Protect buried services that are required to remain undisturbed.

3.3 STRIPPING OF TOPSOIL

- .1 Commence topsoil stripping of areas as indicated by Owner's Representative after area has been cleared of brush, weeds and grasses and removed from site.
.2 Strip topsoil to depths as indicated by Owner's Representative. Do not mix topsoil with subsoil.
.3 Stockpile in locations as directed by Owner's Representative. Stockpile height not to exceed 2 m.
.4 Dispose of unused topsoil as directed by Owner's Representative.

3.4 STOCKPILING

- .1 Stockpile fill materials in areas designated by Owner's Representative. Stockpile granular materials in manner to prevent segregation.
.2 Protect fill materials from contamination.

3.5 COFFERDAMS, SHORING, BRACING AND UNDERPINNING

- .1 Maintain sides and slopes of excavations in safe condition by appropriate methods and in accordance with Division 01 - General Requirements & the Occupational Health and Safety Act for the Province of Prince Edward Island.
- .2 Obtain permit from authority having jurisdiction for temporary diversion of water course.
- .3 Construct temporary works to depths, heights and locations as indicated or approved by Owner's Representative .
- .4 During backfill operation:
 - .1 Unless otherwise as indicated or as directed by Owner's Representative remove sheeting and shoring from excavations.
 - .2 Do not remove bracing until backfilling has reached respective levels of such bracing.
 - .3 Pull sheeting in increments that will ensure compacted backfill is maintained at an elevation at least 500 mm above toe of sheeting.
- .5 When sheeting is required to remain in place, cut off tops at elevations as indicated.
- .6 Upon completion of substructure construction:
 - .1 Remove cofferdams, shoring and bracing.
 - .2 Remove excess materials from site and restore water courses as indicated and as directed by Owner's Representative.

3.6 DEWATERING AND HEAVE PREVENTION

- .1 Keep excavations free of water while Work is in progress.
- .2 Submit for Owner's Representative's review details of proposed dewatering or heave prevention methods, such as dikes, well points, and sheet pile cut offs.
- .3 Avoid excavation below groundwater table if quick condition or heave is likely to occur. Prevent piping or bottom heave of excavations by groundwater lowering, sheet pile cut offs, or other means.
- .4 Protect open excavations against flooding and damage due to surface run off.
- .5 Dispose of water in accordance with Division 01 - General Requirements and in manner not detrimental to public and private property, or any portion of work completed or under construction.
- .6 Provide flocculation tanks, settling basins, or other treatment facilities to remove suspended solids or other materials before discharging to storm sewers, water courses or drainage areas

3.7 EXCAVATION

- .1 Excavate to lines, grades, elevations and dimensions as indicated by Owner's Representative
 - .2 Remove concrete, masonry, paving, walks, demolished foundations and rubble and other obstructions encountered during excavation.
 - .3 Excavation must not interfere with bearing capacity of adjacent foundations.
 - .4 Do not disturb soil within branch spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with sharp axe or saw.
 - .5 For trench excavation, unless otherwise authorized by Owner's Representative in writing, do not excavate more than 30 m of trench in advance of installation operations and do not leave open more than 15 m at end of day's operation.
 - .6 Keep excavated and stockpiled materials a safe distance away from edge of trench as directed by Owner's Representative.
 - .7 Restrict vehicle operations directly adjacent to open trenches.
 - .8 Dispose of surplus and unsuitable excavated material off site.
 - .9 Do not obstruct flow of surface drainage or natural watercourses.
 - .10 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.
 - .11 Notify Owner's Representative when bottom of excavation is reached.
 - .12 Obtain Owner's Representative approval of completed excavation.
-

- .13 Remove unsuitable material from trench bottom to extent and depth as directed by Owner's Representative.
- .14 Correct unauthorized over excavation as follows:
 - .1 Fill under bearing surfaces and footings with concrete specified for footings.
 - .2 Fill under other areas with Type 2 fill compacted to not less than 95% of corrected maximum dry density.
- .15 Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil. Clean out rock seams and fill with concrete mortar or grout to approval of Owner's Representative.

3.8 FILL TYPES AND COMPACTION

- .1 Use fill of types as indicated or specified below. Compaction densities are percentages of maximum densities obtained from ASTM D698 corrected maximum dry density.
 - .1 Exterior side of perimeter walls: use Type 3 fill to subgrade level. Compact to 95%.
 - .2 Within building area: use Type 2 to underside of base course for floor slabs. Compact to 98%.
 - .3 Under concrete slabs: provide 150 mm compacted thickness base course of Type 1 fill to underside of slab. Compact base course to 100%.
 - .4 Retaining walls: use Type 2 fill to subgrade level on high side for minimum 500 mm from wall and compact to 95%. For remaining portion, use Type 3 fill compacted to 95%.
 - .5 To correct over excavation in trenches: use Type 2 fill to underside of sand bedding compacted to 95%.

3.9 BEDDING AND SURROUND OF UNDERGROUND SERVICES

- .1 Place and compact granular material for bedding and surround of underground services as indicated.
- .2 Place bedding and surround material in unfrozen condition.

3.10 BACKFILLING

- .1 Vibratory compaction equipment: approved by Owner's Representative.
- .2 Do not proceed with backfilling operations until Owner's Representative has inspected and approved installations.
- .3 Areas to be backfilled to be free from debris, snow, ice, water and frozen ground.
- .4 Do not use backfill material which is frozen or contains ice, snow or debris.
- .5 Place backfill material in uniform layers not exceeding 150 mm compacted thickness up to grades indicated. Compact each layer before placing
- .6 Backfilling around site installations.
 - .1 Place bedding and surround material as specified elsewhere.
 - .2 Do not backfill around or over cast-in-place concrete within 24 hours after placing of concrete.
 - .3 Place layers simultaneously on both sides of installed work to equalize loading. Difference not to exceed 600 mm.
 - .4 Where temporary unbalanced earth pressures are liable to develop on walls or other structures:
 - .1 Permit concrete to cure for minimum 14 days or until it has sufficient strength to withstand earth and compaction pressure, and approval obtained from Owner's Representative, or
 - .2 If approved by Owner's Representative, erect bracing or shoring to counteract unbalance, and leave in place until removal is approved by Owner's Representative.

3.11 RESTORATION

- .1 Upon completion of work, remove waste materials and debris, trim slopes, and correct defects as directed by Owner's Representative.
- .2 Replace topsoil as indicated by Owner's Representative.
- .3 Reinstall lawns to elevation which existed before excavation.
- .4 Reinstall pavement and sidewalks disturbed by excavation to thickness, structure, and elevation which existed before excavation.
- .5 Clean and reinstall areas affected by work as directed by Owner's Representative.
- .6 Use temporary plating to support traffic loads over unshrinkable fill for initial 24 hours.

END OF SECTION

1 General

1.1 RELATED SECTIONS

- .1 Section 32 17 23 - Pavement Markings.

1.2 DESCRIPTION OF WORK

- .1 This Section specifies the requirements for the materials, equipment and methods to be followed for production, placement and compaction of hot mix, hot laid asphalt concrete for pavement construction for the parking areas, including access driveways.
- .2 The following Prince Edward Island Department of Transportation and Infrastructure Specifications will be followed for all work related to Hot Mix Asphalt Concrete Paving.
 - .1 501 Asphalt Cement
 - .2 502 Asphalt Prime
 - .3 503 Asphalt Emulsions
 - .4 601 Tack Coat Application
 - .5 602 Prime Coat Application
 - .6 603 Hot Mix Asphaltic Concrete
 - .7 705 Cold Plane Construction Joint
 - .8 907 Vehicle Configurations and Restrictions

1.3 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM D995-95b(2002), Standard Specification for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
 - .2 ASTM D1559-89, Test Method for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus, was withdrawn in 1998 with no replacement.
- .2 Asphalt Institute (AI)
 - .1 AI MS-2-1993, Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-16.1-M89, Cutback Asphalts for Road Purposes.
 - .2 CAN/CGSB-16.3-M90, Asphalt Cements for Road Purposes.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse in accordance with Waste Management Plan.
- .2 Divert unused asphalt materials from landfill.
- .3 Divert unused aggregate materials from landfill for reuse as approved by Consultant.
- .4 Unused protective coating material must be disposed of at an official hazardous material collections site as approved by Consultant.
- .5 Unused protective coating material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.

2 Products

2.1 MATERIALS

- .1 Asphalt paving mixture: The current Prince Edward Island Department of Transportation and Infrastructure Specifications 603 and 501 for hot-mixed, hot-laid asphalt concrete shall govern the materials and composition of the asphalt concrete pavements.
 - .1 Base: Mix designation 'A' - as per Specification 501
 - .2 Seal: Mix designation 'C' - as per Specification 501
- .2 Asphalt prime: In accordance with the Prince Edward Island Department of Transportation and Infrastructure Specification 502.

- .3 Asphalt emulsions: In accordance with the Prince Edward Island Department of Transportation and Infrastructure Specification 503.

3 Execution

3.1 ASPHALT PRIME

- .1 Apply asphalt prime over imported granular base in accordance with the requirements of Prince Edward Island Department of Transportation and Infrastructure Specification 602, Paragraphs 602.01 to 602.04 inclusive.

3.2 ASPHALT CONCRETE PAVING

- .1 Place and compact asphalt concrete base and seal courses in accordance with the requirements of Prince Edward Island Department of Transportation and Infrastructure Specification 603 to thickness indicated on drawings.

3.3 ASPHALT TACK

- .1 Apply asphalt tack between base and seal courses and elsewhere as applicable in accordance with the requirements of Prince Edward Island Department of Transportation and Infrastructure Specification 601.

3.4 JOINTS

- .1 Provide cold plane joint at intersection with existing roads and elsewhere as required in accordance with Prince Edward Island Department of Transportation and Infrastructure Specification 705, Paragraphs 705.01 and 705.02.

3.5 VEHICLE REQUIREMENTS

- .1 In accordance with Prince Edward Island Department of Transportation and Infrastructure Specification 907.

3.6 TESTING AND INSPECTION

- .1 Testing of asphalt materials and inspection and testing of placement and compaction to be carried out by testing laboratory engaged and paid by the Contractor, in accordance with Division 01 - General Requirements. Frequency of tests to be determined by the testing laboratory.

3.7 SURPLUS MATERIALS

- .1 Remove all surplus materials from site.
- .2 Dispose off site at a location approved by Provincial Authority governing such disposal and pay all fees that may be charged to dispose of materials.

3.8 ASPHALTIC CURBS

- .1 Form asphalt curbs by machine to profiles as indicated. Curve curbs uniformly.

3.9 SPEED BUMPS

- .1 Form speed bumps at locations indicated on drawings
- .2 Generally speed bumps to be 16" wide x 4" high by width of travel lane as indicated
- .3 Stop bumps 300 mm short of curb to allow for drainage.

3.10 PROTECTION

- .1 Keep vehicular traffic off newly paved areas until paving surface temperature has cooled below 38 degrees C. Do not permit stationary loads on pavement until 24 hours after placement.

- .2 Provide access to buildings as required. Arrange paving schedule so as not to interfere with normal use of premises.

END OF SECTION

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1 General

1.1 RELATED SECTIONS

- .1 Section 31 23 33.01 - Excavation, Trenching and Backfilling.
- .2 Section 32 12 00 - Flexible Paving.

1.2 REFERENCES

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM D698-91(1998), Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³).
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.2-98, Boiled Linseed Oil.
 - .2 CAN/CGSB-3.3-99, Kerosene.
- .3 Canadian Standards Association (CSA)
 - .1 CSA A23.1:24/CSA A23.2:24, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.

1.3 TESTING AND INSPECTION

- .1 Testing and inspection of concrete and concrete materials will be carried out by testing laboratory engaged and paid by the Contractor in accordance with Division 01 - General Requirements. Frequency of tests will be determined by the testing laboratory.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials and place in on-site bins in accordance with Waste Management Plan.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely.

2 Products

2.1 MATERIALS

- .1 Portland cement and supplementary cementing materials to CSA A23.1
- .2 Welded wire mesh: to CSA G30.5. Provide in flat sheets only.
 - .1 All 152 x 152 x 18.7 x 18.7
- .3 Joint filler: 12mm preformed, non-extruding, resilient, bituminous type.
- .4 Granular base: to Section 31 23 00.01 - Excavation, Trenching and Backfilling, type fill.
- .5 Non-staining mineral type form release agent: chemically active release agents containing compounds that react with free lime to provide water soluble soap.
- .6 Fill material: to Section 31 23 00.01 - Excavation, Trenching and Backfilling., type fill.
- .7 Forms:
 - .1 Use minimum 38 mm thickness lumber x maximum practical length at sides of walks and curbs staked to ensure level, straight, undeviating edges over length of walk or
 - .2 Provide temporary 2 piece wood shut-offs to allow for continuity of welded wire fabric reinforcing.

3 Execution

3.1 CONSTRUCTION

- .1 Construction method:
 - .1 Curb and sidewalks to be constructed on a prepared smooth sub-grade of uniform density. All large rocks, roots, sods, rubbish and soft or spongy material shall be removed from subgrade and the excavations filled with material conforming to that of

-
- the remainder of the sub-grade. The sub-grade shall then be brought to a smooth surface and thoroughly compacted by rolling or power tamping to finished grade.
- .2 Excavation and filling:
- .1 Provide sand and preparation of sub-grade for curbs and sidewalks. Grade and compact the sub-grade as specified above.
- .3 Concrete:
- .1 Concrete supplied for the construction of curbs and sidewalks shall meet the following guidelines:
- .1 Cement: use Normal Type 10 Portland Cement
- .2 Minimum compressive strength at 28 days: 32 MPa
- .3 Minimum cement content: 400 kg/m³
- .4 Class of exposure: C-2
- .5 Nominal size of coarse aggregate: 20mm.
- .6 Slump at time and point of discharge: 80mm +/- 30mm.
- .7 Air Content: 5% to 8% maximum.
- .8 Chemical admixtures: in accordance with CAN3-A266.4-M.
- .9 Maximum water-cement ratio: 0.45.
- .4 Mixing and delivering of concrete:
- .1 Delivery and discharge of concrete by a truck mixer shall be completed within 1 1/2 hours of the introduction of cement and other materials. This period may be reduced by the Consultant during hot weather or under conditions to rapid stiffening on the concrete. Mixing shall begin within thirty minutes of the introduction of cement to the aggregates. Addition of water after the initial introduction of the mixing water will not be permitted, if as a result, the specified 28 day strength will not be obtained.
- .5 Forms:
- .1 Forms shall be of sturdy construction using dressed lumber. Sidewalk forms shall be placed such as the surface of the walk will grade downwards toward the street at a slope of 1:50.
- .2 Curb face forms shall be left in place until the concrete is hardened sufficiently so that they can be removed without damaging the curb. The exposed surfaces shall then be finished to give a granular or matted texture. The remaining forms shall not be removed for at least 24 hours after the concrete has been placed. The edges shall be rounded with an edging tool and no marks shall be left on exposed edges before final finishing.
- .6 Construction details
- .1 All sidewalks construction shall be 1.5 meters wide except where local conditions prohibit this width.
- .2 Sidewalk crossing driveways and entrance ramps shall be 150mm thick rather than 125mm. 150 x 150mm steel mesh shall be placed in these sections.
- .3 No sidewalk blocks shall have a dimension greater than 1500mm. Reinforced steel dowels 12mm in diameter, 610mm long shall be encased in the concrete at 300mm intervals between adjacent blocks to prevent differential movement of the blocks.
- .4 Saucer-type curbs shall be provided at crosswalks, driveways and other areas as directed by the Consultant.
- .7 Joints:
- .1 Expansion joints shall be provided every 1500mm of sidewalk, along the face of abutting buildings or structures and between adjacent curb and sidewalk section. Expansion joint material shall be approved premolded bitumen filler 12mm in thickness.
- .2 Control joints shall be provided every 1500mm of sidewalk.
- .3 Curbs shall be provided with contraction joints of 6mm at intervals of 3000mm and at the beginning and end of every curve.
- .8 Placing Concrete:
-

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- .1 All concrete placing methods shall be subjected to the approval of the Consultant and placing shall not commence until a representative has inspected and approved of all preparations including forms, reinforcing and all spreading, compacting, finishing and curing equipment.
 - .2 The concrete shall be deposited on the sub-grade immediately after mixing and shall be screeded to a level surface within thirty minutes after discharge from the mixer.
 - .9 Sidewalk finishing:
 - .1 Screeding shall be carried out immediately after consolidation of the concrete to give the surface its approximate shape and grade. This shall be accomplished by moving a straight edge with a sawing motion along the top of the forms.
 - .2 After the screeding operation and the water sheen has disappeared from the surface of the concrete it shall be floated with a wooden float. The Contractor shall exercise care so as to not overwork the concrete, thus avoiding bring access water and fines to the surface.
 - .3 A pebble finish shall be applied when the concrete is sufficiently hard to retain marking. This finish shall be applied using a suitable metal roller. The edges of the exposed surfaces shall be rounded off with an edging tool and the top portion of joints adjacent to buildings shall be filled with bitumen compound to seal the filler.
 - .10 Protection and curing:
 - .1 The Contractor shall have available at all time a supply of tarpaulins, polyethylene of other suitable covering which may be placed over the fresh concrete to protect it from damage in event of rain.
 - .2 Should the surrounding air temperature fall below 3 degrees Celsius or if there is any likelihood of the temperature falling to this level within forty-eight hours of the placing of the concrete, the contractor shall protect the concrete from damage from frost by covering all exposed surfaces as soon as possible after finishing the tarpaulins or other suitable insulating material. This protection shall remain in place until such time as, in the opinion of the Consultant, the concrete will not be damaged by frost. Well consolidated within the forms.
 - .3 An approved concrete curbing compound "Rite Cure" or equal shall be supplied to the concrete immediately following finishing. Rate of application shall be as recommended by the manufacturer.
 - .4 Approximately thirty days after the application of an approved curing compound, the Contractor shall apply an application of linseed oil and kerosene, the mixture shall consist of 50% linseed oil and 50% kerosene. One week after the first application the procedure shall be repeated using an identical mixture.
 - .11 Pedestrian protection:
 - .1 Place barricades to warn and keep motor vehicle traffic a safe distance from the working area. Also place barricades to warn pedestrian and other such traffic of the work area. If redirecting pedestrian traffic, make sure the alternate route is protected from any vehicle traffic. This may require a double row of barricades. Also make sure the alternate route is as mobility accessible as possible. Keep in mind wheelchairs and visually impaired person, temporary walking shall be Class A, minimum 50mm and shall be properly compacted by hand tamping floating, or vibrating.

3.2 GRADE PREPARATION

- .1 Do grade preparation work in accordance with Section 31 23 00 - Excavation and Fill.
 - .2 Construct embankments using excavated material free from organic matter or other objectionable materials. Dispose of surplus and unsuitable excavated material in approved location on site.
 - .3 When constructing embankment provide for minimum 300mm shoulders, where applicable, outside of neat lines of concrete.
-

- .4 Place fill in maximum 150 mm layers and compact to at least 95% of maximum density to ASTM D698.

3.3 GRANULAR BASE

- .1 Obtain Consultant's approval of subgrade before placing granular base.
- .2 Place granular base material to lines, widths, and depths as indicated.
- .3 Compact granular base to at least 95% of maximum density to ASTM D698.

3.4 CONCRETE

- .1 Obtain Consultant's approval of granular base and reinforcing steel prior to placing concrete.
- .2 Do concrete work in accordance with applicable standards.
- .3 Immediately after floating, give sidewalk surface uniform broom finish to produce regular corrugations not exceeding 2 mm deep, by drawing broom in direction normal to center line.
- .4 Provide edging as indicated with 10 mm radius edging tool.
- .5 Slip-form pavers equipped with string line system for line and grade control may be used if quality of work acceptable to Consultant can be demonstrated. Hand finish surfaces when directed by Consultant.

3.5 TOLERANCES

- .1 Finish surfaces to within 3 mm in 3 m as measured with 3 m straight edge placed on surface.

3.6 EXPANSION AND CONTRACTION JOINTS

- .1 Install tooled transverse contraction joints after floating, when concrete is stiff, but still plastic, at intervals of 1500mm.
- .2 Install expansion joints as indicated at intervals of 7500mm max or as directed by Consultant.
- .3 When sidewalk is adjacent to curb, make joints of curb, gutters and sidewalk coincide.

3.7 ISOLATION JOINTS

- .1 Install isolation joints around manholes and catch basins and along length adjacent to concrete curbs, catch basins, buildings, or permanent structure.
- .2 Seal isolation joints with sealant approved by Consultant.

3.8 CURING

- .1 Apply curing or curing/sealing compound to finished surfaces at a rate recommended by manufacture as soon as the water sheen has left the concrete surface.
- .2 Cure and protect concrete to CSA A23.1 unless noted otherwise.
- .3 Apply curing compound evenly to form continuous film, in accordance with manufactures requirements.

3.9 BACKFILL

- .1 Allow concrete to cure for seven (7) days prior to backfilling.

END OF SECTION

1 General

1.1 RELATED WORK

- .1 Section 32 12 00 - Flexible Paving.

1.2 DESCRIPTION OF WORK

- .1 The work of this Section comprises
 - .1 The furnishing of all material, labour and equipment for the provisions of all painted markings on all new asphalt paving inside the Limit of Contract, as specified in this Section and indicated on the drawings.
 - .2 Temporary markings at new entry road applied to base course, including center lines, stop bars and arrows.
 - .3 Removal of existing conflicting painted lines by painting over with black paint.
 - .4 STOP Bars as indicated within limit of contract
 - .5 Symbols as indicated within limit of contract.

1.3 REFERENCES

- .1 CAN/CGSB-1.5-M91, Low Flash Petroleum Spirits Thinner.
- .2 CGSB1-GP-12c-68, Standard Paint Colors.
- .3 CGSB1-GP-71-83, Method, of Testing Paints and Pigments.
- .4 CGSB1-GP-74M-79, Paint, Traffic, Alkyd.

1.4 SAMPLES

- .1 If requested, submit samples in accordance with Division 01 - General Requirements.
- .2 If requested, submit to Consultant following material sample quantities at least four (4) weeks prior to commencing work.
 - .1 Two 1L samples of each type of paint.
 - .2 One 1kg sample of glass beads.
 - .3 Sampling to CGSB1-GP-71.
- .3 Mark samples with name of project and its location, paint manufacturer's name and address, name of paint, CGSB specification number and formulation number and batch number.

1.5 MEASUREMENT FOR PAYMENT

- .1 Pavement marking will be measured by lump sum.
- .2 Pavement marking including reflective glass beads will be measured by lump sum.
- .3 Supply of paint will be measured in liters.
- .4 Supply of reflective glass beads will be measured in kilograms.
- .5 Symbols and letters will be measured in units.

2 Products

2.1 MATERIALS

- .1 Paint:
 - .1 To CGSB1-GP-74M, alkyd traffic paint.
 - .2 Color:
 - .1 Centerlines: to CGSB 1-GP-12C, yellow 505-308.
 - .2 Shoulder edge lines: to CGSB 1-GP-12C, white, 513-301.
 - .3 Directional arrows and stop lines: to CGSB 1-GP-12, white, 513-301.
 - .4 Painted medians: to CGSB 1-GP-12C, yellow 505-308.
 - .5 Barrier free symbols: Blue
 - .6 Parking stalls: to CGSB 1-GP-12C, white, 513-301.

- .3 Thinner: to CGSB 1-GP-5M
- .4 Upon request, Consultant will supply a qualified product list of paints applicable to work. Qualified paints may be used but Consultant reserves right to perform further tests.
- .2 Thinner: to CAN/CGSB-1.5.
- .3 Glass beads:
- .1 Overlay type: to CGSB1-GP-74M.

3 Execution

3.1 EQUIPMENT REQUIREMENTS

- .1 Paint applicator to be an approved pressure type mobile distributor capable of applying paint in single, double and dashed lines. Applicator to be capable of applying marking components uniformly, at rates specified, and to dimensions as indicated, and to have positive shut-off.
- .2 Distributor to be capable of applying reflective glass beads as an overlay on freshly applied paint.

3.2 CONDITION OF SURFACES

- .1 Pavement surface to be dry, free from ponded water, frost, ice, dust, oil, grease and other foreign materials.

3.3 TRAFFIC CONTROL

- .1 Control public traffic to avoid driving on painted markings while wet.

3.4 APPLICATION

- .1 Pavement markings to be laid out by Contractor as indicated on drawings and in accordance with the Manual of Uniform Traffic Control Devices for Canada, latest edition.
- .2 Unless otherwise approved by Consultant, apply paint only when air temperature is above 10°C, wind speed is less than 60km/h and no rain is forecast within next 4h.
- .3 Apply traffic paint evenly at rate of 3m²/L.
- .4 Do not thin paint unless approved by Consultant.
- .5 Symbols and letters to conform to dimensions indicated.
- .6 Paint lines to be of uniform color and density with sharp edges.
- .7 Thoroughly clean distributor tank before refilling with paint of different color.
- .8 Apply glass beads at rate of 200g/m² of painted area immediately after application of paint.

3.5 TOLERANCE

- .1 Paint markings to be within plus or minus 12 mm of dimensions indicated.
- .2 Remove incorrect markings and apply correct markings.

3.6 PROTECTION OF COMPLETED WORK

- .1 Protect pavement markings until dry.

END OF SECTION

1 General

1.1 RELATED SECTIONS

- .1 Section 31 23 33.01 - Excavation, Trenching and Backfilling

1.2 REFERENCES

- .1 Prince Edward Island Department of Transportation and Infrastructure, General Provisions and Contract Specifications for Highway Construction:
 - .1 Section 200 - Earthwork, Prince Edward Island Department of Transportation and Infrastructure General Provisions and Contract Specifications for Highway Construction.
 - .1 Section 212 - Topsoil and Landscaping.
 - .2 Section 800 - Environment, Prince Edward Island Department of Transportation and Infrastructure General Provisions and Contract Specifications for Highway Construction.
 - .1 Section 803 - Hydro Seeding.

1.3 QUALITY ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

2 Products

2.1 MATERIALS

- .1 Topsoil will be imported as required.

2.2 TOPSOIL

- .1 Mixture of particulates, micro organisms and organic matter which provides suitable medium for supporting intended plant growth.
- .2 Topsoil for seeded/sodded areas:
 - .1 Soil texture based on The Canadian System of Soil Classification, to consist of 20 to 70 % sand, minimum 15 % clay, and contain 3 to 5 % organic matter by weight.
 - .2 Contain no toxic elements or growth inhibiting materials or debris.
 - .3 Finished surface free from:
 - .1 Debris and stones over 50 mm diameter.
 - .2 Course vegetative material, 10 mm diameter and 100 mm length, occupying more than 2% of soil volume.
 - .4 Consistence: friable when moist.
- .3 Planting Beds and Tree Pits:
 - .1 Soil texture based on The Canadian System of Soil Classification, to consist of 30 to 70 % sand, 15-30% clay, and contain 5 to 20 % organic matter by weight.
 - .2 Contain no toxic elements or growth inhibiting materials or debris.
 - .3 Finished surface free from:
 - .1 Debris and stones over 50 mm diameter.
 - .2 Course vegetative material, 10 mm diameter and 100 mm length, occupying more than 2% of soil volume.
 - .4 Consistence: friable when moist.

2.3 SOIL AMENDMENTS

- .1 Fertilizer as recommended by soils tests for:
 - .1 Trees and shrubs.
 - .2 Lawn.
- .2 Limestone:
 - .1 Ground agricultural limestone.
 - .2 Gradation requirements: percentage passing by weight, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve.
 - .3 Limestone as recommended by soils test.
- .3 Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and other micro nutrients suitable to specific plant species or application or defined by soil test.

2.4 SOURCE QUALITY CONTROL

- .1 Site shall be stripped and topsoil shall be stockpiled on site for re-use. Supplemental topsoil shall be imported as required.
- .2 Topsoil to be screened and amended.
- .3 Contractor is responsible for topsoil testing and requirements for amendments to supply topsoil as specified.
- .4 Soil testing by recognized testing facility for PH, P, N and K, and organic matter and sand content.
- .5 Testing of topsoil will be carried out by testing laboratory designated by Consultant. Soil sampling, testing and analysis to be in accordance with Provincial standards.
- .6 Owner will pay for cost of soils tests.

3 Execution

3.1 PREPARATION OF EXISTING GRADE

- .1 Verify that grades are correct prior to placement of topsoil. If discrepancies occur, notify Consultant and do not commence work until instructed by Consultant.
- .2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.
- .3 Remove debris, lumps of turf, roots, branches, stones in excess of 50 (twenty-five) mm diameter and other deleterious materials. Remove soil contaminated with calcium chloride, toxic materials and petroleum products. Remove debris which protrudes more than 75 (seventy-five) mm above surface. Dispose of removed material off site under direction of Consultant.
- .4 Cultivate entire area which is to receive topsoil to minimum depth of 50 (fifty) mm. Cross cultivate those areas where equipment used for hauling and spreading has compacted soil.

3.2 PLACING AND SPREADING OF TOPSOIL

- .1 Place topsoil after Consultant has accepted subgrade.
- .2 Spread topsoil in uniform layers not exceeding 150 mm.
- .3 For sod areas keep topsoil 15 (fifteen) mm below finished grade.
- .4 Spread topsoil as indicated to following minimum depths after rolling and settlement.
 - .1 150mm for seed areas.
 - .2 150mm for sod areas.
 - .3 450mm for planting beds.
 - .4 As indicated for tree pits.
 - .5 Manually spread topsoil/planting soil around existing trees, shrubs and obstacles.

3.3 SOIL AMENDMENTS

- .1 For tree pits and lawn areas: apply and thoroughly mix soil amendments into full specified depth of topsoil.

3.4 FINISH GRADING

- .1 Grade to eliminate rough spots and low areas and ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
- .2 Consolidate topsoil to required bulk density using equipment approved by Consultant. Leave surfaces smooth, uniform and firm against deep footprinting.

3.5 ACCEPTANCE

- .1 Consultant will inspect and test topsoil in place and determine acceptance of material, depth of topsoil and finish grading.

3.6 SURPLUS MATERIAL

- .1 Dispose of surplus materials off site.

3.7 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.8 MEASUREMENT

- .1 Measurement of this work shall be included as part of hydraulic seeding or sod in place. Refer to Section 803 - Hydro Seeding and Section 809 - Sodding of Prince Edward Island Department of Transportation and Infrastructure General Provisions and Contract Specifications for Highway Construction.

END OF SECTION

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1 General

1.1 RELATED SECTIONS

1.2 SOIL STABILIZATION

- .1 Hydroseeding is to be used for soil stabilization only as required for erosion control.
- .2 Sodding will be used as a permanent finish to all disturbed areas.

1.3 SUBMITTALS

- .1 Product Data.
 - .1 Submit product data in accordance with Division 01 - General Requirements.
 - .2 Provide product data for:
 - .1 Seed.
 - .2 Mulch.
 - .3 Tackifier.
 - .4 Fertilizer.
 - .3 Submit in writing to Consultant 5 days prior to commencing work:
 - .1 Volume capacity of hydraulic seeder in liters.
 - .2 Amount of material to be used per tank based on volume.
 - .3 Number of tank loads required per hectare to apply specified slurry mixture per hectare.

1.4 QUALITY ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

1.5 SCHEDULING

- .1 Schedule hydraulic seeding to coincide with preparation of soil surface.
- .2 Schedule hydraulic seeding using grass mixtures and mixtures containing Crownvetch between dates recommended by the Provincial Agricultural Department.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and waste materials in accordance with Waste Management Plan.
- .2 Divert unused fertilizer from landfill to official hazardous material collections site.
- .3 Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

2 Products

2.1 MATERIALS

- .1 Seed: "Canada pedigreed grade" in accordance with Government of Canada Seeds Act and Regulations.
 - .1 Grass mixture: "Certified", "Canada No. 1 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
- .2 Mulch: specially manufactured for use in hydraulic seeding equipment, non-toxic, water activated, green coloring, free of germination and growth inhibiting factors with following properties:
 - .1 Type I mulch:

- .1 Made from wood cellulose fiber.
- .2 Organic matter content: 95% plus or minus 0.5%.
- .3 Value of pH: 6.0.
- .4 Potential water absorption: 900%.
- .3 Tackifier: water dilutable, liquid dispersion.
- .4 Water: free of impurities that would inhibit germination and growth.
- .5 Fertilizer:
 - .1 To Canada "Fertilizers Act" and "Fertilizers Regulations".
 - .2 Complete synthetic, slow release with 35% of nitrogen content in water-insoluble form.
- .6 Inoculants: inoculant containers to be tagged with expiry date.

3 Execution

3.1 WORKMANSHIP

- .1 Do not spray onto structures, signs, guide rails, fences, plant material, utilities and other than surfaces intended.
- .2 Clean-up immediately, any material sprayed where not intended, to satisfaction of Consultant.
- .3 Do not perform work under adverse field conditions such as wind speeds over 10 km/h, frozen ground or ground covered with snow, ice or standing water.
- .4 Protect seeded areas from trespass until plants are established.

3.2 PREPARATION OF SURFACES

- .1 Fine grade areas to be seeded free of humps and hollows. Ensure areas are free of deleterious and refuse materials.
- .2 Cultivated areas identified as requiring cultivation to depth of 25mm.
- .3 Ensure areas to be seeded are moist to depth of 150mm before seeding.
- .4 Obtain Consultant's approval of grade and topsoil depth before starting to seed.

3.3 FERTILIZING PROGRAM

- .1 Apply lime at a rate of 50kg per 100m² or at a rate determined by soil analysis.

3.4 PREPARATION OF SLURRY

- .1 Measure quantities of materials by weight or weight-calibrated volume measurement satisfactory to Consultant. Supply equipment required for this work.
- .2 Charge required water into seeder. Add material into hydraulic seeder under agitation. Pulverize mulch and charge slowly into seeder.
- .3 After all materials are in the seeder and well mixed, charge tackifier into seeder and mix thoroughly to complete slurry.

3.5 SLURRY APPLICATION

- .1 Hydraulic seeding equipment:
 - .1 Slurry tank.
 - .2 Agitation system for slurry to be capable of operating during charging of tank and during seeding, consisting of recirculation of slurry and/or mechanical agitation method.
 - .3 Capable of seeding by 50 m hand operated hoses and appropriate nozzles.
 - .4 Tank volume to be certified by certifying authority and identified by authorities "Volume Certification Plate".
- .2 Slurry mixture applied per hectare.
 - .1 Seed: Grass mixture 2.0 kg, or as recommended by seed manufacturer.
 - .2 Mulch: Type 10 kg.
 - .3 Water: Minimum 100 L.

- .4 Fertilizer: 500 kg, of nitrogen.
- .3 Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.
 - .1 Using correct nozzle for application.
 - .2 Using hoses for surfaces difficult to reach and to control application.
- .4 Blend application 300 mm into adjacent grass areas or sodded areas to form uniform surfaces.
- .5 Re-apply where application is not uniform.
- .6 Remove slurry from items and areas not designated to be sprayed.
- .7 Protect seeded areas from trespass satisfactory to Consultant.
- .8 Remove protection devices as directed by Consultant.

3.6 MAINTENANCE DURING ESTABLISHMENT PERIOD

- .1 Perform following operations from time of seed application until acceptance by Consultant.
- .2 Grass Mixture:
 - .1 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
 - .2 Mow grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Consultant.
 - .3 Fertilize seeded areas after first cutting in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles; water in well.
 - .4 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.
 - .1 If chemical means are used, comply with manufacturers written instructions and environmental regulations.
 - .5 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.
- .3 Repair and Maintenance:
 - .1 Repair minor dead and bare spots as determined by Consultant to allow establishment of seed prior to acceptance.
 - .2 Negotiate repair of major dead and bare spots as determined by Consultant in accordance with site climatic averages and recommendations of local agricultural governmental representative.
 - .3 Mow grass to 100mm whenever height reaches 200 mm and as follows:
 - .1 Do not mow within period commencing 3 weeks before and ending 3 weeks after first severe, average fall frost date and 3 weeks after actual severe fall frost.
 - .2 When mowing after first severe fall frost, mow at a height of not less than 300 mm.
 - .4 Remove clippings which will smother plants as directed by Consultant.
 - .5 Water seeded areas to maintain optimum soil moisture level for germination and continued growth. Control watering to prevent washouts.

3.7 ACCEPTANCE

- .1 Seeded areas will be accepted by Consultant provided that:
 - .1 Plants are uniformly established.
 - .2 Areas have been mown at least twice.
 - .3 Areas have been fertilized.
- .2 Areas seeded in fall will achieve final acceptance in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

3.8 MAINTENANCE DURING WARRANTY PERIOD

- .1 Perform following operations from time of acceptance until end of warranty period:
 - .1 Repair and reseed dead or bare spots to satisfaction of Consultant.
 - .2 Mow areas seeded, remove clippings, as directed by Consultant.

3.9 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

1 General

1.1 RELATED SECTIONS

- .1 Section 31 23 33.01 - Excavation, Trenching and Backfilling.

1.2 REFERENCES

- .1 American Society for Testing and Materials (ASTM International)
 - .1 ASTM C139-23, Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
 - .2 ASTM C478-20, Specification for Precast Reinforced Concrete Manhole Sections Metric.
- .2 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-A3000-13, Cementitious Materials Compendium. Includes:
 - .1 CAN/CSA-A5-98, Portland Cement.
 - .2 CAN/CSA-A8-98, Masonry Cement.
 - .3 CAN/CSA-A23.5-98 (R1992), Supplementary Cementing Materials.
 - .2 CSA-A23.1/A23.2-14, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
 - .3 CAN/CSA-G30.18-21, Billet Steel Bars for Concrete Reinforcement.
 - .4 CAN/CSA-G164-18 (R2023), Hot Dip Galvanizing of Irregularly Shaped Articles.

1.3 SUBMITTALS

- .1 Submittals in accordance with Division 01 - General Requirements.
- .2 Submit manufacturer's drawings, information and shop drawings.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Collect and separate for disposal waste material and place in appropriate on-site bins in accordance with Waste Management Plan.
- .2 Divert unused concrete materials from landfill.
- .3 Divert unused aggregate materials from landfill.

2 Products

2.1 MATERIALS

- .1 Materials
 - .1 Precast sanitary and storm manhole sections: to ASTM C478M, circular or oval. Top sections eccentric cone with opening offset for vertical ladder installation. Units to have integral precast base section with benching at sanitary manholes and performed gasketed openings for pipes.
 - .2 Provide openings in walls of manholes as required to suit size and inverts of lines. Confirm size and invert before fabrication.
 - .3 Acceptable Material:
 - .1 Campbells' Concrete Ltd.
 - .2 L.E. Shaw Limited.
 - .4 Frames, gratings, covers to plan dimensions and following requirements:
 - .1 Manhole frames and cover: heavy duty municipal type for road service. Cover cast without perforations and complete with two - 1 inch square lifting holes.
 - .2 Acceptable Material:
 - .1 Hall and Stavert No. 26 or equal.
 - .5 Cast-in-place base slab: use permitted only where use of integral base in not practical and when approved by Consultant.
 - .6 Concrete Grout:

- .1 Non shrink, non metallic, grout capable of developing compression strength of 50mPa at 28 days.
- .2 Acceptable Material: Meadows "Sealtight CG-86"
- .2 Precast catch basin sections: to ASTM C139, ASTM C478M.
 - .1 Acceptable material:
 - .1 Campbells' Concrete Ltd.
 - .2 L.E. Shaw Limited.
- .3 Joints: to be made watertight using rubber rings, bituminous compound, epoxy resin cement or cement mortar.
- .4 Ladder rungs: to CAN/CSA-G30.18, No.25M billet steel deformed bars, hot dipped galvanized to CAN/CSA-G164. Rungs to be safety pattern (drop step type).
- .5 Adjusting rings: to ASTM C478M.
- .6 Drop manhole pipe: to be same as sewer pipe.

3 Execution

3.1 EXCAVATION AND BACKFILL

- .1 Excavate and backfill in accordance with Section 31 23 33.01 - Excavation, Trenching and Backfilling and as indicated.
- .2 Obtain approval of Consultant before installing outfall structures, manholes or catch basins.

3.2 CONCRETE WORK

- .1 All concrete and reinforcement to CSA A23.1 Standards to a min compressive strength of 35Mpa at 28 days.
- .2 Position metal inserts in accordance with dimensions and details as indicated.

3.3 INSTALLATION

- .1 Construct units in accordance with details indicated, plumb and true to alignment and grade.
- .2 Complete units as pipe laying progresses. Maximum of three units behind point of pipe laying will be allowed.
- .3 Dewater excavation to approval of Consultant and remove soft and foreign material before placing concrete base.
- .4 Installation of units:
 - .1 Set precast concrete base section to ensure proper alignment and invert elevations, on minimum 150mm of imported granular material compacted to 100% corrected maximum dry density. When use of cast-in-place base slab approved set bottom section of manhole in bed of cement mortar and bond to concrete slab.
 - .2 When cast-in-place slab approved set bottom section of manhole in bed of cement mortar and bond to concrete slab.
 - .3 Make each successive joint watertight with approved rubber ring gaskets or bituminous compound. If bituminous compound used, apply to CGSB 56-GP-9A.
 - .4 Clean surplus grout and joint compounds from interior surface of unit as work progresses.
 - .5 Plug lifting holes with precast concrete plugs set in cement mortar or mastic compound.
- .5 For sanitary sewers:
 - .1 When use of cast-in-place base slab approved by Consultant bench to provide a smooth U-shaped channel. Side height of channel to be full diameter of sewer. Slope adjacent floor at 1 in 10 toward channel. Curve channels smoothly. Slope invert to establish sewer grade.
- .6 Compact granular backfill to 95% corrected maximum dry density.
- .7 Place frame and cover on top section to elevation as indicated. If adjustments required use concrete rings to suit finished grade elevations.

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- .8 Clean units of debris and foreign materials. Remove fins and sharp projections. Prevent debris from entering system.
 - .9 Install safety platforms in manholes having depth of 5 m or greater, as indicated.

3.4 NEW CONNECTION AT EXISTING STORM/SANITARY MANHOLE

- .1 Core drill opening in wall of existing manhole to suit diameter and invert of new storm/sanitary line connection, complete with rubber ring.
- .2 Fit rubber ring on pipe to place it at the center of the wall of the manhole. Grout line in place from both sides and make watertight.
- .3 Provide cast-in-place concrete saddle to support existing piping where new pipe crosses an existing pipe and where the distance is less than 300mm.

3.5 LEAKAGE TEST

- .1 Install watertight plugs or seals on inlets and outlets of each new sanitary sewer manhole and fill manhole with water. Leakage not to exceed 0.3% per hour of volume of manhole.
- .2 If permissible leakage is exceeded, correct defects. Repeat until approved by Consultant.

END OF SECTION

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1 General

1.1 RELATED REQUIREMENTS

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

1.2 REFERENCE STANDARDS

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM C14M, Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe (Metric).
 - .2 ASTM C76M, Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (Metric).
 - .3 ASTM C443M, Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets (Metric).
 - .4 ASTM C1433, Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers.
 - .5 ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ (600 kN- m/m³)).
 - .6 ASTM D3034, Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - .7 ASTM F794, Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.
- .2 Canadian Standards Association (CSA International)
 - .1 CSA-A3000, Cementitious Materials Compendium.
 - .2 CSA A257 Series, Standards for Concrete Pipe and Manhole Sections.
 - .3 CSA B1800, Thermoplastic Nonpressure Piping Compendium.
- .3 PEI Department of Transportation and Infrastructure (PEI TIR)
 - .1 General Provisions and Contract Specifications for Highway Construction.

1.3 SCHEDULING

- .1 Schedule Work to minimize interruptions to existing services and to maintain existing flow during construction.
- .2 Submit schedule of expected interruptions for approval and adhere to approved schedule.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit shop drawings in accordance with Division 01 - General Requirements.
- .2 Submit shop drawings, manufacturer's test data and certification that materials meet requirements of this Section at least 2 weeks prior to commencing work.
- .3 Certification to be marked on pipe.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Contractor to deliver, store and handle materials in accordance with Product Requirements or PEI TIR requirements.

2 Products

2.1 CONCRETE PIPE

- .1 Reinforced circular concrete pipe and fittings: ASTM C76 and CSA A257.2.
 - .1 Minimum storm sewer main diameter: 300mm.
 - .2 Class: 65D or (ASTM Class III), 100D or (ASTM Class IV), 140D or (ASTM Class V) as indicated on the Drawings.
 - .2 Locked-in gasket and integral bell system with flexible rubber gasket joints to CSA A257.3.
 - .3 Lifting holes:
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- .1 Pipe 900 mm and less diameter: no lift holes.
- .2 Pipe greater than 900 mm diameter: lift holes not to exceed two per pipe.
- .3 Provide prefabricated plugs to effectively seal lift holes after installation of pipe.

2.2 PVC PIPE

- .1 PVC (Polyvinyl Chloride) pipe: to ASTM D3034 and CSA B1800.
 - .1 Minimum storm sewer main diameter: 300mm.
 - .2 Standard Dimensional Ratio (SDR): 35
 - .3 Standard Dimensional Ratio (SDR) for catch basin leads: 28
 - .4 Locked-in gasket and integral bell system. Rubber gaskets to CAN/CSA A257.3.
- .2 Large diameter, ribbed PVC sewer pipe and fittings: to ASTM F794 and CSA- B1800.
- .3 Bends to be of the long radius type only, color-coded white.

2.3 HDPE PIPE

- .1 Double walled HDPE pipe with smooth walled interior and corrugated exterior to 320 kPa to CSA B182.6.
 - .1 Locked-in flexible rubber gasket and integral bell and spigot system.
- .2 Connect to catchbasins with PVC manhole adaptor.
- .3 Acceptable products: Solflo Max by Soleno, Boss 2000 by Armttec and N-12 ST by ADS.

2.4 PLUGS AND CAPS

- .1 Plugs and caps for concrete pipes shall be an approved concrete plug or cap complete with rubber gasket seal and shall meet the requirements in Clause 2.1.
- .2 Plugs and caps for PVC shall be an approved PVC plug or cap complete with gasket seal and shall meet the requirements in Clause 2.2.
- .3 Plugs and caps for HDPE pipes shall be an approved HDPE plug or cap complete with rubber gasket seal and shall meet the requirements in Clause 2.3.

2.5 STORM SERVICE LATERALS

- .1 PVC (Polyvinyl Chloride) pipe: to ASTM D3034 or and CSA B1800.
 - .1 Standard Dimensional Ratio (SDR): 28
 - .2 Locked-in flexible rubber gasket and integral bell and spigot system.
 - .3 Colour coded WHITE.
- .2 Use approved tee connections and fittings only. Bends shall be of the long radius type only.
- .3 Storm service saddles: with oil resistant gaskets, stainless steel clamp and oil resistant "O" rings in branch end may be utilized upon authorization of the Owner's Representative.

2.6 GRANULAR BEDDING AND BACKFILL

- .1 As specified in accordance with Section 31 23 33.01 - Excavating, Trenching and Backfilling.

3 Execution

3.1 PREPARATION

- .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 drawings and requirements of authorities having jurisdiction.
 - .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.

- .2 Clean pipes and fittings of debris and water before installation. Carefully inspect materials for defects before installing. Remove defective materials from site.

3.2 TRENCHING

- .1 Do trenching Work in accordance with Section 31 23 33.01 - Excavating, Trenching and Backfilling.
- .2 Protect trench from contents of sewer.
- .3 Trench alignment and depth to approval of Owner's Representative prior to placing bedding material and pipe.

3.3 GRANULAR BEDDING

- .1 Dewater excavation, as necessary, to allow placement of granular bedding in the dry.
- .2 Place bedding in unfrozen condition.
- .3 Place minimum thickness of 150 mm of approved granular material on bottom of excavation and compact to a minimum of 95% of the maximum dry density in accordance with ASTM D698.
- .4 Shape bed true to grade and to provide continuous, uniform bearing surface for pipe.
 - .1 Do not use blocks when bedding pipes.
- .5 Fill excavation below bottom of specified bedding adjacent to manholes or catch basins with bedding material.

3.4 INSTALLATION

- .1 Pipe shall be thoroughly inspected in the field before and after laying. Any defective or damaged pipe shall be immediately removed from the site and replaced with new sound material at the Contractor's expense.
- .2 Approved laser alignment equipment must be used to control line and grade during all pipe laying.
- .3 Lay and join pipe in accordance with manufacturer's recommendations and to approval of Owner's Representative.
- .4 Handle pipe using methods in accordance with manufacturer's recommendations.
 - .1 Do not use chains or cables passed through rigid pipe bore so that weight of pipe bears upon pipe ends.
- .5 Lay pipes on prepared bed, true to line and grade with pipe inverts smooth and free of sags or high points.
 - .1 Ensure barrel of each pipe is in contact with shaped bed and with uniform bearing throughout its full length.
 - .2 The Owner's Representative will be the sole judge of the deviation and the required corrective work. Any pipe which is not in true alignment or shows any undue settlement after laying shall be taken out and re-laid at the Contractors expense.
- .6 Commence laying at outlet and proceed in upstream direction with bell ends of pipe facing upgrade.
- .7 Trenches where pipe laying is in progress shall be kept dry and no pipe shall be laid in water or upon a wet bedding. As the pipes are laid, they must be thoroughly cleaned and the bore protected from dirt and water. No length of pipe shall be laid until the preceding length has been thoroughly embedded and secured in place so as to prevent any movement or disturbance of the pipe.
- .8 Joint deflection permitted within limits recommended by pipe manufacturer.
- .9 Do not allow water to flow through pipe during construction, except as may be permitted by Owner's Representative.
- .10 Whenever Work is suspended, install removable watertight bulkhead at open end of last pipe laid to prevent entry of foreign materials.
- .11 Install PVC pipe and fittings in accordance with CSA B1800.
- .12 Joints:

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- .1 Install gaskets as recommended by manufacturer if not pre-installed.
 - .2 Support pipes with bedding as required to minimize lateral pressure on gasket and maintain concentricity until gasket is properly positioned.
 - .3 Align pipes carefully before joining.
 - .4 Maintain pipe joints free from mud, silt, gravel and other foreign material.
 - .5 Avoid displacing gasket or contaminating with dirt or other foreign material. Remove disturbed or dirty gasket; clean, lubricate and replace gasket before joining is attempted.
 - .6 Complete each joint before laying next length of pipe.
 - .7 Minimize joint deflection after joint has been made to avoid joint damage.
 - .8 Apply sufficient pressure in making joints to ensure that joint is complete as outlined in manufacturer's recommendations.
 - .13 Block pipes when any stoppage of work occurs to prevent "creep" during down time.
 - .14 Plug lifting holes with approved prefabricated plugs, set in non-shrink grout.
 - .15 Cut pipes only as required for special inserts, fittings or closure pieces in neat manner, as recommended by pipe manufacturer, without damaging pipe or its coating and to leave spigot end at right angles to axis of pipe.
 - .16 Make watertight connections to manholes, sluice boxes and catch basins. Manholes and catch basins shall have factory installed cast-in rubber gaskets to suit the pipes. Any additional holes required in the field shall be core-drilled and a "Kor-n-seal" connector inserted. Use non-shrink grout when suitable gaskets are not available.
 - .17 Use prefabricated saddles for connecting pipes to existing storm sewer pipes. Joint to be structurally sound and watertight.
 - .18 Temporarily plug open upstream ends of pipes with removable watertight concrete, steel or plastic bulkheads.

3.5 BACKFILL

- .1 Place backfill material in unfrozen condition.
- .2 Place approved backfill material in uniform 150mm layers to full width, alternately on each side of pipe, so as not to displace it laterally or vertically, up to grades as indicated.
- .3 Compact each layer to a minimum of 95% of the maximum dry density in accordance with ASTM D698, taking special care to obtain required density under haunches.

3.6 STORM SERVICE LATERALS

- .1 Install pipe to manufacturer's standard instructions and specifications and as indicated on the Drawings.
- .2 Maintain pipe grade at 2% minimum unless directed otherwise by Owner's Representative.
- .3 Storm service lateral connections to storm sewer main: approved Tee fittings or approved saddles.
- .4 Storm service lateral connection pipe shall not extend into interior of storm sewer main.
- .5 Make up required horizontal and vertical bends from 45o long radius bends or less.
- .6 Plug storm service laterals with watertight caps or plugs unless service is presently active. If active make connection to existing storm sewer lateral.
- .7 Place location marker at ends of plugged or capped unconnected storm service laterals. Each marker shall consist of 50 x 100 mm stake extending from pipe invert to 0.6 m above final finished landscape grade. Paint exposed portion of stake red with designation STM SWR in black.

3.7 FIELD TESTS AND INSPECTIONS

- .1 Repair or replace pipe, pipe joint or bedding found defective.
- .2 Remove foreign material from sewers and related appurtenances by flushing with water.

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- .3 For newly installed storm sewer and catchbasin leads, the Contractor is responsible for the proper cleaning of the line to provide a complete continuous video of 100% of the newly installed storm sewer.
 - .4 Contractor to carry out video inspection of installed storm sewers by closed circuit television equipment. Notify Owner's Representative 24 hours in advance of inspection.
 - .5 Scheduling:
 - .1 The video inspection shall be first performed when the storm sewer has been cleaned and all manhole adjustments and street reinstatement have been completed.
 - .2 Repeat video inspection of the sanitary sewer system, after all repairs have been made (at the discretion of the Owner's Representative). Notify Owner's Representative 24 hours in advance of inspection.

3.8 DEFECTIVE SEWERS IDENTIFIED DURING VIDEO INSPECTION

- .1 Storm sewers shall be inspected for alignment and obstruction. WATER PONDING IN GRAVITY SEWERS that can not be eliminated by flushing and cleaning will be considered as evidence of pipe settlement. Any and all defects such as water ponding, exposed gasket, leaking joints, sags, improper grade or alignment, excessive deflection, obstructions, etc. shall be cause for rejection and such defects must be repaired by the Contractor at no expense to the City. The initial video inspection shall be at the cost of the Contractor and any costs for re-video of sewer mains required to inspect repaired defects will be at the Contractor's expense.

END OF SECTION