



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS Á:

Parks Canada Agency – Central Registry
111 Water Street East
Cornwall, Ontario, K6H 6S3

INVITATION TO TENDER
INVITATION À SOUMISSIONNER

Tender To: Parks Canada Agency

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Soumission aux: l'Agence Parcs Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du Chef du Canada, aux conditions énoncées ou incluses par référence dans la présente aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Parks Canada Agency
Contracting Operations
111 Water Street East
Cornwall, Ontario, K6H 6S3

Title-Sujet ITT – Fuel Storage System Upgrades for Cape Breton Field Unit.		Date 2016-05-10
Solicitation No. - No. de l'invitation 5P300-16-5081		Client Ref. No. – No. de réf du client.
GETS Reference No. – No de reference de SEAG		
Solicitation Closes L'invitation prend fin – at – á 02:00 PM on – le 2016-05-31	Time Zone Fuseau horaire - Heure Normal de l'Est (HNE) / Eastern Daylight Time (EDT)	
F.O.B. - F.A.B. Plant-Usine: ? Destination: ? Other-Autre: ?		
Address Inquiries to: - Adresser toute demande de renseignements à : Sheldon Lalonde sheldon.lalonde@pc.gc.ca		
Telephone No. - No de téléphone (613) 938-5948	Fax No. – No de FAX: (866) 246-6893	
Destination of Goods, Services, and Construction: Destinations des biens, services et construction: See Herein		
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur : Telephone No. - No de telephone: _____ Facsimile No. - N° de télécopieur: _____		
Name and title of person authorized to sign on behalf of the Vendor/Firm Nom et titre de la personne autorisée a signer au nom du fournisseur/ de l'entrepreneur Name / Nom _____ Title / Titre _____ Signature: _____ Date: _____ Courriel: _____		

INVITATION TO TENDER

IMPORTANT NOTICE TO BIDDERS

1. INTEGRITY PROVISIONS - BID

Important changes have been made to the Integrity Provisions - Bid as of July 3rd 2015. See GI01, Integrity Provision-Bid of **R2710T** of the General Instructions for more information.

2. MANDATORY TECHNICAL CRITERIA

Criteria is presented at SI05 and is the responsibility of the contractor to submit with tender package.

3. Direct Deposit

In April 2012, the Government of Canada announced that it will be replacing cheques with electronic payments by April 2016. Contract payment(s) currently made by cheque will be replaced by Direct Deposit. Businesses are encouraged to proactively enrol with Parks Canada. Please contact **Sheldon Lalonde** at Sheldon.lalonde@pc.gc.ca in order to obtain a Direct Deposit enrollment form.

Additional information on this Government of Canada initiative is available at: <http://www.directdeposit.gc.ca>

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R2710T GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI) (2016-04-04)

The following GI's are included by reference and are available at the following Web Site <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

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SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 INTEGRITY PROVISIONS – DECLARATION OF CONVICTED OFFENCES

As applicable, pursuant to GI01 of the Declaration of Convicted Offences, paragraph 10 (copied below) of the General Instructions **R2710T**, the Bidder must provide with its bid, a completed [Declaration Form](#), to be given further consideration in the procurement process.

Declaration of Convicted Offences

Where a Bidder or its Affiliate is unable to certify that it has not been convicted of any of the offences referenced under the Canadian Offences Resulting in Legal Incapacity, the Canadian Offences and the Foreign Offences subsections, the Bidder must provide with its bid the completed [Declaration Form](#), to be given further consideration in the procurement process.

SI02 BID DOCUMENTS

1. The following are the bid documents:

- a. Invitation to Tender - Page 1;
- b. Special Instructions to Bidders;
- c. **General Instructions - Construction Services - Bid Security Requirements R2710T (2016-04-04)**
- d. Clauses & Conditions identified in "Contract Documents";
- e. Drawings and Specifications;
- f. Bid and Acceptance Form and related Appendix(s); and
- g. Any amendment issued prior to solicitation closing.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

2. **General Instructions - Construction Services - Bid Security Requirements R2710T** is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

All reference to the Minister of Public Works and Government Services Canada shall be deleted and replaced with the Minister of the Environment and Climate Change for the purposes of the Parks Canada Agency. All reference to the Department of Public Works and Government Services Canada shall be deleted and replaced with the Parks Canada Agency.

SI03 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to the Contracting Officer named on the Invitation to Tender - Page 1 as early as possible within the solicitation period. Except for the approval of alternative materials as described in **GI15 of R2710T**, enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
2. To ensure consistency and quality of the information provided to Bidders, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
3. All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed **ONLY** to the Contracting Officer named on the Invitation to Tender - Page 1. Failure to comply with this requirement may result in the bid being declared non-responsive.

SI04 OPTIONAL SITE VISIT

There will be a site visit on **May 17, 2016 at 10:00am**. Interested bidders are to meet at:

Fortress of Louisburg National Historic Site
Parks Canada Administration Office, 259 Park Service Road, Louisburg, NS
ITT (08-2015)

Safety boots and hat are optional.

SI05 MANDATORY TECHNICAL CRITERIA

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

Contractors shall provide the following with tender package:

1. Safety certification with the NSCSA.
2. Qualified and accredited for petroleum equipment installation.

SI06 REVISION OF BID

A bid may be revised by letter or facsimile in accordance with **GI10 of R2710T**. The facsimile number for receipt of revisions is **(877) 558-2349**.

SI07 BID RESULTS

1. A public bid opening will be held in the office designated on the Front Page "Invitation to Tender" for the receipt of bids shortly after the time set for solicitation closing.
2. Following solicitation closing, bid results may be obtained by calling at number 613-938-5948.

SI08 INSUFFICIENT FUNDING

- 1) In the event that the lowest compliant bid exceeds the amount of funding Canada has allocated for the construction phase of the work
 - (a) by 15% or less, Canada, at its sole discretion, shall either
 - (i) Cancel the solicitation; or
 - (ii) Obtain additional funding and, subject to the provisions of GI11 of the General Instructions to Bidders, award the Contract to the Bidder submitting the lowest compliant bid; or
 - (iii) Revise the scope of the work accordingly and negotiate, with the Bidder submitting the lowest compliant bid, a corresponding reduction in its bid price.
 - (b) by more than 15%, Canada, at its sole discretion, shall either
 - (i) Cancel the solicitation; or
 - (ii) Obtain additional funding and, subject to the provisions of GI11 of the General Instructions to Bidders, award the Contract to the Bidder submitting the lowest compliant bid; or
 - (iii) Revise the scope of the work accordingly and invite those who submitted compliant bids at the original solicitation to re-bid the work.
- 2) If negotiations or a re-bid are undertaken as is contemplated in subparagraphs 1)(a)(iii) or 1)(b)(iii) above, Bidders shall retain the same subcontractors and suppliers as they carried in their original bids.
- 3) If Canada elects to negotiate a reduction in the bid price as is contemplated in subparagraph 1)(a)(iii) herein and the negotiations fail to reach an agreement, Canada shall then exercise either of the options referred to subparagraphs 1)(a)(i) or 1)(a)(ii)

SI09 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1.of SI08 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1.of SI08 is not accepted in writing by all those who submitted bids then Canada shall, at its sole discretion, either

- a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under **GI11 of R2710T**.

SI10 CONSTRUCTION DOCUMENTS

The successful Contractor will be provided with one paper copy of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer. Additional copies, up to a maximum (1), will be provided free of charge upon request by the Contractor. Obtaining more copies shall be the responsibility of the Contractor including costs.

SI11 SECURITY RELATED REQUIREMENTS

Not applicable.

SI12 WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Treasury Board Appendix L, Acceptable Bonding Companies

<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appl>

Buy and Sell <https://www.achatsetventes-buyandsell.gc.ca>

Canadian economic sanctions <http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Bid Bond (form PWGSC-TPSGC 504) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Performance Bond (form PWGSC-TPSGC 505) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505.pdf>

Labour and Material Payment Bond (form PWGWSC-TPSGC 506)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

PWGSC, Industrial Security Services <http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

PWGSC, Code of Conduct and Certifications

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Construction and Consultant Services Contract Administration Forms Real Property Contracting

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Declaration Form

<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>

SUPPLEMENTARY CONDITIONS (SC)

SC01 SECURITY RELATED REQUIREMENTS, DOCUMENT SAFEGUARDING

There is no document security requirement applicable to this Contract.

SC02 INSURANCE TERMS

1) Insurance Contracts

- (a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.
- (b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

2) Period of Insurance

- (a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.
- (b) The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

3) Proof of Insurance

- (a) Before commencement of the Work, and no later than thirty (30) days after acceptance of its bid, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.
- (b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

4) Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

5) Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:
 - a. Contract Page when signed by Canada;
 - b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c. Drawings and Specifications;
 - d. General Conditions and clauses

GC1 General Provisions – Construction Services	R2810D	(2016-04-04);
GC2 Administration of the Contract	R2820D	(2016-01-28);
GC3 Execution and Control of the Work	R2830D	(2015-02-25);
GC4 Protective Measures	R2840D	(2008-05-12);
GC5 Terms of Payment	R2850D	(2016-01-28);
GC6 Delays and Changes in the Work	R2860D	(2016-01-28);
GC7 Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8 Dispute Resolution	R2880D	(2016-01-28);
GC9 Contract Security	R2890D	(2014-06-26);
GC10 Insurance	R2900D	(2008-05-12);
Allowable Costs for Contract Changes under GC6.4.1	R2950D	(2015-02-25);
 - e. Supplementary Conditions
 - f. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - g. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - h. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site:
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

Fuel Storage System Upgrades for Cape Breton Field Unit

Locations:

1. Alexander Graham Bell Centre (AGB), 559 Chebucto Street, Baddeck, NS.
2. Fortress of Louisburg (FOL), 259 Park Service Road, Louisburg, NS (six sub-sites).
3. Cape Breton Highlands National Park, Ingonish Compound, 37486 Cabot Trail, Ingonish, NS.
4. Cape Breton Highlands National Park, Cheticamp Compound, 16650 Cabot Trail, Cheticamp, NS.

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____ Email: _____

Address: _____

Telephone: _____ Fax: _____ PBN: _____

BA03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the Total Bid Amount of:

\$ _____ excluding applicable taxes.
(Amount in numbers)

Work included in the Lump Sum Amount represents all work described in the Summary of Work document (including but not limited to Mob/Demob, testing, inspections, travel, etc.).

BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of **thirty (30)** days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BA06 CONSTRUCTION TIME

The Contractor shall perform and complete the work by **October 31, 2016**, from the date of notification of acceptance of the offer.

BA07 BID SECURITY

The Bidder is enclosing bid security with its bid in accordance with GI08 - Bid Security Requirements of R2710T - General Instructions - Construction Services - Bid Security Requirements.

BA08 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Signature

Date

APPENDIX 1 – STATEMENT OF WORK

TERMS OF REFERENCE AND CONSTRUCTION SPECIFICATIONS
FOR
FUEL STORAGE SYSTEM UPGRADES
CAPE BRETON FIELD UNIT

SECTION	DESCRIPTION	PAGES
Division 01		
01 11 00	Summary of Work	8
01 33 00	Submittal Procedures	5
01 35 29.06	Health and Safety Requirements	4
01 35 43	Environmental Procedures	5
Division 03		
03 30 00	Cast-in-Place Concrete	4
Division 23		
23 11 13	Facility Fuel Oil Piping	7
Division 33		
33 56 13	Aboveground Fuel Tanks	8
List of Drawings		
Mechanical		
2200-1	Fortress of Louisbourg Plans & Details	
2200-2	Alexander Graham Bell Museum, Cheticamp, Ingonish	



END OF SECTION

PART 1. GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- .1 In general, the work of this Contract comprises, but is not limited to:
 - .1 The upgrading of nine (9) Fuel and Waste Oil Storage and Distribution Systems as shown in the project Drawings. Five (5) of the systems are considered above ground tanks connected to a heating appliance while the remaining four (4) are independent above ground tanks for the storage of waste oil and paint.
 - .2 The decommissioning of existing tanks and associated distribution lines according to Federal, Provincial and Municipal standards as indicated in the project Drawings.
 - .3 The installation of new sensors, monitoring, and alarm devices for all sites as shown on the project Drawings and described in the Specifications.
 - .4 The work locations for this project are located at the following four (4) Parks Canada sites in the Cape Breton Field Unit (CBFU):
 - .1 Alexander Graham Bell Centre (AGB), 559 Chebucto Street, Baddeck, NS
 - .2 Fortress of Louisbourg (FOL) - 259 Park Service Road, Louisbourg, NS which consists of six sub-sites.
 - .1 Garage
 - .2 Paint Shop
 - .3 Administration Building
 - .4 King's Bastion
 - .5 Carrerot House
 - .6 Visitor's Centre
 - .3 Cape Breton Highlands National Park - Ingonish Compound, 37486 Cabot Trail, Ingonish, NS
 - .4 Cape Breton Highlands National Park - Cheticamp Compound, 16650 Cabot Trail, Cheticamp, NS

1.2 CONTRACTOR QUALIFICATIONS

- .1 Contractors shall provide the following prior to award:
 - .1 Safety Certification with the NSCSA
 - .2 Qualified and accredited for petroleum equipment installation

1.3 FAMILIARIZATION WITH SITE

- .1 Before submitting a bid, it is the responsibility of bidders to visit the sites to review the nature and extent of the work.
- .2 Bidders must obtain site visit authorization from Departmental Representative prior to visiting the site.
- .3 The submission of a bid will be interpreted as the bidder's acknowledgement that they are familiar with site conditions and their influence on the bidder's ability to perform the work. **No adjustment in submitted fee will be given to compensate the bidder for work methods, labour, materials or equipment required to accommodate identified or observable pre-existing site conditions.**

1.4 PRODUCT/SYSTEM OPTIONS

- .1 Except as the drawings and specifications may be modified by Addenda, the successful Contractor will be held to furnish under his lump sum bid all work as specified. Alternates will be allowed only by procedures described herein. All materials and articles of any kind necessary for this work are subject to the approval of the Departmental Representative and his judgment and decision will be final. The submission of a bid will be taken as evidence of the bidder's compliance with these instructions.
- .2 Where bid documents stipulate a particular product, alternatives will NOT be considered by the Departmental Representative during the bidding period.
- .3 After bid closing when submitting for approval of alternates/equals the onus will be on the bidder to judge the acceptability of proposed alternates. The final decision on the acceptability of alternates/equals will be the Departmental Representative's.
- .4 After contract award, the successful Contractor may submit a formal request for approval of alternates/equals, with appropriate credit. Include with each request all basic data and characteristics of the proposed item, so that a direct comparison can be readily made. It is the responsibility of the bidder to submit complete description and technical information so that the Departmental Representative can make a proper appraisal. Approvals will be issued in writing.
- .5 The Departmental Representative will be the sole judge regarding acceptability of alternates.

1.5 CODES AND STANDARDS

- .1 Perform work in accordance with the latest edition of the National Building Code of Canada adopted by the local authority

having jurisdiction and with other codes of provincial or local application, including amendments up to project tender closing date. In the case of conflict or discrepancy, the more stringent requirement shall apply.

- .2 In addition to above, perform work in accordance with the following codes, regulations, guidelines:
 - .1 Canadian Environmental Protection Act, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, (2008 or latest). (CEPA)
 - .2 Canadian Council of Ministers of the Environment, Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, (2003 or latest). (CCME)
 - .3 Nova Scotia Environment and Labour, Nova Scotia Standards for Construction and Installation for Petroleum Storage Tank Systems (1997 with 2005 amendments, or latest)
 - .4 National Fire Code of Canada, (2010 or latest). (NFC)
 - .5 Canadian Electrical Code, latest edition(CEC)
- .3 Materials and workmanship to meet or exceed the requirements of specified standards, codes and referenced documents.

1.6 CONTRACT METHOD

- .1 Construct Work under stipulated price contract.

1.7 INTERPRETATION OF DOCUMENTS

- .1 Supplementary to the General Conditions of the Contract, the Division 01 specification sections take precedence over the technical specification.

1.8 TERM DEPARTMENTAL REPRESENTATIVE

- .1 Departmental Representative where used in Specifications and project Drawings shall mean the person or entity representing the interest of Parks Canada (PC) for the purpose of the execution of this work.

1.9 WORK SEQUENCE

- .1 The successful bidder shall provide a list of items of work numerically following the same division and section system of the specification and thereafter subdivide into major work components.
- .2 The cost breakdown will be used as basis for progress payment.
- .3 Construct Work in stages to accommodate Owner's continued use of premises during construction.

- .4 Co-ordinate Progress Schedule and co-ordinate with Owner Occupancy during construction.
- .5 Construct Work in stages to provide for continuous public usage. Do not close off public usage of facilities until use of one stage of Work will provide alternate usage.
- .6 Maintain fire access/control.
- .7 Before submitting first progress claim, the successful bidder shall submit a cost breakdown of the Contract price in detail and aggregate contract price. Required forms will be provided for application of progress payment.

1.10 CONTRACTOR USE OF PREMISES

- .1 Unrestricted use of site until Substantial Performance.
- .2 Limit use of premises for Work, storage, and access to allow:
 - .1 Owner occupancy.
 - .2 Public usage.
- .3 Co-ordinate use of premises under direction of Departmental Representative.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .5 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.
- .6 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Departmental Representative.
- .7 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

1.11 OWNER OCCUPANCY

- .1 Owner will occupy premises during entire construction period for execution of normal operations.
- .2 Co-operate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.

1.12 SETTING OUT WORK

- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .2 Provide devices needed to lay out and construct work.

1.13 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING CONDITIONS

- .1 Execute work with least possible interference or disturbance to Facility operations, occupants, public and normal use of

- premises. Arrange with Departmental Representative to facilitate execution of the work.
- .2 Provide barricades, barriers and warning signs around work areas and adjacent to areas in use by Facility occupants.
 - .1 Signage shall be professionally made with bilingual message or use internationally recognized graphic symbols.
 - .3 Separate work areas from other areas of the building and of the site. Provide dust barriers and fences suitable to provide isolation of work site from surroundings and as approved by the Departmental Representative. Submit details for approval.
 - .4 Facility access corridors and emergency exits:
 - .1 Ensure that building corridors, stairs, entrances and fire exits are left unobstructed and kept free of construction materials, tools, debris, dust and dirt at all times for safe passage by building users.
 - .2 Fire escape routes must be accessible and maintained at all times. Do not under any circumstances block fire exit doors and emergency escape routes.
 - .5 Where building security has been reduced by the work of the Contract, provide temporary means to maintain security in coordination with Departmental Representative.

1.14 ROUGHING-IN

- .1 Be responsible for obtaining manufacturer's literature and for correct roughing-in and hook-up of equipment.

1.15 EXISTING SERVICES

- .1 Before starting Work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .2 Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .3 Where work involves breaking into, connecting or shutting down of existing services, obtain approval beforehand from Departmental Representative and carryout work at times as directed by Departmental Representative with minimum disturbance to Facility and site operations. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide alternative routes for personnel, pedestrian and vehicular traffic.

- .5 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .6 Provide temporary services to maintain critical building and tenant systems.
- .7 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .8 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
- .9 Record locations of maintained, re-routed and abandoned service lines.

1.16 CUTTING, FITTING AND PATCHING

- .1 Ensure that cutting and patching, required by trades and sub-trades, is included in total bid price submitted for the work.
- .2 Execute cutting, fitting and patching required to ensure work fits properly.
- .3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work. This includes sections of existing work as a result of removal of existing services.
- .4 Do not cut, bore, or sleeve load-bearing members.
- .5 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.
- .6 Fit work tight to pipes, sleeves, ducts, conduits, and other services penetrating new and existing surfaces.
- .7 Openings made in existing fire rated walls, floors and ceilings shall be filled with purpose made, ULC approved, fire stopping material and smoke seals.
- .8 Reinstate integrity of fire rated separations which have been affected as a result of the work.

1.17 DEMOLITION AND REMOVAL OF FUEL TANK SYSTEMS

- .1 Removal and disposal of all fuel tank system components and accessories shall be in accordance with the *Nova Scotia Standards for Construction and Installation for Petroleum Storage Tank Systems*.

1.18 LOCATION OF EQUIPMENT

- .1 Location of equipment, shown or specified shall be considered as approximate. Final location shall be as required to suit conditions at the time of installation.
- .2 Locate equipment, and distribution systems to provide minimum interference and maximum usable space and in accordance with the manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative when impending installation conflicts with other new or existing components. Follow directives for final location.
- .2 Submit field drawings to indicate final position of services and equipment.

1.19 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each document as follows:
 - .1 Contract Drawings
 - .2 Specifications
 - .3 Addenda
 - .4 Reviewed Shop Drawings
 - .5 List of Outstanding Shop Drawings
 - .6 Change Orders
 - .7 Other Modifications to Contract
 - .8 Field Test Reports
 - .9 Copy of Approved Work Schedule
 - .10 Health and Safety Plan and Other Safety Related Documents
 - .11 Other documents as stipulated elsewhere in the Contract Documents

1.20 PERMITS

- .1 In accordance with the General Conditions of the contract, obtain and pay for compliance certificates, licenses and other permits and permissions as required by municipal, provincial and federal authorities.
- .2 Provide appropriate notification of project to provincial and other inspection authorities having jurisdiction.
- .3 Submit a copy of application forms and approval documents received from above referenced authorities to Departmental Representative.
- .4 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of the work.

1.21 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions in place at site of work.

1.22 ASBESTOS DISCOVERY

- .1 Demolition of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of work, stop work and notify Departmental Representative immediately. Do not proceed with relevant work until written instructions have been received from Departmental Representative.
- .2 Contractor shall consult the facility Asbestos Management Plan (AMP), if existing, prior to commencement of work. All work to be in accordance with AMP.

1.23 OTHER WORK RESTRICTIONS

- .1 Access to King's Bastion and Carrerot House will not be accessible to Contractors between the months of June to October inclusive. Restore building exterior and site conditions to prior to commencement of work.
- .2 Waste-oil and paint storage tanks located at the Fortress of Louisbourg and the Ingonish compounds shall remain in service until completion of new tank system installations.
- .3 The Contractor shall schedule work such that system outage durations are kept to a minimum.
- .4 The Carrerot House tank shall not exceed 4,000L under any circumstance.

PART 2. PRODUCTS

2.1 NOT USED

3.1 NOT USED

END OF SECTION

PART 1. GENERAL

1.1 RELATED REQUIREMENTS

- .1 Health and Safety Requirements Section 01 35 29.06
- .2 Environmental Procedures Section 01 35 43

1.2 ADMINISTRATIVE

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

1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and

other data which are to be provided by Contractor to illustrate details of a portion of Work.

- .1 Contractor may submit the information required by this Section in hard copy form, in the quantities indicated in subsections 1.3.6 to 1.3.9 or as a single copy in electronic form for approval.
- .2 Contractors submitting material in electronic format will be responsible to print copies of approved documents in the quantities indicated in subsections 1.3.6 to 1.3.9 and shall retain (at maximum) the number of copies indicated in subsection 1.3.17 for their own use and distribute the remainder per subsection 1.3.16 to PC (min. 3 copies) and the consultant (min. 1 copy) unless otherwise advised with approval of submission.
- .2 Submit drawings stamped and signed by professional engineer registered or licensed to practice in the Province of Nova Scotia of Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .5 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.

- .2 Layout, showing dimensions, including identified field dimensions, and clearances.
- .3 Setting or erection details.
- .4 Capacities.
- .5 Performance characteristics.
- .6 Standards.
- .7 Operating weight.
- .8 Relationship to adjacent work.
- .6 Submit 8 prints of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .7 Submit 8 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .8 Submit 8 copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Statements shall be printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
 - .2 Certificates must be dated after award of project contract complete with project name.
- .9 Submit 8 copies of manufacturer's instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Provide pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .10 Provide documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 Allow 7 days for Departmental Representative's review of each submission.
- .14 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.

- .15 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .16 After Departmental Representative's review, distribute copies.
- .17 If upon review by Departmental Representative no errors or omissions are discovered or if only minor corrections are made, 4 copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .18 The review of shop drawings by Parks Canada (PC) is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that PC approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
 - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

1.4 SAMPLES

- .1 Submit for review, samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative's business address.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .5 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .6 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.5 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

PART 2. PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3. EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1. GENERAL

1.1 RELATED SECTIONS

- .1 General Instructions Section 01 00 10

1.2 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 Nova Scotia
 - .1 Occupational Health and Safety Act. (1996).

1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .3 Submit 8 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative and authority having jurisdiction, weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS MSDS - Material Safety Data Sheets.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 7 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 7 days after receipt of comments from Departmental Representative.
- .8 Departmental Representative'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.

- .9 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.4 FILING OF NOTICE

- .1 File Notice of Project with Provincial and Federal authorities prior to beginning of Work.

1.5 SAFETY ASSESSMENT

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

1.6 MEETINGS

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

1.7 REGULATORY REQUIREMENTS

- .1 Do work in accordance with all applicable Municipal, Provincial and Federal regulatory requirements.

1.8 PROJECT/SITE CONDITIONS

- .1 Work at site will involve contact with:
 - .1 Hydrocarbon storage and distribution systems and their associated potential to adversely affect the environment through accidental release of contents
 - .2 Exposure to vehicular traffic
 - .3 Historic Properties
 - .4 National Park Facilities
- .2 Obtain from Departmental Representative, copy of MSDS Data sheets of existing hazardous materials stored on site or being used by Facility and Tenant personnel in the course of their operations.
- .3 Above lists shall not be construed as being complete and inclusive of safety and health hazards encountered as a result of Contractor's operations during the course of work. Include above items into the hazard assessment program specified herein.

1.9 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.

- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.10 RESPONSIBILITY

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

1.11 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act, Occupational Safety General Regulations, N.S.
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.12 UNFORSEEN HAZARDS

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

1.13 HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:
 - .1 Have site-related working experience specific to activities associated with fuel storage tank and distribution equipment de-commissioning and installation.
 - .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.
 - .5 Be on site during execution of Work and report directly to and be under direction of site supervisor.

1.14 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 Nova Scotia having jurisdiction, and in consultation with Departmental Representative.

1.15 CORRECTION OF NON-COMPLIANCE

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

1.16 BLASTING

- .1 Blasting or other use of explosives is not permitted.

1.17 POWDER ACTUATED DEVICES

- .1 Use powder actuated devices only after receipt of written permission from Departmental Representative.

1.18 WORK STOPPAGE

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

PART 2. PRODUCTS

2.1 NOT USED

- .1 Not used.

PART 3. EXECUTION

3.1 NOT USED

- .1 Not used.

END OF SECTION

PART 1. GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 00 10 - General Instructions.
- .2 Section 01 35 29.06 - Health and Safety Requirements.

1.2 REFERENCES

- .1 Definitions:
 - .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.
 - .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.
- .2 Reference Standards:
 - .1 Department of Justice Canada
 - .1 National Parks of Canada Fire Protection Regulations - 1980 (R2009).
 - .2 Nova Scotia Environment and Labour
 - .1 Guidelines for the Application and Removal of Structural Steel Protective Coatings - 1996 (R2003).
 - .2 Construction and Demolition Debris Disposal Site Guidelines - 1997 (R2003).
 - .3 Dangerous Goods Management Regulations - 1995 (R2002)
 - .4 Erosion and Sedimentation Control Handbook for Construction Sites
 - .5 Activity Designation Regulations - 1995 (R2007).
 - .6 Approval Procedure Regulations - 1995
 - .7 Nova Scotia Wetlands Conservation Policy - 2011.
 - .3 U.S. Environmental Protection Agency (EPA)/Office of Water
 - .1 EPA 832/R-92-005-92, Storm Water Management for Construction Activities, Chapter 3.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prior to commencing construction activities or delivery of materials to site, provide Environmental Protection Plan for review and approval by Departmental Representative.
- .3 Ensure Environmental Protection Plan includes comprehensive overview of known or potential environmental issues to be addressed during construction.
- .4 Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .5 Include in Environmental Protection Plan:
 - .1 Name of person responsible for ensuring adherence to Environmental Protection Plan.
 - .2 Name and qualifications of person responsible for manifesting hazardous waste to be removed from site.
 - .3 Name and qualifications of persons responsible for training site personnel.
 - .4 Descriptions of environmental protection personnel training program.
 - .5 Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.
 - .6 Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Ensure plans include measures to minimize amount of mud transported onto paved public roads by vehicles or runoff.
 - .7 Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Ensure plan includes measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.
 - .8 Spill Control Plan including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
 - .9 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
 - .10 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
 - .11 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended

actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.

- .12 Historical, archaeological, cultural resources, biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands.

1.4 FIRES

- .1 Fires and burning of rubbish on site are not permitted.
- .2 The Contractor is required to comply with the Fire Protection Regulations of the National Parks Act.
- .3 In accordance with these Regulations, the Park Superintendent may restrict activities, or access to work areas, in the interest of fire prevention.

1.5 DRAINAGE

- .1 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

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 paint, grinding debris and other extraneous materials from contaminating air and waterways beyond application area.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris.

1.7 HAZARDOUS MATERIALS

- .1 Dangerous goods, whose release into the environment could cause adverse effect, shall be stored and handled in a manner which gives due regard for workers and public safety, and for the protection of the environment.
- .2 No material toxic to fish or any aquatic life shall be permitted to enter any stream, river, lake or ocean. This shall include, but not be limited to lubricants, fuels, testing fluids, insecticides, detergents, herbicides, cement, lime or concrete.
- .3 The management of fuels, lubricants and chemicals must meet with the requirements of the Nova Scotia Dangerous Goods Management Regulations and all other appropriate provincial and

federal regulations to include but not be limited to the following:

- .1 Temporary fuel storage sites are to be located a minimum 200 m from any watercourse.
- .2 Fuel storage containers must be accompanied by impermeable structures that would provide containment of 125% of the container capacity in the event of a leak or spill.
- .3 Fuelling and lubricating of equipment shall not be done closer than 100 m to any watercourse
- .4 All refuelling and lubricating operations shall employ protection measures such as drip pans, to reduce the potential for escape of petroleum products to the environment.
- .4 The Departmental Representative and the Park Warden must be immediately contacted after a spill of more than 10 L of fuel or lubricant, and after any amount of other chemical products has escaped.
- .5 Contractor storage of large amounts of fuel (more than 900 L) in the Park is not permitted. Refuelling of on-line equipment from storage facilities located outside Park boundaries is strongly preferred. Storage of any fuel has to occur only in previously approved locations, and with Park consent. The Contractor must submit plans for fuel management and a Spill Contingency Plan seven days prior to the start of the Work. The Contractor is expected to be prepared to effect the containment and clean-up of all spills related to the Work.
- .6 Storage of hazardous material, including explosives, shall not be permitted within the Park, except for quantities which shall normally be expected to be utilized in a day of Work, and which are not permitted to stockpile.
- .7 Emulsion storage tankers and transfer of emulsion from tanker to spray vehicle are not permitted within National Park.

1.8 NOTIFICATION

- .1 Departmental Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor: after receipt of such notice, inform Departmental Representative of proposed corrective action and take such action for approval by Departmental Representative.
 - .1 Do not take action in advance of receipt of written approval by Departmental Representative.
- .3 Departmental Representative will issue stop order of work until satisfactory corrective action has been taken.

- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

PART 2. PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3. EXECUTION

3.1 CLEANING

- .1 Unless prior permission from the Departmental Representative is obtained, all contractor equipment, facilities and materials must be removed from the Park at the finish of each work phase, or if work is suspended due to weather or other circumstance, upon the suspension of work activities.
- .2 All work sites must be returned to a neat and tidy condition upon site abandonment.
- .3 Waste Management: Do not bury rubbish and waste materials on site. Sort waste materials for recycling and remove all garbage and construction debris from site daily. Dispose in environmentally acceptable disposal site in accordance with all applicable Provincial and Municipal regulations.
- .4 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCES

- .1 CSA-A23.1 (latest edition): Concrete Materials and Methods of Concrete Construction.
- .2 CSA-A23.2 (latest edition): Methods of Test for Concrete.
- .3 CSA A283 (latest edition): Qualification Code for Concrete Testing Laboratories.
- .4 CSA G30.5-M1983: Welded Steel Wire Fabric for Concrete Reinforcement.
- .5 CAN/CSA-G30.18-M92: Billet-Steel Bars for Concrete Reinforcement.
- .6 Reinforcing Steel: Reinforcing Steel Manual of Standard Practice, Institute of Canada (RSIC), Third Edition, 1996.

1.2 RELATED SECTIONS

- .1 Section 01 10 10 - General Instructions

1.3 STANDARDS ON SITE

- .1 Keep a copy of CAN/CSA-A23.1 (latest edition) at the work site, and make available for reference.

1.4 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit reinforcement shop drawings clearly showing plan, layout, sizes, dimensions, installation details, bar lists, chair sizes and other relevant details and information.

1.5 QUALIFICATIONS

- .1 Concrete shall be supplied by an approved and qualified concrete supplier.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Reinforcing steel:
 - .1 billet steel, to CAN/CSA-G30.18 (latest edition), Grade 400 deformed bars.
 - .2 size as shown on drawings.
- .2 Reinforcing steel and welded wire fabric supports:
 - .1 Footings and slabs-on-grade:

- .1 Class C, Type CB chairs or bolsters.
- .2 Of adequate construction for strength and support of reinforcing steel under construction loads.
- .3 Reinforcing polypropylene fibres:
 - .1 Acceptable products: PSI Fibrestrand 150 by Euclid
- .4 Non-shrink grout:
 - .1 Acceptable products: SikaGrout 212 HP

2.2 REINFORCING STEEL FABRICATION

- .1 Fabricate and detail reinforcement in accordance with Reinforcing Steel Institute of Canada Manual of Standard Practice.
- .2 Do bending and splicing in accordance with CAN/CSA-A23.1 (latest edition).

2.3 MIX DESIGNS

- .1 Proportion concrete in accordance with CAN/CSA-A23.1 (latest edition), Alternative 1 to give the following properties.
- .2 Have mix design prepared by concrete supplier, or CSA Certified Materials Testing Laboratory, to meet the criteria for the specified mix.
- .3 Mix design:

	<u>All Concrete</u>
Class	C-1
Nominal Maximum Size Aggregate	3/4" (19 mm)
Slump	50mm to 100mm
Air Content	5% to 8%
Minimum Compressive Strength at 28 days	35 MPa
Other Admixtures	None

- .4 Materials, proportions and source of supply of ready-mixed concrete shall be subject to review by the Departmental Representative.
- .5 Provide 3.0 kg/m³ of polypropylene micro-fibre in concrete mix for oil pipe encasement. Mix in accordance with manufacturer's specifications.

PART 3 EXECUTION

3.1 PLACING REINFORCEMENT

- .1 Accurately space and support reinforcement in accordance with CAN/CSA-A23.1-M (latest edition).
- .2 Minimum clear cover for reinforcement shall be in accordance with CAN/CSA-A23.1 (latest edition) and as detailed.
- .3 Place reinforcing steel supports in continuous rows at 760 millimeters centre-to-centre.
- .4 Coordinate placement of reinforcement with Mechanical trade.
- .5 Placement of reinforcement shall proceed in such a way to prevent damage to oil piping. All damage shall be reported to mechanical trade for immediate repair.
- .6 Upon completion of reinforcement installation and prior to concrete pour, the Consultant shall inspect installation. Give 48 hour written notice of date for review to the Consultant and Departmental Representative. Make corrections as required to satisfaction of the Consultant.

3.2 PLACING

- .1 Handling, depositing, consolidation and vibration shall conform to CAN/CSA-A23.1 (latest edition).
- .2 Appropriate measures shall be taken to ensure oil piping reinforcement and other embedded items are not damaged or displaced by workers, equipment, or other loads which may be present during the concreting operation.
- .3 Give 48 hours written notice of date for concrete placement to the Consultant and Departmental Representative.

3.3 CURING AND PROTECTION

- .1 Curing and protection shall conform to CAN/CSA-A23.1 (latest edition).

3.4 CONCRETE FINISHINES

- .1 All exposed surfaces to have steel trowel finish.
- .2 Hand steel trowel surfaces not accessible for power trowelling.
- .3 Chamfer all exposed edges $\frac{3}{4}$ " x $\frac{3}{4}$ ".

3.5 TESTING

- .1 A Testing Company shall be employed by the Contractor at his expense to advise on quality control regarding all aspects of protection, mixing, transporting, placing, and finishing of the cast-in-place concrete.

- .2 Review and testing of concrete and concrete materials shall be carried out by a testing laboratory certified in accordance with CSA A283 (latest edition).
- .3 Provide access to the work for review and selection of samples, and provide materials required for test specimens.
- .4 Materials for concrete shall be tested, if required, and approved before concrete placing begins.
- .5 Cast a minimum of one (1) set of three (3) standard cylinders for each 76 cubic-meters of concrete placed.
- .6 One cylinder shall be tested at age seven (7) days; remaining two (2) at age 28 days.
- .7 Report test results will be issued to the Contractor and Consultant.
- .8 Slump and air content tests will be taken at intervals as frequent as considered necessary. If required, make immediate adjustments to correct unacceptable results.
- .9 Cement:
 - .1 To CAN/CSA-A5-M (latest edition), Type 10.
- .10 Fine and coarse aggregates:
 - .1 To CAN/CSA-A23.1 (latest edition).
- .11 Air entraining admixture:
 - .1 To CAN3-A266.1 (latest edition)
 - .2 Acceptable products: Darex AEA as manufactured by Grace Construction Materials.
- .12 Insulation:
 - .1 Extruded polystyrene, shiplapped edges
 - .2 To CAN/CGSB-51.20-M (latest edition), Type VI
 - .3 Acceptable products: Styrofoam Highload-40.
- .13 Cement board:
 - .1 Aggregated portland cement board with vinyl-coated, woven glass-fibre mesh embedded in front and back surfaces, specially formulated to resist water and steam, square cut and smooth finished edges.
- .14 Isolation board:
 - .1 Acceptable products: Sealtight Asphalt Expansion Joint Filler by W.R. Meadows.

END OF SECTION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 33 56 13 Aboveground Fuel Storage Tanks.

1.2 REFERENCES

- .1 American Society of Mechanical Engineers (ASME)
 - .1 Date.
 - .2 ASME-B16.3-2006, Malleable-Iron Threaded Fittings: Classes 150 and 300.
 - .3 ASME-B16.9-2007, Factory-Made Wrought Steel Buttwelding Fittings.
- .2 ASTM International
 - .1 ASTM A47/A47M-99(2004), Standard Specification for Ferritic Malleable Iron Castings.
 - .2 ASTM A53/A53M-07, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless.
 - .3 ASTM B61-08, Standard Specification for Steam or Valve Bronze Castings.
 - .4 ASTM B75M-99(2005), Standard Specification for Seamless Copper Tube Metric.
- .3 Canadian Environmental Protection Act (CEPA)
 - .1 CCME PN 1326-2008, Environmental Code of Practice for Aboveground and Underground Storage Tank Systems for Petroleum Products and Allied Petroleum Products.
- .4 CSA International
 - .1 CSA-B139-09, Installation Code for Oil Burning Equipment.
 - .2 CSA-B140.0-03, Oil Burning Equipment: General Requirements.
 - .3 CSA-C282-05, Emergency Electrical Power Supply for Buildings.
- .5 Green Seal Environmental Standards (GSES)
 - .1 Standard GS-11-2008, 2nd Edition, Paints and Coatings.
- .6 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .7 Manufacturers Standardization Society of the Valve and Fitting Industry (MSS)
 - .1 MSS-SP-80-08, Bronze Gate, Globe, Angle and Check Valves.
- .8 National Association of Corrosion Engineers (NACE)

- .1 NACE SP0169-2007, Control of External Corrosion on Underground or Submerged Metallic Piping Systems.
- .9 National Fire Code of Canada (NFCC 2005)
- .10 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC S603.1-03, External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids.
 - .2 ULC ORD-C107.12-1992, Line Leak Detection Devices for Flammable Liquid Piping.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature, specifications and datasheets for piping, fittings and equipment and include product characteristics, performance criteria, physical size, finish and limitations.
 - .1 Indicate on manufacturer's catalogue literature the following: valves.
 - .2 Provide copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Test Reports:
 - .1 Submit certified test reports from approved independent testing laboratories indicating compliance with specifications for specified performance characteristics and physical properties.
- .4 Certificates:
 - .1 Submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .5 Manufacturers' Instructions: provide manufacturer's installation instructions.

1.4 CLOSEOUT SUBMITTALS

- .1 Submit maintenance and engineering data for incorporation into manual specified in Section 01 33 00 - Submittal Procedures

1.5 QUALITY ASSURANCE

- .1 Ensure piping is installed by company or individual authorized by authority having jurisdiction.

PART 2 PRODUCTS

2.1 ABOVEGROUND/INTERIOR OIL PIPING

- .1 Copper tubing with polyethylene coating.
- .2 Copper alloy C12200 - Annealed Temper.
- .3 Low density polyethylene LLDPE extrusion resin with UV inhibitors.
- .4 Standard of Acceptance: Kamco Oil Pro-Tec.

2.2 FILL VENT AND CARRIER PIPE

- .1 Materials as per CSA-B139, CEPA SOR/2008-197, NFCC.
- .2 Steel: to ASTM A53/A53M, Schedule 40, continuous weld or electric resistance welded, screwed.
- .3 Copper: type K L, soft copper tubing, to ASTM B75M, in long lengths.

2.3 FITTINGS

- .1 Steel:
 - .1 Malleable iron: screwed, banded, Class 150 to ASME-B16.3.
 - .2 Welding: butt-welding to ASME-B16.9.
 - .3 Unions: malleable iron, brass to iron, ground seat, screwed, to ASTM A47/A47M.
 - .4 Nipples: Schedule 40, to ASTM A53/A53M.
- .2 Copper:
 - .1 Piping: flare.
 - .2 Connections to equipment: flare.

2.4 BALL VALVES

- .1 Materials: Brass body.
- .2 Working pressure up to 4,100 kPa (600 psig).
- .3 Complete with lockable handle with PVC grip.
- .4 Provide the following spare parts:
 - .1 Valve seats: one for every ten valves, each size. Minimum one.
 - .2 Discs: one for every ten valves, each size. Minimum one.
 - .3 Stem packing: one for every ten valves, each size. Minimum one.
 - .4 Gaskets for flanges: one for every ten flanges.
- .5 Standard of acceptance: Morrison Bros. Co. (Fig.691B), OPW Global.

2.5 SWING CHECK VALVES

- .1 Bronze body, brass seat ring, viton disc, bronze cap.
- .2 Full bore inside diameter.
- .3 Rated normal pressure limit: 860kPa (125 psi).
- .4 Provide the following spare parts
 - .1 Pin: one for every ten valves, each size. Minimum one.
 - .2 Stem: one for every ten valves, each size. Minimum one.
 - .3 Plug: one for every ten valves, each size. Minimum one.
 - .4 Cap: one for every ten valves, each size. Minimum one.
 - .5 Disc: one for every ten valves, each size. Minimum one.
 - .6 Disc Sub-Assembly: one for every ten valves, each size. Minimum one.
 - .7 Disc Nut: one for every ten valves, each size. Minimum one.
 - .8 Disc Holder: one for every ten valves, each size. Minimum one.
 - .9 Carrier: one for every ten valves, each size. Minimum one.
 - .10 Retaining Ring: one for every ten valves, each size. Minimum one.
 - .11 Washer: one for every ten valves, each size. Minimum one.
 - .12 Lock Nut: one for every ten valves, each size. Minimum one.
- .5 Standard of Acceptance: OPW 175 Swing Check Valve, Morrison Bros.

2.6 LUBRICATED PLUG COCKS

- .1 NPS 2 and under, screwed: to ASTM B61, Class 150, 1 MPa, bronze body.

2.7 ANTI-SIPHON VALVES

- .1 For preventing accidental siphoning in the event of a leak downstream below the liquid level of the tank.
- .2 Ductile iron body.
- .3 Normally closed.
- .4 Integrated thermal expansion relief.
- .5 cUL listed.
- .6 Standard of Acceptance: Morrison Bros. Fig 910.

2.8 PIPING LEAK DETECTION

- .1 Controller:
 - .1 Alarm module for use with hydrocarbon detecting probe.

- .2 60 dB audible alarm with silence button.
- .3 LED indicators for leaks, trouble and communication status.
- .4 120V Power supply.
- .5 Standard of Acceptance: Pentair/TraceTek TTA-SIM
- .2 Sensing probe:
 - .1 For detecting hydrocarbon fuels floating on water or in a sump.
 - .2 Resettable for multiple use.
 - .3 Standard of Acceptance: Pentair/TraceTek TT-FFS.

PART 3 EXECUTION

3.1 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 PIPING

- .1 Install oil piping system in accordance with NFCC CSA-B139 CSA-B140.0.
- .2 Slope piping down in direction of storage tank unless otherwise indicated.
- .3 Above ground piping to be protected from physical damage due to impact.
- .4 Piping inside building:
 - .1 Ensure piping in solid flooring is installed to CSA-B139 authority having justification.
 - .2 Use flare joint approved fitting to CSA-B139 for copper piping.
 - .3 Install filter, gate valve, and fire valve at burners.
- .5 Fill, vent, suction and return piping outside building:
 - .1 Steel piping welded throughout except at tanks where electrically isolating fittings are used.
 - .2 Grading: slope piping at 1% minimum back to tanks.
- .6 Piping at tanks:
 - .1 Suction: terminate 150 mm from bottom of tank with foot valve and strainer.
 - .2 Return: terminate at top of tank.
 - .3 Comply with CSA-B139 authority having jurisdiction for vent piping at tanks including venting whistle venting alarm.

- .4 Fill pipes: install to comply with CSA-B139.
- .5 Include vapour liquid tight tamperproof cover.
- .6 Equip fill pipes on tanks with capacity greater than 5000 L with liquid and vapour tight connections.
- .7 Dipstick: extend tube to within 150 mm from bottom of tank. Terminate top of tank with lockable cap and chain, and watertight cover.
- .7 Clearly label piping runs in legible form indicating;
 - .1 Piping product content.
 - .2 Direction of flow.
 - .3 Identify transfer points in piping systems to CPPI Colour-Symbol System to Mark Equipment and Vehicles for Product Identification

3.3 VALVES

- .1 Install valves with stems upright or horizontal unless approved otherwise by Departmental Representative.
- .2 Install ball valves at branch take-offs, to isolate pieces of equipment and as indicated.
- .3 Install swing check valves as indicated.
- .4 Install plug cocks as indicated.

3.4 OVERFILL AND SPILL PROTECTION

- .1 In accordance with:
 - .1 Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations - 2008.
 - .2 Installation and Environment Management Guide for Aboveground Domestic Oil Tanks in Nova Scotia.
 - .3 Nova Scotia Petroleum Management Regulations.
 - .4 Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products - Canadian Council of Ministers of the Environment (CCME).
 - .5 National Fire Code of Canada (NFCC) and National Fire Protection Association (NFPA 30).
 - .6 Nova Scotia Standards for Construction and Installation for Petroleum Storage Tanks Systems.
 - .7 CSA-B139.

3.5 LEAK DETECTION

- .1 Install line leak detector to ULC ORD C107.12.
- .2 Install secondary containment systems that will allow leaks to accumulate in containment sump available for visual inspection.

3.6 FIELD QUALITY CONTROL

- .1 Site Tests/Inspection:
 - .1 Test system to CSA-B139 and CSA-B140.0 and authorities having jurisdiction.
 - .2 Isolate tanks from piping pressure tests.
 - .3 Maintain test pressure during backfilling.

3.7 MANUFACTURER'S FIELD SERVICES:

- .1 Have manufacturer of products, supplying materials for Work of this Section, review Work involved in handling, installation/application, protection and cleaning, of its products and submit written reports, in acceptable format, to verify compliance of Work with Contract.
- .2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- .3 Schedule site visits, to review Work, at stages listed:
 - .1 After delivery and storage of products, and when preparatory Work, or other Work, on which the Work of this Section depends, is complete but before installation begins.
 - .2 Twice during progress of Work at 25 % and 60 % complete.
 - .3 Upon completion of the Work, after cleaning is carried out.
- .4 Obtain reports, within 3 days of review, and submit, immediately, to Departmental Representative.

3.8 CLEANING

- .1 Flush after pressure test with number 1 number 2 fuel oil for a minimum of two hours. Clean strainers and filters.
- .2 Dispose of fuel oil used for flushing out in accordance with requirements of authority having jurisdiction.
- .3 Ensure entire installation is approved by authority having jurisdiction.
- .4 Remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 23 11 13 Facility Fuel Oil Piping.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI).
 - .1 ANSI/NFPA-329-99, Handling Underground Releases of Flammable and Combustible Liquids.
 - .2 ANSI/API 650-2000, Welded Steel Tanks for Oil Storage.
- .2 American Petroleum Institute (API).
 - .1 API RP 651-1997, Cathodic Protection of Aboveground Petroleum Storage Tanks.
 - .2 API STD 653-R01, Tank Inspection, Repair, Alteration, and Reconstruction.
- .3 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM C618-01, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
- .4 Canadian Council of Ministers of the Environment (CCME).
 - .1 CCME-PN1326-2004, Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.
- .5 Department of Justice Canada (Jus).
 - .1 Canadian Environmental Protection Act, 1999 (CEPA).
- .6 Canadian Standards Association (CSA)/CSA International.
 - .1 CAN/CSA-B139-00, Installation Code for Oil Burning Equipment.
- .7 The Master Painters Institute (MPI).
 - .1 Architectural Painting Specification Manual - September 2002.
- .8 National Research Council/Institute for Research in Construction.
 - .1 NRCC 38727, National Fire Code of Canada (NFC)-1995.
- .9 Transport Canada (TC).
 - .1 Transportation of Dangerous Goods Act, 1992 (TDGA).
- .10 Underwriters' Laboratories of Canada (ULC).
 - .1 ULC/ORD-C58.9-97, Secondary Containment Liners for Underground and Aboveground Tanks.

- .2 ULC/ORD-C58.12-92, Leak Detection Devices (Volumetric Type) for Underground Storage Tanks.
- .3 ULC/ORD-C58.14-92, Leak Detection Devices (Nonvolumetric Type) for Underground Storage Tanks.
- .4 ULC/ORD-C58.15-92, Overfill Protection Devices for Underground Tanks.
- .5 ULC/ORD-C107.4-92, Ducted Flexible Underground Piping Systems for Flammable and Combustible Liquids.
- .6 ULC/ORD-C107.7-93, Glass-Fibre Reinforced Plastic Pipe and Fittings.
- .7 ULC/ORD-C107.19-92, Secondary Containment of Underground Piping.
- .8 ULC/ORD-C142.23-91, Aboveground Waste Oil Tanks.
- .9 ULC-S601-2000, Aboveground Horizontal Shop Fabricated Steel Tanks.
- .10 CAN/ULC-S602-92, Aboveground Steel Tanks for Fuel Oil and Lubricating Oil.
- .11 CAN/ULC-S603.1-92, Galvanic Corrosion Protection Systems for Steel Underground Tanks.
- .12 ULC-S630-93, Aboveground Vertical Shop Fabricated Steel Tanks.
- .13 ULC-S652-93, Tank Assemblies for Collection of Used Oil.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Indicate details of construction and installation.
- .3 Shop drawings to detail and indicate following as applicable to project requirements. Submit manufacturers product data to supplement shop drawings.
 - .1 Size, materials and locations of ladders, ladder cages, catwalks and lifting lugs.
 - .2 Tank capacity.
 - .3 Size and location of fittings.
 - .4 Environmental compliance package accessories.
 - .5 Decals, type size and location.
 - .6 Accessories: provide details and manufacturers' product data.
 - .7 Size, material and location of manholes.
 - .8 Size, materials and locations of railings, stairs, and walkways.
 - .9 Finishes.
 - .10 Electronic accessories: provide details and manufacturers' product data.
 - .11 Insulation types, locations and RSI values.

- .12 Identification, name, address and phone numbers of corrosion expert where applicable. Note: Grading drawings to be stamped by licenced corrosion expert.
- .13 Spill containment: provide description of methods and show sizes, materials and locations for collecting spills at connection point between storage tank system and delivery truck, rail car, or vessel.
- .14 Anchors: description, material, size and locations.
- .15 Concrete: type, composition and strength.
- .16 Size and location of site pads.
- .17 Level gauging: type and locations, include:
 - .1 Reporting systems, types of reports and report frequency.
 - .2 Maximum number of tanks to be monitored.
 - .3 Number of probes required and sizes.
 - .4 Provide details and manufacturer's product data.
- .18 Ancillary devices: provide details and manufacturer's product data.
- .19 Leak detection system, type and locations, and alarm system.
- .20 Grounding and bonding: provide details of design, type, materials and locations.
- .21 Field-erected AST overfill-protection systems: provide details of design, type, materials and locations.
- .22 Containment system for spills, overfills and storm runoff water: provide details, materials used, and locations.
- .4 Provide maintenance data for tank appurtenances and leakage detection system for incorporation into O&M manual.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .2 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard, and packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .3 Separate for recycling and place in designated containers steel, metal and plastic waste in accordance with Waste Management Plan.
- .4 Place materials defined as hazardous or toxic in designated containers.
- .5 Handle and dispose of hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.
- .6 Clearly label location of salvaged materials storage areas and provide barriers and security devices.

- .7 Ensure emptied containers are sealed and stored safely.
- .8 Divert unused materials from landfill to metal recycling facility as approved by Departmental Representative.
- .9 Divert unused concrete materials from landfill to local facility as approved by Departmental Representative.
- .10 Dispose of unused paint or coating material at an official hazardous material collections site as approved by Departmental Representative.
- .11 Do not dispose of unused paint material must into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .12 Fold up metal banding, flatten and place in designated area for recycling.

PART 2 PRODUCTS

2.1 TANKS: ABOVEGROUND DOUBLE WALL STEEL

- .1 Aboveground horizontal, double walled steel, 300° containment, vacuum monitored tank suitable for heating oil storage.
- .2 Manufactured to CAN/ULC-S601. Tanks inside buildings to CAN/ULC-S602.
- .3 Exterior finish: Blast cleaned to SSPC-SP6 with one coat of grey primer and one finish coat of white epoxy enamel.
- .4 Tank saddles: minimum 100mm clearance between tank bottom and mounting surface, and welded to base.
- .5 Lifting lugs.
- .6 Factory installed emergency vent.
- .7 Dipstick and gauge chart.
- .8 Normal vent c/w galvanized riser pipe.
 - .1 Vent cap: OPW model 23 or approved equal.
- .9 Railings, stairs, ladders and walkways: as indicated.
- .10 Secondary containment (interstitial vacuum space and tank capacity) shall be equal or greater than 100% of total tank capacity.
- .11 Vacuum monitor pressure gauge.
- .12 Vacuum monitor switch and alarm.
- .13 Connections: Minimum five (5) connections. Provide two (2) spare connections. As indicated.
- .14 Standard of Acceptance: Clemmer Steelcraft.
 - .1 Schedule:

Location	Volume	Model
Alexander Graham Bell Museum	4,540 L	TH7G004500W12X
Fortress of Louisbourg - Administration Building	4,540 L	TH7G004500W12X
Fortress of Louisbourg - Carrerot House	3,990 L	TH7G004500W12X
Fortress of Louisbourg - Visitors Centre	4,540 L	TH7G004500W12X

- .15 Other acceptable manufacturers: AT&S Gil-Fab Division, The Tank Shop, Guardian Tanks.

2.2 TANKS: ABOVEGROUND DOUBLE WALL STEEL - USED OIL AND PAINTS

- .1 Aboveground used oil storage tank, suitable for disposal of used motor oil and paints.
- .2 To ULC-S652 or ULC/ORD-C142.23.
- .3 Double wall construction.
- .4 Interstitial vacuum monitoring gauge with guard.
- .5 Fill/spill box with steel spill box cover with stainless steel hinges c/w splash guard.
- .6 Tank pump out.
- .7 Lifting lugs.
- .8 Factory installed emergency vent.
- .9 3500mm galvanized sch. 40 steel vent stack.
- .10 Tank exterior: sandblasted to SSPC-SP6, commercial blast, two part high built epoxy 4-6 mils dry, two part polyurethane epoxy 2-3 mils dry.
- .11 Safety and product labeling and per codes.
- .12 Tanks 1,500L and greater to be supplied with factory installed access stairs.
- .13 Standard of Acceptance: Myers SD Series.
- .14 Other acceptable manufacturers: Clemmer Steelcraft.
- .15 Capacities:
- .1 Ingonish Compound: 2,000L
 - .2 Cheticamp Compound: 2,000L
 - .3 Fortress of Louisbourg Compound - Paint: 500L
 - .4 Fortress of Louisbourg Compound - Waste Oil: 1,500L

2.3 CONCRETE

- .1 In accordance with Section 03 30 00 - Cast-in-Place Concrete.

2.4 PIPING, VALVES AND FITTINGS

- .1 In accordance with Section 23 11 13 - Facility Fuel Oil Piping.
- .2 Mechanical joints on buried primary piping are not permitted.
- .3 Piping located below product level equipped with either manual or automatic shut-off at storage tank.
- .4 Provide means for collecting spills at connection point between storage tank system and delivery truck.

2.5 LEVEL GAUGING

- .1 Tank gauging stick: to manufacturer's standard.
- .2 Tank level gauging and indicator.
 - .1 Mechanical, direct reading device with large dial.
 - .2 Gauge and gauge openings: protected against liquid overflow and possible liquid and vapour release.
 - .3 Standard of Acceptance: Scully Golden Gallon Gauge.

2.6 OVERFILL AND SPILL CONTAINMENT

- .1 Spill Containers:
 - .1 28L capacity spill-fill bowl, with hinged cover lockable with a padlock.
 - .2 12 gauge steel body, powder coated white, with 14 gauge steel cover, powder coated white.
 - .3 To CAN-ULC-S663-11.
 - .4 Standard of Acceptance: Morrison Bros. Fig 518.
- .2 Vent Whistles:
 - .1 Calibrated whistle fitting for aboveground tanks.
 - .2 c/w integral pipe scale and big screen.
 - .3 Standard of Acceptance: Scully Ventalarm.

2.7 PRODUCT TRANSFER

- .1 ASTs with normal vent and separate emergency vent.
 - .1 Liquid- and vapour-tight connection on fill pipes for flammable products.
- .2 Cam-Lock coupling, with cap at end of storage tank suction tube for connection to transfer used oil.

2.8 SPILLS, OVERFILLS AND STORM RUNOFF WATER

- .1 Contained, treated and disposed of in accordance with applicable provincial or territorial regulations, guidelines and policies.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Installations in accordance with "Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations - 2008".
- .2 Installations in accordance with "Installation and Environment Management Guide for Aboveground Domestic Oil Tanks in Nova Scotia".
- .3 Installations in accordance with "Nova Scotia Petroleum Management Regulations".
- .4 Installations in accordance with "Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products" - Canadian Council of Ministers of the Environment (CCME).
- .5 National Fire Code of Canada (NFCC) and National Fire Protection Association (NFPA 30).
- .6 Installations in accordance with "Nova Scotia Standards for Construction and Installation for Petroleum Storage Tanks Systems".
- .7 Install tanks and accessories in accordance with CAN/CSA-B139, National Fire Code of Canada, manufacturer's recommendations and CCME PN 1326.
- .8 Position tanks using lifting lugs and hooks, and where necessary use spreader bars. Do not use chains in contact with tank walls.
- .9 Install tanks using certified installers.
- .10 Provide certification of installation to Departmental Representative.

3.2 FIELD QUALITY CONTROL

- .1 Test tanks for leaks to requirements of authority having jurisdiction.

3.3 TOUCH-UP

- .1 Where coating is damaged, touch-up with original coating material.

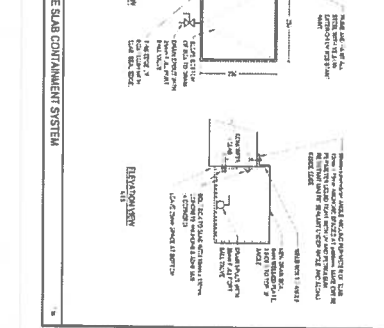
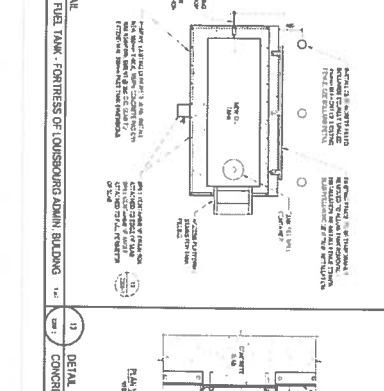
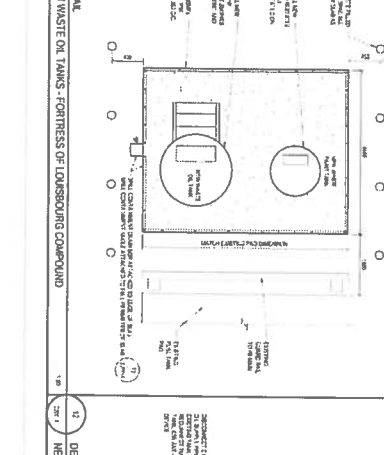
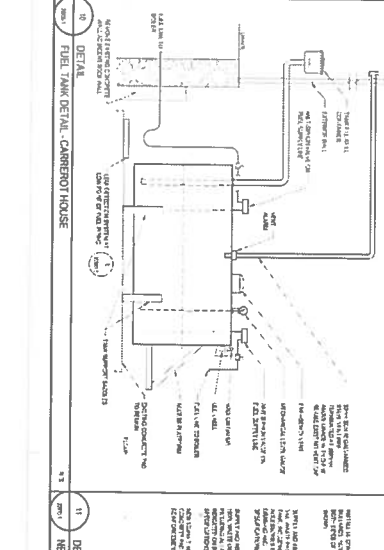
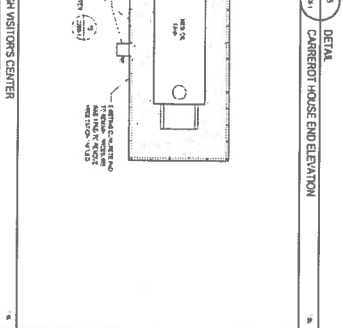
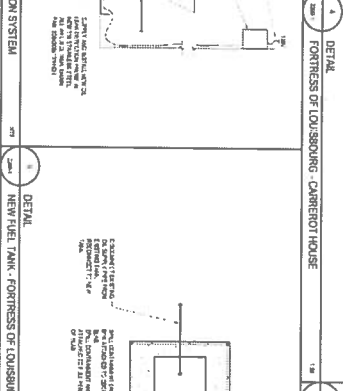
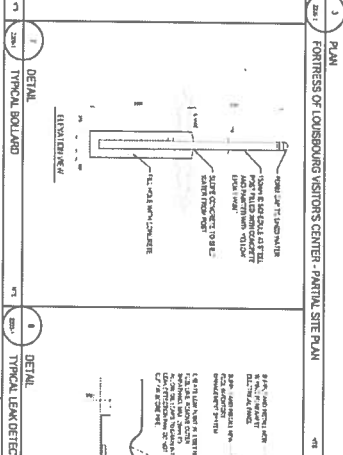
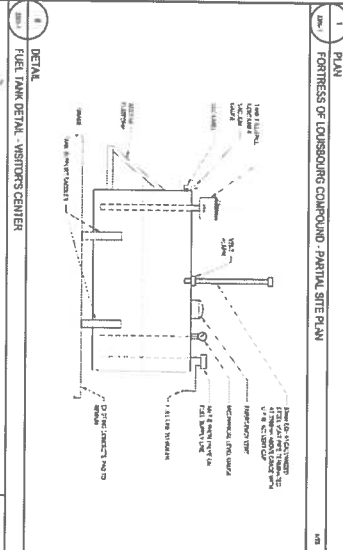
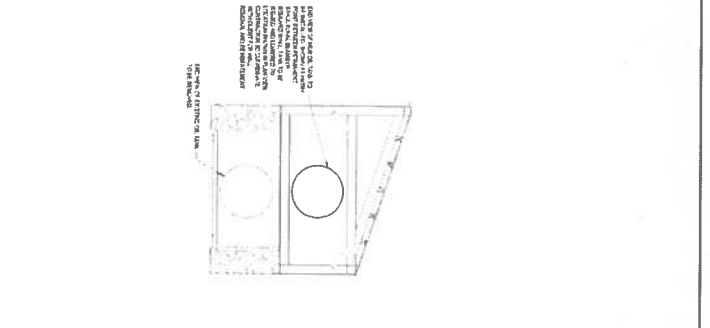
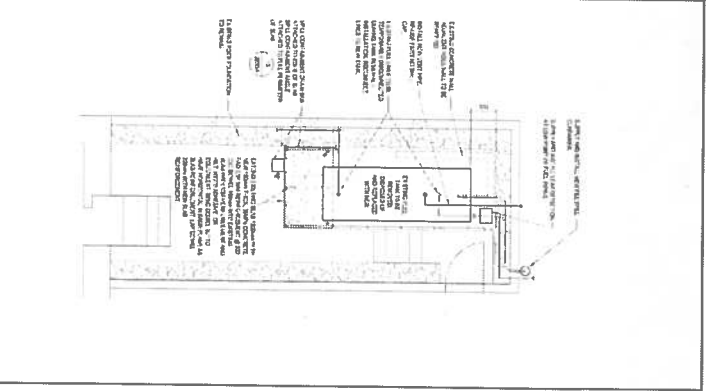
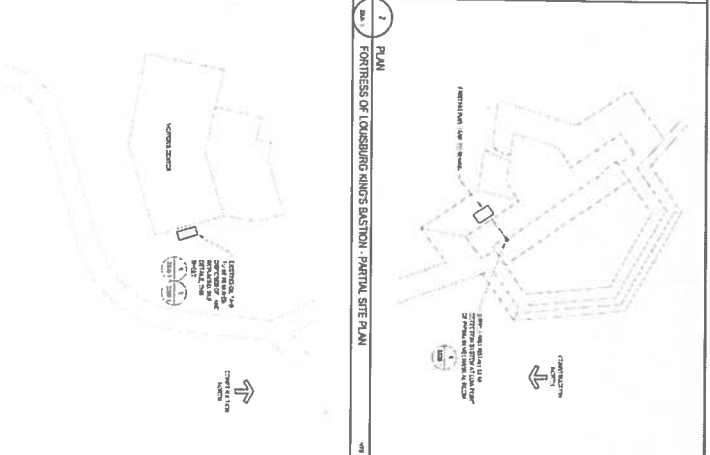
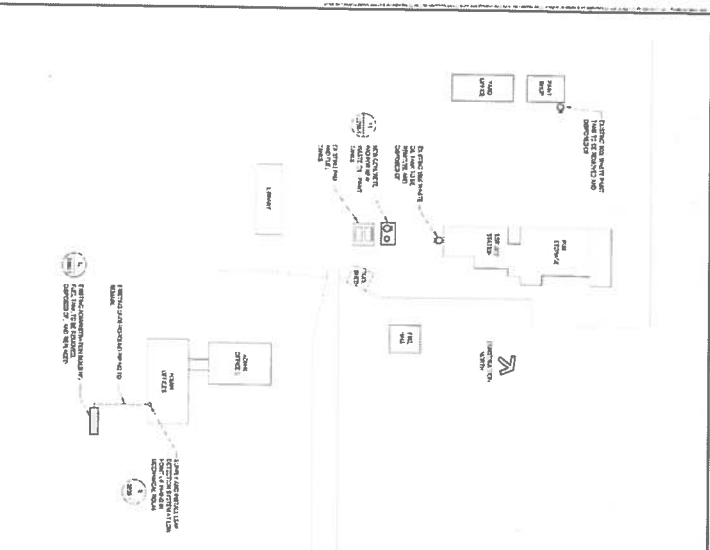
3.4 LEVEL GAUGE SYSTEM

- .1 Provide leak and vapour proof caulking at connections.
- .2 Shield capillary and tubing connections in heavy duty 50 mm polyethylene pipe.
- .3 Calibrate system.

3.5 LEAK DETECTION SYSTEM

- .1 Install in accordance with manufacturer's recommendations.

END OF SECTION



exp.

1000 UNIVERSITY AVENUE, SUITE 1000
 WILLOWDALE, ONTARIO M2H 3L7
 TEL: 416-491-1100
 WWW.EXP-CANADA.COM

PROJECT: FORTRESS OF LOUISBOURG VISITORS CENTER
 DRAWING NO: 2200-1
 DATE: 2020-11-00

PRELIMINARY

Project No: 2200-1
 Date: 2020-11-00
 Drawing No: 2200-1
 Title: FORTRESS OF LOUISBOURG VISITORS CENTER
 Client: PARKS CANADA AGENCY
 Location: CAPE BRETON FIELD UNIT
 Project: FUEL STORAGE SYSTEM UPGRADES

SYD-00229857-AD
 2200-1
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APPENDIX 2 – INTEGRITY PROVISIONS

APPENDIX 3 –
DEPARTMENTAL REPRESENTATIVE'S AUTHORITY

APPENDIX 3 – DEPARTMENTAL REPRESENTATIVE'S AUTHORITY

TO BE PROVIDED AT CONTRACT AWARD.

Contracting Authority is:

Sheldon Lalonde

Contracting Officer, National Contracting Services

Chief Financial Officer Directorate

Parks Canada Agency

111 Water Street East

Cornwall, Ontario K6H 6S3

sheldon.lalonde@pc.gc.ca

Telephone 613-938-5948

Facsimile 1-866-246-6893

The Contracting Authority is responsible for the management of the Contract, and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

Technical Authority is:

Name : _____

Title : _____

Department : _____

Division : _____

Telephone : ____ - ____ - _____

e-mail : _____

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

ANNEX A – HEALTH AND SAFETY

(Not required at solicitation closing)

ATTESTATION FORM (Annex A)

The following form must be completed and signed prior to commencing work on Parks Canada Sites.

Attestation and Proof of Compliance with Occupational Health and Safety (OHS)

Submission of this completed form, satisfactory to Parks Canada, is a condition of gaining access to the work place.

Parks Canada recognizes that federal OHS legislation places certain specific responsibilities upon Parks Canada as owner of the work place. In order to meet those responsibilities, Parks Canada is implementing a contractor safety regime that will ensure that roles and responsibilities assigned under Part II of the *Canada Labour Code* and the *Canada Occupational Health and Safety Regulations* are implemented and observed when involving contractor(s) to undertake works in Parks Canada work places.

Parks Canada Responsible Authority/Project Lead	Address	Contact Information
Project Manager/Contracting Authority (delete as required)		
Prime Contractor		
Subcontractor(s) (add additional fields as required)		

Location of Work

General Description of Work to be Completed

Mark "Yes" where applicable.

	A meeting has been held to discuss hazards and access to the work place and all known and foreseeable hazards have been identified to the contractor and/or subcontractor(s)
	The contractor and/or its subcontractor(s) will comply with all federal and provincial/territorial legislation and Parks Canada's policies and procedures, regarding occupational health and safety.
	The contractor and/or its subcontractor(s) will provide all prescribed safety materials, equipment, devices and clothing.
	The contractor and/or its subcontractor(s) will ensure that its employees are familiar with and use all prescribed safety materials, equipment, devices and clothing at all times.
	The contractor and/or its subcontractor(s) will ensure that its activities do not endanger the health and safety of Parks Canada employees.
	The contractor and/or its subcontractor(s) has inspected the site and has carried out a hazard assessment and has put in place a health and safety plan and informed its employees accordingly, prior to the commencement of the work.
	Where a contractor and/or its subcontractor(s) will be storing, handling or using hazardous substances in the work place, it will place warning signs at access points warning persons of the presence of the substances and any precautions to be taken to prevent or reduce any hazard of injury or death.
	The contractor and/or its subcontractor(s) will ensure that its employees are instructed in respect of any emergency procedures applicable to the site.

I, _____ (contractor), certify that I have read, understood and attest that my firm, employees and all sub-contractors will comply with the requirements set out in this document and the terms and conditions of the contract.

Name _____

Signature _____

Date _____

ANNEX B - CERTIFICATE OF INSURANCE

(Not required at solicitation closing)



CERTIFICATE OF INSURANCE

Description and Location of Work	Contract No.
	Project No.

Name of Insurer, Broker or Agent	Address (No., Street)	City	Province	Postal Code
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Name of Insured (Contractor)	Address (No., Street)	City	Province	Postal Code
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Additional Insured
Her Majesty the Queen in Right of Canada as represented by the Minister of the Environment for the purposes of the Parks Canada Agency

Type of Insurance (Required when Checked)	Insurer Name and Policy Number	Inception Date D / M / Y	Expiry Date D / M / Y	Limits of Liability		
				Per Occurrence	Annual General Aggregate	Completed Operations Aggregate
<input checked="" type="checkbox"/> Commercial General Liability <input type="checkbox"/> Umbrella/Excess Liability				\$	\$	\$
<input type="checkbox"/> Umbrella/Excess Liability				\$	\$	\$
<input checked="" type="checkbox"/> Builder's Risk / Installation Floater				\$		
<input type="checkbox"/> Pollution Liability				\$	<input type="checkbox"/> Per Incident <input type="checkbox"/> Per Occurrence	Aggregate \$
<input type="checkbox"/> Marine Liability				\$		
<input type="checkbox"/> Aviation Liability				\$	<input type="checkbox"/> Per Incident <input type="checkbox"/> Per Occurrence	Aggregate \$
<input type="checkbox"/>				\$		

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverages stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

 Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker) _____
 Telephone Number

 Signature _____
 Date D / M / Y



<p>General</p> <p>The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverages listed under the corresponding type of insurance on this page.</p> <p>The policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services as an additional Insured.</p> <p>The insurance policies must be endorsed to provide Canada with not less than thirty (30) days notice in writing in advance of a cancellation of insurance or any reduction in coverage.</p> <p>Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policies must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.</p>	<p>Commercial General Liability</p> <p>The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100.</p> <p>The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:</p> <ul style="list-style-type: none"> (a) Blasting. (b) Pile driving and caisson work. (c) Underpinning. (d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor. <p>The policy must have the following minimum limits:</p> <ul style="list-style-type: none"> (a) \$5,000,000 Each Occurrence Limit; (b) \$10,000,000 General Aggregate Limit per policy year if the policy contains a General Aggregate; and (c) \$5,000,000 Products/Completed Operations Aggregate Limit. <p>Umbrella or excess liability insurance may be used to achieve the required limits.</p>	<p>Builder's Risk / Installation Floater</p> <p>The insurance coverage provided must not be less than that provided by the latest edition of IBC Forms 4042 and 4047.</p> <p>The policy must permit use and occupancy of any of the projects, or any part thereof, where such use and occupancy is for the purposes for which a project is intended upon completion.</p> <p>The policy may exclude or be endorsed to exclude coverage for loss or damage caused by asbestos, fungi or spores, cyber and terrorism.</p> <p>The policy must have a limit that is not less than the sum of the contract value plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by Canada at the site of the project to be incorporated into and form part of the finished Work. If the value of the Work is changed, the policy must be changed to reflect the revised contract value.</p> <p>The policy must provide that the proceeds thereof are payable to Canada or as Canada may direct in accordance with GC10.2, "Insurance Proceeds" (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R/R2900D/2).</p>
<p>Contractors Pollution Liability</p> <p>The policy must have a limit usual for a contract of this nature, but not less than \$1,000,000 per incident or occurrence and in the aggregate.</p>	<p>Marine Liability</p> <p>The insurance coverage must be provided by a Protection & Indemnity (P&I) insurance policy and must include excess collision liability and pollution liability.</p> <p>The insurance must be placed with a member of the International Group of Protection & Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the <i>Marine Liability Act</i>, S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by the statutory requirements of the Territory or Province having jurisdiction over such employees.</p> <p>The policy must waive all rights of subrogation against Canada as represented by Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.</p>	<p>Aviation Liability</p> <p>The insurance coverage shall Include Bodily Injury (including passenger Bodily Injury) and Property Damage, in an amount of not less than \$5,000,000 per incident or occurrence and in the aggregate.</p>