



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS A:

**Natural Resource Canada
Bid Receiving Unit, Mailroom
588 Booth Street, Room 108
Ottawa, Ontario
K1A 0Y7
Attention: Valerie Holmes**

**INVITATION TO TENDER
APPEL D'OFFRES**

Tender to: Natural Resources Canada
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: Ressources naturelles 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 et aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

COMMENTS - COMMENTARIES

Issuing Office - Bureau de distribution

**Natural Resources Canada
Finance and Procurement Branch
580 Booth Street
Ottawa, Ontario
K1A 0E4**

Title - Sujet Corry Lake and Young's Creek Bridge Rehabilitation	
Date September 22, 2015	
Solicitation No. - No. de l'invitation NRCan-5000017669	Client Ref. No. - No. de réf du client 127513
GETS Reference No. - No de reference de SEAG	
Solicitation Closes - L'invitation prend fin At - à: 02:00 PM On - le: October 13, 2015	Time Zone - Fuseau horaire Eastern Daylight Savings Time (EDT)
F.O.B. - F.A.B. Plant-Usine <input type="checkbox"/> Destination: X Other - Autre: <input type="checkbox"/>	
Address Inquiries to: - Adresse toute demande de renseignements à : Valerie Holmes - Procurement Specialist	
Téléphone No. - No. de telephone: (343) 292-8371	Fax No. - No de FAX (613) 947-5477
Destination of Goods, Services, and Construction: Destination des biens, services et construction: Petawawa Research Forest, Chalk River, Ontario	
Vendor/Firm Name and Address : Raison sociale et adresse du fournisseur/de l'entrepreneur: Name/Nom : _____ Address/Adresse : _____ _____ _____ Telephone/Téléphone : _____ Facsimile/Télécopieur : _____ Email/Courriel : _____ Procurement Business Number - Achats numero d'entreprise : _____	
Name and Title of person authorized to sign on behalf of the Vendor/Firm: Nom et titre de la personne autorisé à signer au nom du fournisseur/de l'entrepreneur : Name/Nom : _____ Title/Titre : _____	



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R2410T GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES (GI) (2015-07-03)

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

At Section GI01 – Integrity Provisions - Bid of SACC Clause R2410T (2015-07-03):

DELETE: in its entirety

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 R2410T (2015-07-03);
 - 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 -R2410T 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>

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 GI13 of R2410T, 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 an optional site visit on **30 September 2015** at **11:00 a.m.** Interested Bidders are to meet at **Petawawa Research Forest, Main Office Building**, located at **1000 Cloutier Road, Chalk River, Ontario, K0J 1J0**.

Bidders are requested to communicate with the Contracting Authority no later than **two (2)** business day(s) before the scheduled visit to confirm attendance and provide the names of the person(s) who will attend. The representative of the Bidder will be required to sign the Site Visit Attendance Sheet at the site visit.

SI05 Revision of Bid

A bid may be revised by letter of facsimile in accordance with GI08 of R2410T. The facsimile number for receipt of revisions is (613) 995-2920.



SI06 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 set time for solicitation closing.
2. Following solicitation closing, bid results may be obtained by calling (343) 292-8371.

SI07 Bid Validity Period

1. Canada reserves the right to seek an extension to the bid validity period prescribed at 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 SI07 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approved processes.
3. If the extension referred to in paragraph 1 of SI07 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 right in law or under GI11 of R2710T.

SI08 Security Related Requirements

There are no security requirements associated with this requirement.

SI09 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 to the Web sites:

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-TSPGC 2913):

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.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.tsgc-pwgsc.gc.ca/index-eng.html>



PWGSC, Code of Conduct and Certifications:

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

PWGSC Consent to a Criminal Record Verification (PWGSC-TPSGC 229):

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/229.pdf>

Construction and Consultant Services Contract Administration forms Real Property Contracting:

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



SUPPLEMENTARY CONDITIONS (SC)

SC01 Security Requirements, Document Safeguarding Location

There is no 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, at Annex "A".
- (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	R2801D	(2015-07-09)
GC2 - Administration of the Contract	R2820D	(2015-02-25)
GC3 - Execution and Control of the Work	R2830D	(2015-02-25)
GC4 - Protective Measures	R2840D	(2008-05-12)
GC5 - Terms of Payment	R2850D	(2015-02-25)
GC6 - Delays and Changes in the Work	R2860D	(2013-04-25)
GC7 - Default, Suspension or Termination of Contract	R2870D	(2008-05-12)
GC8 - Dispute Resolution	R2880D	(2015-04-01)
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) Any amendment issued or any allowable bid revision received before the date and time set for solicitation;
 - f) Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - g) Any amendment or variation of the contract documents that is made in accordance with the General Conditions.

2. Any document 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

Corry Lake and Young's Creek Bridge Rehabilitation

BA02 Business Name and Address of Bidder

Name: _____

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 GST/HST
(amount in numbers)

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 within three (3) months from the date of notification of acceptance of the offer.

BA07 Signature

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

Signature

Date



APPENDIX 1 - GENERAL REQUIREMENTS - DIVISION 1

1. Summary of Work

1.1 The work includes, but is not limited to, the following:

- Apply, obtain and pay for all required applications, permits and inspections;
- Mobilize to site; and
- Provide and install construction safety barriers, traffic control and signage.

1.2 Complete all work in accordance with the Contract drawings, including, the following list of required remedial work on the Young's Creek Bridge and Corry Lake Bridge:

Young's Creek Bridge Remedial Work

Repair A1: Running Boards

- Install 1"x10" rough sawn timber running boards over existing on all four (4) quadrants where different thickness deck timbers have caused noticeable elevation change in the driving surface.
- Thoroughly clean and sand existing running boards in areas of installation to allow for consistent surface.
- Bevel adjacent surfaces to match and provide smooth transition.
- Gravel approaches immediately adjacent to running boards shall be graded to ensure a smooth transition to the structure.

Repair A2: Structure Details Signage

The following signage shall be installed at each approach:

- Narrow Bridge: MTO Sign Wa-24
- Load Limit (3 Tonnes): MTO Sign Wa-63
- Speed Limit (10 km/h): MTO Sign Rb-1A

The Contractor shall verify the appropriate location of signage as per the Ontario Traffic Manual.

Repair A3: Hazard Signage

Hazard signage shall be installed immediately adjacent to the structure as follows:

- Left of oncoming traffic: MTO Sign Wa-33L
- Right of oncoming traffic: MTO Sign Wa-33R

The Contractor shall verify the appropriate location of signage as per the Ontario Traffic Manual.

Repair A4: Curb

- Removing existing 2-ply 3"x8" rough sawn timber curbs (East and West);
- Install new 2-ply 3"x9" rough sawn timber curbs upon completion of curb riser remedial work (Repair A5);
- Configuration and elevation to be similar to existing.

Repair A5: Curb Risers

- Remove decayed timber curb risers on both sides of structure:
 - Four (4) locations on east curb
 - Five (5) locations on west curb
- Install new timber curb risers to match existing curb elevation;
- Riser height will vary by 1" due to different thickness of deck timbers near approaches.



Corry Lake Bridge Remedial Work

Repair B1: Guardrails

- Remove existing wooden guiderail and posts on both side of South approach;
- Install two (2) sections of standard "flex beam" guiderail (7.62m) on wooden posts as per OPSD 912.140;
- Install eccentric loader terminal system as per OPSD 922.430;

Contractor is to verify acceptable shoulder width and placement of guiderail system prior to installation.

Repair B2: Retaining Walls

- Remove existing wooden retaining wall on both side of the South approach. Retaining walls is supported by existing guiderail posts.
- Install 2m x 1m x 1m gabion baskets to provide roadway stabilization at the South approach.
- Installation, including bedding, backfill, and geotextile, to conform to manufacturers recommendations.
- Place and compact Granular 'A' to return shoulders to correct elevation and grade.
- Required length and height to maintain roadway stabilization to be confirmed by Contractor prior to construction.
- Provide price for **44.0m³** total of gabion baskets as part of this tender.
- Provide separate price per gabion basket additional to the 44.0m³. The price to be used to calculate credits or extras for this item. Quantity payable shall be verified by the consultant during the final inspection.

Repair B3: Running Boards

- Remove existing 2"x8" rough sawn lumber running boards on each wheel path.
- Install new 2"x8" rough sawn lumber similar to existing, to cover the complete bridge deck.

Repair B4: Embankment Erosion

- Replace eroded embankment at eastern face of South abutment with 0.4 MPa unshrinkable fill.
- Cover with 150mm Granular 'A', returning embankment to original grade.

Repair B5: Cotter Pin

- Install missing cotter pin between first and second panels on the northwest side quadrant of structure.
- Inspect remaining pinned connections and replace all missing hardware.

Repair B6: Hazard Signage

- Hazard signage shall be installed immediately adjacent to the structure as follows:
 - Left of oncoming traffic: MTO Sign Wa-33L
 - Right of oncoming traffic: MTO Sign Wa-33R

The Contractor shall verify the appropriate location of signage as per the Ontario Traffic Manual.

Repair B7: Sway Braces

- Remove all C75x5 sway braces (with toes facing upwards)
- Replace one (1) brace per panel for a total of ten (10) on the structure
- Install new C75x5 sway braces, toes downward to prevent debris and water buildup
- Fasten to transom beam using bolted connection similar to existing.

Repair B8: Bearing Housings

- Remove gravel and debris from inside and around bearing housing.



Repair B9: Deck Connections

- Fasten loose bolts in various locations where wooden deck timbers connect to floor stringers.

Repair B10: Undermining

- Fill and stabilize undermining at east corner of north abutment
- Place 0.4 MPa unshrinkable fill followed by 150mm Granular 'A' cover
- Ensure positive drainage away from abutment face.

1.3 For a complete description of work, refer to drawings.

2. Site Conditions

2.1 Contractor to verify locations of all existing services.

2.2 Dedicated on-site parking must be included to the Contractor by the Departmental Representative.

2.3 Materials pertinent to immediate future use must be stored on site only. No interference of facility operation will be permitted. Dedicated area will be indicated to Contractor by the Departmental Representative prior to commencement of work.

2.4 Contractor is solely responsible for all construction aids, hoisting equipment, and all items necessary to complete entire scope of work.

3. Debris

3.1 During construction, the trades must remove from the project site debris caused by their work immediately. All debris removed must be at the Contractor's expense. No On-Site refuse bins must be used unless approval received in writing by the Departmental Representative.

3.2 The Contractor must enforce the requirements of this Specification, regulatory authorities and specific requests, which the Departmental Representative may issue.

3.3 Bulk containers which the Contractor may provide for assembly of debris must:

- Be placed in a convenient area not obstructing normal operations;
- Be covered or otherwise protected;
- Be emptied when full but at a time not obstructing the use of the grounds.

Coordinate efforts to remove debris with the Departmental Representative.

4. Occupational Health and Safety Act

4.1 The successful Contractor must provide a staff person on site who is knowledgeable in the obligations of the Act and will ensure that the requirements of the Act are fully complied with.

4.2 It is specifically drawn to the attention of the Contractor that the Occupational Health and Safety Act provides in addition to other matters that:

- A Constructor must ensure that, on a project undertaken by the Constructor that the measures and procedures prescribed by this Act and Regulations, are carried out on this project.
- Every employer and every Worker performing work on the project complies with the Act and the Regulations.
- The Health and Safety of Workers on the project is protected.
- The Contractor must pay all such assessments as will protect him from claims under the Workplace Safety and Insurance Act.



5. Health and Safety Qualifications

- 5.1 The successful Contractor must supply the following documents:
- Workers Safety & Insurance Board CAD rating and Certificate of Clearance.
 - Certificate of Clearance documentation is to remain current throughout the course of the project with updated certificates submitted to the Departmental Representative.
 - Copy of the Signed Contractors Health and Safety Policy with proof of training and listing of programs developed that support the Policy Statement.
 - Copy of Proof of Training for each employee, by a valid first aid instructor to show compliance with Workplace Safety & Insurance Act Regulation 110 showing the level of training and expiry dates, and details of level of First Aid supplies present at work site are required. A signed statement by the Contractor attesting to compliance with the following:
 - WHMIS Regulations including proof of annual refresher all for personnel.
 - Occupational Health and Safety Act.
 - Specifically, that all engaged in the project have completed the 'Basics of Fall Protection' training program by the Construction Safety Association of Ontario.
 - Personal protective equipment required by provincial legislation and the Departmental Representative's requirements - including but not limited to:
 - Class B Hard Hat
 - Approved CSA Footwear
 - Approved CSA Hearing Protection, where necessary
 - Approved Safety Glasses

6. Cooperation and Protection

- 6.1 The Contractor must cooperate with other Contractors or Workers sent onto the Place of Work.
- 6.2 The Contractor must give the required notices and must comply with the laws, ordinances, rules, regulations, codes and orders of Authorities having jurisdiction that relate to the Work, the preservation of public health and to construction safety.
- 6.3 The Contractor will comply with the requirements of the current building use. All required documents are available for study from the Departmental Representative. Make all provisions for required training from the Departmental Representative.
- 6.4 The Contractor must be solely responsible for construction safety at the place of work.

7. Controlled Products

- 7.1 The Contractor must ensure that where substances classified as controlled products under the Controlled Products Regulations are to be used at the place of the Work, the Contractor must ensure that his employees receive appropriate training as per Provincial/Federal Regulations and the Workplace Hazardous Materials Information System (WHMIS).
- 7.2 The Contractor must ensure that all controlled products are identified to the Departmental Representative and must obtain Material Safety Data sheet (MSDS) for controlled products, which must be made available at the place of Work.
- 7.3 Departmental Representative must be advised when controlled products are brought onto the place of Work.



8. Quality Control

- 8.1 Upon award of Contract, the Contractor, if requested, must submit to Departmental Representative a quality management plan indicating quality goals, objectives and implementation processes and propose reporting mechanisms.

9. Record Drawings

- 9.1 After award of Contract, Departmental Representative will provide a set of drawings for purpose of maintaining record drawings. Accurately and neatly record deviations from Contract Documents caused by site conditions and changes ordered by the Departmental Representative. Use sharp red pencil indicating all deviations from contract documents.
- 9.2 Identify drawings as "Project Record Copy". Maintain in new condition and make available for inspection on site by Departmental Representative. On completion of each phase of Work and prior to final inspection, submit record documents to Departmental Representative.

10. Construction Facilities and Temporary Controls

- 10.1 Before entering existing premises to carry out the Work or to obstruct or take out of use any area of the existing premises, or to cause any other interference, request a meeting with the Departmental Representative in order to reach agreement as to time and length of time you may cause interference, possess, obstruct or remove from use any such area or services.
- 10.2 Provide construction facilities and temporary controls in order to execute work expeditiously. Remove from site all such work after use.
- 10.3 Telephone: Contractor to make their own arrangements for telephone facilities.
- 10.4 Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the Work. Remove all such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Departmental Representative.

11. Barricades, Protection and Damages

- 11.1 The Contractor must provide adequate barricades or fences with suitable signage/warning devices to adequately protect the site from trespassers and the general public.
- 11.2 The Contractor must be responsible for the protection of all adjacent buildings/structures on adjacent properties. Any damages to adjacent properties are to be repaired to the satisfaction of the Departmental Representative at the Contractor's expense.
- 11.3 The Contractor must be responsible for the protection of any active underground and above grade services and utilities. Any damages caused by the Contractor's operation must be the Contractor's responsibility.

12. Utilities

- 12.1 Whenever it is necessary to cut, interfere with, or connect to existing services or facility, do so at hours and time recommended by governing authorities and with minimum disturbance to occupants, pedestrian, vehicular traffic, and public and private property.
- 12.2 The Contractor must submit schedules and obtain approvals of each proposed shutdown of active service.



13. Regulations

- 13.1 The Contractor must comply at all times with all ordinances, bylaws and other acts and regulations from time to time imposed by law as related to the execution of the work under this contract, and must make payments required thereof.

14. Health and Safety

- 14.1 The Contractor must be required to provide such equipment or facilities, and to conduct his operations in such a manner as to meet the requirements of the Occupational Health and Safety Act and Regulations.
- 14.2 The Contractor must also develop a suitable health and safety plan to protect his workers and any visitors to the site. The plan must include appropriate provisions to address the hazardous materials identified in the Hazmat reports appended hereto. The plan must be submitted to the Departmental Representative prior to initiating the work.

15. Fires Prohibited

- 15.1 No debris or other materials must be burned on the lot.

WORK RESTRICTIONS

1. Use of Site and Facilities

- 1.1 Work is not to begin on site until after October 1, 2015 for both the Corry Lake Bridge and the Young's Creek Bridge.
- 1.2 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.
- 1.3 Maintain existing services to building and provide for personnel and vehicle access.
- 1.4 Where security is reduced by work provide temporary means to maintain security.
- 1.5 Departmental Representative will assign sanitary facilities for use by Contractor's personnel. Keep facilities clean.
- 1.6 Closures: protect work temporarily until permanent enclosures are completed.

2. Existing Services

- 2.1 Notify the Departmental Representative and utility companies of intended interruption of services and obtain required permission.

3. Special Requirements

- 3.1 Ensure that Contractor personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.
- 3.2 Keep within limits of work and avenues of ingress and egress.

4. Building Smoking Environment

- 4.1 Comply with smoking restrictions. Smoking is not allowed.



SUMMARY OF WORK

1. Precedence

- 1.1 Division 1 sections take precedence over technical specification sections in other Divisions of this project manual.

2. Work Covered by Contract Documents

- 2.1 Work of this Contract comprises of the remedial work on the Young's Creek Bridge and Corry Lake Bridge as outlined in the drawings and Appendix 1 - General Requirements.

3. Work Sequence

- 3.1 Co-ordinate Progress Schedule and co-ordinate with Owner Occupancy during construction. Work is not to begin on site until after October 1, 2015 for both the Corry Lake Bridge and the Young's Creek Bridge.

4. Contractor Use of Premises

- 4.1 Limit use of premises for Work, and for access, to allow:
- Owner use of facility and equipment at all times.
- 4.2 Co-ordinate use of premises under direction of the Departmental Representative.
- 4.3 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.
- 4.4 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

5. Owner Occupancy

- 5.1 Co-operate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.

PROJECT MEETINGS

1. Administrative

- 1.1 Schedule and administer project meetings throughout the progress of the work and at the call of the Departmental Representative.
- 1.2 Prepare agenda for meetings.
- 1.3 Distribute written notice of each meeting four (4) days in advance of meeting date to the Departmental Representative.
- 1.4 Preside at meetings.
- 1.5 Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- 1.6 Reproduce and distribute copies of minutes within three (3) days after meetings and transmit to meeting participants and Departmental Representative.
- 1.7 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.



2. Preconstruction Meeting

- 2.1 Within 7 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- 2.2 Departmental Representative, Contractor major Subcontractors, field inspectors and supervisors will be in attendance.
- 2.3 Establish time and location of meeting and notify parties concerned minimum 3 days before meeting.
- 2.4 Agenda to include:
 - a) Appointment of official representative of participants in the Work
 - b) Schedule of Work: in accordance with Section - Construction Progress - Section 5 - Project Schedule (GANTT) Chart.
 - c) Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section - Submittal Procedures.
 - d) Delivery schedule of specified equipment in accordance with Section - Submittal Procedures.

CONSTRUCTION PROGRESS

1. Definitions

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

2. Requirements

- 2.1 Ensure Master Plan and Detail Schedule are practical and remain within specified Contract duration.
- 2.2 Plan to complete Work in accordance with prescribed milestones and time frame.



- 2.3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- 2.4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

3. Submittals

- 3.1 Provide submittals in accordance with Section - Submittal Procedures.
- 3.2 Submit to Departmental Representative within 5 working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- 3.3 Submit Project Schedule to Departmental Representative within 5 working days of receipt of acceptance of Master Plan.

4. Master Plan

- 4.1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- 4.2 Departmental Representative will review and return revised schedules within 5 working days.
- 4.3 Revise impractical schedule and resubmit within 5 working days.
- 4.4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

5. Project Schedule

- 5.1 Develop detailed Project Schedule derived from Master Plan.
- 5.2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
 - 5.2.1 Award
 - 5.2.2 Shop Drawings, Samples
 - 5.2.3 Permits
 - 5.2.4 Mobilization
 - 5.2.5 Replacement of existing bridge lumber
 - 5.2.6 Replacement of existing guiderails
 - 5.2.7 Installation of new signage
 - 5.2.8 Final site remediation complete
 - 5.2.9 Commissioning
 - 5.2.10 Substantial completion
 - 5.2.11 Closeout

6. Project Schedule Reporting

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

7. Project Meetings

- 7.1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or



completion dates later than current approved dates shown on baseline schedule.

7.2 Weather related delays with their remedial measures will be discussed and negotiated.

SUBMITTAL PROCEDURES

1. Administrative

- 1.1 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.
- 1.2 Do not proceed with Work affected by submittal until review is complete.
- 1.3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- 1.4 Where items or information is not produced in SI Metric units converted values are acceptable.
- 1.5 Review submittals prior to submission to the Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- 1.6 Notify the Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- 1.7 Verify lead measurements and affected adjacent Work are coordinated.
- 1.8 Contractor's responsibility for errors and omissions in submissions is not relieved by the Departmental Representative's review of submittals.
- 1.9 Contractor's responsibility for deviations in submission from requirements to Contract Documents is not relieved by the Departmental Representative's review.
- 1.10 Keep one reviewed copy of each submission on site.
- 1.11 Submit number of hard copies specified for each type and format of submittal and also submit in electronic format as pdf files. Forward pdf files on CD or through email.

2. Shop Drawings and Product Data

- 2.1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- 2.2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- 2.3 Allow 5 days for Departmental Representative's review of each submission.



- 2.4 Adjustments made on shop drawings by the Departmental Representative are not intended to change Contract Price. If adjustments affect value of the Work, state such in writing to the Departmental Representative prior to proceeding with the Work.
- 2.5 Make changes in shop drawings as the Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify the Departmental Representative in writing of revisions other than those requested.
- 2.6 Accompany submissions with transmittal letter, in duplicate, containing:
 - 2.6.1 Date
 - 2.6.2 Project title and number
 - 2.6.3 Contractor's name and address
 - 2.6.4 Identification and quantity of each shop drawing, product data and sample
 - 2.6.5 Other pertinent data
- 2.7 Submissions include:
 - 2.7.1 Date and revision dates
 - 2.7.2 Project title and number
 - 2.7.3 Name and address of:
 - 2.7.3.1 Subcontractor
 - 2.7.3.2 Supplier
 - 2.7.3.3 Manufacturer
 - 2.7.4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - 2.7.5 Details of appropriate portions of Work as applicable:
 - 2.7.5.1 Fabrication
 - 2.7.5.2 Layout, showing dimensions, including identified field dimensions, and clearances
 - 2.7.5.3 Setting or erection details
 - 2.7.5.4 Capacities
 - 2.7.5.5 Performance characteristics
 - 2.7.5.6 Standards
 - 2.7.5.7 Operating weight
 - 2.7.5.8 Wiring diagrams
 - 2.7.5.9 Single line and schematic diagrams
 - 2.7.5.10 Relationship to adjacent work
 - 2.7.8 After Departmental Representative's review, distribute copies.
 - 2.7.9 Submit 2 prints and 1 electronic copy of shop drawings for each requirement requested in specification Sections and as the Departmental Representative may reasonably request.
 - 2.7.10 Submit 2 prints and 1 electronic copy of product data sheets or brochures for requirements requested in specification Section and as requested by the Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
 - 2.7.11 Submit 2 prints and 1 electronic copy of test reports for requirements requested in specification Sections and as requested by the Departmental Representative.
 - 2.7.11.1 Report signed by authorized official of testing laboratory that material, product or



- system identical to material, product or system to be provided has been tested in accord with specified requirements.
- 2.7.11.2 Testing must have been within 3 years of date of contract award for project.
- 2.7.12 Submit 2 prints and 1 electronic copy of certificates for requirements requested in specification Sections and as requested by the Departmental Representative.
- 2.7.12.1 Statements 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.
- 2.7.12.2 Certificates must be dated after award of project contract complete with project name.
- 2.7.13 Submit 2 prints and 1 electronic copy of manufacturer's instructions for requirements requested in specification Sections and as requested by the Departmental Representative.
- 2.7.13.1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- 2.7.14 Submit 2 prints and 1 electronic copy of Manufacturer's Field Reports for requirements required in specification Sections and as requested by the Departmental Representative.
- 2.7.14.1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- 2.7.15 Submit 2 prints and 1 electronic copy of Operation and Maintenance Data for requirements requested in specification Sections as requested by the Departmental Representative.
- 2.7.16 Delete information not applicable to project.
- 2.7.17 Supplement standard information to provide details applicable to project.
- 2.7.18 If upon review by the Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of the Work may proceed.
- 2.7.19 The review of shop drawings by the Departmental Representative is for sole purpose of ascertaining conformance with general concept.
- 2.7.19.1 This review shall not mean that NRCan approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
- 2.7.19.2 Without restricting generality of foregoing, the 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 coordination of work of sub-trades.

3. Fees, Permits and Certificates

- 3.1 Provide authorities having jurisdiction with information requested.
- 3.2 Pay fees and obtain certificates and permits required.
- 3.3 Furnish certificates and permits



HEALTH AND SAFETY

1. Section Includes

- 1.1 Health and safety considerations required to ensure that NRCan shows due diligence towards health and safety on construction sites, and meets the requirements laid out in PWGSC/RPB Department Policy DP 073 - Occupational Health and Safety - Construction.

2. References

- 2.1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- 2.2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - 2.2.1 Material Safety Data Sheets (MSDS)
- 2.3 Province of Ontario
 - 2.3.1 Occupational Health and Safety Act R.S.O. [1990 Updated 2005].

3. Submittals

- 3.1 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:
 - 3.1.1 Results of site specific safety hazard assessment
 - 3.1.2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
- 3.2 Submit 4 copies of Contractor's authorized representative's work site health and safety inspection reports to the Departmental Representative weekly.
- 3.3 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- 3.4 Submit copies of incident and accident reports.
- 3.5 The Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 2 days after receipt of plan. Revise plan, as appropriate, and resubmit plan to the Departmental Representative within 2 days after receipt of comments from the Departmental Representative.
- 3.6 The Departmental Representative's review of the 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.
- 3.7 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to the Departmental Representative.
- 3.8 On-Site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

4. Filing of Notice

- 4.1 File Notice of Project with Ontario Ministry of Labour prior to beginning of Work.



5. Safety Assessment

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

6. Meetings

- 6.1 Schedule and administer Health and Safety meetings with the Departmental Representative prior to commencement of work.

7. General Requirements

- 7.1 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.
- 7.2 The Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

8. Responsibility

- 8.1 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 the extent that they may be affected by conduct of Work.
- 8.2 Comply with and enforce compliance by employees with safety requirements of the Contract Documents, applicable federal, provincial, territorial and local statutes, regulations and ordinances and with site-specific Health and Safety Plan.

9. Compliance Requirements

- 9.1 Comply with Ontario Health and Safety Act, R.S.O.
- 9.2 Comply with Occupational Health and Safety Regulations, 1996.
- 9.3 Comply with Occupational Health and Safety Act, General Safety Regulations.
- 9.4 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

10. Unforeseen Hazards

- 10.1 When unforeseen or peculiar safety-related factor, hazard or condition occur during the performance of the Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Ontario Ministry of Labour having jurisdiction and advise the Departmental Representative verbally and in writing.

11. Health and Safety Coordinator

- 11.1 Employ and assign to the Work, competent and authorized representative as Health and Safety Coordinator. Health and Safety Coordinator must:
 - 11.1.1 Have site-related working experience specific to activities associated with working at heights and roof railing installations.
 - 11.1.2 Have working knowledge of occupational safety and health regulations.
 - 11.1.3 Be responsible for completing the Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform the Work.



- 11.1.4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
- 11.1.5 Be on site during execution of the Work.

12. Posting of Documents

- 12.1 Ensure applicable items, articles, notices and orders are posted in a conspicuous location on site in accordance with Acts and Regulations of Ontario having jurisdiction, and in consultation with the Departmental Representative.

13. Correction of Non-Compliance

- 13.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by the Departmental Representative.
- 13.2 Provide the Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- 13.3 The Departmental Representative may stop Work if non-compliance of health and safety regulations are not corrected.

14. Work Stoppage

- 14.1 Given precedence to safety and health and public and site personnel and protection of environment over cost and schedule considerations for the Work.

ENVIRONMENTAL REQUIREMENTS

1. General

- 1.1 Comply with Division 1 requirements and documents referred to therein.

2. Description

- 2.1 This Section covers work for protection of environment as applicable to this Project.
- 2.2 Provisions of this Section supplement requirements of Contract Documents.

3. Environmental Practices

- 3.1 Implement environmentally sound practices in this Project by incorporating products that lessen burden on environment in production, use and final disposition. Support implementation of reduction, reuse and recycling strategies and use of environmentally sound products. Promote use of environmentally responsible packaging practices by reducing and/or eliminating products with excessive packaging in this Project where these practices do not negatively affect the proper protection of materials from inclement weather, especially water damage.
- 3.2 Employ environmentally sound products, which are made, used and disposed of in a manner that significantly reduces harm to the environment. Product selection criteria will be based on requirements of CSA Z760, Life Cycle Assessment and CSA Z762 Design for the Environment. Use products which improves energy efficiency in its material, and/or the product itself can be recycled or reused, and/or in some way is environmentally benign.



4. Site Review

- 4.1 The Ministry of the Environment and other authorities having jurisdiction may visit the Site periodically during construction. Where Work does not comply with environmental protection requirements, said authorities have power to issue a stop work order. The Departmental Representative's acceptance of Work may be withheld until the Ministry of the Environment or other authorities concerned have issued their approval.

5. Site Working Areas

- 5.1 Confine operations to limits of Site working area indicated on Drawings.
- 5.2 Provide access roads to Site working area and on Site in locations acceptable to the Departmental Representative.
- 5.3 Install suitable fencing to clearly define limits of the Site working area, haul routes, parking areas, access routes and maintenance areas to ensure construction activity is confined to these areas.

6. Noise Control

- 6.1 Adhere to local noise bylaws.
- 6.2 Equip vehicles and equipment with efficient noise attenuation devices (mufflers) to minimize noise levels in the vicinity of the Site.
- 6.3 Where necessary, place noise attenuation devices (barriers) around stationary pumps and compressors.

7. Dust Control

- 7.1 Application of calcium chloride shall be kept to a minimum and shall be restricted to vehicle right-of-way. In close proximity to watercourses, frequent applications or water shall be the preferred method. Obtain the Departmental Representative's approval before chemicals for dust control are used.
- 7.2 Transport dusty materials in covered haulage vehicles.
- 7.3 Transport wet materials in suitable watertight haulage vehicles.

8. Equipment Fuelling, Maintenance and Storage

- 8.1 Obtain the Departmental Representative's acceptance of refueling areas.
- 8.2 Procedures for interception and rapid clean up and disposal of fuel spillages shall be submitted to the Departmental Representative for review prior to starting Work.
- 8.3 Ensure that materials required for clean-up of fuel spillages are readily accessible on Site at all times.
- 8.4 Carry out refueling of equipment at acceptable refueling areas.
- 8.5 Ensure that water used for cleaning of equipment does not drain into streams, lakes, or watercourses. Do not empty fuel, lubricants and/or pesticides into any watercourse, or on ground.
- 8.6 Clean construction equipment prior to entering public roadways to prevent littering. Debris from cleaning equipment shall not be permitted into storm sewers or watercourses.
- 8.7 Store equipment and materials in orderly manner and in a location acceptable to the Departmental Representative.



9. Spills Reporting

- 9.1 In the event of a spill or other emission of pollutant into nature environment, notify:
 - 9.1.1 Local office of the Ministry of Environment and MOE Spill Action Centre (SAC).
 - 9.1.2 Municipality or Regional Municipality within boundaries of which spill occurred.
 - 9.1.3 Person having control of pollutant, if known, of spill, of circumstances surrounding the spill and of any action taken or intended to be taken.

10. Contingency Plan for Control and Clean-up of Spill

- 10.1 Prior to commencing construction, prepare contingency plan for control and clean-up of spills. Contingency plan to include:
 - 10.1.1 Names and telephone numbers of persons in local municipalities and MOE to be notified forthwith of the spill.
 - 10.1.2 Names and telephone numbers of representative of fire, police and health departments of local municipalities who are responsible to respond to emergency situation.
 - 10.1.3 Names and telephone numbers of companies experienced in control and clean-up of hazardous materials that would be called upon in an emergency involving spills.
 - 10.1.4 Contingency plan shall include provisions for spills or hazardous or unknown materials (i.e. puncturing on unmarked drain during excavation).
 - 10.1.5 Proposal for immediate containment and control of spill; clean-up procedures to be initiated immediately and any other action to be taken to mitigate potential environmental damage while awaiting additional assistance.
- 10.2 Be responsible for preparing, implementing, directing and supervision of contingency plan.
- 10.3 Ensure immediate availability of products with which to effect temporary repair to broken pipelines and other services so spill or other emission of pollutants is immediately controlled and stopped and to mitigate damages.
- 10.4 Submit for the Departmental Representative's review a copy of the Contingency Plan and make appropriate changes, as requested.

11. Snow Removal

- 11.1 Snow removed from the site must be placed in an area designated by the Owner and not in any traffic or walkway areas.

12. Waste Disposal

- 12.1 Do not burn rubbish on the Site. Obtain approval, and use following off-site disposal alternatives, depending upon materials involved; burying, composting, recycling, municipal collection, or local dump or sanitary landfill site.



REGULATORY REQUIREMENTS

1. References and Codes

- 1.1 Perform Work in accordance with latest edition of National Building Code of Canada (NBC), Canadian Standards Association (CSA), National Fire Code of Canada (NFC) and Ontario Building Code, including amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- 1.2 Meet or exceed requirements of:
 - 1.2.1 Contract documents
 - 1.2.2 Specified standards, codes and referenced documents

2. Building Smoking Environment

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

QUALITY CONTROL

1. Inspection

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

2. Independent Inspection Agencies

- 2.1 Independent Inspection/Testing Services must be engaged by the Contractor for the purpose of inspecting and/or testing portions of the work.
- 2.2 Employment of inspection/testing agencies does not relax responsibility to perform the Work in accordance with Contract Documents.
- 2.3 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by the Departmental Representative at no cost to the Departmental Representative. Pay costs for retesting and re-inspection.

3. Access to Work

- 3.1 Allow inspection/testing agencies access to the Work, off site manufacturing and fabrication plants.
- 3.2 Cooperate to provide reasonable facilities for such access.



4. Procedures

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

5. Rejected Work

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

6. Reports

- 6.1 Submit 4 copies of inspection and test reports to the Departmental Representative.
- 6.2 Provide copies to subcontractor of work being inspected or tested manufacturer or fabricator of material being inspected or tested.

7. Tests and Mix Designs

- 7.1 Furnish test results and mix designs are requested.
- 7.2 Cost of tests and mix design beyond those called for in the Contract Documents or beyond those required by law of Place of Work will be appraised by the Departmental Representative and may be authorized as recoverable.

8. Mock-ups

- 8.1 Prepare mock-ups for the Work specifically requested in specifications. Include for Work of Sections required to provide mock-ups.
- 8.2 Construct in locations acceptable to the Departmental Representative as specified in specific Section.
- 8.3 Prepare mock-ups for the Departmental Representative's review with reasonable promptness and in orderly sequence, to not cause delays in the Work.
- 8.4 Failure to prepare mock-ups 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.
- 8.5 If requested, the Departmental Representative will assist in preparing schedule fixing dates for preparation.
- 8.6 Remove mock-ups at conclusion of the Work or when acceptable to the Departmental Representative.



9. Equipment and Systems

- 9.1 Submit adjustment and balancing reports for mechanical, electrical and building equipment, systems as requested by the Departmental Representative.

CONSTRUCTION FACILITIES

1. References

- 1.1 Canadian General Standards Board (CGSB)
 - 1.1.1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
 - 1.1.2 CGSB 1.59-97, alkyd Exterior Gloss Enamel.
- 1.2 Canadian Standards Association (CSA International)
 - 1.2.1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - 1.2.2 CSA-0121-M1978 (R2003), Douglas Fir Plywood
 - 1.2.3 CAN/CSA-S269.2-M1987 (R2003), Access Scaffolding for Construction Purposes.
 - 1.2.4 CAN/CSA-Z321-96 (R2001), Signs and Symbols for the Occupational Environment.
- 1.3 Public Works and Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions 'C', In Effect as of: May 14, 2004.

2. Submittals

- 2.1 Provide submittals in accordance with Section - Submittal Procedures.

3. Installation and Removal

- 3.1 Indicate use of supplemental or other staging area.
- 3.2 Provide construction facilities in order to execute work expeditiously.
- 3.3 Remove from site all such work after use.

4. Hoisting

- 4.1 Provide, operate and maintain hoist cranes required for moving of workers, materials and equipment. Make financial arrangements with subcontractors for their use of hoists.
- 4.2 Hoist cranes to be operated by qualified operator.

5. Site Storage/Loading

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

6. Construction Parking

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



7. Sanitary Facilities

- 7.1 Use existing sanitary facilities for work force in accordance with governing regulations and ordinances.
- 7.2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

8. Construction Signage

- 8.1 No other signs or advertisements, other than warning signs are permitted on site.
- 8.2 Signs and notices for safety and instruction shall be in both official languages. Graphic symbols shall conform to CAN/CSA-Z321.
- 8.3 Maintain approved signs and notices in good condition for duration of the project, and dispose of off-site on completion of the project or earlier if directed by the Departmental Representative.

9. Clean-up

- 9.1 Remove construction debris, waste materials, packaging material from work site daily.
- 9.2 Store materials resulting from demolition activities that are salvageable.
- 9.3 Stack stored new or salvaged material not in construction facilities.

EXECUTION

1. Submittals

- 1.1 Submittals: in accordance with Section - Submittal Procedures.
- 1.2 Submit written request in advance of cutting or alteration which affects:
 - 1.2.1 Structural integrity of elements of project.
 - 1.2.2 Integrity of weather-exposed or moisture-resistant elements.
 - 1.2.3 Efficiency, maintenance, or safety of operational elements.
 - 1.2.4 Visual qualities of sight-exposed elements.
 - 1.2.5 Work of Owner or separate Contractor.
- 1.3 Include in request:
 - 1.3.1 Identification of project.
 - 1.3.2 Location and description of affected Work.
 - 1.3.3 Statement on necessity for cutting or alteration.
 - 1.3.4 Description of proposed Work, and products to be used.
 - 1.3.5 Alternatives to cutting and patching.
 - 1.3.6 Effect on Work of Owner or separate Contractor.
 - 1.3.7 Written permission of affected separate Contractor.
 - 1.3.8 Date and time work will be executed.

2. Materials

- 2.1 Required for original installation.
- 2.2 Change in Materials: submit request for substitution in accordance with Section - Submittal Procedures.



3. Preparation

- 3.1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- 3.2 After uncovering, inspect conditions affecting performance of the Work.
- 3.3 Beginning of cutting or patching means acceptance of existing conditions.
- 3.4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.
- 3.5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

4. Execution

- 4.1 Execute cutting, fitting and patching including excavation and fill, to complete the Work.
- 4.2 Fit several parts together, to integrate with other Work.
- 4.3 Uncover Work to install ill-timed Work.
- 4.4 Remove and replace defective and non-conforming Work.
- 4.5 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- 4.6 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- 4.7 Fit Work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- 4.8 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except when indicated otherwise.

5. Waste Management and Disposal

- 5.1 Separate waste materials for reuse and recycling in accordance with Part 1 - General Requirements.

CLEANING

1. Project Cleanliness

- 1.1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner of other Contractors.
- 1.2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by the Departmental Representative. Do not burn waste materials on site, unless approved by the Departmental Representative.
- 1.3 Clear snow and ice from access to bridge, bank/pile snow in designated areas only.
- 1.4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- 1.5 Provide on-site containers for collection of waste materials and debris.



- 1.6 Provide and use marked separate bins for recycling. Refer to Part 1 - General Requirements.
- 1.7 Dispose of waste materials and debris at designated dumping areas off site.
- 1.8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- 1.9 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

2. Final Cleaning

- 2.1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- 2.2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- 2.3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- 2.4 Remove waste products and debris other than that caused by Owner or other Contractors.
- 2.5 Remove waste materials from site at regularly scheduled times or dispose of as directed by the Departmental Representative. Do not burn waste materials on site, unless approved by the Departmental Representative.
- 2.6 Make arrangements with an obtain permits from authorities having jurisdiction for disposal of waste and debris.
- 2.7 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- 2.8 Remove dirt and other disfiguration from exterior surfaces.
- 2.9 Sweep and wash clean paved areas.

3. Waste Management and Disposal

- 3.1 Separate waste materials for reuse and recycling in accordance with Part 1 - General Requirements.



APPENDIX 2 - DEPARTMENTAL REPRESENTATIVES'S AUTHORITY

Contracting Authority is:

Name: **Valerie Holmes**
Title: Procurement Specialist
Department: Natural Resources Canada
Division: Finance and Procurement Branch
Telephone: (343) 292-8371
Email: Valerie.holmes@nrcan-rncan.gc.ca

To be provided at time of Contract Award:

Technical Authority is:

Name:
Title:
Department: Natural Resources Canada
Division: Corporate Management Support Services
Telephone:
Email



ANNEX "A" - CERTIFICATE OF INSURANCE

Note: Not required at solicitation closing

CERTIFICATE OF INSURANCE



Description and Location of Work	Contract No.
Petawawa Research Forest, 1000 Cloutier Road, Chalk River, Ontario, K0J 1J0	Project No. NRCan-5000017669

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 Natural Resources Canada

Type of Insurance	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
Commercial General Liability				\$	\$	\$
Umbrella/Excess Liability				\$	\$	\$

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 coverage's stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

<input type="text"/>	<input type="text"/>
Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker)	Telephone number
<input type="text"/>	<input type="text"/>
Signature	Date D / M / Y



GENERAL

The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverage listed under the corresponding type of insurance on this page.

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.

The insurance policies must be endorsed to provide Canada with not less than thirty (30) day's notice in writing in advance of a cancellation of insurance or any reduction in coverage.

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.

COMMERCIAL GENERAL LIABILITY

The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100.

The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:

- (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.

The policy must have the following minimum limits:

- (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.

Umbrella or excess liability insurance may be used to achieve the required limits.