

## 1.01 SCOPE

- .1 The work covered under this project consists of the furnishing of all plant, labour, equipment, materials, services and supervision for Harbour Improvements at North Head and Whitehead, Grand Manan, New Brunswick. In general the Work at North Head consists of the demolition, removal and disposal of the Spur Wharf, Upgrades to the Old Ferry Wharf, Construction of a New Breakwater, Dredging and installation of floats on rock socketed pipe piles, gangway landing. In general, the work at Whitehead consists of Class "A" dredging, both locations, in strict accordance with specifications and accompanying drawings and subject to all terms and condition of contract.
- .2 Only items in the Unit Price Table will be measured for payment. All other work necessary to complete the Contract will be considered incidental to the project and will not be measured separately for payment.

## 1.02 DESCRIPTION OF WORK

- .1 In general, the principal items of work under this contract consist of the following:
  - .1 Departmental Representative's site office at North Head.
  - .2 Construction of a temporary containment cell for Class "B" Dredging at North Head.
  - .3 Relocation of the existing winch from the Spur Wharf to the Old Ferry Wharf. Exact location to be approved by the Departmental Representative.
  - .4 Relocation of an existing water pump from the Spur Wharf to the Old Ferry Wharf and Extension of a 3" water intake line to the location shown on the drawings, or as specified by the Departmental Representative.
  - .5 Demolition and complete removal of the existing spur wharf structure that lies adjacent to the Old Ferry Wharf.
  - .6 Dismantling and removal of the Old Ferry boarding facility, (the structural steel ramp, lifting towers, overhead frame assembly, machinery and machinery housing.)
  - .7 Demolition and removal of the timber cribwork structure supporting the steel lifting towers.
  - .8 Demolition and Removal of the existing storage shed located on the Old Ferry
  - .9 Removal and disposal of the overhead service lines providing electrical power to the shed and outer end of the Old Ferry Wharf, Wharf Structure.
  - .10 Removal and disposal of service lines exposed when the existing deck is removed.
  - .11 Disposal of Class "B" Dredging to the newly constructed breakwater.
  - .12 Reuse of Class "A" dredged material as core material for the breakwater.
  - .13 Dredging at North Head and Class "A" at Whitehead.
  - .14 Construction of a new rubble mound breakwater/containment cell at the South end of the Old Ferry Wharf.
  - .15 Partial demolition and removal of the asphalt topping and laminated timber decking from the outer two cribwork sections of the Old Ferry Wharf

Structure.

- .16 Partial demolition and removal of 4 concrete fender support walls along the North face of the Old Ferry Wharf Structure.
- .17 Supply and placement of ballast stone in the empty cribwork pockets in the outer cribwork sections of the Old Ferry Wharf Structure.
- .18 Supply and placement of geotextile and granular base materials above the crib ballast stone to the deck surface.
- .19 Removal and disposal of the existing timber handrail and posts and deteriorated sections of the existing timber wheelguard along the cribwork structure adjacent to the existing steel ramp.
- .20 Supply and installation of new timber wheelguard as required along the cribwork structure adjacent to the existing ramp.
- .21 Removal and disposal of the existing timber wheelguard, chocks, coping timber below the curb and timber filler pieces below the coping timbers along the outer two cribwork sections of the Old Ferry Wharf Structure.
- .22 Supply and installation of new timber wheelguard, blocks, coping and fillers below the coping as required along the outer two cribwork sections of the Old Ferry Wharf.
- .23 Supply and Installation of new timber ladders along the North face of the Old Ferry Wharf Structure.
- .24 Supply and Installation of new timber fenders along the cribwork structure adjacent to the existing steel ramp.
- .25 Supply and Installation of Bored and Socketed Pipe piles.
- .26 Construction of a New Gangway Landing.
- .27 Supply and installation of a New Gangway.
- .28 Installation of floats already stored in North Head.

### 1.03 LOCATION

- .1 Work will be carried out at North Head and Whitehead, New Brunswick at the locations as shown on the accompanying drawings.

### 1.04 DATUM

- .1 Datum used for this project is Lowest Normal Tides (LNT) and is assumed to be:

North Head Wharf: Datum used at this location is Lowest Normal Tides and is assumed to be 10.146 meters below CHS Benchmark BM\_CHS 2-1980.

Whitehead Wharf: Datum used for at this location is Lowest Normal Tides (LNT) and is assumed to be 7.41 meters below Benchmark BM Point "Armour".

- .2 Bidders are advised to consult the Tide Tables issued by Fisheries and Oceans in order to make sure of the tidal conditions affecting work.

### 1.05 FAMILIARIZATION WITH SITE

- .1 All bidders, before submitting their bid, are required to inspect and examine the sites and their surroundings and satisfy themselves as to the form and nature

of the work and materials necessary for the completion of the works, the means of access to the site, severity, exposure and uncertainty of weather, soil conditions, any accommodations they may require, and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the conditions that will apply.

- .2 Contractors, bidders or those they invite to site are to review specification Section 01 35 29 - Health and Safety Requirements before visiting sites. Take all appropriate safety measures for any visit to sites, either before or after acceptance of bid.
- .3 Obtain prior permission from Departmental Representative before carrying out such site inspections.

#### 1.06 CODES AND STANDARDS

- .1 Perform work in accordance with the latest edition of the National Building Code of Canada, FCC Standard 373 - Standard for Piers and Wharves (<http://www.hrsdc.gc.ca/en/lp/lo/fp/standards/373.shtml>), and any other code of provincial or local application including all amendments up to project bid closing date provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

#### 1.07 EXISTING STRUCTURES

- .1 Spur Wharf
  - .1 The Spur Wharf Structure is to be demolished. It is in an advanced state of deterioration and is not considered safe for use as a working platform.
- .2 Old Ferry Wharf
  - .1 The existing deck on the Old Ferry Wharf Structure is comprised of asphalt surfacing placed over laminated timber decking which spans over the top crossties in the cribwork.
  - .2 Along the outer cribwork sections of the Old Ferry Wharf Structure, not all the cribwork pockets are filled with ballast rock. Record drawings indicate that all of the perimeter crib pockets were filled with ballast rock. The record drawings also indicate that for the interior sections of the cribwork there is an alternating pattern of empty and full crib pockets.
  - .3 The existing deck structure was not designed to accommodate surcharge loading that could result from heavy equipment operation or storage of materials as may be required for possible construction operations that may be undertaken to execute the work. Furthermore, the existing decking along the section of the structure adjacent to the existing ramp is to remain.
- .3 Assessments

- .1 Ensure that construction operations do not overload the existing structures.
- .2 If the Contractor intends to operate equipment, machinery or load the existing structures in any manner, assessments of the structures with respect to the intended loading must be undertaken.
- .3 Assessment of existing structures with respect to the intended loading must be undertaken by a qualified Professional Engineer Registered in the Province of New Brunswick.
- .4 Submit copies of such assessments to the Departmental Representative at least 4 weeks prior to the beginning of any work, for its review and record. All reports, drawings or other information provided shall be sealed and signed by the Professional Engineer responsible for the assessments.

#### 1.08 LAYOUT OF WORK

- .1 Set grades and layout work in detail from control points and grades established by Departmental Representative.
- .2 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated or as directed by Departmental Representative.
- .3 Provide devices needed to layout and construct work, such as masts, scaffolds, batter boards, lines, straight edges, templates and other devices as may be necessary to facilitate layout, construction and inspection of the work. Whenever necessary, suspend work for such reasonable time as may be necessary, to permit the Departmental Representative to check or inspect any portion of the work. The Contractor will not be allowed any extra compensation because of this suspension.
- .4 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.
- .5 Supply stakes and other survey markers required for laying out work.
- .6 Verify all grades, lines, levels and dimensions shown on drawings and report any errors or inconsistencies to the Departmental Representative before commencing work.

#### 1.09 WORK SCHEDULE

- .1 Submit within 14 work days of notification of acceptance of bid, a construction schedule showing commencement and completion of all work within the time stated on the Bid and Acceptance Form and the date stated in the bid acceptance letter.
- .2 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
- .3 As a minimum, work schedule to be prepared and submitted in the form of Bar (GANTT) Charts, indicating work activities, tasks and other project elements, their

anticipated durations and planned dates for achieving key activities and major project milestones provided in sufficient details and supported by narratives to demonstrate a reasonable plan for completion of project within designated time. Generally Bar Charts derived from commercially available computerized project management system are preferred but not mandatory.

### 1.10 ABBREVIATIONS

- .1 Following abbreviations of standard specifications have been used in this specification and on the drawings:

CGSB - Canadian Government Specifications Board  
CSA - Canadian Standards Association  
NLGA - National Lumber Grades Authority  
ASTM - American Society for Testing and Materials

- .2 Where these abbreviations and standards are used in this project, latest edition in effect on date of bid call will be considered applicable.

### 1.11 QUARRY AND EXPLOSIVES

- .1 Make own arrangements with Provincial authorities and owners of private properties, for the quarrying and transportation of rock and all materials and machinery necessary for work over their property, roads or streets as case may be.

### 1.12 SITE OPERATIONS

- .1 Arrange for sufficient space adjacent to project site for conduct of operations, storage of materials and so on. Exercise care so as not to obstruct or damage public or private property in area. Do not interfere with normal day-to-day operations in progress at site. All arrangements for space and access will be made by Contractor.
- .2 Remove snow and ice as required to maintain safe access in a manner that does not damage existing structures or interfere with the operations of others.

### 1.13 PROTECTION

- .1 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .2 Repair or replace all materials or equipment damaged in transit or storage to the satisfaction of Departmental Representative and at no cost to Canada.

#### **1.14 PAYMENT**

- .1 Payment for all work under this contract to be according to the "Articles of Agreement".
- .2 Dimensional changes as directed by the Departmental Representative to suit existing conditions, but not resulting in additional work or materials, will not be considered as extra to the Contract.

#### **1.15 INSPECTION AND TESTING**

- .1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms to the contract.

#### **1.16 DISPOSAL AND DEBRIS**

- .1 Debris, including construction materials not incorporated in the work, oil products and containers, and other materials of this nature will be disposed of in suitable locations off the site. Disposal is the responsibility of the Contractor.
- .2 Material from the work will not be permitted to go adrift to otherwise become a menace to navigation.

#### **1.17 RELICS AND ANTIQUITIES**

- .1 Protect relics, antiquities, items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.
- .2 Give immediate notice to Departmental Representative and await written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain Her Majesty's property.

#### **1.18 PROJECT MEETINGS**

- .1 Contractor will arrange project meetings and assume responsibility for setting times and recording minutes.
- .2 Project meetings will take place on site of work unless so directed by the Departmental Representative.
- .3 Contractor will assume responsibility for recording minutes of meetings and forwarding copies to all parties present at the meetings.
- .4 Have a responsible member of firm present at all project meetings.

### 1.19 LOCATION OF EQUIPMENT

- .1 Location of cleats, jib cranes, equipment, fixtures, power pedestals and outlets, shown or specified shall be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with 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 actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

### 1.20 ACCEPTANCE OF WORK

- .1 Prior to the issuance of the Certificate of Substantial Performance, in Company with Departmental Representative, make a check of all work. Correct all discrepancies before final inspection and acceptance.

### 1.21 WORKS COORDINATION

- .1 Responsible for coordinating the work of the various trades, where the work of such trades interfaces with each other.
- .2 Convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required. Provide each trade with the plans and specifications of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
- .3 Canada will not be responsible for or held accountable for any extra costs incurred as a result of the failure to carry out coordination work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor and shall be resolved at no extra cost to Canada.

### 1.22 CONTRACTOR'S USE OF SITES

- .1 Co-operate with users of existing facilities. Maintain access to existing facilities.
- .2 Construction operations, including storage of materials for this contract, not to interfere with the fishing activity and/or operations at the harbour facilities.
- .3 Contractor is responsible for arranging the storage of materials on or off sites, and any materials stored at the site which interfere with any of the day to day

activities at or near the site will be moved promptly at the Contractor's expense, upon request by Departmental Representative.

- .4 Contractor will take adequate precautions to protect existing concrete deck(s) and asphalt when operating tracked equipment.
- .5 Exercise care so as not to obstruct or damage public or private property in the areas.
- .6 At completion of work, restore areas to their original condition. Damage to ground and property will be repaired by Contractor. Remove all construction materials, residue, excess, etc., and leave sites in a condition acceptable to Departmental Representative.
- .7 Remove snow and ice as required throughout the course of the work to maintain safe access in a manner that does not damage existing structures or roadways or interferes with the operations of others.
- .8 At completion of work, remove all equipment, temporary facilities, construction materials, residue, etc. and restore site areas to original conditions. Any damage caused by the construction operations will be repaired by the Contractor at his own expenses.

### **1.23 FACILITY SMOKING ENVIRONMENT**

- .1 Comply with smoking restrictions.

### **1.24 INTERPRETATION OF DOCUMENTS**

- .1 Supplementary to GC1.1 of the General Conditions, the Division 01 sections of the specifications take precedence over technical specifications in other divisions of the specifications.

### **1.25 MEASUREMENT RESPONSIBILITIES**

- .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment purposes.

### **1.26 EXISTING SERVICES**

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to site operations.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service of facility. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide temporary services when directed by Departmental Representative to maintain critical facility systems.

- .5 Provide adequate bridging over trenches which cross walkways or roads to permit normal traffic.
- .6 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .7 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

### 1.27 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each of the following:
  - .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 Tests Reports
  - .9 Copy of Approved Work Schedule
  - .10 Site Specific Health and Safety Plan and Other Safety related documents
  - .11 Other documents as stipulated elsewhere in the Contract Documents

### 1.28 PERMITS

- .1 Obtain and pay for all permits, certificates and licenses as required by Municipal Provincial, Federal and other Authorities.
- .2 Provide appropriate notifications of project to municipal and provincial inspectors.
- .3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.
- .4 Submit to Departmental Representative, copy of quarry permit, if applicable, prior to start of quarry operations.
- .5 Submit to Departmental Representative copy of quarry permit, if applicable, prior to start of quarry operations.
- .6 Comply with all requirements, recommendations and advice by all regulatory authorities.

### 1.29 CUTTING, FITTING AND PATCHING

- .1 Execute cutting, including excavation, fitting and patching required to make work fit properly.
- .2 Where new work connects to existing and where existing work is altered, cut, patch and make good to match existing work.
- .3 Do not cut, bore, or sleeve load-bearing members.
- .4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

### 1.30 WORK COMMENCEMENT

- .1 Mobilization to project sites is to commence after acceptance of bid and submission of Site Specific Safety Plans, unless otherwise agreed by Departmental Representative.
- .2 Project work on sites is to commence as soon as possible, with a continuous reasonable work force, unless otherwise agreed to by Departmental Representative.
- .3 Weather conditions, short construction season, delivery challenges and the location of the work sites may require the use of longer days and additional work force to complete the project within the specified completion time.
- .4 Make every effort to ensure that sufficient material and equipment is delivered to sites at the earliest possible date after acceptance of bid and replenished as required.

#### **1.31 WORKER'S COMPENSATION**

- .1 Contractor and all sub-contractors must be registered under the Workers Compensation Act and provide evidence of good standing.

#### **1.32 BOREHOLE INFORMATION**

- .1 Borehole information is available at the PWGSC Saint John Office only. Borehole logs and descriptions are not shown on plan nor are they enclosed in this specification. Contractor will request an office meeting to view the details pertaining to the boreholes.

#### **1.33 SCHEDULING OF PAYMENT**

- .1 Available funding by fiscal year will be as follows:
  - .1 Fiscal Year 2016/2017 Total \$4,500,000,00.
  - .3 Fiscal Year 2017/2018 Balance of the bid price.
- .2 Fiscal year starts on April 01 and ends on March 31.

**GENERAL****1.01 GENERAL**

- .1 The bid item prices are full compensation for the work necessary to complete each item in the Contract in the Form of Tender. The prices bid are complete and separate from other or related bid items.
- .2 In the case of conflict between the instructions for measurement and payment contained in Section 01 22 00 and another Section of the Specifications, the requirements of Section 01 22 00 shall govern.
- .3 No separate payment will be made for:
  - .1 Unauthorized work beyond the limits shown.
  - .2 Field engineering survey and layout of work.
  - .3 Erosion and Sediment Control.
  - .4 Water Management.
  - .5 Dust Control.
  - .6 Temporary Facilities
  - .7 Temporary Barriers and Enclosures
  - .8 Calibrated Weight Scales
  - .9 Snow clearing
  - .10 Temporary Haul Roads
  - .11 Cleaning

**1.02 DESCRIPTION OF WORK**

- .1 The tendered price for work includes all items listed within the specification. Price includes all labour, materials, and equipment for complete supply and installation of the work.
- .2 Mobilization/Demobilization including all equipment, temporary facilities, security, maintenance, snow clearing, and cleaning of site and public access roads (as required), securing all necessary regulatory permits, insurance and bonding, establishing health and safety protocol, and the construction, maintenance and decommissioning of all necessary temporary access roads.
- .3 All demolition, material disposal (hazardous and non-hazardous), service disconnection/ reconnection, site excavation, construction, repairs and improvements and site restoration and landscaping, as contained in the specifications.

**2 - PRODUCT MEASUREMENT**

**SECTION 02 41 16**

- .1 This section specifies requirements for demolishing and removing wholly or in part various items designated to be removed or partially removed.
- .2 Demolition and Removal will be paid for as a Lump Sum price and will consist of, but not necessarily be limited to, the following:
  - .1 Supply of Departmental Representative's site office.
  - .2 Relocation of the existing winch from the Spur Wharf to the Old Ferry Wharf. Exact location to be approved by the Departmental Representative.
  - .3 Relocation of an existing water pump from the Spur Wharf to the Old Ferry Wharf and Extension of a 3" water intake line to the location shown on the drawings, or as specified by the Departmental Representative.
  - .4 Demolition and complete removal of the existing spur wharf structure that lies adjacent to the Old Ferry Wharf.
  - .5 Dismantling and removal of the Old Ferry boarding facility, (the structural steel ramp, lifting towers, overhead frame assembly, machinery and machinery housing.)
  - .6 Demolition and removal of the timber cribwork structure supporting the steel lifting towers.
  - .7 Demolition and Removal of the existing storage shed located on the Old Ferry
  - .8 Removal and disposal of the overhead service lines providing electrical power to the shed and outer end of the Old Ferry Wharf, Wharf Structure.
  - .9 Removal and disposal of service lines exposed when the existing deck is removed.
  - .10 Partial demolition and removal of the asphalt topping and laminated timber decking from the outer two cribwork sections of the Old Ferry Wharf Structure.
  - .11 Partial demolition and removal of concrete fender support walls along the North face of the Old Ferry Wharf Structure.
  - .12 Removal and disposal of the existing timber handrail and posts and deteriorated sections of the existing timber curbs along the cribwork structure adjacent to the existing steel ramp.
  - .13 Removal and disposal of the existing timber curb, chocks, coping timber below the curb and timber filler pieces below the coping timbers along the outer two cribwork sections of the Old Ferry Wharf Structure.
- .3 Mobilization and Demobilization to both sites of all equipment necessary to make work progress for the entire contract including work indicated under Section 1.02.2 to be paid for as a Lump Sum price.

**SECTION 03 30 00**

- .1 Measurement and Payment:
  - .1 Supply and installation of Cast-in-Place Concrete, grout, anchor bolts, nuts and washers and bolt grouting for socketing of Pipe Piles will not be measured under this section, but will be included in section 31

63 19 Bored and Socketed Piles.

- .2 Concrete and all associated work for construction of the Gangway landing will be measured for payment as a lump sum.

**SECTION 05 50 00**

.1 Measurement and Payment:

- .1 No separate payment shall be made for spikes, anchor bolts, machine bolts, lagscrews, nuts and washers, inserts, holdfasts, mooring rings, angles, channels, plates, any other metal required to complete the work, will be considered incidental to the contract and no separate payment will be made for these items.
- .2 Payment for the supply and installation of the epoxy coated steel wale including all fastenings, drilling and splicing of the steel wale will be made by the linear meter. No extra payment will be made for splicing of steel wale.
- .3 Payment for the supply and installation of the inter float aluminum checkered cover plates will be included in the lump sum bid priced under section 35 51 24. Included in the installation will be the neoprene mattes, carriage bolts, nuts, washers, lag screws and any other necessary materials.
- .4 Supply and Installation of one Aluminum Gangway will be measured for payment as a lump sum. Included will be all the anchor bolts, anchorage systems, hinges, bushings, and any other necessary materials.

**SECTION 31 23 25**

.1 Measurement and Payment:

- .1 Measurement for payment of Cribwork Ballast will be in Tonnes of material acceptably placed.
- .2 Measurement for payment of Cribwork Rockfill will be in Tonnes of material acceptably placed.

**SECTION 31 32 21**

- .1 The supply and installation of Geotextile will be measured for payment by

square meters of material acceptable incorporated into the work. Overlapping will not be measured for payment.

**SECTION 31 63 19**

- .1 Measurement for payment of Rock Socketed Pipe Piles acceptably incorporated into this contract will be by the unit from base elevation to cut-off including rock-socket. Included also will be:
  - .1 Pile Shoes.
  - .2 Reinforcing Steel.
  - .3 Pipe Pile
  - .4 Grout and Cast-in-Place Concrete
  - .5 Any required welding.
  - .6 Removal of material from interior of pipe piles.
  - .7 Drilling and socketing of sockets for piles.
- .2 No payment will be made for defective piles.
- .3 Supply and Installation of Cathodic Protection will not be measured for payment but will be incidental. Cathodic Protection shall be installed at the locations shown on the plans, or as directed by the Departmental Representative.

**SECTION 32 11 23**

- .1 Measurement For payment:
  - .1 Supply, placement and compaction of Granular Base will be measured for payment in Tonnes of material acceptably incorporated into the work.

**SECTION 35 00 00**

- .1 Treated dimension timber supplied and installed for longitudinals, coping, wheelguard, splice blocks, fillers and other miscellaneous timber to complete the work will be measured by Lump sum price for Cribwork Repairs. Included will be all galvanized/stainless steel fastenings, plant, material, and labour. Included under this section, but not necessarily limited are the following items:
  - .1 Cribwork repairs:

.1 Removal and disposal of sections of the existing timber wheelguard, longitudinal timber coping, timber filler pieces, timber handrail, and other deteriorated or damaged timbers as necessary.

.2 Repairs to the South and West walls of the timber crib at the shore end of the existing structural steel ramp, including timber fillers, longitudinal timber, timber coping, timber blocks, timber wheelguard and associated fastening hardware.

.3 Replacement of deteriorated or damaged sections of the Old Ferry Wharf.

.4 Repairs to the West Face of the outer two cribwork sections of the Old Ferry Wharf including, timber fillers, longitudinal coping timbers, timber wheelguard blocks, timber wheelguard, timber spacer elements, vertical timber sheathing and associated fastening hardware.

.2 Timber ladders:

.1 The supply and installation of new timber ladders will be measured by the number of ladders supplied, placed and incorporated into the work.

.3 Timber Fenders:

.1 The Supply and Installation of New Timber fenders will be measured by the number unit of 250mm x 250mm of timber fenders supplied, installed and incorporated into the work.

### SECTION 35 20 23

.1 Measurement for Payment for Mobilization and Demobilization will be paid under section 02 41 16.

.2 Measurement and Payment for dredging:

.1 Dredging at Whitehead will be paid as a lump sum.

.2 Dredging at North Head will be measured for payment by the CPM.

Included but not limited to the following for dredging at both Whitehead and North Head are the following items:

.1 Operations in connection with field positioning of equipment will not be measured separately for payment.

.2 No separate payment will be made for Contractor's survey vessel, equipment and crew or diving services.

.3 Payment will include disposal of dredge material, at location specified.

.4 No additional payment for delays incurred during fishing seasons, during periods when no dredging is permitted.

.5 No additional payment for downtime and for delays caused by vessel traffic.

.6 Removal of infilling material will not be measured for payment.

.3 No Measurement for Payment will be made for Pre-dredge survey, Seismographic survey and continuous monitoring by a registered consultant, it will be considered incidental to this section.

### SECTION 35 31 23.13

.1 Measurement for payment of Core will be in Tonnes of material acceptably placed. Core reused from Dredging at North Head will not be measured for payment. Include cost under unit price for Dredging at North Head.

.2 Measurement for payment of Filter will be in Tonnes of material acceptably placed.

.3 Measurement for payment of Armour will be in Tonnes of material acceptably placed.

**SECTION 35 51 24**

.1 Measurement for payment for Installation of Floats will be made as a lump sum. This will include all equipment necessary for the complete float installation, to the locations shown on the plans.

.1 Transportation of the floats from the shore, and launching and installation to the location at North Head as indicated on the drawings will be included in the lump sum payment in this section.

**END OF SECTION**

## **1 GENERAL**

### **1.01 APPLICATIONS FOR PROGRESS PAYMENT**

- .1 Make applications for payment upon confirmation that work stated has been verified by the Departmental Representative, and approved by the Departmental Representative.
- .2 Date applications for payment last day of agreed monthly payment period and ensure amount claimed is for value, proportionate to amount of Contract, of Work performed and Products delivered to Place of Work at that date.

### **1.02 PROGRESS PAYMENT**

- .1 Departmental Representative will issue to Owner, no later than 10 days after receipt of an application for payment, certificate for payment in amount applied for or in such other amount as Departmental Representative determines to be due. If Departmental Representative amends application, Departmental Representative will give notification in writing giving reasons for amendment.

### **1.03 SUBSTANTIAL PERFORMANCE OF WORK**

- .1 Prepare and submit to Departmental Representative comprehensive list of items to be completed or corrected and apply for a review by Departmental Representative to establish Substantial Performance of Work or substantial performance of designated portion of Work when Work is substantially performed if permitted by lien legislation applicable to Place of Work designated portion which Owner agrees to accept separately is substantially performed. Failure to include items on list does not alter responsibility to complete Contract.
- .2 No later than 10 days after receipt of list and application, Departmental Representative will review Work to verify validity of application, and no later than 7 days after completing review, will notify Contractor if Work or designated portion of Work is substantially performed.
- .3 Departmental Representative: state date of Substantial Performance of Work or designated portion of Work in certificate.
- .4 Immediately following issuance of certificate of Substantial Performance of Work, in consultation with Departmental Representative, establish reasonable date for finishing Work.

### **1.04 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF WORK**

- .1 After issuance of certificate of Substantial Performance of Work:
  - .1 Submit application for payment of holdback amount.
  - .2 Submit sworn statement that accounts for labour, subcontracts, products, construction machinery and equipment, and other indebtedness which may have been incurred in Substantial Performance of Work and for which Owner might in be held responsible have been paid in full, except for amounts properly retained as holdback or as identified amount in dispute.

- .2 After receipt of application for payment and sworn statement, Departmental Representative will issue certificate for payment of holdback amount.

### 1.05 FINAL PAYMENT

- .1 Submit application for final payment when Work is completed.
- .2 Departmental Representative will issue final certificate for payment when application for final payment is found valid.

## 2 PRODUCTS

### 2.01 NOT USED

- .1 Not Used.

## 3 EXECUTION

### 3.01 NOT USED

- .1 Not Used.

END OF SECTION

## 1 GENERAL

### 1.01 ADMINISTRATIVE

- .1 Schedule and administer project meetings throughout the progress of the work at the call of Departmental Representative.
- .2 Prepare agenda for meetings.
- .3 Distribute written notice of each meeting four days in advance of meeting date to Departmental Representative.
- .4 Provide physical space and make arrangements for meetings.
- .5 Preside at meetings.
- .6 Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .7 Reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants and, affected parties not in attendance.
- .8 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

### 1.02 PRECONSTRUCTION MEETING

- .1 Within 15 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Departmental Representative, Contractor, major Subcontractors, field inspectors will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .5 Agenda to include:
  - .1 Appointment of official representative of participants in the Work.
  - .2 Schedule of Work: in accordance with Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart.
  - .3 Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
  - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 52 00 - Construction Facilities.
  - .5 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
  - .6 Owner provided products.

- .7 Record drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .8 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
- .9 Monthly progress claims, administrative procedures, photographs, hold backs.
- .10 Appointment of inspection and testing agencies or firms.
- .11 Insurances, transcript of policies.

### 1.03 PROGRESS MEETINGS

- .1 During course of Work and two weeks prior to project completion, schedule progress meetings.
- .2 Contractor, major Subcontractors involved in Work and Departmental Representative are to be in attendance.
- .3 Notify parties minimum 14 days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within five days after meeting.
- .5 Agenda to include the following:
  - .1 Review, approval of minutes of previous meeting.
  - .2 Review of Work progress since previous meeting.
  - .3 Field observations, problems, conflicts.
  - .4 Problems which impede construction schedule.
  - .5 Review of off-site fabrication delivery schedules.
  - .6 Corrective measures and procedures to regain projected schedule.
  - .7 Revision to construction schedule.
  - .8 Progress schedule, during succeeding work period.
  - .9 Review submittal schedules: expedite as required.
  - .10 Maintenance of quality standards.
  - .11 Review proposed changes for affect on construction schedule and on completion date.
  - .12 Other business.

## 2 PRODUCTS

### 2.01 NOT USED

- .1 Not Used.

## 3 EXECUTION

### 3.01 NOT USED

- .1 Not Used.

END OF SECTION

## **1 GENERAL**

### **1.01 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 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 and affected adjacent Work are co-ordinated.
- .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 review.
- .10 Keep one reviewed copy of each submission on site.

### **1.02 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.
- .3 Submit drawings stamped and signed by professional engineer registered or licensed in the Province of New Brunswick, Canada.
- .4 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.
- .5 Allow ten days for Departmental Representative's review of each submission.
  - .6 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.
  - .7 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.
  - .8 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.
  - .9 After Departmental Representative's review, distribute copies.
  - .10 Submit 3 prints and one electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
  - .11 Submit one electronic copy 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.
  - .12 Supplement standard information to provide details applicable to project.
  - .13 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, two copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
  - .14 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
    - .1 This review shall not mean that PWGSC 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.

### 1.03 CERTIFICATES AND TRANSCRIPTS

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

## 2 PRODUCTS

### 2.01 NOT USED

- .1 Not Used.

## 3 EXECUTION

### 3.01 NOT USED

- .1 Not Used.

END OF SECTION

## 1 GENERAL

### 1.01 DEFINITIONS

- .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
  - .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
  - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
  - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4 PPE: personal protective equipment
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.

### 1.02 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00.
- .2 Submit site-specific Health and Safety Plan prior to commencement of Work.
  - .1 Submit within 10 work days of notification of Bid Acceptance. Provide 3 copies.
  - .2 Departmental Representative will review Health and Safety Plan and provide comments.
  - .3 Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.
  - .4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
  - .5 Submit revisions and updates made to the Plan during the course of Work.
- .3 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
- .4 Submit building permit, compliance certificates and other permits obtained.
- .5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other department of labour organization.

- .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
- .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit copies of incident reports.
- .8 Submit WHMIS MSDS - Material Safety Data Sheets.

### 1.03 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act for Province of New Brunswick, and Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
  - .1 The Canada Labour Code can be viewed at:  
[www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)
  - .2 COSH can be viewed at: [www.http://laws.justice.gc.ca/eng/SOR-86-304/ ne.html](http://laws.justice.gc.ca/eng/SOR-86-304/ne.html)
  - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9 Tel: (819) 956-4800 (1-800-635-7943) Publication No. L31-85/2000 E or F)
- .3 Observe construction safety measures of:
  - .1 Part 8 of National Building Code
  - .2 Municipal by-laws and ordinances.
- .4 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .5 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .6 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

### 1.04 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on sites, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

### 1.05 SITE CONTROL ACCESS

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
  - .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.
- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
  - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment. See Section 01 50 00 for minimum acceptable requirements.
  - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
  - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
- .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
- .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. Provide security guard where adequate protection cannot be achieved by other means.

### 1.06 PROTECTION

- .1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.
- .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

### 1.07 FILING OF NOTICE

- .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
  - .1 Departmental Representative will assist in locating address if needed.

### 1.08 PERMITS

- .1 Post permits, licenses and compliance certificates, specified in section 01 10 10, at Work Site.

- .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.

#### 1.09 HAZARD ASSESSMENTS

- .1 Perform site specific health and safety hazard assessment of the Work and its site.
- .2 Carryout initial assessment prior to commencement of Work with further assessments as needed during progress of work, including when new trades and subcontractors arrive on site.
- .3 Record results and address in Health and Safety Plan.
- .4 Keep documentation on site for entire duration of the Work.

#### 1.10 UNFORSEEN HAZARDS

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

#### 1.11 PROJECT/SITE CONDITIONS

- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
  - .1 Known latent site and environmental conditions:
    - .1 Working near/on watercourse.
    - .2 Working with tides.
    - .3 Uneven work surfaces.
    - .4 Working in adverse weather.
    - .5 Working near on-going vehicular and marine traffic
  - .2 Facility on-going operations:
    - .1 The Contractor will co-operate with users of existing facilities. Maintain access to the existing wharf structures during fishing season and consult with the Departmental Representative for site access limitations.
    - .2 Should interference occur, take directions from Departmental Representative.
    - .3 Do not unreasonably encumber site with materials.
    - .4 Move stored products or equipment which interfere with operations.
    - .5 Comply with all regulations and authorities having jurisdiction over the work, whether on land or on water.
    - .6 Contractor will note that fishing activity in the harbour includes

fishing boats, moorings, etc.

- .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards encountered during Work.
- .3 Include above items in the hazard assessment of the Work.
- .4 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

### 1.12 MEETINGS

- .1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
  - .1 Superintendent of Work
  - .2 Designated Health & Safety Site Representative
  - .3 Subcontractors
- .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations.
- .3 Keep documents on site.

### 1.13 HEALTH AND SAFETY PLANS

- .1 Prior to commencement of Work, develop written Health and Safety Plans for each North Head and Whitehead, specific to the Work. Implement, maintain, and enforce Plans for entire duration of Work and until final demobilization from sites.
- .2 Health and Safety Plans shall include the following components:
  - .1 List of health risks and safety hazards identified by hazard assessment.
  - .2 Control measures used to mitigate risks and hazards identified.
  - .3 On-site Contingency and Emergency Response Plan as specified below.
  - .4 On-site Communication Plan as specified below.
  - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
  - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
- .3 On-site Contingency and Emergency Response Plans shall include:
  - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
  - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshalling areas. Details on alarm notification methods, fire drills, location of firefighting equipment and other related data.
  - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
  - .4 Emergency Contacts: name and telephone number of officials from:
    - .1 General Contractor and subcontractors.
    - .2 Pertinent Federal and Provincial Departments and Authorities having

- jurisdiction.
- .3 Local emergency resource organizations.
- .5 Harmonize Plan with Facility's Emergency Response and Evacuation Plans. Departmental Representative will provide pertinent data including name of PWGSC and Facility Management contacts.
- .4 On-site Communication Plan:
  - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
  - .2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.
- .5 Address all activities of the Work including those of subcontractors.
- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or subcontractor arrive at Work Site.
- .7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
- .8 Post copy of the Plan, and updates, prominently on Work Site.

#### 1.14 SAFETY SUPERVISION

- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
  - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work
  - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
  - .3 Conduct site safety orientation session to persons granted access to Work Site.
  - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
  - .5 Stop the Work as deemed necessary for reasons of health and safety.
- .3 Health & Safety Site Representative must:
  - .1 Be qualified and competent person in occupational health and safety.
  - .2 Have site-related working experience specific to activities of the Work.
  - .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
  - .1 Conduct regularly scheduled safety inspections of the Work on a minimum bi-weekly basis. Record deficiencies and remedial action taken.
  - .2 Conduct Formal Inspections on a minimum monthly basis. Use standardized

safety inspection forms. Distribute to subcontractors.

- .3 Follow-up and ensure corrective measures are taken.
- .6 Cooperate with Facility's Occupational Health and Safety representative should one be designated by Departmental Representative.
- .7 Keep inspection reports and supervision related documentation on site.

### 1.15 TRAINING

- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.
- .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

### 1.16 MINIMUM SITE SAFETY RULES

- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; ensure the following minimum safety rules are obeyed by persons granted access to Work Site:
  - .1 Wear appropriate PPE pertinent to the Work or assigned task; minimum being hard hat, safety footwear, safety glasses and hearing protection.
  - .2 Immediately report unsafe condition at site, near-miss accident, injury and damage.
  - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
  - .4 Obey warning signs and safety tags.
- .2 Brief persons of disciplinary protocols to be taken for non compliance. Post rules on site.

### 1.17 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 will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

### 1.18 INCIDENT REPORTING

- .1 Investigate and report the following incidents to Departmental Representative:
  - .1 Incidents requiring notification to Provincial Department of Occupational Safety and Health, Workers Compensation Board or to other regulatory Agency.
  - .2 Medical aid injuries.
  - .3 Property damage in excess of \$10,000.00,
  - .4 Interruptions to Facility operations resulting in an operational lost to a Federal department in excess of \$5000.00.
- .2 Submit report in writing.

### 1.19 HAZARDOUS PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets for all products delivered to site.
  - .1 Post on site.
  - .2 Submit copy to Departmental Representative.
  - .3 For interior work in an occupied Facility, post additional copy in one or more publicly accessible locations.

### 1.20 BLASTING

- .1 Blasting or other use of explosives is not permitted on sites without prior receipt of written permission and instructions from Departmental Representative.
- .2 Do blasting operations in accordance with section.

### 1.21 POWER ACTUATED DEVICES

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

### 1.22 SITE RECORDS

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

### 1.23 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Work Site in accordance with Acts and Regulations of Province having

jurisdiction.

- .2 Post other documents as specified herein, including:
  - .1 Site specific Health and Safety Plan
  - .2 WHMIS data sheets
  - .3 Fire and Safety Requirements
  - .4 Special Procedures on Lockout Requirements

**END OF SECTION**

## 1 GENERAL

### 1.01 RELATED REQUIREMENTS

- .1 Section 35 20 23 - Dredging.
- .2 Waste Management and Disposal: Section 01 74 21.

### 1.02 REFERENCES

- .1 Reference Standards:
  - .1 U.S. Environmental Protection Agency (EPA)/Office of Water
    - .1 EPA 832/R-92-005-92, Storm Water Management for Construction Activities, Chapter 3.
    - .2 EPA General Construction Permit (GCP) 2012.
  - .2 WHMS: Workplace Hazardous Materials Information System, Health Canada.
  - .3 Transportation of Dangerous Goods Act. Transport Canada, updated 2008-02-21.
  - .4 Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters, Department of Fisheries and Oceans Canada, 1998.
  - .5 MBCA: Migratory Birds Convention Act, Environment Canada, 1994.
  - .6 Canadian Coast Guard Regulations, Department of Fisheries and Oceans Canada.
  - .7 Canadian Shipping Act, Transport Canada, 2001.
  - .8 AWPA: American Wood Preserver Association

### 1.03 DEFINITIONS

- .1 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .2 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands," and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.
- .3 Watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.
- .4 Alien species: refers to a species or subspecies introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.

- .5 Buffer zone: a vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.
- .6 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
- .7 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

#### 1.04 TRANSPORTATION

- .1 Transport hazardous materials and hazardous waste in compliance with Federal Transportation of Dangerous Goods Act.
- .2 Do not overload trucks when hauling material. Secure contents against spillage.
- .3 Maintain trucks clean and free of mud, dirt and other foreign matter.
- .4 Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the Work. Take extra care when hauling dredged material and other hazardous materials. Immediately clean any spillage and soils.
- .5 Before commencement of work, advise the Departmental Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material to and from the site, including roads to the dredged disposal field.

#### 1.05 DISPOSAL OF DREDGE MATERIALS

- .1 Class "A" Dredging at Whitehead is to be placed on the existing breakwater as indicated on the drawings.
- .2 Class "A" Dredging at North Head is to be reused in the breakwater construction as core material.
- .3 Class "B" Dredging at North Head is to be first placed into a temporary containment cell constructed by the Contractor. Once the material is dried, the contractor will transport and place the dried materials into the newly constructed breakwater as and where indicated on the drawings.
- .4 Contractor is responsible to dispose of the temporary containment cell.
- .5 Obtain applicable permit from the Department of the Environment for the Province of New Brunswick and stringently follow all directives and procedures stipulated

- in permit for transportation and disposal of dredged material to approved disposal site.
- .6 Eliminate free board spillage when excavating, loading and hauling dredged material.
  - .7 Do not overload trucks when hauling dredged material or other hazardous material. Secure contents against spillage. Clean ground spills to extent as directed by authority having jurisdiction and by Departmental Representative.
  - .8 Obtain approval from Departmental Representative of the proposed route to be used to haul dredged material to the disposal site.
  - .9 Place and spread dredged material at the disposal field in a uniform and well graded manner. Minimize height and slopes of the disposed material. Match slopes and contours of the existing surrounding terrain as much as possible following grades as directed by Departmental Representative.
  - .10 Control disposal and runoff of water containing suspended materials or other harmful substances in accordance with requirements of authority having jurisdiction.

#### **1.06 HAZARDOUS MATERIAL HANDLING**

- .1 Handle and store hazardous materials on site in accordance with WHMIS procedures and requirements.
- .2 Store all hazardous liquids in location and manner to prevent their spillage into the environment.
- .3 Maintain written inventory of all hazardous materials kept on site. List product name, quantity and storage date.
- .4 Keep MSDS data sheets on site for all items.

#### **1.07 PETROLEUM, OIL AND LUBRICANTS**

- .1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
- .2 Do not place fuel storage tanks and store fuel or other petroleum products within a 30 metre buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.
- .3 Do not dump petroleum products or any other deleterious substances on ground or in the water.
- .4 Be diligent and take all necessary precautions to avoid spills and contaminate the soil and water (both surface and subsurface) when handling petroleum products

on site and during fueling and servicing of vehicles and equipment.

- .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.
- .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
- .7 In the event of a petroleum spill, immediately notify the Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

#### 1.08 PETROLEUM, OIL AND LUBRICANTS

- .1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
- .2 Do not place fuel storage tanks and store fuel or other petroleum products within a 30 metre buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.
- .3 Do not dump petroleum products or any other deleterious substances on ground or in the water.
- .4 Be diligent and take all necessary precautions to avoid spills and contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
- .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.
- .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
- .7 In the event of a petroleum spill, immediately notify the Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

#### 1.09 DISPOSAL OF WASTE

- .1 Do not bury rubbish, demolition debris and waste materials on site.
- .2 Dispose and recycle demolition debris and waste materials in accordance with project waste management requirements specified in section 01 74 21.

- .3 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners etc...) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.
- .4 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
- .5 Concrete waste:
  - .1 Do not discharge residual or rejected concrete on site.
  - .2 Immediately clean any accidental release of concrete on site prior to solidification.
  - .3 Do not wash and clean concrete vehicles on site.
  - .4 Perform dumping of residual material and truck cleaning operations only at the concrete plant. Follow environmental regulations and good practices as approved by the Provincial Department of the Environment and other authorities having jurisdiction.

#### 1.10 WATER QUALITY

- .1 Conduct dredging of a watercourse in such a manner to limit turbidity and reduce sediment suspension in the water to an absolute minimum at all times.
  - .1 Maintain appropriate production speed and momentum of the dredging equipment. Make adjustments as required and as approved by Departmental Representative.
  - .2 Strategically position dredging equipment and barge to avoid over the water swings of excavated material whenever possible.
- .2 Where work may affect the water quality adjacent to water intake lines used by Lobster Holding Facilities, Fish Processing Facilities and other harbour users, schedule work in cooperation with the Harbour Authority as directed by Departmental Representative to minimize interference and impact to harbour users.
- .3 Visually monitor the water turbidity of the surrounding areas adjacent to the work and up to the established dredge limit of 200 metre.
  - .1 Should excessive change occur in the turbidity beyond the dredge limit which differs from existing conditions of the surrounding water bodies, such as a distinct color difference; notify the Departmental Representative to obtain appropriate mitigation measures to be followed.
- .4 Do not washdown equipment within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.

#### 1.11 BLASTING

- .1 Develop a Blasting Plan for any blasting required in the Work identifying measures employed to minimize the impact on fish, mammals, water quality and the environment.
- .2 Blasting Plan shall include the following minimum requirements:
  - .1 Predictive analysis conducted to assess the zone of influence of the blasting

activities.

- .2 Ensure that fish and mammals are scared away from the blasting area by use of boat, pre-blasting caps or by other means.
  - .3 Make use of shock wave padding (bubble curtain or air curtain) to minimize the transmission of the blast through the water.
  - .4 The number and magnitude of explosives used is kept to an absolute minimum as required for the Work.
- .3 Submit Blasting Plan to Departmental Representative for review prior to the commencement of any blasting.
  - .4 Obtain required permit required by authority having jurisdiction.
  - .5 All blasting must be conducted in accordance with DFO's 1998 "Guidelines for Use of Explosives In or Near Canadian Fisheries Waters", as prescribed by DFO.
  - .6 Blasting is to occur at high tide while rock fragment removal and placement may occur during all tide levels (i.e. wet and dry conditions).

#### 1.12 SOCIOECONOMIC RESTRICTIONS

- .1 Abide by municipal and provincial regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.
- .2 Place flood lights in opposite direction of adjacent residential and business areas.
- .3 Equip equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

#### 1.13 BIRD AND BIRD HABITAT

- .1 Become knowledgeable with abide by the Migratory Birds Convention Act (MBCA) in regards to the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.
- .2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the Work.
- .3 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.
- .4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
- .5 Do not use beaches, dunes and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the Departmental Representative.

- .6 Should nests of migratory birds in wetlands be encountered during work, immediately notify Departmental Representative for directives to be followed.
  - .1 Do not disturb nest site and neighboring vegetation until nesting is completed.
  - .2 Minimize work immediately adjacent to such areas until nesting is completed.
  - .3 Protect these areas by following recommendations of Canadian Wildlife Service.

#### 1.14 FISH AND FISH HABITAT

- .1 Be aware of the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.
- .2 To minimize the possibility of fish habitat contamination, all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species.
  - .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.
- .3 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- .4 Conduct cleaning and washing operations as follows:
  - .1 Scrap and remove heavy accumulation of mud and dispose appropriately.
  - .2 Wash all surfaces of equipment by use of a pressurized fresh water supply.
  - .3 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
  - .4 Check and remove all plant, animal and sediment matter from the all bilges and filters.
  - .5 Drain standing water from equipment and let fully dry before use.
  - .6 Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.
- .5 Do not perform cleaning and washdown within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .6 Record of Assurance Logbook:
  - .1 Maintain an on-going log of past and present usage and washdowns of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
  - .2 Write data in a hard cover bound logbook,
  - .3 Include the following:
    - .1 Date and location where equipment was previously used in a watercourse or wetland;
    - .2 Type of work performed.
    - .3 Dates of washdown for each piece of equipment;
    - .4 Cleaning method and cleaning agent(s) used.

- .7 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Departmental Representative for review.
- .8 Abide by requirements and recommendations of the Federal Department of Environment and the Department of Fisheries and Oceans - Habitat Protection and Sustainable Development Branch in cleaning and washdown of equipment.

### **1.15 AIR QUALITY**

- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Apply dust control measures to roads, parking lots and work areas.
- .3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.
- .4 Do not use oil or any other petroleum products for dust control.

### **1.16 FIRES**

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

**END OF SECTION**

## 1 GENERAL

### 1.01 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
  - .1 CCDC 2-94, Stipulated Price Contract.

### 1.02 INSPECTION

- .1 Refer to CCDC 2, GC 2.3.
- .2 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .3 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
- .4 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .5 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction.

### 1.03 INDEPENDENT INSPECTION AGENCIES

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

### 1.04 ACCESS TO WORK

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

### 1.05 PROCEDURES

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

### 1.06 REJECTED WORK

- .1 Refer to CCDC, GC 2.4.
- .2 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .3 Make good other Contractor's work damaged by such removals or replacements promptly.
- .4 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Departmental Representative.

## 2 PRODUCTS

### 2.01 NOT USED

- .1 Not Used.

## 3 EXECUTION

### 3.01 NOT USED

- .1 Not Used.

END OF SECTION

## **1 GENERAL**

### **1.01 CONTRACTOR'S SITE OFFICE**

.1 Be responsible for and provide own site office, if required, including electricity, heat, lights and telephone. Locate site office as directed by Departmental Representative.

### **1.02 SANITARY FACILITIES**

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local Health authorities. Keep area and premises in sanitary condition.

### **1.03 INSTALLATION AND REMOVAL**

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Remove from site all such work after use.

### **1.04 WATER SUPPLY**

- .1 Arrange for connection with appropriate utility company and pay costs for installation, maintenance and removal.

### **1.05 TEMPORARY POWER AND LIGHT**

- .1 Arrange for connection with appropriate utility company. Pay costs for installation, maintenance and removal.
- .3 Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of the Contractor.

### **1.06 TEMPORARY COMMUNICATION FACILITIES**

- .1 Provide and pay for temporary telephone, fax, data hook up, lines, equipment necessary for own use.

### **1.07 CONSTRUCTION SIGN AND NOTICES**

- .1 Contractor or subcontractor advertisement signboards are not permitted on site.
- .2 Only notices of safety or instructions are permitted on site.

.3 Safety and Instruction Signs and Notices:

.1 Signs and notices for safety and instruction shall be in both official languages. Graphic symbols shall conform to CAN/CSA-Z321-96(R2006).

.4 Maintenance and Disposal of Site Signs:

.1 Maintain approved signs and notices in good condition for duration of project and dispose of off site on completion of project or earlier if directed by Departmental Representative.

**1.08 FIRE PROTECTION**

.1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.

.2 Burning rubbish and construction waste materials is not permitted on site.

**1.09 REMOVAL OF TEMPORARY FACILITIES**

.1 Remove temporary facilities from site when directed by Departmental Representative.

**2 PRODUCTS**

**2.01 NOT USED**

.1 Not Used.

**END OF SECTION**

## 1 GENERAL

### 1.01 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
  - .1 CCDC 2-[1994], Stipulated Price Contract.
- .2 Canada Green Building Council (CaGBC)
  - .1 LEED Canada-NC Version 1.0-2004, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations (including Addendum 2007).
  - .2 LEED Canada-CI Version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide For Commercial Interiors.
- .3 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
  - .2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
- .4 Canadian Standards Association (CSA International)
  - .1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
  - .2 CSA-0121-M1978(R2003), Douglas Fir Plywood.
  - .3 CAN/CSA-S269.2-M1987(R2003), Access Scaffolding for Construction Purposes.
  - .4 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment.
- .5 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions 'C', In Effect as of: May 14, 2004.
- .6 U.S. Environmental Protection Agency (EPA) / Office of Water
  - .1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

### 1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 LEED Submittals:
  - .1 Submit erosion and sedimentation control plan for Credit SSpl in accordance with LEED Canada-NC.

### 1.03 MEASUREMENT FOR PAYMENT

- .1 Departmental Representative's Office will not be measured for payment, but will be incidental to Demolition and Removal.
- .2 All other items listed under this section are incidental to this contract.

### 1.04 INSTALLATION AND REMOVAL

- .1 Prepare site plan indicating proposed location and dimensions of area to be used by the Contractor, number of trailers to be used.
- .2 Remove from site all such work after use.

### 1.05 SITE STORAGE

- .1 Refer to CCDC 2, GC 3.12.
- .2 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .3 Do not load or permit to load any part of Work with weight or force that will endanger Work.

### 1.06 CONSTRUCTION PARKING

- .1 Parking on site is limited.
- .2 Provide and maintain adequate access to project site.

### 1.07 DEPARTMENTAL REPRESENTATIVE'S SITE OFFICE

- .1 Provide office heated to 22 degrees C, lighted 750 lx and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .2 Provide marked and fully stocked first-aid case in a readily available location.
- .4 Departmental Representative's Site office.
  - .1 Provide temporary office for Departmental Representative.
  - .2 Inside dimensions minimum 3.6 m long x 3 m wide x 2.4 m high, with floor 0.3 m above grade, complete with 50% opening windows and one lockable door.
  - .3 Insulate building and provide heating system to maintain 22 degrees C inside temperature at -20 degrees C outside temperature.
  - .4 Finish inside walls and ceiling with plywood, hardboard or wallboard and paint in selected colours. Finish floor with 19 mm thick plywood.
  - .5 Install electrical lighting system to provide min 750 lx using surface mounted, shielded commercial fixtures with [10] % upward light component.
  - .6 Provide private washroom facilities adjacent to office complete with flush or chemical type toilet, lavatory and mirror and maintain supply of paper towels and toilet tissue.
  - .7 Equip office with 1 x 2 m table, 4 chairs, 6 m of shelving 300 mm wide, one, 3 drawer filing cabinet, one plan rack and one coat rack and shelf.
  - .8 Maintain in clean condition.

### 1.08 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

### 1.09 SANITARY FACILITIES

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

### 1.10 CONSTRUCTION SIGNAGE

- .1 Provide and erect project sign, within three weeks of signing Contract.
- .8 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.
- .9 Maintain approved signs and notices in good condition for duration of project, and dispose of offsite on completion of project or earlier if directed by Departmental Representative.

### 1.11 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Provide access as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Departmental Representative.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .9 Dust control: adequate to ensure safe operation at all times.

.10 Provide snow removal during period of Work.

#### 1.12 CLEAN-UP

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

**END OF SECTION**

## **1 GENERAL**

### **1.01 RELATED REQUIREMENTS**

- .1 Barriers
- .2 Traffic Controls

### **1.02 REFERENCES**

- .1 Canadian General Standards Board (CGSB)
  - .1 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
  - .2 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
- .2 Canadian Standards Association (CSA International)
  - .1 CSA-O121-M1978(R2003), Douglas Fir Plywood.
- .3 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions 'C', In Effect as Of: May 14, 2004.

### **1.03 INSTALLATION AND REMOVAL**

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

### **1.04 Access to Site**

- .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

### **1.05 Protection For Off-Site And Public Property**

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

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PWGSC  
Harbour Improvements  
North Head and Whitehead  
Grand Manan, N.B.  
Charlotte County  
Project No. R.076368.001

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TEMPORARY BARRIERS AND  
ENCLOSURES

SECTION 01 56 00  
PAGE 2

**2 PRODUCTS**

**2.01 NOT USED**

.1 Not Used.

**3 EXECUTION**

**3.01 NOT USED**

.1 Not Used.

**END OF SECTION**

## 1 GENERAL

### 1.01 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
  - .1 CCDC 2-94, Stipulated Price Contract.
- .2 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions "C", In Effect as Of: May 14, 2004.

### 1.02 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Provide on-site containers for collection of waste materials and debris.
- .5 Provide and use marked separate bins for recycling. Refer to Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .6 Dispose of waste materials and debris off site.
- .7 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

### 1.03 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste products and debris other than that caused by Owner or other Contractors.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

### 1.04 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

END OF SECTION

## 1 GENERAL

### 1.01 WASTE MANAGEMENT GOALS

- .1 Accomplish maximum control of solid construction waste.
- .2 Preserve environment and prevent pollution and environment damage.

### 1.02 DEFINITIONS

- .1 Class III: non-hazardous waste - construction renovation and demolition waste.
- .2 Cost/Revenue Analysis Workplan (CRAW): based on information from WRW, and intended as financial tracking tool for determining economic status of waste management practices.
- .3 Demolition Waste Audit (DWA): relates to actual waste generated from project.
- .4 Inert Fill: inert waste - exclusively asphalt and concrete.
- .5 Materials Source Separation Program (MSSP): consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .6 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
- .7 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .8 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .9 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
  - .1 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
  - .2 Returning reusable items including pallets or unused products to vendors.
- .10 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
- .11 Separate Condition: refers to waste sorted into individual types.
- .12 Source Separation: acts of keeping different types of waste materials separate beginning from first time they became waste.

### **1.03 MATERIALS SOURCE SEPARATION PROGRAM (MSSP)**

- .1 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.

### **1.04 STORAGE, HANDLING AND PROTECTION**

- .1 Store materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect, stockpile, store and catalogue salvaged items.
- .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .5 Protect structural components not removed for demolition from movement or damage.

### **1.05 DISPOSAL OF WASTES**

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

### **1.06 USE OF SITE AND FACILITIES**

- .1 Execute work with least possible interference or disturbance to normal use of premises.

## **2 PRODUCTS**

### **2.01 NOT USED**

- .1 Not Used.

## **3 EXECUTION**

### **3.01 APPLICATION**

- .1 Do Work in compliance with WRW.
- .2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

### **3.02 CLEANING**

- .1 Remove tools and waste materials on completion of Work, and leave work area in

clean and orderly condition.

- .2 Clean-up work area as work progresses.
- .3 Source separate materials to be reused/recycled into specified sort areas.

### 3.03 CANADIAN GOVERNMENTAL DEPARTMENTS CHIEF RESPONSIBILITY FOR THE ENVIRONMENT

- .1 Schedule E - Government Chief Responsibility for the Environment:

Province	Address	General Inquires	Fax
New Brunswick	Department of the Environment 364 Argyle Street, Box 6000 Fredericton NB E3B 5H1	506-453-3700	506-453-3843

END OF SECTION

## 1 GENERAL

### 1.01 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
  - .1 CCDC 2-2008, Stipulated Price Contract.

### 1.02 ADMINISTRATIVE REQUIREMENTS

- .1 Acceptance of Work Procedures:
  - .1 Contractor's Inspection: Contractor: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
    - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
    - .2 Request Departmental Representative inspection.
  - .2 Departmental Representative Inspection:
    - .1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
    - .2 Contractor to correct Work as directed.
  - .3 Final Inspection:
    - .1 When completion tasks are done, request final inspection of Work by Departmental Representative.
    - .2 When Work incomplete according to Departmental Representative, complete outstanding items and request re-inspection.
  - .4 Declaration of Substantial Performance: when Departmental Representative considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.
  - .5 Commencement of Lien and Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance to be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
  - .6 Final Payment:
    - .1 When Departmental Representative considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.
  - .7 Payment of Holdback: after issuance of Certificate of Substantial Performance of Work, submit application for payment of holdback amount in accordance with contractual agreement.

### 1.03 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

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PWGSC  
Harbour Improvements  
North Head and Whitehead  
Grand Manan, N.B.  
Charlotte County  
Project No. R.076368.001

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CLOSEOUT PROCEDURES

SECTION 01 77 00

PAGE 2

END OF SECTION

## 1 GENERAL

### 1.01 RELATED REQUIREMENTS

- .1 Section includes:
  - Project Record Documents as follows:
    - .1 As-built drawings;
    - .2 As-built specifications;
    - .3 Reviewed shop drawings.

### 1.02 REFERENCES

- .1 Canadian Environmental Protection Act (CEPA)
  - .1 SOR/2008-197, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.

### 1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

### 1.04 AS -BUILT DOCUMENTS AND SAMPLES

- .1 Maintain, in addition to requirements in General Conditions, at site for Departmental Representative one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders and other modifications to Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.

### 1.05 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on set of opaque drawings, provided by Departmental Representative.
- .2 Use felt tip marking pens, maintaining separate colors for each major system, for recording information.
- .3 Record information concurrently with construction progress.
  - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
  - .1 Field changes of dimension and detail.
  - .2 Changes made by change orders.
  - .3 Details not on original Contract Drawings.
  - .4 References to related shop drawings and modifications.

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PWGSC  
Harbour Improvements  
North Head and Whitehead  
Grand Manan, N.B.  
Charlotte County  
Project No. R.076368.001

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CLOSEOUT SUBMITTALS

SECTION 01 78 00

PAGE 2

#### 1.06 FINAL DREDGE SURVEY

- .1 Submit final dredging survey certificates in accordance with Section 01 33 00 - Examination and Preparation, certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

END OF SECTION