

1. Site .1 The location for the wharf repairs is to occur on Federal Property on North Victoria Six Ports Harbour Authority leased property, in Ingonish Ferry. Some pre-fabrication can be completed off-site, but the majority of the work will need to be completed at the harbour.
 2. Description .1 The work covered under this project consists of furnishing all plant, labour, equipment and materials in accordance with the plans and specifications attached herein.
 3. Scope .1 The General Terms of work includes, but is not necessarily limited to the following items:
 - Removal/Disposal of existing treated timber materials (wales, sheathing, fenders, ladders, etc.)
 - Supply/Delivery/Installation of new treated timber upper wales
 - Supply/Delivery/Installation of new treated timber lower wales
 - Supply/Delivery/Installation of new treated timber fenders
 - Supply/Delivery/Installation of new treated timber sheathing
 - Supply/Delivery/Installation of new treated timber ladder assemblies
 - Supply/Delivery/Installation of new galvanized steel backing plates for installation of new upper wales on existing sub-guard (see drawings)
 4. Examination of Site .1 Contractors who will tender on this work are advised to visit the work site and make their own appraisal of the facilities required for and the difficulties pertaining to the execution of the work, the actual site and soil conditions, the severity, exposure and uncertainty of local weather conditions and all other contingent matters. Submission of a tender will be deemed confirmation that the Contractor is conversant with site conditions.
 5. Work Schedule .1 The Contractor must submit a schedule of work showing anticipated progress stages and final completion of work within the time period required by Contract documents.
 6. Layout of Work .1 The exact limits of work will be determined on site by SCH.
 7. Contractor's use of Site .1 Caution will be exercised during the work to avoid damage to private or public property at or near the site. Any damage as a result of Contractor's operations will be repaired to the satisfaction of SCH and the HA at the Contractor's expense.
.2 Do not unreasonably encumber the site with materials or equipment.
.3 At the completion of the work, the area will be restored to its original condition. The Contractor will remove all construction materials, residue, etc., and leave the site in a condition acceptable to HA & SCH.
 8. Codes & Standards .1 Perform all work in accordance with the National Building Code of Canada (NBCC) and any other provincial or local application.
 9. Utilities .1 All utilities necessary for the performance of the work such as electricity, water, telephone, etc., will be arranged and paid for by the Contractor.
 10. Safety .1 The Contractor will administer the project in a manner that will ensure at all times full compliance with the regulations of all applicable safety codes.
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- In particular, the safety regulations of the Worker's Compensation Board of NS will be strictly adhered to.
- .2 The Contractor must supply and erect any necessary barricades for public safety. The Contractor will be responsible for any damage as a result of the absence or inadequacy of safety barricades.
11. Safety Certified
- .1 **SCH requires tenderers and their intended subcontractors which are to be considered for the work shall have a corporate certificate of safety certification as issued by the Department of Labour and NSCSA or a written confirmation that the company is considered to be in the process of being certified.**
- .2 **Contractors “in the process” shall submit safety document for review.**
11. Datum
- .1 The datum, referred to in this specification and on the accompanying plans is low normal tide (LNT).
12. Additional Drawings
- .1 SCH may furnish additional drawings to assist proper execution of the work. These drawings will be issued for clarification only. Such drawings have same meaning and intent as if they were included with plans referred to in the Contract documents.
13. Measurement For Payment
- .1 No interim payment will be made due to the length of the performance period. Payment for all work will be processed upon final inspection by the H.A. and S.C.H.
- (1) Removal & disposal of existing timbers (sheathing, wales, fenders and ladders) will not be measured but paid Lump Sum.
 - (2) Load, supply and installation of new treated timber upper wales (250x250x6706) will be measured by the number of new units incorporated into the work. The exact location of new upper wales as shown on contract drawings. **New galvanized steel backing plates (13x200x”determined on site”) for installation of new upper wales on existing sub-guard to be including in this item(see drawings).**
 - (3) Load, supply and installation of new treated timber lower wales (200x200x6706) will be measured by the number of new units incorporated into the work. The exact location of new lower wales as shown on contract drawings.
 - (4) Load, supply and installation of new treated timber fenders (200x200x3660) will be measured by the number of new units incorporated into the work.
 - (5) Load, supply and installation of new treated timber sheathing (100x200x3660) will be measured by the number of new units incorporated into the work.
 - (6) Load, supply, fabrication and installation of new treated timber ladders (200x200x3660 uprights) will be measured by the number of new units incorporated into the work.
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- .2 All materials removed, shall be disposed of in a proper manner and in accordance with municipal, provincial and federal standards.
- .3 All items that require installation are to include all necessary galvanized hardware such as machine bolts, lag screws, sheathing bolts, ladder rungs, anchor bolts, washers, nuts, etc. into that item. The contractor is responsible to supply all hardware required for the refastening of any existing timbers temporally loosened, such as utility poles. These items are considered to be incidental to the work, and will not be measured.

1. Construction Safety Measures
 - .1 Observe and enforce construction safety measures required by National Building Code, Provincial Government, Workmen's Compensation Board and municipal statutes and authorities.
 - .2 In event of conflict between any provisions of above authorities the most stringent provision will apply.
2. Fire Safety Requirements
 - .1 Comply with requirements of standard for Building Construction Operations FCC No. 301 Standard for Construction Operations, June 1982, issued by Fire Commissioner for Canada.
 - .2 This standard may be viewed at Regional Engineer's office, P.O. Box 2247, 1713 Bedford Row 2nd Floor, Halifax, N.S. B3J 3C9, and copies may be obtained from: Sir Charles Tupper Building, Riverside Drive, Ottawa, Ontario K1A 0M2.
 - .3 Continually maintain on the construction site an approved, workable 2.5 kg or equivalent multi-purpose dry chemical extinguisher for each welding and cutting unit which shall be located so as to be readily accessible to the operator.
 - .4 At least one 10 kg or equivalent multipurpose dry chemical extinguisher should be located on site and be readily available during the working day
3. Overloading
 - .1 Ensure no part of Work is subjected to a load which will endanger its safety or will cause permanent deformation.
 - .2 The Contractor is advised that use of heavy equipment on or close to existing structure is at Contractor's risk and responsibility.
 - .3 Repair any damage to existing structure caused by Contractor.
4. Falsework
 - .1 Design and construct falsework in accordance with CSA S269.1-1975.
5. Scaffolding
 - .1 Design and construct scaffolding in accordance with CSA S269.2-M1980.
6. Hazardous Materials
 - .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.
 - .2 Deliver copies of WHMIS data sheets to Engineer on delivery of materials.
 - .3 Train staff regarding handling of plant treated wood products and use of field treatment materials.

7. Project Safety Plan
- .1 Notwithstanding other safety requirements specified in this section or in any other section of the Specifications, Contractor shall prepare a written site specific Project Safety Plan outlining all safety rules, procedures and safe work practices which must be followed by all personnel working on or accessing the project site. These safety rules, procedures and safe work practices must be accompanied by an outline of all known and potential hazards. The Safety Plan shall address and conform to the applicable Provincial Safety Act, Codes and Regulations, except where a requirement to conform to a more stringent Act or Regulation has been specified elsewhere in the contract Documents. Develop the Safety Plan in collaboration with all sub-contractors who will be carrying out work at the site at any given time during the construction period, to ensure that all pertinent types of work activities are addressed in the Safety Plan by related safety rules, procedures and practices. It is the Contractor's responsibility to be familiar with all applicable Safety Acts, Regulations, Codes and contract requirements. The requirements of the Acts, Regulations, Codes and contract must be identified and addressed in the Safety Plan, by identifying Standard Operating Procedures (SOP) and safe work practices (SWP) which incorporate clear and specific control measures, applicable safety rules, procedures and practices, all of which shall become mandatory.
 - .2 Retain all copies of the formal Hazard assessment conducted by the contractor throughout the duration of the project and make available to the Engineer immediately upon request.
 - .3 Post the Project Safety Plan at a common location on the Project Site visible to all workers and persons accessing the site. Ensure that all employees, including sub-contractors' personnel, are advised of such Project Safety Plan and of the posted location.
 - .4 Contractor shall ensure all workers and authorized persons entering the work site are notified of and abide by the posted Project Safety Plan, safety rules, procedures, safe work practices and applicable Safety Acts, Regulations, and Codes. Any persons not complying with applicable Acts, Regulations, Codes, or the Project Safety Plan shall not be permitted on the site.
 - .5 Develop the Project Safety Plan immediately upon notification of contract award and submit it to the Engineer for information prior to the commencement of work. Revise such Plan when any potential or new hazards are identified, prior to sub-contractors not covered in the original plan commencing work or when requested by the Engineer or his representative. Submit the Project Safety Plan and any revised version to the Engineer, or his representative, for information, retention and reference purposes only. Submission of the Safety Plan to the Engineer does not imply approval and shall not relieve Contractor of any legal obligations for the provision of construction safety as specified by the Provincial safety Acts, Codes or Regulations..

PART 1 - GENERAL

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| 1.1 | <u>Related Work</u> | .1 | Refer to other specification sections for related information. |
| 1.2 | <u>Submissions</u> | .1 | Methodology:
(1) When requested provide methodology for carrying out the work. |
| 1.3 | <u>Protection</u> | .1 | Prevent debris from going adrift and becoming a menace to navigation. |
| | | .2 | Any damage to existing structures, utility poles, electrical system, derrick/offloading devices not specified for removal to be repaired at the Contractor's cost to the satisfaction of the HA and SCH. |
| 1.4 | <u>Measurement for Payment</u> | .1 | Refer to general instructions, section 13, Measurement for Payment. |

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

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| 3.1 | <u>Preparation</u> | .1 | Inspect site and verify with Small Craft Harbours items designated for removal and items to be preserved. |
| | | .2 | Locate and protect utility lines. Preserve in operating condition active utilities traversing site. |
| | | .3 | Provide temporary power and lighting as required. |
| 3.2 | <u>Removal</u> | .1 | Remove items as indicated. |
| | | .2 | Do not disturb adjacent structures designated to remain in place. |
| | | .3 | At end of each day's work, leave work in safe condition so no part is in danger of toppling or falling. |
| 3.3 | <u>Disposal of Material</u> | .1 | Disposal of materials not designated for salvage or re-use in work, will be the contractor's responsibility, and must be disposed of off-site. |
| | | .2 | The material to be disposed is to be transported and disposed of in an environmentally acceptable manner in accordance with any local, Municipal, Provincial and Federal restrictions and regulations. |
| 3.4 | <u>Restoration</u> | .1 | Upon completion of work, remove debris, trim surfaces and leave work site clean. |
| | | .2 | Reinstate areas and existing works outside areas of demolition to conditions that existed prior to commencement of work. |

PART 1 GENERAL

1.1 Reference Standards

- .1 CAN/CSA-080 Series -08 (R2012) (or latest edition), Wood Preservation
- .2 AWPA P7-85 (or latest edition), Creosote for Brush or Spray Treatment for Field Cuts (American Wood Preservers Association)
- .3 NLGA standard grading rules for Canadian Lumber 2014 edition or most recent edition at time of tendering
- .4 CAN/CSA-G164-M92 (or latest edition), Hot Dip Galvanizing of Irregularly Shaped Articles
- .5 ASTM A307-14 (or latest edition), Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile
- .6 CAN/CSA B111-1974 (or latest edition), Wire Nails, Spikes and Staples
- .7 CAN/CSA 086-14 (or latest edition), Engineering Design in Wood (Limit States Design)\
- .8 CAN/CSA G40.21M (or latest edition), Structural Quality Steels
- .9 ASTM A48-03 (or latest edition), Standard Specification for Gray Iron Castings
- .10 CSA W59-13 (or latest edition), Welded Steel Construction (Metal Arc Welding)

PART 2 PRODUCTS

2.1 Treated Timber

.1 Materials

- .1 **To be supplied by the contractor.**
- .2 Softwood Timber: Graded and stamped to National Lumber Grading Authority (NLGA) No. 1 Structural. Eastern Hemlock, Western Hemlock or Douglas Fir Species, only, will be used.
- .3 Timber Treatment:

	CCA	ACA
	(kgs/m ³)	(kgs/m ³)
Coast Douglas Fir	24	24
Western/Eastern Hemlock 300	24	24
Jack/Longpole Pine	24	24
Red, Ponderosa	30	30
Southern Yellow Pine		
- .4 Make arrangements for testing of timber by:
Plant Inspection: Provide treatment plant identification, date of treatment, list of various pieces in the charge, charge number, plant assay testing results, concentration and type of preservative used, duration of treatment, gauge retention, species of wood; and make arrangements with the treatment plant to locate bundles, move bundles, break open bundles and carry out other measures to facilitate the inspection.

.2 Execution

- .1 Timber will be protected during handling, shipping, offloading and field handling, by use of suitable equipment and procedures. Use rope or fabric

strap slings on site for moving bundles or individual timbers, rather than metal grabs, chains or cables.

- .2 Tops of vertical untreated timber to be field treated with minimum two liberal coats of Copper or Zinc Naphthenate.
- .3 Handle treated material to avoid damage causing alteration in original treatment.
- .4 Treat in field, spike holes, boreholes, plugged holes, cuts and any damage to treated material, using Copper or Zinc Naphthenate, as specified herein, regardless of plant treatment type. Fill all unused bored holes and any other holes with tight fitting treated wooden plugs prior to any exposure to water containing marine borers.
- .5 Treat boreholes, using a pressurized container with an extension rod, to produce a fine spray in the holes with one application. Alternately a cylindrical brush may be used.
- .6 Treat field cuts and any abrasions with minimum of two liberal applications, using either spray or brush.
- .7 Environmental Concern: Ensure no spillage or excess application of field preservative. Provide workmen with sufficient training and protective gear to properly and safely handle the treated materials and to apply field treatment, so as to prevent undue hazard to themselves, others, or the environment.
- .8 Contain all debris and leachates (films on water surface) within the area of the work by using containment facilities such as floating booms or screens.

2.2 Galvanized Hardware:

.1 Materials

.1 **To be supplied by the contractor**

.2 Hardware must meet the following specifications:

- (1) Machine bolts, lag screws, anchor bolts, sheathing bolts, ladder rungs, holdfasts, nuts, round plate washers: to ASTM A307.
- (2) Spikes: to CSA B111.
- (3) Hot dip galvanized hardware, machine bolts, lag screws, sheathing bolts, anchor bolts, nuts, ladder rungs, holdfasts, washers and spikes to CSA G164-1981, with minimum zinc coating of 610 g/m².
- (4) All hardware will be galvanized unless otherwise shown on plans.

.2 Execution

- .1 Boreholes for machine bolts and sheathing bolts to be same diameter as bolts. Boreholes for lag bolts to be same diameter as shank for unthreaded portion and 0.70 times the shank diameter for the threaded portion. Threaded portion of lag bolts will be installed using a wrench, not by driving.
- .2 All countersunk holes to be recessed 50 mm and shall receive two coats of Copper or Zinc Naphthenate, allowing sufficient time between applications to permit total absorption. The cost of supply and application of Copper or Zinc Naphthenate will not be measured for payment but will be considered incidental to the work.

Ingonish Ferry: Wharf 402 Repairs - Environmental Mitigation Measures

- Ensure compliance with all federal legislation and provincial, territorial, municipal and international laws codes, and standards, as applicable.
- Notify the Harbour Authority and any private businesses on or adjacent to the project site prior to the commencement of the project.
- Ensure that all waste material will be disposed of in an environmentally responsible manner, and in accordance with provincial, territorial, municipal legislation.
- Ensure all construction material and debris does not become waterborne.
- Do not deposit any deleterious substances in the watercourse/waterbody.
- Become knowledgeable with and 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.
- Minimize disturbance to all birds on-site and adjacent areas during the entire course of the work.
- Ensure that no litter (including food wastes) is left in coastal areas.
- Ensure that all vehicles are road-worthy, and that drivers observe all speed and weight limits on site.
- Ensure that all construction equipment is in good working order and careful maintenance and monitoring of all equipment be carried out to minimize the risk of spills or leaks of petroleum-based products.
- Ensure Contractor has an emergency response plan to control any fuel spills, which will include having on site appropriate spill response equipment readily available for immediate deployment. All spills and releases must be reported to the relevant federal, provincial, or territorial government departments. The emergency response plan must include the appropriate phone number for reporting releases in the area as well as phone numbers for local authorities (Police or Fire departments).
- Ensure clean-up measures of any spills are suitably applied so as not to result off-site impacts.
- Clean-up and appropriately dispose of any deleterious substances.
- All waste materials to be disposed of in an environmentally responsible manner, and in accordance with provincial, territorial and municipal legislation.
- Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.
- Ensure machinery is checked for leakage of lubricants or fuel and is in good working order.

- Ensure refuelling will be done at least 30 m from any water body and on impermeable surface.
- Ensure basic petroleum spill clean-up equipment is on-site.
- Site access is restricted to authorized workers only.
- Dust suppression measures (e.g., water) shall be applied to prevent fugitive dust.
- Any hazardous materials produced as a result of the Project are to be transported off-site for disposal / treatment at an approved waste handling facility pursuant to applicable provincial and federal regulations / legislation and contract specifications.
- Water contamination by preservative treated wood:
 - Preservative treated lumber and timber, whether plant or site treated, shall be cured for a minimum of 30 days from date of the treatment application before their installation in areas which will be in contact with the water.
 - Do not cut treated lumber over the surface of a watercourse or wetland.
 - Do not use liquid applied preservative products over the surface of a watercourse or wetland.
 - Wood treated with chromate copper arsenate or ammoniac copper zinc arsenate must be Canadian Standards Association or American Wood Preserver Association approved.
 - Do not use timber and lumber treated with creosote, petroleum, or pentachlorophenol for any part of the work.
- Project activities to comply with the provincial and federal *Occupation Health and Safety Act* Regulatory requirements.
- All in-water activities should be conducted during low wind, wave, and suitable weather conditions.
- Do not bury rubbish, construction, and demolition debris (i.e., concrete, creosote timbers, steel, impacted soil materials, etc.) and waste materials on site.
- Dispose of hazardous waste in accordance with applicable federal and provincial, regulations, codes, standards, and guidelines.
- Dispose of construction related debris, including demolished cribwork materials and cut timber at an approved landfill that is licensed to dispose of creosote timber or in a manner approved by the province.
- Debris entering the marine environment should be immediately retrieved when it is safe to do so.
- Weather conditions are to be assessed on a daily basis to determine the risk of extreme weather in the project areas. Avoid work during periods which ECCC has issued rainfall or wave warning for the work area.