Fisheries and Oceans Canada | Pêches et Océans Canada

Canada

Small Craft Harbours Branch

INVITATION TO TENDER

FLOAT RECONSTRUCTION

COMOX, B.C.

April, 2015

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1 SITE LOCATION

.1 Comox is located on the East coast of Vancouver Island, approximately 96km Northwest of Nanaimo.

2 DEFINITIONS

.1 The Site:

"The Site" referred to herein is Comox Small Craft Harbour, 121 Port Augusta Street Comox, BC V9M 3N8.

.2 The Contract Documents:

"The Contract Documents" referred to herein include all Sections herein, as well as, attached drawings referenced in Section 01 01 00 – Table of Contents.

.3 Contracting Authority:

"The Contracting Authority" referred to herein is the Department of Fisheries and Oceans Canada – Small Craft Harbours, Suite 200-401 Burrard Street, Vancouver, BC V6C 3S4.

.4 The Owner:

"The Owner" (also known as the "Technical Authority" or Client Department) referred to herein is the Department of Fisheries and Oceans Canada – Small Craft Harbours, Suite 200-401 Burrard Street, Vancouver, BC V6C 3S4.

.5 The Engineer:

"The Engineer" referred to herein is commonly an employee of the Owner assigned by the Client Department as the Engineer and Technical Authority for the project. The Engineer may be a sub-contract Consultant for technical and inspection purposes and the Technical Authority must still be an employee of the Client Department.

.6 The Contractor:

"The Contractor" referred to herein is the party accepted by the Owner, with whom a formal contract is signed, to complete the work of this project.

3 WORK INCLUDED

.1 In general, work consists of float construction repairs to the West Harbour within the Site. Refer to C-FR-001 for the location of the West Harbour.

.2 All work specified in the Contract Documents shall include the supply of equipment, labour and materials (including hardware) necessary for the performance and completion of the work as required by the Contract Documents. All materials shall be new and conform to Technical Specifications in Sections 03 01 00, 03 02 00 and 03 03 00. A description of materials supplied by the Owner is provided in Section 01 04 00. All replaced items, cut-offs and waste material shall be disposed by the Contractor in accordance to Section 02 01 00, 23.

.3 The principal works for platform to be executed and for which all materials (except Owner supplied), plant and labour are to be supplied by the Contractor are to:

.1 Replace all flange and bull rail hardware.

.2 Replace all decking.

.3 Replace all bull rail.

.4 Re-tighten all loose lower crosstie hardware in Float A.

.5 Install pontoons.

.6 Replace select flanges.

.7 Replace all flange splice blocks.

.8 Reconstruct all mooring wells.

.9 Replace all rub board.

.4 Description of Items

With reference to items listed in the Schedule of Quantities and Prices, work consists of, but is not limited to, the following items:

.1 Mobilization / Demobilization

The lump sum cost of mobilization/demobilization includes the following:

.1 Moving all crew, equipment and materials on and off the Site.

.2 Supply all materials required to complete the Contract, except for Owner supplied materials listed in Section 01 04 00.

.3 Site clean-up after completion of the work.

.2 Replace All Flange & Bull Rail Hardware (West Harbour)

The lump sum cost to replace all flange and bull rail hardware includes the following:

.1 Remove (unfasten or cut and drive out) and dispose all flange and bull rail hardware.

.2 While hardware is removed, pause this item to complete other items that require hardware to be removed.

.3 Install new hardware.

.3 Replace All Decking (West Harbour)

The unit cost per square meter to replace decking includes the following:

.1 Where located on C-FR-001, remove and dispose decking.

.2 For a custom sized section, cut and treat the new decking.

.3 Pre-drill decking ends to avoid splitting.

.4 Hammer in 2 nails per contact. **Note: Nails to be supplied by the Contractor.**

.5 While decking is removed, pause this item to complete other items that require decking to be removed.

.6 Install new decking as per drawing C-FR-002.

.4 Replace All Bull Rails (West Harbour)

The unit cost per meter to replace bull rail includes the following:

.1 Perform this work while hardware is removed from item 3.4.2.

.2 Where located on C-FR-001, remove and dispose the bull rail.

.3 Cut, drill and treat the new timber to match the original length and bolt pattern of the removed bull rail.

.4 While bull rail is removed, pause this item to complete other items that require bull rail to be removed.

.5 Install new bull rail as per drawing C-FR-002.

.5 Re-tighten All Loose Lower Crosstie Hardware (West Harbour, Float A)

The lump sum cost to re-tighten loose lower crosstie hardware in Float A includes the following:

.1 Perform this work while hardware and decking are removed from items 3.4.2 and 3.4.3, respectively.

.2 Re-tighten loose lower crosstie hardware on Float A.

.6 Install Pontoons (West Harbour)

The unit cost per pontoon to install a pontoon includes the following:

.1 Perform this work while hardware and decking are removed from items 3.4.2 and 3.4.3, respectively.

.2 Where located on C-FR-001, install and secure a new pontoon.

.7 Replace Select Flanges (West Harbour)

The unit cost per flange to replace a flange includes the following:

.1 Perform this work while hardware and decking are removed from items 3.4.2 and 3.4.3, respectively.

.2 Where located on C-FR-001, remove and dispose the select flange.

.3 Cut, drill and treat the new timber to match the original length and bolt pattern of the removed flange.

.4 Install the new flange as per drawing C-FR-002.

.8 Replace All Flange Splice Block Pairs (West Harbour)

The unit cost per flange splice block pair to replace a flange splice block pair includes the following:

.1 A flange splice block pair includes an upper and lower flange splice block.

.2 Perform this work while hardware and decking are removed from items 3.4.2 and 3.4.3, respectively.

.3 Where located on C-FR-001, remove and dispose the flange splice block pair.

.4 Cut, drill and treat the new timber to match the original length and bolt pattern of the removed flange splice blocks.

.5 Install the new flange splice block pair as per drawing C-FR-002.

.9 Reconstruct All Mooring Wells (West Harbour)

The unit cost per mooring well to reconstruct a mooring well includes the following:

.1 Perform this work while hardware, decking and bull rails are removed from items 3.4.2, 3.4.3 and 3.4.4.

.2 Where located on C-FR-001, remove and dispose mooring well materials, suchas, well blocking, joists, crossties, stringers and liners.

.3 Install new mooring well materials as per drawing C-FR-002.

.10 Replace All Rub Boards (West Harbour)

The unit cost per meter to replace rub board includes the following:

.1 Where located on C-FR-001, remove and dispose the rub board.

.2 For a custom sized section, cut the new rub board.

.3 Pre-drill rub board ends to avoid splitting.

.4 Install new rub board as per drawing C-FR-002.

END OF SECTION

1 OWNER SUPPLIED MATERIALS

The Owner shall supply the following materials to the Site:

.1 Float Hardware:

.1 An estimated amount of hex bolts, washers and nuts for flanges, bull rail and mooring well timbers required for the work will be supplied by the Owner. A list of supplied hardware is as follows:

.1 Flange & Edge Stringer Hardware: 835, 3/4x28in Long Galv. Hex Bolts, Nuts and Washers.

.2 Mid-Flange & Interior Flange Hardware: 1130, 3/4x22in Long Galv. Hex Bolts, Nuts and Washers.

.3 Bull Rail Hardware: 685, 3/4x18in Long Galv. Hex Bolts, Nuts and Washers.

.2 Float Timber:

.1 An estimated amount of timber required for the work will be supplied by the Owner. The Owner shall supply additional timber, above and beyond the estimated amount, under the condition that, the Contractor provides a list of required timbers no later than 30 days after award.

2 CONTRACTOR SUPPLIED MATERIALS

.1 The Contractor shall supply additional hardware, above and beyond those supplied by the Owner (refer to item 1.1), required for the performance and completion of the Contract.

.2 If the Contractor requires additional timber, above and beyond those supplied by the Owner (refer to item 1.2), for the performance and completion of the Contract and notifies the Owner after 30 days of award, the Contractor will be responsible for supplying the additional timber.

END OF SECTION

1 COMMENCEMENT AND COMPLETION

.1 Site work may begin on September 1th, 2015.

.2 All work including clean-up and demobilization must be completed by January 15th, 2016.

2 INSPECTION OF SITE

.1 It is the responsibility of each bidder to obtain all necessary information pertaining to local site conditions and existing works, beyond the information provided in this Specification and accompanying drawing(s).

3 PERMITS, CERTIFICATES, LAWS AND ORDINANCES

.1 The Contractor must, at his own expense, procure all permits, certificates and licenses required of him by law for the execution of his work under this contract. He shall comply with all Federal, Provincial or Municipal laws, ordinances or rules and regulations relating to the performance of his work and in force during the duration of this contract.

.2 The Contractor is required to give all required notices, comply with all local, municipal, provincial, and federal laws, ordinances, codes, by-laws, rules and regulations relating to the work.

.3 All work to be done in accordance with Work Safe BC regulations.

.4 The Contractor shall comply with Federal and Provincial laws, orders and regulations concerning the control and abatement of water and air pollution.

.5 The Contractor shall comply with the requirements of any local or other Noise By-Laws.

4 MINIMUM STANDARDS

.1 In the absence of other standards specified in the Contract Documents, all work is to conform to, or exceed, the minimum standards of the Canadian Government Specifications Boards, the Canadian Standards Association, the American Society for Testing of Materials, or the National Building Code of Canada, whichever is applicable.

.2 All work to be done in accordance with Work Safe BC regulations.

5 INTERFERENCE WITH OPERATION

.1 The Contractor shall obey all navigation regulations and conduct operations so as to interfere as little as possible with the use of berthing spaces, fairways and passages. Install and maintain any and all protection to navigation as may be required by any properly constituted authority or by the Owner. During the course of construction and clean-up, do not dispose of surplus, waste or demolished materials in navigable waters.

.2 The Contractor shall upon instruction of the Owner or Engineer, promptly remove any of the Contractor's equipment located outside the specified work area and obstructing any harbour operation.

6 COMPLIANCE WITH STANDARD SPECIFICATIONS CODES AND REGULATIONS

.1 Unless expressly stated to the contrary, all materials, equipment and articles furnished by the Contractor shall comply with the applicable provisions of the standards of the Canadian Standards Association (CSA) or the Canadian Government Specification Board (CGSB) with the applicable provisions of the American Society for Testing Materials (ASTM), National Dredging Association (NFPA), American Concrete Institute (ACI) and the American Water Works Association (AWWA).

.2 The Contractor shall follow all regulations in accordance with the Fisheries Act. Care shall be taken not to release any deleterious materials to fish habitat, into the water.

.3 All work to be done in accordance with Work Safe BC regulations.

7 CONTRACTOR'S PERSONNEL

.1 The Contractor's representative on site shall be completely familiar with the method of work to be employed. Such personnel shall remain on site for the duration of the work.

8 RESPONSIBILITY TO PERSONNEL

.1 The Contractor shall have full responsibility for the board, lodging and transportation of his personnel and subcontractors. The cost for this shall be incorporated into his unit prices. He shall comply with all labor requirements, and Worker’s Compensation regulations.

9 BARRIERS, LIGHTS AND WATCHING

.1 The Contractor shall provide all requisite barriers, fences, warning signs, lights and watching for the protection of persons and property on or adjacent to the Site.

10 SITE ACCESS

.1 The Contractor shall provide access to the work for the Owner’s inspectors and surveyors as required.

.2 General site access shall be coordinated with the Owner.

.3 The Contractor shall maintain routes of travel, with the Owner being the sole judge as to what may be deemed reasonable.

.4 The Contractor shall erect and maintain barriers, fences, lights, warning devices, and other protective devices as may be required for prevention of theft or damage of goods and protection of the public and workmen, or if so ordered by the Owner.

11 CONSTRUCTION AREA

.1 The Contractor shall regulate construction traffic on public areas and comply with all local ordinances in connection therewith, including load limitation and removal of debris.

.2 The Contractor shall confine his operations on the Site to those areas actually required for the work including routes and regulations approved by the Owner for haulage of materials.

12 NIGHT WORK

.1 The Contractor shall keep proper lights each night between the hours of sunset and sunrise upon all floating plants, false-work and other obstructions where necessary, and upon all buoys of such size and in such locations as required by a governing authority. When work is done at night, maintain from sunset to sunrise such lights on or about the work and plant as necessary for the proper observation of the work and the efficient prosecution thereof.

13 CLEAN-UP

.1 At all times the Contractor shall keep the Site free from accumulation of waste material and debris and leave the Site clean and tidy on completion.

14 TEMPORARY SERVICES

.1 On site the Contractor shall make his own arrangements for supply of water and electricity.

.2 The Contractor shall supply for his own use; sanitary, first aid, and all other temporary services and facilities required for the work.

15 PROGRESS REPORT

.1 The Contractor shall keep a daily record of progress of the work available for inspection by the Engineer.

.2 The daily record shall include particulars of weather conditions, number of men working, plant and equipment working and work performed.

16 ENGINEER’S ACCESS

.1 The Contractor shall provide access to the work for the Engineer's inspectors and surveyors as required.

17 PERMITS AND ROYALTIES

.1 Permits and licenses required for the Contractors work are the responsibility of the Contractor and shall be for the Contractor's account. The Contractor shall have the appropriate business license.

18 PROTECTION OF EXISTING STRUCTURES

.1 Existing structures, adjacent marine facilities, roads, services, piping or equipment within the work area which are not to be replaced shall be properly protected from any injury or damage, direct or indirect. Any damage that is caused as a result of the operations of the Contractor shall be repaired and made good at the Contractor's expense to the satisfaction of the Engineer.

19 WEATHER

.1 Time lost by the Contractor due to stoppage on account of adverse weather conditions may be allowed the Contractor, at the discretion of the Engineer, as an extension of time for the completion of the work over and above the date of completion specified in the contract agreement.

20 SOIL DATA AND EXISTING TOPOGRAPHY

.1 The Contractor shall notify the Engineer of any subsurface conditions at the place of the work that may differ materially from those indicated in the Contract Documents.

21 UTILITIES AND SERVICES

.1 The Contractor shall be responsible for any damage to overhead, underwater and/or underground utilities and/or services caused by the Contractor's operations and shall repair and make good the repairs at the Contractor's own expense.

.2 The Contractor shall be responsible, unless otherwise agreed to by the Engineer, for all temporary or construction services and utilities, and first aid facilities.

22 CARE OF FINISHED WORK

.1 The Contractor shall protect all finished work from injury, defacement, unauthorized entry, or trespass until such time as the work described in the Contract Documents is substantially complete.

23 DISPOSAL

.1 All material designated to be replaced or removed will become the property of the Contractor and will be disposed of in an environmentally acceptable manner so that they neither become a menace to marine navigation nor a nuisance to the public on adjacent or any other property.

.2 All replaced items, cut-offs and waste material shall be disposed by the Contractor in strict accordance with provincial, local, and municipal regulations and Part 8 of the National Building Code and with the Canadian Construction Safety Code.

.3 Conduct clean-up and disposal operations to comply with local ordinances and antipollution laws.

24 MATERIAL HANDLING AND STORAGE

.1 Any materials damaged by the Contractor during handling, transportation and storage shall be replaced at the Contractor’s expense.

25 MATERIALS AND EQUIPMENT SUPPLIED BY THE CONTRACTOR

.1 The Contractor shall supply all hardware, labor, hand tools, power tools, generators, equipment and all other materials required to complete this Contract.

26 CONSTRUCTION WORK SCHEDULE

.1 The Contractor shall work whatever shifts required in order to ensure the work meets regulatory windows and is completed by the completion date of the contract.

.2 The Contractor shall normally perform all work within the hours of daylight except in instances where the Contractor has requested and received approval for shift changes from the Owner.

.3 Within 7 days of award the Contractor is to supply a week by week schedule of proposed activities related to the contract.

.4 The Contractor must notify the Owner immediately whenever a variation from the construction schedule is expected to occur or when the submission of the submittals will be delayed.

27 SETTING OUT OF WORK

.1 The Contractor is expected to familiarize themselves with the Site, facilities and amenities within.

.2 The Contractor shall not enter on nor occupy with men, tools, equipment or material, any ground outside the property of the Harbour Authority without the written consent of the party owning such ground. Other Contractors or employees or representatives of the Department may, for all necessary purposes, enter upon the work and premises used by the Contractor, and the Contractor shall conduct his work so as not to impede unnecessarily any work being done by others nor adjacent to the Site.

28 AS-BUILT DRAWINGS

.1 The Contractor shall mark up one set of plans with any changes or amendments implemented during the Contract. These plans shall be submitted to the engineer before the Final Certificate of completion is issued.

29 SITE SECURITY

.1 The Contractor is responsible for all materials and equipment either supplied by the Contractor, the Client Department, or the Owner. The Contractor is responsible for the repair and replacement of stolen or damaged items.

30 SITEWORK

.1 All work shall be completed as per direction of on-site Owner or representative.

.2 All heavy construction equipment shall be free of leaks and cleaned prior to construction.

.3 The Contractor shall have absorbent pads on site in case of any oil leaks or contaminants entering the water.

31 CO-OPERATION WITH HARBOUR AUTHORITY

.1 The Contractor will give the Harbour Authority a minimum 24 hours notice for work that may interrupt access to the harbour.

.2 The site shall be left in a safe condition at the completion of each work day.

32 CONDITION OF STRUCTURE

.1 Existing structures, adjacent marine facilities, roads, and all other structures, services, piping or equipment within the work area shall be properly protected from any injury or damage, direct or indirect. Any damage that is caused as a result of the operations of the Contractor shall be repaired and made good at the Contractors expense to the satisfaction of the Owner.

33 INSPECTION OF STRUCTURE

.1 The Owner or inspector, shall inspect the completed works. The Contractor shall be responsible for the costs of any re-inspections that may be required due to errors or omissions of the Contractor.

END OF SECTION

1 GENERAL

.1 This section refers to demolition specifications required as part of this Contract.

.2 Where existing works are to be removed, they shall be removed and salvaged or disposed of to the satisfaction of the Engineer.

.3 The Contractor shall furnish all labour, materials, tools, plant and services required incidental to the completion to the full extent of the drawings and specifications for the execution of all demolition salvage and protection work specified herein.

.4 Demolition and disposal shall be carried out in strict accordance with provincial, local, and municipal regulations and Part 8 of the National Building Code and with the Canadian Construction Safety Code.

2 REMOVAL OF DEMOLISHED MATERIAL

.1 All materials, which are not to be salvaged for the Owner, shall become the Contractor's property and the Contractor must remove it from the Site.

.2 It shall be the Engineer's decision as to which material shall be salvaged and which material shall be disposed of.

3 SALVAGE

.1 The Owner may request the Contractor to salvage materials. The Contractor shall store materials on Site as directed by the Engineer.

4 PROTECTION

.1 The Contractor shall protect the remaining structural elements and adjacent structures against damage from falling debris or other causes.

.2 The Contractor shall take precautions to guard against movement or settlement of adjacent structures and remaining structural elements, provide and place shoring or bracing as required, and be responsible for the safety and support of such structures, be liable for any damage or injury caused thereby or resulting therefore. If at any time safety of any adjacent structure appears to be endangered; the Contractor shall cease operations and notify the Engineer.

END OF SECTION

1 GENERAL

.1 This section refers to steel specifications required as part of this Contract.

.2 Reference Standards

Unless specified otherwise, all steel shall be new and conform to the current edition of the following standards:

- CSA B-111-M: Wire nails, spikes and staples
- CAN/CSA-G164-M: Hot dip galvanizing of irregularly shaped articles
- CAN/CSA-G40.21-M81: Drift bolts, machine bolts, washers, and miscellaneous iron
- ASTM A307: Specification of carbon steel bolts and studs
- ASTM A153: Hot dipped galvanizing

2 PRODUCTS

.1 Steel Hardware

.1 Unless otherwise specified, all bolts shall be installed with round flat washers, with an OD no greater than 2.5", under the head and nut.

.2 All bolts shall be National Course Thread, unless shown otherwise.

.3 All bolts shall have minimum 76mm (3") of thread, unless shown otherwise.

.4 All hardware including, but not limited to, bolts, drift bolts, spikes, carriage bolts, lag bolts, nuts and washers shall be hot dipped galvanized in accordance with the ASTM – A153. Galvanize to 610gm/m3 (2oz/ft2).

.2 Pile Banding

.1 All pile bands shall be 19mm (3/4") wide and made of 316 grade stainless steel.

.3 Fabrication Steel

.1 Items manufactured or fabricated from scrap steel of unknown chemical or physical properties are not acceptable.

.2 All fabrication steel such as brackets shall be galvanized in accordance to CAN/CSA-G164-M.

3 EXECUTION

.1 Assembly

.1 All bolts shall be tightened to 100 newton meters (80 lbs feet.)

.2 Care shall be taken not to damage the treated wood finish. All treatment damaged by the Contractor shall be repaired at his own expense.

.3 All caps, sub caps, corbels and piles shall be predrilled prior to installation to prevent splitting.

.4 Holes for machine bolts will be bored to provide a driving fit.

.5 All holes drilled for caps, sub caps, corbels and piles shall be treated with preservative as specified prior to bolting.

END OF SECTION

1 GENERAL

.1 This section refers to timber specifications required as part of this Contract.

.2 Reference Standards

Unless specified otherwise, timber shall conform to the current edition of the following standards:

- NLGA: Standard Grading Rules for Canadian Lumber
- CAN/CSA-080: Wood Preservation
- ASTM D25: Timber Specifications
- Best Management Practices for the use of Treated Wood in Aquatic Environments

2 PRODUCTS

.1 Except as otherwise noted, only new materials will be used in, and remain an integral part of the structures.

.2 The Engineer may inspect materials and products at his discretion at all stages of their manufacture, and transportation to the Site. Satisfactory inspection at any stage does not preclude future rejection if the materials or products are subsequently found to lack uniformity or fail to conform to the requirements specified. Acceptance will not be made until the materials or products are satisfactorily installed in the completed structures as specified.

.3 The Contractor shall be responsible to repair all materials damaged by his handling, storage and installation of materials.

4. Salvaged materials deemed to be reusable shall remain property of the Owner.

3 TIMBER

.1 All timber for the purpose intended shall conform to the requirements of the NLGA Standard Grading Rules for Canadian Lumber.

.2 All timber shall be Coast Douglas Fir. No. 1 or Better Structural Grade; unless specified otherwise.

4 TREATMENT OF MATERIAL

.1 Creosote-treated Materials:

.1 All creosote treated timber will be treated in accordance with CSA 080 and will follow the Best Management Practices for Creosote as outlined in “Best Management Practices for the use of Treated Wood in Aquatic Environments”, Canadian Version January 1997.

.2 All creosote treated materials will have a minimum retention of 225kg per cubic meter (14lb. per cubic foot).

.2 Salt-treated Materials:

.1 All timber specified to be treated with water-home salts will be treated in accordance with CSA 080-1989, "Wood Preservation", and its current amendments CSA 080.14, for materials in contact with ground or water. (Only non-leachable ACA salts will be accepted).

.2 All salt treatment will follow the Best Management Practices for ACA and ACZA as outlined in “Best Management Practices for the use of Treated Wood in Aquatic Environments”, Canadian Version January 1997.

.3 All salt-treated timber will have a minimum retention of 6.4 kg/m3 (0.40 lb. per cubic foot) and a depth of penetration of 10mm as specified in CSA 080.14.

5 FIELD TREATING

.1 Creosote treated timber members that have fresh cut surfaces exposed in the structure shall be treated as specified. All cuts or breaks in the surfaces of creosote treated timber shall be treated with two separate coats of creosote oil. Where bolt holes must be bored through creosote treated piles, the holes shall be filled with creosote oil and the bolts shall be dipped in hot creosote oil before the bolts are placed. Other alternative field wood treatment should be approved by the Engineer before application. Ensure the creosote or other preservatives are properly stored and protected in case of spillage (ie: place in tray).

.2 All salt treated members that are modified (cut or drilled) shall be field treated with two coats of Copper Naphthenate or pentachlorophenol. When field treating by brushing, spraying, dipping or soaking do so in such a manner that the preservative does not drip into the water or onto the ground. Ensure the creosote or other preservatives are properly stored and protected in case of spillage. (ie: place in tray)

6 HANDLING OF MATERIALS

.1 Treated material will not be accepted if damaged in any manner in handling. This includes damage from strapping and slings.

.2 The Contractor shall be responsible to repair or replace all materials damaged by his handling, storage and installation of materials.

7 PILE CAP AND SHIM REPLACEMENT

.1 Field cuts in treated material comprising the wharf will be treated as specified.

.2 Contractor will submit a proposed construction method to the Engineer prior to construction.

.3 All blocking and shims shall be creosote treated and supplied by Contractor.

8 EXISTING STRUCTURES

.1 Any structures damaged by the Contractor during the works shall be repaired and made good at the Contractor's expense to the satisfaction of the Engineer.

9 SERVICES

.1 All services shall be removed from the floats/wharf as not to damage them. All service materials misc. hangers, fasteners and supplies required to reinstall the services shall be supplied by the Contractor. All materials that are not reusable shall be disposed of by the Contractor.

.2 The Contractor shall be responsible for the handling and storage of the service lines, lamp standards and other equipment during construction. All materials damaged by the Contractor shall be replaced at the Contractor's expense.

10 PATCHING AND REPAIRS

.1 All unused bolt holes or damaged areas of creosote treatment shall be patched with creosote treated dowels, mastic, ships felt and copper patches as specified.

11 PAINTING

.1 Timber specified to be painted will receive one brushed undercoat. After 48 hours, two brushed finish coats of 2-part urethane paint will be applied with a minimum of 48 hours between finish coats. Paint will be applied to clean, dry surfaces only.

.2 Provide paint specifications to Owner to be approved before construction.

.3 Paint colours will match the following:

.1 "Signal Red"
.2 "Safety Yellow"

END OF SECTION

1 GENERAL

.1 Health and safety requirements are mandatory to ensure that Small Craft Harbours shows due diligence towards health and safety on construction sites.

2 REFERENCES

Unless specified otherwise, Health and Safety Requirements shall conform to the current edition of the following standards:

.1 Government of Canada
Canada Labour Code, Part II
Canada Occupational Health and Safety Regulations.

.2 National Building Code of Canada (NBC):
Part 8, Safety Measures at Construction and Demolition Sites.

.3 Canadian Standards Association (CSA):
CSA S269, Falsework for Construction Purposes.
CSA S269.2, Access Scaffolding for Construction Purposes.
CSA-S350, Code of Practice for Safety in Demolition of Structures.

.4 Fire Protection Engineering Services, HRSDC:
FCC No. 301, Standard for Construction Operations.
FCC No. 302, Standard for Welding and Cutting.
HRSDC website:
http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/index.shtml

.5 American National Standards Institute (ANSI):
ANSI A10.3, Operations – Safety Requirements for Powder-Actuated Fastening Systems.

.6 Province of British Columbia:
Workers Compensation Act. Part 3 Occupational Health and Safety.
Occupational Health and Safety Regulation

.7 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

3 GENERAL CONDITIONS

.1 Provide safety barricades around work site as required to provide a safe working environment for workers and protection for pedestrian traffic.

.2 Ensure that non-authorized persons are not allowed to circulate in designated construction areas of the work site.

.3 Provide appropriate means by use of barricades, fences, and warning signs as required.

.4 Secure site at night time as deemed necessary to protect site against entry.

.5 Mark floating equipment with lights in accordance with International Rules of Road and maintain radio watch on board.

.6 Place and maintain buoys, markers and lights required to define work and disposal areas.

4 RESPONSIBILITY

.1 Assume responsibility as the Prime Contractor under this Contract.

.2 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

.3 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

5 GENERAL REQUIREMENTS

.1 Comply with specified codes, acts, bylaws, standards and regulations to ensure safe operations at site.

.2 In event of conflict between any provision of the above authorities, the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, the Departmental Representative will advise on the course of action to be followed.

.3 Mark floating equipment with lights in accordance with requirements and directives of Queen's Harbour Master.

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

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

6 COMPLIANCE REQUIREMENTS

.1 Comply with Workers Compensation Act, B.C.

.2 Comply with Occupational Health and Safety Regulations.

.3 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

.4 Small Craft Harbours may terminate the Contract without liability to Small Craft Harbours where the Contractor, in the opinion of Small Craft Harbors, refuses to comply with a requirement of the Workers' Compensation Act or the Occupational Health and Safety Regulations.

.5 It is the Contractor's responsibility to ensure that all workers are qualified, competent and certified to perform the work as required by the Workers' Compensation Act or the Occupational Health and Safety Regulations.

7 WORKER’S COMPENSATION BOARD COVERAGE

.1 Comply fully with the Workers' Compensation Act, regulations and orders made pursuant thereto, and any amendments up to the completion of the work.

.2 Maintain Workers' Compensation Board coverage during the term of the Contract, until and including the date that the Certificate of Final Completion is issued.

8 SUBMITTALS

.1 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:

.1 Results of site specific safety hazard assessment.

.2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.

.3 Risk Management and Safety Procedure for possible events including but not limited to storm, fire, and fall.

.2 Submit one copy of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative weekly.

.3 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.

.4 Submit copies of incident and accident reports.

.5 Submit WHMIS MSDS - Material Safety Data Sheets if requested.

.6 Departmental Representative may review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 5 days after receipt of comments from Departmental Representative.

.7 Departmental Representative review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.

.8 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.

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

9 FILING OF NOTICE

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

10 SAFETY ASSESSMENT

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

11 MEETINGS

.1 Schedule and administer Health and Safety meeting prior to commencement of Work.

12 PROJECT/SITE CONDITIONS

.1 Work at site will involve contact with:

.2 Harbour Manager.

.3 Departmental Representative.

13 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.

14 HEALTH AND SAFETY CO-ORDINATOR

.1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:

.1 Have site-related working experience specific to activities associated with the repairs.

.2 Have working knowledge of occupational safety and health regulations.

.3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.

.4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.

.5 Be on site during execution of Work.

15 POSTING OF DOCUMENTS

.1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.

16 CORRECTION OF NON-COMPLIANCE

.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.

.2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.

.3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

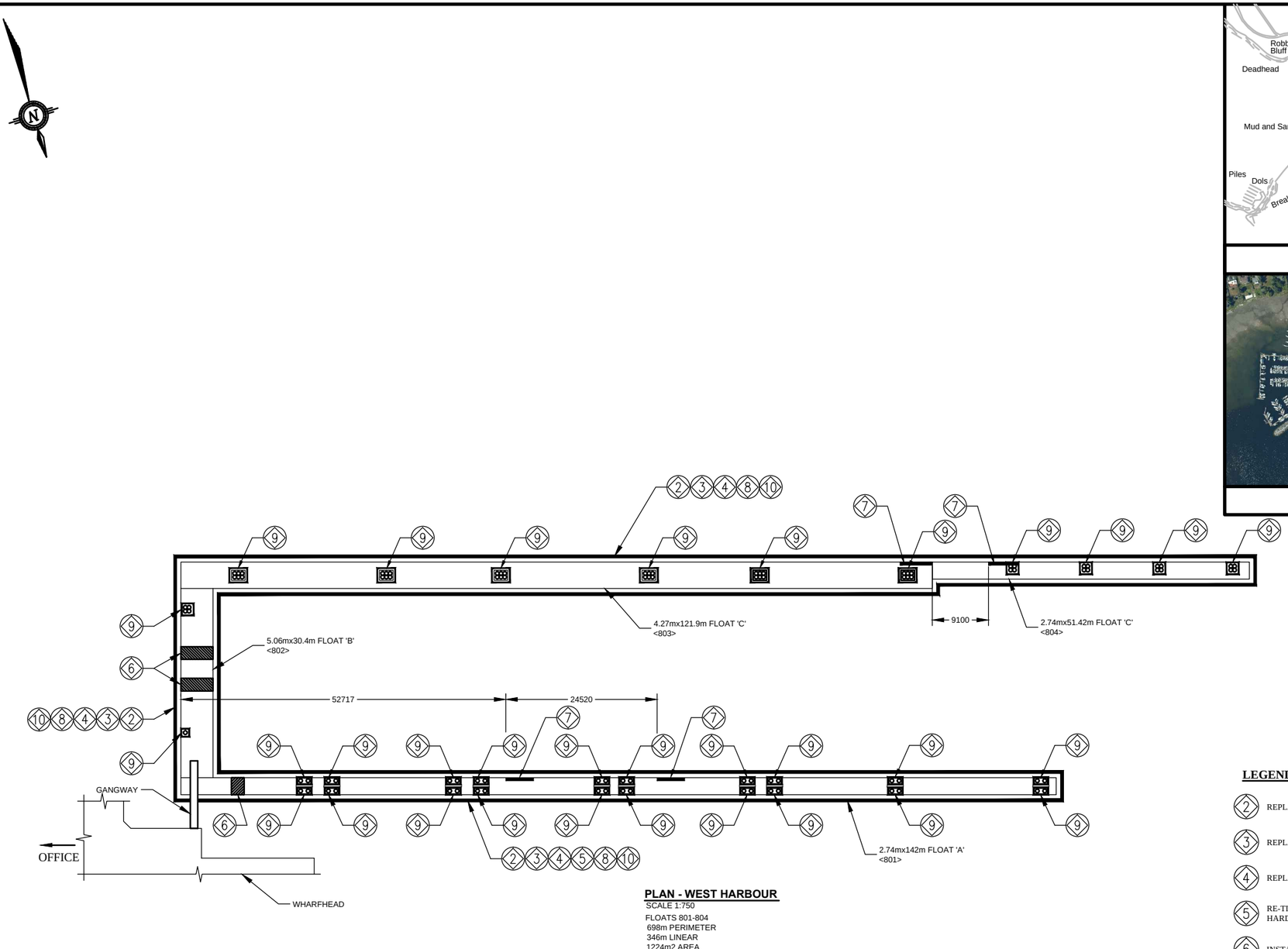
17 WORK STOPPAGE

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

END OF SECTION

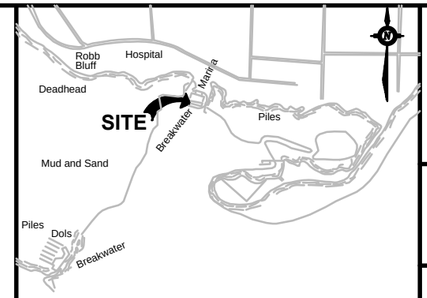
1 SCHEDULE OF QUANTITIES AND PRICES

Item No.	Description of Work	Units	Qty	Unit Rate $	Total Amount $
1	Mobilization / Demobilization (West Harbour)	Lump Sum	1		
2	Replace All Flange & Bull Rail Hardware (West Harbour)	Lump Sum	1		
3	Replace All Decking (West Harbour)	Square Meters	1224		
4	Replace All Bull Rail (West Harbour)	Meters	954		
5	Re-Tighten All Loose Lower Crosstie Hardware (West Harbour, Float A)	Lump Sum	1		
6	Install Pontoons (West Harbour)	Each	3		
7	Replace Select Flanges (West Harbour)	Each	4		
8	Replace All Flange Splice Block Pairs (West Harbour)	Each	130		
9	Reconstruct All Mooring Wells (West Harbour)	Each	32		
10	Replace All Rub Board (West Harbour)	Meters	698		
	TOTAL TENDER SUM INCLUDING ALL TAXES				**$_____**



PLAN - WEST HARBOUR
SCALE 1:750

FLOATS 801-804
698m PERIMETER
346m LINEAR
1224m2 AREA



LOCATION PLAN

AERIAL VIEW

LEGEND

2 REPLACE ALL FLANGE AND BULL RAIL HARDWARE
3 REPLACE ALL DECKING
4 REPLACE ALL BULL RAIL
5 RE-TIGHTEN ALL LOOSE LOWER CROSSTIE HARDWARE IN FLOAT A
6 INSTALL PONTOON
7 REPLACE FLANGE
8 REPLACE ALL FLANGE SPLICE BLOCK REPAIRS
9 RECONSTRUCT ALL MOORING WELLS
10 REPLACE ALL RUB BOARD

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

DO NOT SCALE DRAWINGS

Revision/ Révision	Description/Description	Date/Date

Client/client

Fisheries & Oceans Canada
Small Craft Harbours Branch
Pacific Division

200 - 401 Burrard Street
Vancouver, Canada, V6C 3S4

Project title/Titre du projet

COMOX VALLEY SMALL CRAFT HARBOUR

Approved by/Approuvé par
M.B.

Designed by/Concept par
J.A.

Drawn by/Dessiné par
WSL

PWGSC Project Manager/Administrateur de Projets TPSGC

PWGSC, Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'ingénierie, TPSGC

Client/client

Drawing title/Titre du dessin

GENERAL ARRANGEMENT FLOAT RECONSTRUCTION

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
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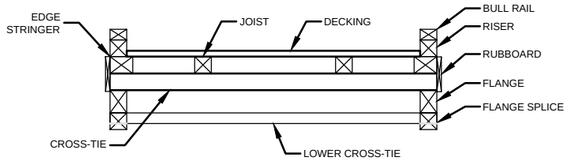
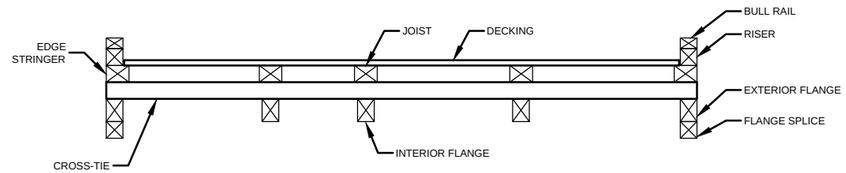


- BULL RAIL - 90 x 140
- RISER - 140 x 140
- EDGE STRINGER - 152 x 203
- CROSS-TIE -152 x 152
- JOIST - 152 x 152
- FLANGE - 190 x 152
- LWR FLANGE SPLICE - 140 x 140 x 1200
- LOWER CROSS-TIE - 100 x 150

NOTE: LOWER CROSS TIES ARE TYPICALLY SECURED TO FLANGE TIMBER PROCEEDING AND FOLLOWING FLOTATION BLOCKS

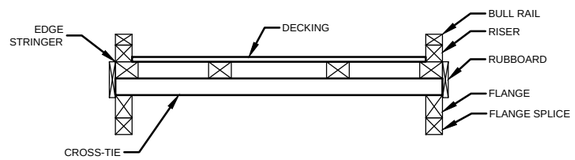
FLOAT A - SECTION 1 COMPONENT DIMENSIONS [V X H(mm)]
SCALE 1:50



- BULL RAIL - 90 x 140
- RISER - 140 x 140
- EDGE STRINGER - 140 x 190
- CROSS-TIE - 152 x 152
- JOIST - 140 x 190
- EXTERIOR FLANGE - 190 x 140
- INTERIOR FLANGE - 190 x 140
- LWR FLANGE SPLICE- 140 x 140 x 1200

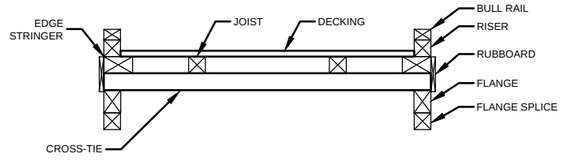
NOTE: INTERIOR FLANGE SPLICES ARE LOCATED ABOVE FLANGE TIMBERS BETWEEN CROSS TIE JOINS ASYMMETRICAL FLANGE LOCATION THE RESULT OF A PREVIOUS FLOAT EXPANSION

FLOAT B COMPONENT DIMENSIONS [V X H(mm)]
SCALE 1:50



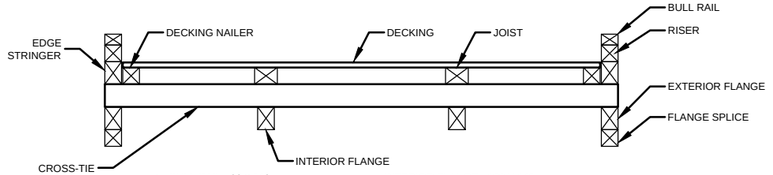
- BULL RAIL - 90 x 140
- RISER - 140 x 140
- EDGE STRINGER - 140 x 190
- CROSS-TIE - 152 x 203
- JOIST - 140 x 190
- FLANGE - 190 x 140
- LWR FLANGE SPLICE - 140 x 140 x 1200

FLOAT C - SECTION 2 COMPONENT DIMENSIONS [V X H(mm)]
SCALE 1:50



- BULL RAIL - 90 x 140
- RISER - 140 x 140
- EDGE STRINGER - 152 x 240
- CROSS-TIE - 152 x 152
- JOIST - 152 x 152
- FLANGE - 203 x 152
- LWR FLANGE BLOCK - 140 X 140 X 1200

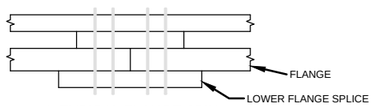
FLOAT A - SECTION 2 COMPONENT DIMENSIONS [V X H(mm)]
SCALE 1:50



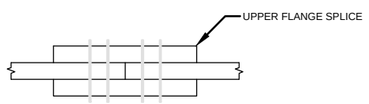
- BULL RAIL - 90 x 140
- RISER - 140 x 140
- EDGE STRINGER - 190 x 140
- CROSS-TIE - 190 x 140
- JOIST - 140 x 190
- EXTERIOR FLANGE - 190 x 140
- INTERIOR FLANGE - 190 X 140
- LWR FLANGE SPLICE - 140 X 140 X 1200
- DECKING NAILER - 140 X 140

NOTE: INTERIOR FLANGE SPLICES ARE LOCATED ABOVE FLANGE TIMBERS BETWEEN CROSS TIE JOINTS

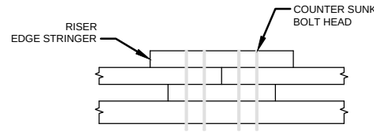
FLOAT C - SECTION 1 COMPONENT DIMENSIONS [V X H(mm)]
SCALE 1:50



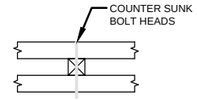
1. TYPICAL FLANGE JOIN
SCALE 1:50



3. TYPICAL INTERNAL FLANGE
SCALE 1:50



2. TYPICAL EDGE STRINGER JOIN
SCALE 1:50



4. TYPICAL JOIST/CROSS BRACE BOLT
SCALE 1:50

DRAWING NOTES
- BULL RAILS NOT SHOWN FOR CLARITY
- RISER BLOCKS ACT AS UPPER BLOCKS ON EDGE STRINGER JOINS
- PROFILE #2 BOLTS ARE COUNTER SUNK IN RISER BLOCK
- PROFILE #4 BOLT IS COUNTER SUNK IN JOIST TIMBER

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TYPICAL FLOAT SECTIONS
FLOAT RECONSTRUCTION

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
C-FR	002 OF	

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