



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

Small Craft Harbours Branch

INVITATION TO TENDER HEAVY EQUIPMENT RENTAL STEVESTON SMALL CRAFT HARBOUR BRITISH COLUMBIA

September 2017

1 TABLE OF CONTENTS**DIVISION 1 – GENERAL REQUIREMENTS**

SECTION	TITLE
01 11 00	Summary of Work
01 13 00	General Requirements
01 33 00	Submittal Procedures
01 35 29 06	Health and Safety Requirements
01 35 43	Environmental Procedures
01 74 11	Cleaning
01 74 21	Construction/Demolition Waste Management and Disposal
01 77 00	Closeout Procedures

DIVISION 11 - EQUIPMENT

SECTION	TITLE
11 01 00	Heavy Equipment Rental

DRAWINGS

DRAWING	TITLE
Wharf Drawings S-HER-001	SITE LOCATION HEAVY EQUIPMENT
Dywidag Rods Technical Specification	DYWIDAG THREADBARS - TECHNICAL DATA

1 SITE LOCATION

- .1 Steveston Small Craft Harbour is located in Richmond, British Columbia, along the Fraser River.

2 DEFINITIONS

- .1 Site:

“Site” referred to herein is Steveston Small Craft Harbour, 12740 Trites Road Richmond, BC, V7E 3R8, Canada.

- .2 Contracting Authority:

“Contracting Authority” referred to herein is Public Works and Government Services Canada – Pacific Region (PWGSC), 800 Burrard Street, 12th Floor, Vancouver, BC V6Z 2V8, Canada.

- .3 Owner:

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

- .4 Engineer:

“Engineer” referred to herein is commonly an employee of the Owner assigned by the Owner 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 Owner.

- .5 Contractor:

“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 supplying and heavy equipment, complete with the operators and labourers, and materials to the Site. Work Tasks as directed by Departmental Engineer.

- .2 All work under this agreement covers the furnishings of all labour, materials, tools, supervision, transport and equipment necessary for the provision of heavy equipment supply complete with the operators for the Site as specified herein.

- .3 Work Description

Work under this contract consists of the procurement for operating hours for equipment, operators, labourers and the supply of materials to complete designated heavy marine construction. The Owner will identify each task in advance and provide drawings and specifications for each task. The contractor will provide a work plan and schedule for completion of each task.

The task work includes but is not limited to:

Timber Pile Driving and Removal (12" and 14" Creosote Piles)
Steel Pile Driving and Removal (24", 30", 36" Piles)
Steel Sheet Pile Driving
Concrete Deck Panel Removal
Timber Wharf Removal
Gangway Removal and Installation

.3 Description of Items

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

.1 Mobilization / Demobilization of Derrick

The lump sum cost for each Mobilization / Demobilization of Derrick includes the following:

- .1 Move Derrick, all Derrick crew, materials, tools and equipment on and off the Site.
- .2 Site clean-up.

.2 Derrick Including Spud Barge Rental

The hourly cost of Derrick Rental includes the following:

- .1 Supply a Derrick that conforms to technical specifications in Section 11 01 00.
- .2 Supply small equipment and tools required for the performance of standard heavy marine construction work such as, but not limited to, earthwork, pile driving and wharf/float reconstruction.
- .3 Supply an experienced/qualified crane operator and deck engineer.
- .4 The hourly cost of this item shall be based on 8 hour work days.

.3 Bridgeman Crew Rental

The man hour cost of Bridgeman Crew includes the following:

- .1 Supply minimum four (4) man crew, which includes a foreman for the coordination and safety of the crew.
- .2 Man hours are calculated as the summation of hours that each crew member worked.

- .3 The crew shall be professional, self-sufficient and capable of completing standard heavy marine construction work in accordance to construction drawings, without the direct supervision of the Owner.

.4 Mobilization / Demobilization of Scow Barge

The lump sum cost for each Mobilization / Demobilization of Scow Barge includes the following:

- .1 Move Scow Barge, all Scow Barge crew, materials, tools and equipment on and off the Site.
- .2 Site clean-up.

.5 Scow Barge Rental

The daily cost of Scow Barge Rental includes the following:

- .1 Supply Scow Barge that conforms to technical specifications in Section 11 01 00.

.6 Tug Boat Rental

The hourly cost of the Tug Boat Rental includes the following:

- .1 Supply a Tug Boat that conforms to technical specifications in Section 11 01 00.

.7 Mobilization / Demobilization of Land Based Crane

The lump sum cost for each Mobilization / Demobilization of Land Based Crane includes the following:

- .1 Move Land Based Crane, all Land Based Crane crew, materials, tools and equipment on and off the Site.
- .2 Site clean-up.

.8 Land Based Crane Rental

The hourly cost of Land Based Crane Rental includes the following:

- .1 Supply a land based crane that conforms to technical specifications in Section 11 01 00.
- .2 Supply small equipment and tools required for the performance of standard heavy marine construction work such as, but not limited to, earthwork, pile driving and wharf/float reconstruction.
- .3 Supply an experienced/qualified crane operator.

.4 The hourly cost of this item shall be based on 8 hour work days.

.9 Supply Sheet Pile

1. The unit rate cost for this item shall include the Supply EZ18-630 profile steel sheet pile, or approved equivalent.
2. Sheet pile steel grade shall be 350W conforming to CAN/CSA STD G40.20/G40.21 or approved equal.
3. All pile material is to be delivered to the Site.
4. Pile will be priced per metre based on each linear metre of paired pile.
5. Individual lengths of piles shall be a minimum of 18m long.

.10 Supply 323.9 OD x 12.7 Steel Pipe Pile

1. The unit rate cost for this item shall include the supply and delivery of unpainted, 323.9 outside diameter x 12.7 mm wall thickness steel pipe pile.
2. All Steel pipe pile shall conform to ASTM specification A252, Grade 3 or equivalent.
3. All pile material is to be delivered to the Site.
4. Pile will be priced per linear metre.
5. Individual lengths of piles shall be a minimum of 9.14 m long.

.11 Supply 472.2 OD x 12.7 Steel Pipe Pile

1. The unit rate cost for this item shall include the supply and delivery of unpainted, 472.2 mm outside diameter x 12.7 mm wall thickness steel pipe piles.
2. All Steel pipe pile shall conform to ASTM specification A252, Grade 3 or equivalent.
3. All pile material is to be delivered to the Site.
4. Pile will be priced per linear metre.
5. Individual lengths of piles shall be a minimum of 9.14 m long.

.12 Supply 57 ϕ Dywidag Threadbar

1. The unit rate cost for this item shall include the supply and delivery of 57mm #18 GR80 DCP Anchor Dywidag Threadbar.
2. All Dywidag Threadbar shall conform to Dywidag Threadbar – Technical Data or approved equivalent.
3. All Dywidag Threadbar material is to be delivered to the Site.
4. Dywidag Threadbar will be priced per linear metre.

.13 Supply 57 ϕ Dywidag Threadbar Plate

1. The unit rate cost for this item shall include the supply and delivery of 50x350x350 Plate c/w 67mm C.H. Dywidag Threadbar components.
2. All Dywidag Threadbar components shall conform to Dywidag Threadbar – Technical Data or approved equivalent.
3. All Dywidag Threadbar plate material is to be delivered to the Site.
4. Dywidag Threadbar will be priced per unit of 50x350x350 Plate c/w 67mm C.H.

.14 Supply 57 ϕ Dywidag Threadbar Nut

1. The unit rate cost for this item shall include the supply and delivery of #18 Cast Steel Hex Nut for CTD Dywidag Threadbar components.
2. All Dywidag Threadbar nut components shall conform to Dywidag Threadbar – Technical Data or approved equivalent.
3. All Dywidag Threadbar material is to be delivered to the Site.
4. Dywidag Threadbar will be priced per unit of #18 Cast Steel Hex Nut for CTD

.15 Supply C380 x 60 Structural Steel

1. The unit rate cost for this item shall include the supply and delivery of C380 x 60 C-Channel.
2. All rolled sections to be grade 350W conforming to CAN/CSA STD G40.20/G40.21 or approved equal.
3. All C-channel material is to be delivered to the Project site.
4. C-channel will be priced per linear metre.
5. Individual lengths of c-channel shall be a minimum of 6.1 m long.

.16 Material Disposal

This cost per % mark-up on tipping fees will be allotted for all labour and equipment necessary to dispose of all waste material from the construction on site. This disposal work may include:

- .1 Disposal of timber and timber structures including creosote treated wood, and piles.
- .2 Disposal of fill (non-contaminated)
- .3 Disposal of concrete and concrete structures.
- .4 Disposal of other materials associated with a typical marine construction job.

.17 Site Supervision

- .1 The man hour cost of Site Supervision includes the following:

-
- .1 Supply one foreman for the coordination, leadership and safety of the crew.
 - .2 Supply of miscellaneous tools and equipment to aid in the site supervisors duties (Eg. Site Trailer)
 - .3 The blended man hours are calculated as the summation of hours that the supervisor has worked along with all equipment needed for the work (eg. Site trailer).

END OF SECTION

1 COMMENCEMENT AND COMPLETION

- .1 Work to begin upon award, with completion by January 15, 2018.

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, 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. However, no work can be extended past March 31.

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 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 as outlined in the agreed work plan.
 - .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 Submit to Owner 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 Owner. 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 Owner, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent works are co-ordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Owner's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Owner review.
- .10 Keep one reviewed copy of each submission on site.

2 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.
- .2 Submit shop drawings bearing stamp and signature of qualified professional Engineer registered or licensed in British Columbia Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 10 days for Owner's review of each submission.

-
- .5 Adjustments made on shop drawings by Owner are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Owner prior to proceeding with Work.
 - .6 Make changes in shop drawings as Owner may require, consistent with Contract Documents. When resubmitting, notify Owner in writing of revisions other than those requested.
 - .7 Accompany submissions with transmittal letter, 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.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.

-
- .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .9 After Owner's review, distribute copies.
 - .10 Submit one electronic copy of shop drawings for each requirement requested in specification Sections and as Owner may reasonably request.
 - .11 Submit one electronic copy of product data sheets or brochures for requirements requested in specification Sections and as requested by Owner where shop drawings will not be prepared due to standardized manufacture of product.
 - .12 Submit one electronic copy of test reports for requirements requested in specification Sections and as requested by Owner.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - .13 Submit one electronic copy of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Owner.
 - .1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
 - .14 Supplement standard information to provide details applicable to project.
 - .15 If upon review by Owner, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

-
- .16 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.

3 CERTIFICATES AND TRANSCRIPT

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

END OF SECTION

1 GENERAL

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

2 REFERENCES

- .1 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 Owner 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 Owner 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 Harbours, 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 Owner 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 Owner 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 Owner within 5 days after receipt of comments from Owner.
- .7 Owner 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 Owner.
- .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 Owner.

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 Owner 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 Owner.

16 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Owner.
- .2 Provide Owner with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Owner 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 GENERAL**.1 DEFINITIONS**

- .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

.2 REQUIREMENTS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Ensure equipment is equipped with oil containment booms, spill clean-up equipment, and crew trained in their use. The Contractor shall have an emergency spill response plan in place. Provide the Owner with a copy of the spill response plan within the earlier of 1 week before the start of work.

.3 FIRES

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

.4 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site unless approved by Owner.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

.5 DRAINAGE

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

.6 SITE CLEARING AND PLANT PROTECTION

- .1 NOT USED

.7 WORK ADJACENT TO WATERWAYS

- .1 Operate only the construction equipment required to perform the work in the waterways.

.8 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities' emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

.9 HISTORICAL / ARCHAEOLOGICAL CONTROL

- .1 NOT USED

.10 NOTIFICATION

- .1 Owner will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor: after receipt of such notice, inform Owner of proposed corrective action and take such action for approval by Owner.
- .3 Owner will issue stop order of work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

2 PRODUCTS

- .1 NOT USED

3 EXECUTION

- .1 NOT USED

END OF SECTION

1 GENERAL**.1 REFERENCES**

- .1 Refer to Construction General Conditions for stipulated interpretation.

.2 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 Owner.
- .3 Clear snow and ice from access to building, bank/pile snow in designated areas only.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site bin containers for collection of waste materials and debris.
- .6 Dispose of waste materials and debris off site.
- .7 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9 Provide adequate ventilation during use of volatile or noxious substances.
- .10 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .11 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

.3 FINAL CLEANING

- .1 Refer to Construction General Conditions for stipulated interpretation.
- .2 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .3 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .4 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .5 Remove waste products and debris.

-
- .6 Remove waste materials from site at regularly scheduled times or dispose of as directed by Owner. Do not burn waste materials on site.
 - .7 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
 - .8 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
 - .9 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors.
 - .10 Clean lighting reflectors, lenses, and other lighting surfaces.
 - .11 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
 - .12 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
 - .13 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
 - .14 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
 - .15 Remove dirt and other disfiguration from exterior surfaces.
 - .16 Clean and sweep roofs, gutters, areaways, and sunken wells.
 - .17 Sweep and wash clean paved areas.
 - .18 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
 - .19 Clean roofs, downspouts, and drainage systems.
 - .20 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
 - .21 Remove snow and ice from access to building.

.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

STEVESTON
HEAVY EQUIPMENT RENTAL

CLEANING

SECTION 01 74 11
PAGE 3

2 PRODUCTS

.1 NOT USED

3 EXECUTION

.1 NOT USED

END OF SECTION

1 GENERAL

.1 WASTE MANAGEMENT GOALS

- .1 Prior to start of Work conduct meeting with Owner to review and discuss PWGSC's Waste Management Plan and Goals.
- .2 Accomplish maximum control of solid construction waste.
- .3 Preserve environment and prevent pollution and environment damage.

.2 DEFINITIONS

- .1 Class III: non-hazardous waste - construction renovation and demolition waste.
- .2 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
- .3 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .4 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.
- .5 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.
- .6 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
- .7 Separate Condition: refers to waste sorted into individual types.
- .8 Source Separation: acts of keeping different types of waste materials separate beginning from first time they became waste.

.3 STORAGE, HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Owner.
- .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.
- .6 Support affected structures. If safety of building is endangered, cease operations and immediately notify Owner.
- .7 Protect surface drainage, mechanical and electrical from damage and blockage.
- .8 Separate and store materials produced during dismantling of structures in designated areas.
- .9 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
 - .1 On-site source separation is recommended.
 - .2 Remove co-mingled materials to off-site processing facility for separation.
 - .3 Provide waybills for separated materials.

.4 DISPOSAL OF WASTES

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of waste into waterways, storm, or sanitary sewers.
- .3 Remove materials from deconstruction as deconstruction/disassembly Work progresses.

.5 USE OF SITE AND FACILITIES

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

.6 SCHEDULING

- .1 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.

2 PRODUCTS

- .1 NOT USED

3 EXECUTION

- .1 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.
- .2 **CANADIAN GOVERNMENTAL DEPARTMENTS CHIEF RESPONSIBILITY FOR THE ENVIRONMENT**

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

Address	General Inquires	Fax
Ministry of Environment #200-10470 152nd Street Surrey B.C. V3R 0Y3	604-582-5200	604-930-7119
Waste Reduction Commission Soils and Hazardous Waste 770 South Pacific Blvd, Suite 303 Vancouver BC V6B 5E7	604-660-9550	604-660-9596

END OF SECTION

1 GENERAL**.1 REFERENCES**

- .1 Refer to Construction General Conditions for stipulated interpretation.

.2 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 Owner in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.

- .2 Request Consultant's inspection.

- .2 Consultant's Inspection:

- .1 Consultant and Contractor to inspect Work and identify defects and deficiencies.

- .2 Contractor to correct Work as directed.

- .3 Completion Tasks: submit written certificates in English that tasks have been performed as follows:

- .1 Work: completed and inspected for compliance with Contract Documents.

- .2 Defects: corrected and deficiencies completed.

- .3 Equipment and systems: tested, and fully operational.

- .4 Certificates required submitted.

- .5 Operation of systems: demonstrated to Owner's personnel.

- .6 Work: complete and ready for final inspection.

- .4 Final Inspection:

- .1 When completion tasks are done, request final inspection of Work by Consultant, and Contractor.

- .2 When Work incomplete according to Consultant, complete outstanding items and request re-inspection.

- .5 Declaration of Substantial Performance: when Consultant considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.

- .6 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.
- .7 Final Payment:
 - .1 When Consultant considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.
 - .2 Refer to CONSTRUCTION GENERAL CONDITIONS 2: when Work deemed incomplete by Consultant, complete outstanding items and request re-inspection.
- .8 Payment of Holdback: after issuance of Certificate of Substantial Performance of Work, submit application for payment of holdback amount in accordance with contractual agreement.

.3 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.

2 PRODUCTS

- .1 NOT USED

3 EXECUTION

- .1 NOT USED

END OF SECTION

1 GENERAL**.1 Description**

- .1 This section provides minimum technical specifications for equipment supplied by the Contractor.

.2 Measure of Payment

- .1 Payment for each equipment will be measured using the unit from the SCHEDULE OF QUANTITIES AND PRICES.
- .2 Hourly/daily rates shall include all operator costs.
- .3 Travel costs shall be included in mobilization/demobilization items.

2 PRODUCTS**.1 Equipment****.1 Derrick including Spud Barge**

- .1 The Derrick shall, as a minimum, contain the following heavy equipment:
 - .1 Spud barge.
 - .2 100 ton capacity crane.
 - .3 Vibropack 3000, or approved equivalent, compatible with the 100 ton crane from item 2.1.1.1.2. The Vibratory Hammer must have a minimum eccentric moment of 3,000 inlbs The vibratory hammer must be capable of driving 40ft long sections of 472.2 mm OD x 12.7mm Steel Pipe Pile, 323.9 OD x 12.7 Steel Pipe Piles and 60ft long section of 350W EZ18 steel sheet pile.
- .2 The Derrick shall contain a 24 hour timing device.

.2 Scow Barge

- .1 The Scow shall be sized between 500-1000 ton capacity.
- .2 The Scow shall contain a 24 hour timing device.

.4 Tug Boat

- .1 The Tug Boat shall be sized to efficiently handle the fully loaded equipment provided by the Contractor (equipment within 2.1).
- .2 The Tug Boat shall contain a 24 hour timing device.

.1 Land Based Crane

.1 The Land Based Crane shall, as a minimum, contain the following heavy equipment:

.2 85 ton capacity crane.

.3 Vibropack 3000, or approved equivalent, compatible with the 100 ton crane from item 2.1.1.1.2. The Vibratory Hammer must have a minimum eccentric moment of 3,000 in-lbs The vibratory hammer must be capable of driving 40ft long sections of 472.2 mm OD x 12.7mm Steel Pipe Pile, 323.9 OD x 12.7 Steel Pipe Piles and 60ft long section of 350W EZ18 steel sheet pile.

.2 The Land Based Crane shall contain a 24 hour timing device.

3 EXECUTION

.1 Identification of Work

.1 The Owner will identify task projects requiring heavy marine construction equipment and provide a timeline for completion of each project task.

.2 Equipment Operators

.1 Operators for all heavy equipment rentals that perform services under this agreement shall be licensed for road travel as required and must be experienced/qualified for equipment to the satisfaction of the Owner.

END OF SECTION