
STATEMENT OF WORK

PORT EDWARD HARBOUR

Building Refurbishment

PROJECT #

COST DEFINITIONS: For use in the Schedule of Quantities and Prices

With reference to the Schedule of Quantities and Prices, the following items apply

.1 MOBILIZATION / DEMOBILIZATION

The lump sum cost for this item includes all labour, equipment, and material in order to bring equipment to site located at Port Edward harbour, 200 Bayview Drive, Port Edward, BC (mailing address), and demobilize at end of project.

.2 INSTALL CORBEL

The unit rate cost for this item includes all labour, equipment, and material to install one (1) Owner supplied Corbel

.1 Installation locations as per attached drawing E796-01

.2 Corbel size as per attached drawing E796-03

.3 INSTALL PILE SPLICED WITH OLD

The unit rate cost for this item includes all labour, equipment, and material to install one (1) pile spliced with existing.

.1 Installation locations as per attached drawing E796-01

.2 Guidelines and sizing for this process are as per attached drawing E796-04

.4 INSTALL DRIVEN STEEL PILE 219 mm IN DIAMETER

The unit rate cost for this item includes all labour, equipment, and material to install one (1) 219 mm diameter steel pile

.1 Installation locations as per attached drawing E796-01

.2 Includes installation of corbel or blocking to existing cap as required with reference to drawing E796-03

.5 INSTALL DRIVEN STEEL PILE 279 mm IN DIAMETER

The unit rate cost for this item includes all labour, equipment, and material to install one (1)
279 mm diameter steel pile

- .1 Installation locations as per attached drawing E796-01
- .2 Includes installation of corbel or blocking to existing cap as required with reference to drawing E796-03

END OF SECTION

GENERAL REQUIREMENTS

1..... LOCATION

- .1 Port Edward Small Craft Harbour is located in Port Edward, BC, South of Prince Rupert on the Northern shore of BC.

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. DEFINITIONS

- .1 Throughout this specification, where the words "Contract Authority (CA)", "Department / Engineer or TA", or "Contractor" appear, they shall be defined as follows:
 - .2 Contracting Authority (CA) is the PWGSC Contract manager.
 - .3 Client Department/ Technical Authority (TA) - Department of Fisheries and Oceans - Small Craft Harbours, 401 Burrard Street, Vancouver B.C.
 - .4 Engineer - An employee of the Client Department assigned by the Department as the Engineer, and Technical Authority (TA) for this project. The engineer may be a sub-contract Consultant for technical and inspection purposes and the TA must still be a Client Department employee with Technical Authority for the project..
 - .5 Contractor - The party accepted by the Department, with whom a formal contract is signed, to complete the work of this project.

.6 COMMENCEMENT AND COMPLETION

All work including clean-up and demobilization must be completed within 2 months after contract award.

4. 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.

5. SCOPE OF WORK

- .1 Except as otherwise specified; the work described in this section shall include the supply of materials, equipment, tools, services, labor and all things necessary, for the completion of the Port Edward Building Refurbishment Contract.
- .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.

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. 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 TA for haulage of materials.

10. SITE ACCESS

- .1 The Contractor shall provide access to the work for the TA's inspectors and surveyors as required.
- .2 General site access shall be coordinated with the TA / Small Craft Harbour Department of Fisheries and Oceans.
- .3 The Contractor shall maintain routes of travel, the TA 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 TA.

11. 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.

12. 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 TA. 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 TA or representative, promptly remove any of the Contractor's equipment located outside the specified work area, or needlessly obstructing any harbour operation.

13. NIGHT WORK

- .1 The Contractor shall keep proper lights each night between the hours of sunset and sunrise upon all floating plant and false-work, upon all ranges and other stakes 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.

14. 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.

15. MATERIALS and EQUIPMENT SUPPLIED BY THE CONTRACTOR

1. The Contractor shall supply all fasteners, labor, required hand and power tools, generators, equipment and all other materials required as part of Items 1-5 at daily and hourly rates specified in the Schedule of Quantities and Cost Definitions of this contract.

16. 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 TA.
- .3 Within 7 days of award the contractor is to supply a week by week schedule of proposed activities related to the contract.
- .4 Contractor must notify the TA immediately whenever a variation from the dredging schedule is expected to occur or when the submission of the submittals will be delayed.

17. SETTING OUT OF WORK

- .1 The contractor is expected to familiarize themselves with the location of Port Edward, and 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.
- .3 The Contractor shall keep proper illumination each night between hours of sunset and sunrise upon all floating plant and false-work, where necessary, 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.

18. DRAWINGS

- .1 The following drawings and documents shall be considered part of this contract. These drawings are to be used as a reference; the contractor is to confirm all dimensions, elevations and locations.
- .2 The list of drawings for reference are as follows: E796-01, E796-02, E796-03, E796-04, E796-05, E796-06

19. 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.

20. 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.

21. SITE SECURITY

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

22. SITEWORK

- 1 All work shall be completed as per direction of on-site TA/ 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.
- .4 Works shall include installing corbels, piles to be spliced with old ones, and driven steel piles.

23. 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.

24. 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 TA.

25. INSPECTION OF STRUCTURE

- .1 The TA or Inspection representative, 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.

26. 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 TA, as an extension of time for the completion of the work over and above the date of completion specified in the contract agreement.

27. SOIL DATA AND EXISTING TOPOGRAPHY

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

28. 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 accepted as complete.

MATERIALS AND LABOUR

1. STRUCTURAL STEEL:

1. STRUCTURAL STEEL SECTIONS TO BE W350 MATERIAL, AS PER STANDARD CAN/CSA G40.21.
2. STEEL DESIGN AND DETAILING TO CAN/CSA S16.1, LIMIT STATES DESIGN OF STEEL STRUCTURES.
3. MISCELLANEOUS STEEL FOR CONNECTION AND BEARING PLATES, BRACKETS ETC, TO BE MINIMUM W300.
4. ALL NEW PILES AND STRUCTURAL STEEL FABRICATIONS TO BE COATED FOR CORROSION PROTECTION (SPECS FOR COATING TO BE CONFIRMED BY SCH). TOUCH UP ALL COATINGS AFTER INSTALLATION.
5. ALL BOLTS TO BE HOT DIP GALVANIZED. BOLTS FOR STEEL-TO-STEEL CONNECTIONS TO BE A325. BOLTS FOR STEEL-TO-TIMBER CONNECTIONS TO BE A307.

2. PILEDIVING:

1. MINIMUM PENETRATION FOR BEARING PILES BELOW MUDLINE TO BE 8 FT. IF THIS PENETRATION IS NOT OBTAINED, DESIGN MODIFICATIONS MAY BE REQUIRED. PILEDIVING TO BE OBSERVED BY ENGINEER OR REPRESENTATIVE TO DETERMINE SUITABILITY OF DRIVING RESISTANCE.
2. CONTRACTOR TO SUBMIT SPECIFICATIONS OF PILEDIVING EQUIPMENT AND PROCEDURES FOR REVIEW BEFORE COMMENCEMENT OF WORK.
3. OBTAIN APPROVALS FROM DFO, AND FOLLOW GUIDELINES IN “BEST MANAGEMENT PRACTICES FOR PILEDIVING AND RELATED OPERATIONS” IN ORDER TO MINIMIZE IMPACT ON MARINE HABITATS.
4. PILES TO BE HANDLED WITH CARE TO AVOID DAMAGE TO PILE, TO COATING AND TO OTHER STRUCTURES.
5. PILEDIVING TOLERANCES: MAXIMUM DEVIATION OF PLUMB LINE FOR A VERTICAL PILE IN PLACE SHALL BE 2%, UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE. PILE LOCATION TO BE WITHIN +/- 75 mm OF LOCATION SHOWN ON DRAWINGS. OWNER'S REPRESENTATIVE WILL HAVE FINAL SAY ON ACCEPTABILITY OF PILE INSTALLATION.

6. PILEDIVING RECORDS: RECORD SEQUENCE OF DRIVING PILES, WITH DATE AND TIME. PILES SHALL BE MARKED AT 1 FT INTERVALS WITH TO FACILITATE PILEDIVING RECORDS. BLOW COUNTS SHALL BE RECORDED PER FOOT OF DRIVING AND SHALL BE SUBMITTED TO THE OWNER FOR THEIR RECORDS. MAKE A RECORD OF ANY INTERRUPTIONS TO DRIVING. SPECIFICATIONS OF HAMMER, ENERGY, ETC. SHALL ALSO BE SUBMITTED.

3. TIMBER:

1. ALL TIMBER TO BE DOUGLAS FIR NO 1 GRADE OR BETTER, TREATED IN ACCORDANCE WITH SPECIFICATIONS.
2. PILE CAPS AND BRACES TO HAVE FULL CELL CREOSOTE TREATMENT, TO A NET RETENTION OF 225 KG/CU m (14 PCF), MEETING THE REQUIREMENTS OF CAN/CSA O80.
3. STRINGERS TO HAVE FULL CELL CREOSOTE TREATMENT, TO A RETENTION OF 128 KG/CU m (8 PCF), MEETING THE REQUIREMENTS OF CAN/CSA O80.
4. REPLACEMENT DECK PLANKS TO BE PRESSURE-TREATED WITH ACZA, ACCORDING TO CAN/CSA O80.18, TO A RETENTION OF 6.5 KG/CU M (0.4 PCF), AND A MINIMUM PENETRATION OF 10 mm (0.4"). NEW DECK PLANKS TO BE BEARING ON AT LEAST 2 STRINGERS, OVER HALF OF EACH STRINGER WIDTH.
5. CROSS BRACES TO HAVE LOWER HOLE DRILLED BEFORE TREATMENT.
6. TIMBER CONNECTIONS TO BE AS FOLLOWS:
 - a. PILES-TO-CAPS: BOLTS 3/4" DIA.
 - b. STRINGERS-TO-DECK: 8" SPIRAL SPIKES, 2 PER CONTACT,
 - c. PILES-TO-CROSS BRACES: BOLTS 1" DIA.
7. ALL BOLTS TO HAVE GALVANIZED PLATE WASHERS UNDER HEADS AND NUTS. MINIMUM WASHER SIZES TO BE AS FOLLOWS:

3/4" BOLTS: WASHER: 3/8" THICK X 3.5" DIA

1" BOLTS: WASHER: 1/2" THICK X 4" DIA.

4. CONCRETE:

1. CONCRETE FOR PATCHING FLOOR, WHERE REQUIRED, TO MEET THE REQUIREMENTS OF CAN/CSA A23.1, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION, EXPOSURE CLASS F1, AND HAVE A MINIMUM 28 DAY STRENGTH OF 30 MPa
2. REINFORCING FROM EXISTING CONCRETE FLOOR TO BE CONTINUED THROUGH PATCH, IN BOTH DIRECTIONS, MIN 10M AT 300 mm O/C EW, LAPPED WITH EXISTING.

HEALTH AND SAFETY

1. REFERENCES

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

2. 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.

3. COMPLIANCE WITH REGULATIONS

1. 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.
2. 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.

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 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.

6. REGULATORY 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.