

PART 1 - GENERAL

- 1.1 Section Includes .1 Location of site.
- .2 Site conditions.
- .3 Work covered by contract documents.
- .4 Time of completion.
- .5 Use of site.
- 1.2 Precedence .1 Division 1 Sections take precedence over technical specification sections in other Divisions of these Project Specifications.
- 1.3 Related Sections .1 Section 35 05 51 - Marine General Site Work.
- 1.4 Site Conditions .1 Visit site before submitting tender. Make inquiries or investigations necessary to become thoroughly acquainted with site, soil, climatic and tidal conditions along with the nature and extent of the work.
- .2 Submission of a tender will be deemed confirmation that the Contractor is familiar with the site and is conversant with all relevant conditions.
- .3 All known discrepancies are to be brought to the attention of the Departmental Representative and are to be accounted for in the Contractor's Bid Price.
- 1.5 Location of Site .1 The work is located at the Institute of Ocean Sciences located at 9860 West Saanich Road, Sidney, BC.
- .2 The work site includes the timber and concrete floats A, B1, B2, C and D.
- 1.6 Work covered by Contract Documents .1 The principal works to be executed and for which all materials, plant and labour are to be supplied by the Contractor as shown on in the plans and in the specifications:
- .1 Demolishing and removal of existing floats, piles,

gangways and other marine works as required for the construction.

- .2 Taking over Owner supplied materials, transportation and storage on the site.
- .3 Supplying of additional and balance of materials required for completion of works.
- .4 Fabrication and installation of steel pipe piles for floats and ramps.
- .5 Fabrication and installation of steel platforms, access span and foundations
- .6 Receiving, transportation and installation of concrete float and vehicular ramp.
- .7 Fabrication and installation of timber floats
- .8 Fabrication and installation of gangways

1.7 References

- .1 National Research Council of Canada (NRC):
  - .1 National Building Code of Canada (NBC) 2010.
  - .2 See Section 01 35 33 for additional references.

1.8 Codes and Standards

- .1 Perform work in accordance with the National Building Code, the Workers' Compensation Board of B.C., and any other code of provincial or local application provided that, in any case of conflict or discrepancy, the most stringent requirements shall apply.
- .2 Meet or exceed requirements of specified standards, codes and referenced documents.
- .3 Use latest edition of standards and codes.

1.9 Documents Required

- .1 Maintain at job site one copy of the following:
  - .1 Contract Drawings
  - .2 Contract Specifications
  - .3 Addenda
  - .4 Reviewed Shop Drawings, product data and samples;
  - .5 Change orders
  - .6 Other modifications to contract
  - .7 Field Test Reports
  - .8 Copy of all permits from Authorities Having Jurisdiction

- .9 Permit Drawings (where applicable)
  - .10 Industrial Health and Safety Regulations of WorkSafe BC
  - .11 Copy of approved work schedule
  - .12 Manufacturer's installation and application instructions
  - .13 Health and Safety Plan and Fire Safety plan
  - .14 Environmental Emergency Response Plan (including Spill Response Plan)
  - .15 Record Drawings (working marked print)
  - .16 Site Instructions
  - .17 Site Reports
  - .18 WHMIS Documentation
- .2 Departmental Representative may furnish additional drawings to assist proper execution of work. These documents will be issued for clarification only. Such documents will have the same meaning and intent as if they were included in the plans referred to in the Contract documents.
- 1.10 Record Drawings .1 As work proceeds, maintain accurate records to show all deviations from the contract drawings. Note on as-built drawings as changes occur. At completion of work supply one set of all drawings and specifications clearly marked. Supply one set in CAD and pdf format.
- 1.11 Geotechnical Report .1 A geotechnical information is contained in Appendix E.
- 1.12 Datum .1 All elevations or soundings used in the drawings and specifications refer to chart datum. Refer to Appendix L.
- 1.13 Layout of Work .1 Departmental Representative may set stakes and establish bench marks to indicate the location, alignment and reference elevations for the work.
- .2 Lay out work on the ground and execute the work to the Departmental Representative's satisfaction.
- 1.14 Assistance by the Contractor .1 Place work vessels at the Departmental Representative's disposal as required for the Departmental Representative to perform his duties.

1.15 Time of Completion .1 Complete works as stipulated in Invitation to Tender. Total Completion no later than March 31<sup>st</sup>, 2017.

1.16 Work Schedule .1 Within 10 days of Contract award, provide a schedule of work. Observe the following requirements:

.1 Whenever a variation from the schedule in excess of 5 working days occurs or is expected to occur, notify Departmental Representative of the change.

.2 Provide information as indicated below:

**Materials Assembly Phase:**

<u>Materials</u>	<u>Supplier</u>	<u>Date of Delivery</u>
Steel Piling		
Timber		
Hardware		
Gangways		
Miscellaneous steel		
Fenders		

**Construction Phase:**

<u>Activity on site</u>	<u>Start</u>	<u>Complete</u>
Start of Work at Site		
Demolishing		
Taking over Owner supplied materials		
Supplying of Materials		
Pile Fabrication and Driving		
Floats Fabrication and Installation		
Gangways Fabrication and Installation		
End of Work at Site		

.3 Notify Canadian Coast Guard, Regional Operation Centre no less than 5 days before start and completion of proposed activities at the site in order that they may issue Notices to Shipping.

Contact information is:

CCG

Regional Operational Centre Alerting Desk

Email: Notship.western@innav.gc.ca

Tel. 1-800-889-8852

1.17 Use of Site

- .1 Keep facility closure to a minimum. The Contractor will not have exclusive site access. The Contractor's activity must be coordinated with other users for a minimum operation disruption. The Contractor must coordinate and maintain access to site.
- .2 Float C must not be out of service for longer than 2 weeks. Either floats B or C must be available for service. No more than 2 floats to be taken out of service at any time.
- .3 Use of site: limited to immediate area of the work and areas assigned by the Engineer for office storage, equipment, stock piles, sanitary facilities, etc.
- .4 As there will be NO ACCESS to any of the buildings, the Contractor will provide sanitary facilities for the work force in accordance with governing regulations and ordinances.
- .5 Vehicles entering and left in the designated work area must have the Contractor's logo/name clearly marked on the vehicle.
- .6 Arrange parking in areas directed by Department Representative. Maintain construction parking area clean and free of construction related debris. Make good damage resulting from the Contractor use of parking areas, at no cost to the Contract.
- .7 Confine work and operations of employee to areas defined by the Contract Documents unless directed otherwise in writing by the Department Representative. Do not unreasonably encumber premise with products.
- .8 Hours of work.
  - .1 Perform work between normal hours of 07:00 to 18:00, Monday to Friday, except holidays and in accordance with local noise bylaws.
  - .2 Work may be performed after working hours, on weekends and holidays as approved by Departmental Representative.

- .9 Temporary power and light.
  - .1 Provide and pay for temporary power during construction for temporary lighting and operating of power tools, and any other power requirements necessary for completion of the Work.
  - .2 Provide and maintain temporary lighting necessary for the performance of the Work under this contract. Illumination levels shall be in accordance with WorkSafe BC requirements.
  
- 1.18 Project Meetings
  - .1 Meet with Departmental Representative within 5 days of Award of Contract date, to establish scope of Work and approach to project construction operations
  - .2 The Departmental Representative will arrange project meetings and assume responsibility for setting times. The Contractor will be responsible for recording and distributing minutes.
  
- 1.19 Location of Equipment and Fixtures
  - .1 Location of existing equipment and fixtures indicated or specified is to be considered as approximate.
  
- 1.20 Material and Equipment
  - .1 Metric-Sized Products:
    - .1 SI metric units of measurement are used exclusively on the drawings and in the specifications for this project.
    - .2 The Contractor is required to provide metric products where specified in the sizes called for in the Contract Documents except where a valid claim can be made that a particular product is not available on the Canadian market.
    - .3 Difficulties caused by the Contractor's lack of planning and effort to obtain modular metric-sized products which are available on the Canadian market will not be considered sufficient reasons claiming that they cannot be provided.
    - .4 Claims for additional costs due to provision of specified modular metric-sized products will not be considered.
  
  - .2 Material and Equipment:
    - .1 Use new material and equipment unless otherwise specified.
    - .2 Within seven (10) days of written request by Departmental Representative, submit following

information for any or all materials and products proposed for supply:

- .1 Name and address of manufacturer.
  - .2 Trade name, model and catalogue number.
  - .3 Performance, descriptive and test data.
  - .4 Manufacturer's installation or application instructions.
  - .5 Evidence of arrangements to procure.
- .3 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
- .4 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.
- .5 Specifications for materials supplied by Owner are shown in Appendices F, G, H and I. All additional and balance of materials supplied by the Contractor should match or exceeds materials supplied by Owner or to comply with technical specifications if provided.
- .3 Manufacturer's Instructions:
- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
  - .2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturer's instructions. Departmental will designate which document is to be followed.
- .4 Fastenings, General:
- .1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work.
  - .2 Obtain Departmental Representative's approval before using explosive-actuated fastening devices.
  - .3 Comply with CAN3-Z166-M85 Series when using explosive-actuated fastening devices.
- .5 Fastenings, Equipment:
- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.

- .6 Delivery and Storage:
- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
  - .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
  - .3 Store material and equipment in accordance with suppliers' instructions.
  - .4 Touch up damaged factory-finished surfaces to Departmental Representative's satisfaction. Use primer or enamel to match original. Do not paint over name plates.
  - .5 Owner supplied materials for timber floats and vehicular ramp on Float B1 will be delivered to IOS, 9860 West Saanich Road, Sidney, BC, V8L 4B2.
  - .6 Owner supplied steel pipes and concrete float B1 will be delivered for transportation by the Contractor at the following locations:



<b>Owner Supplied Material</b>	<b>Pick-up Location</b>
Concrete Float B1	On the water at: Steveston Harbour Authority 12740 Trites Road, Richmond, BC V7E 3R8.
Steel Piles	On land and not accessible via water in 2 locations: 1) 457mm x 12.7mm – 34 pieces x 20m long each stored at 19395 - 98A Avenue, Surrey, BC. 2) 508mm x 19.1mm – 20 pieces x 26m long each stored at 1835 Kingsway Avenue, Port Coquitlam, BC.

- .7 The Contractor will take over Owner supplied equipment and materials, will inspect all supplies and will report any damages and shortages within 5 working days. The Contractor will be responsible for



- all loading, handling, transportation and storing on the site.
- .8 The Contractor to have representative present on site to accept all deliveries to site and is responsible for unloading.
- .7 Construction Equipment and Plant:
  - .1 On request, prove to the satisfaction of Departmental Representative that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.
  - .2 Maintain construction equipment and plant in good operating order.
- 1.21 Shop Drawing Review
  - .1 The review of shop drawings by Departmental Representative is for the sole purpose of ascertaining conformance with the general concept.
  - .2 This review shall not mean that Departmental Representative approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents.
  - .3 Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of the work of all sub-trades.
- 1.22 Testing and Inspection Services
  - .1 Particular requirements for inspection and testing to be carried out by testing service or in laboratory approved by Departmental Representative are specified under various sections.
  - .2 Contractor will appoint and pay for services of testing laboratory including the following:
    - .1 Inspection and testing required by laws, ordinances,

- rules, regulations or orders of public authorities.
  - .2 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
  - .3 Mill tests and certificates of compliance.
  - .4 Tests specified to be carried out by Contractor under the supervision of Departmental Representative.
  - .5 Additional tests specified in paragraph following.
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- .3 Where tests or inspections performed by the testing service reveal work is not in accordance with the contract requirements, Contractor shall pay costs for additional tests or inspections as Departmental Representative may require to verify acceptability of corrected work.
  - .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Departmental Representative.
  - .5 Provide Departmental Representative with a copy of testing laboratory reports as soon as they are available.
- 1.23 Sleeves, Hangers and Inserts
- .1 Provide and set sleeves where conduits pass through masonry or concrete. Pack sleeves with glass or mineral wool. Obtain Departmental Representative's approval before cutting for sleeves. Provide and install hangers and inserts where required.
- 1.24 Interpretation
- .1 In interpreting the Contract, in the event of discrepancies or conflicts between anything in the Plans and Specifications and the General Conditions, the General Conditions govern.
  - .2 In interpreting the Plans and Specifications, in the event of discrepancies or conflicts between:
    - .1 the Plans and Specifications, the Specifications govern;
    - .2 the Plans, the Plans drawn with the largest scale govern; and
    - .3 figured dimensions and scaled dimensions, the figured dimensions govern.
    - .4 the Plans and Specifications govern over the appendices.

1.25 Measurement for  
payment

- .1 Payment for work will be made at the Prices Per Unit as tendered for the various classifications of the work appearing in the "Unit Price Table" of the Form of Tender .
- .2 Any work called for in the specifications or shown on the plans, or which is necessary for the completion of the work called for in the specifications and is not specifically listed as a separate item in the "Unit Price Table", shall be deemed incidental to the general purpose of the Contract and no separate payment will be made on account of any such work, but the cost of any such incidental work shall be included in the Price Per Unit values as tendered for the various items appearing in the "Unit Price Table".
- .3 “Mobilization and Demobilization” a single lump sum will include all work required to supply the material, plant, and labour (including temporary sanitary facilities) to the site of the work at the start of the project and to remove all materials, plant and labour from the site at the end of the project. The supply and maintenance of the temporary sanitary facilities for the work force will be included in this pay item. This item will also include all costs associated the General Conditions requirements, instructions of the Contract.
- .4 “Demolishing” a single lump sum will include all work required to supply the material, plant, and labour for removal and disposal of existing timber floats, gangways, piles, boat lift trestle, demolishing of all existing works as required to complete the project. The removed steel pipe camels to remain the Owner’s property and will be stored by the Contractor on the site as instructed by Departmental Representative. The re-profiling of the seabed at Float A is also included in this item. For As-Built records refer to Appendix D and J.
- .5 “Piles” steel pipes for pipe piles will be supplied free of charge by the Owner. Additional steel piles will be required to complete fabrication of all piles; This additional steel pipe quantity will be supplied by the Contractor and measured for payment by linear meters (lin.m) of piles delivered to the fabrication yard and incorporated into piles. Transportation of piles to the site,

fabrication, driving and installation will be measured for payment by unit for each pile completed in place. Price shall also include all pile fabrication and handling, pile appurtenances, cutting shoes, concrete and reinforcement infill, grout as specified, rock sockets, rock penetration and cutoffs. For pipes supplied by the Owner refer to Appendix F.



- .6 “Float A” timber, hardware, billets and fasteners will be supplied by the Owner to storage at IOS. Additional timber, hardware and fasteners will be required to complete gangway landing platform landing custom float. This additional quantity supplied by the Contractor will be measured for payment in as a lump sum. Hardware, fasteners and appurtenances will not be measured for payment. Those are considered incidental to payment for additional timber. Additional buoyancy billets will be supplied by the Contractor and measured for payment for each billet delivered to storage at IOS. Supply and fabrication of the steel pile frames will be measured for payment for each frame. Fabrication and installation of Float A using all Owner and Contractor supplied materials will be paid for as a lump sum inclusive of all labour and incidentals. Measurement for payment for support platform, access span and access span foundation will be as a lump sum for each inclusive of all materials, labour and equipment. Measurement for payment for gangway will be as a lump sum inclusive of detailed design, materials, labour and equipment for installed and commissioned gangway. Measurement for payment for the timber rub-boards will be a lump sum including supply and installation. For Owner supplied materials refer to Appendices.



- .7 “Float B1”. Measurement for payment for the float B1 be as a single lump sum that will include acceptance of a complete float supplied by the Owner at Steveston, towing and installation at IOS. For details refer to Appendix I and K. Measurement for payment for fendering system will be as a lump sum for all materials, labour and equipment for a complete fendering in place. Measurement for payment for steel pile well guides will be as a lump sum for all materials, labour and equipment for a complete system in place.- Vehicular ramp measurement for payment will be

a single lump sum that will include acceptance of a complete ramp supplied free of charge by the Owner at IOS and installation at IOS. For details of ramp refer to Appendix H. Measurement for payment for the ramp abutment will be as a lump sum for all materials, labour and equipment. Measurement of payment for supply and construction of the access roadway will be a lump sum inclusive of all materials, labour and equipment. Measurement for payment for the timber rub-boards will be a lump sum including supply and installation. For Owner supplied materials refer to Appendices.



- .8 “Float B2” timber, hardware and fasteners will be supplied by the Owner to storage at IOS. Additional buoyancy billets will be supplied by the Contractor and measured for payment for each billet delivered to storage at IOS. Supply and fabrication of the steel pile frames will be measured for payment for each frame. Fabrication and installation of Float B2 using all Owner and Contractor supplied materials will be paid for as a lump sum inclusive of all labour and incidentals. Measurement for payment for support platform will be as a lump sum for all materials, labour and equipment. Measurement for payment for gangway will be as a lump sum inclusive of detailed design, materials, labour and equipment for installed and commissioned gangway. Measurement for payment for the timber rub-boards will be a lump sum including supply and installation. For Owner supplied materials refer to Appendices.



- .9 “Float C” timber, hardware and fasteners will be supplied by the Owner to storage at IOS. Additional buoyancy billets will be supplied by the Contractor and measured for payment for each billet delivered to storage at IOS. Supply and fabrication of the steel pile frames will be measured for payment for each frame. Fabrication and installation of Float C using all Owner and Contractor supplied materials will be paid for as a lump sum inclusive of all labour and incidentals. Measurement for payment for support platform will be as a lump sum for all materials, labour and equipment. Measurement for payment for gangway will be as a lump sum inclusive of detailed design, materials, labour and equipment for installed and commissioned gangway. Measurement for payment for the timber rub-

boards will be a lump sum including supply and installation. For Owner supplied materials refer to Appendices.



- .10 “Float D” timber, hardware and fasteners will be supplied by the Owner to storage at IOS. Additional timber, hardware and fasteners will be required to complete custom corner float unit. This additional quantity supplied by the Contractor will be measured for payment in as a lump sum. Hardware, fasteners and appurtenances will not be measured for payment. Those are considered incidental to payment for additional timber. Additional buoyancy billets will be supplied by the Contractor and measured for payment for each billet delivered to storage at IOS. Supply and fabrication of the steel pile frames will be measured for payment for each frame. Supply and fabrication of the steel reinforcing frames will be measured for payment as a lump sum. Fabrication and installation of Float D using all Owner and Contractor supplied materials will be paid for as a lump sum inclusive of all labour and incidentals. Measurement for payment for support platform will be as a lump sum for all materials, labour and equipment. Measurement for payment for fendering system will be as a lump sum for all materials, labour and equipment for a complete fendering in place. Measurement for payment for gangway will be as a lump sum inclusive of detailed design, materials, labour and equipment for installed and commissioned gangway. Measurement for payment for the timber fender backing will be a lump sum including supply and installation. For Owner supplied materials refer to Appendices.

PART 3 - EXECUTION

Not applicable

END OF SECTION