



# **Small Craft Harbours Pacific Region**

## **SPECIFICATIONS**

### **MOORING INSPECTION AND REPAIRS**

#### **SMALL CRAFT HARBOURS**

**ALERT BAY, BC**

**BAMFIELD, BC**

**DEEP BAY, BC**

**DEGNEN BAY, BC**

**GILFORD ISLAND, BC**

**LADYSMITH, BC**

**MANSONS LANDING, BC**

**SALTERY BAY, BC**

**SEA OTTER COVE, BC**

**TOFINO, BC**

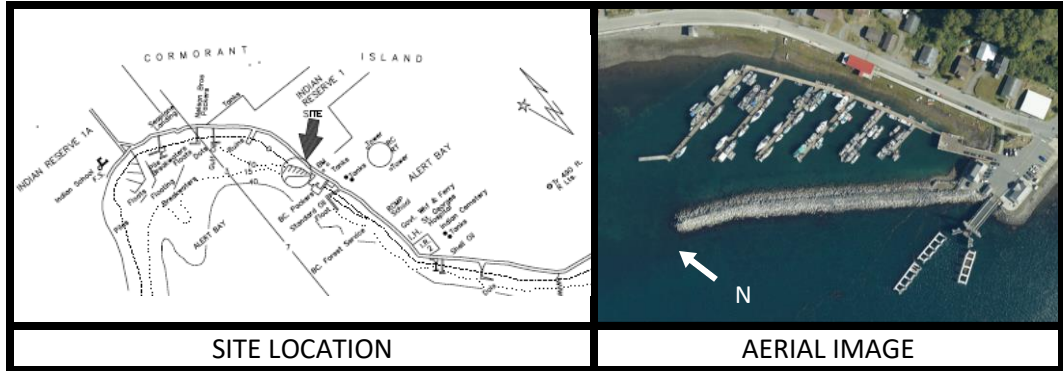
**UCLUELET, BC**

**NOVEMBER 2022**

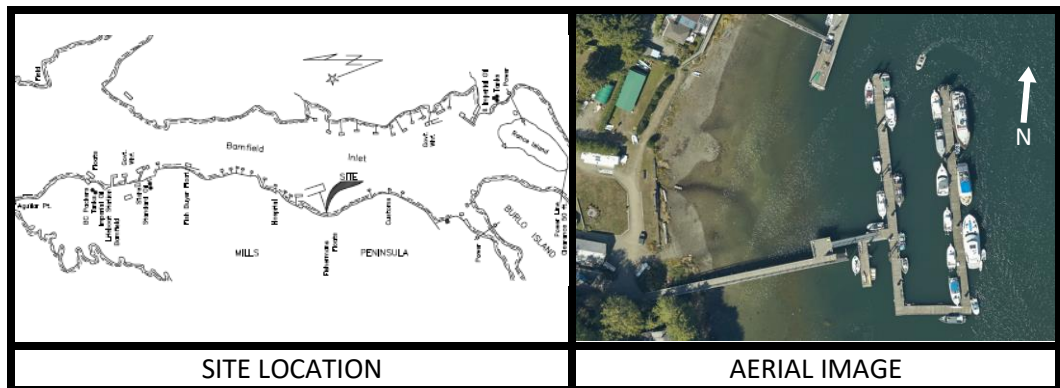


# 1 SITE LOCATION

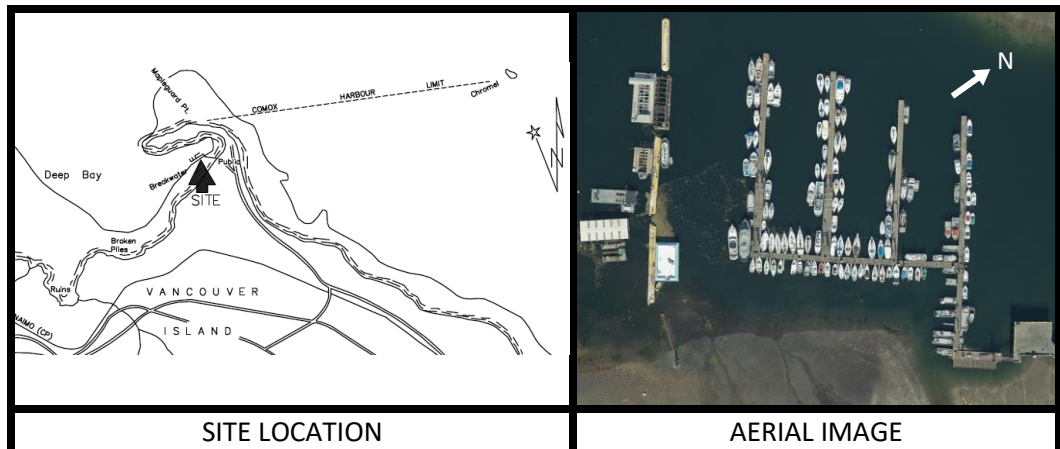
- .1 Alert Bay Small Craft Harbour is located north along the coast of the Village of Alert Bay on Cormorant Island, British Columbia. Refer to site plan location below.



- .2 Bamfield West Small Craft Harbour is located in the Bamfield Inlet, on the southwest coast of Vancouver Island, on the east side of Barclay Sound. Refer to site maps below.



- .3 Deep Bay Small Craft Harbour is located at 164 Burne Road, Bowser, BC, V0R 1G0. Refer to site maps below.

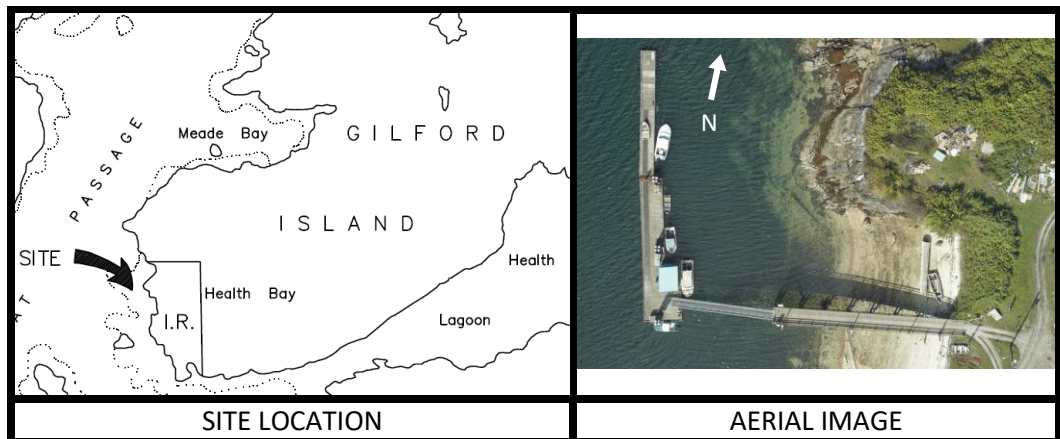




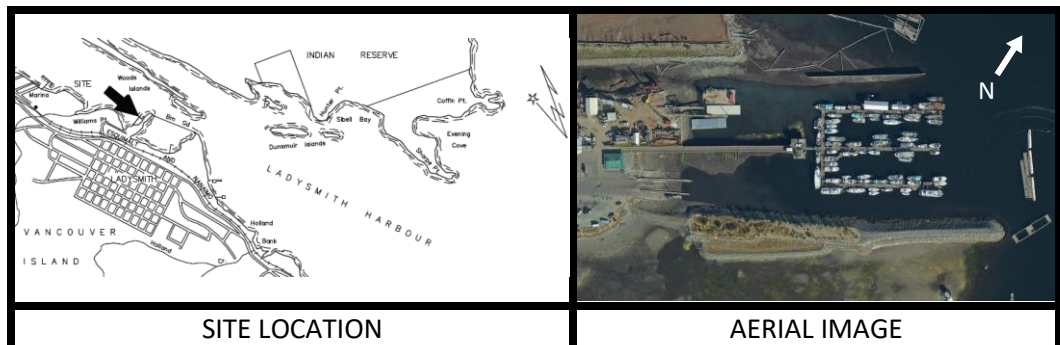
- .4 Degnen Bay Small Craft Harbour is located at the end of Degnen Bay Road on Gabriola Island, east of Nanaimo on Vancouver Island. Refer to site maps below.



- .5 Gilford Island Small Craft Harbour is located in Gwayasdums 1, on the western coast of Gilford Island. Refer to site maps below.

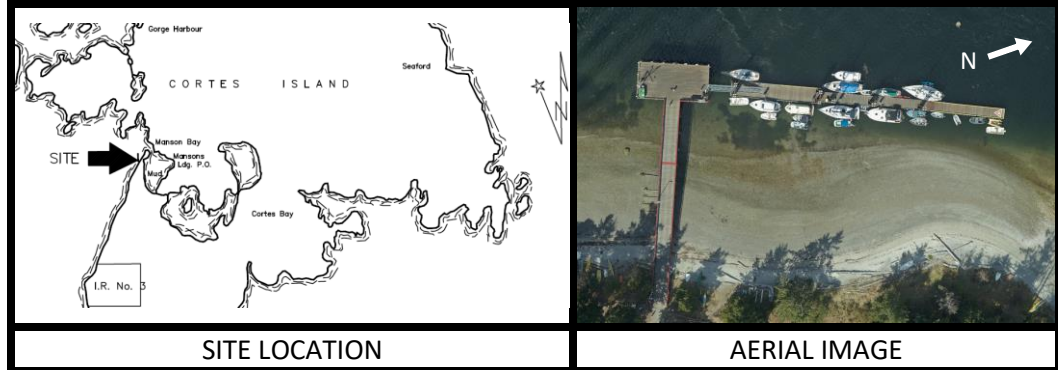


- .6 Ladysmith Small Craft Harbour is located at 837 Ludlow Rd, Ladysmith, BC V9G 1A1, north on the east coast of Vancouver Island. Refer to site maps below.

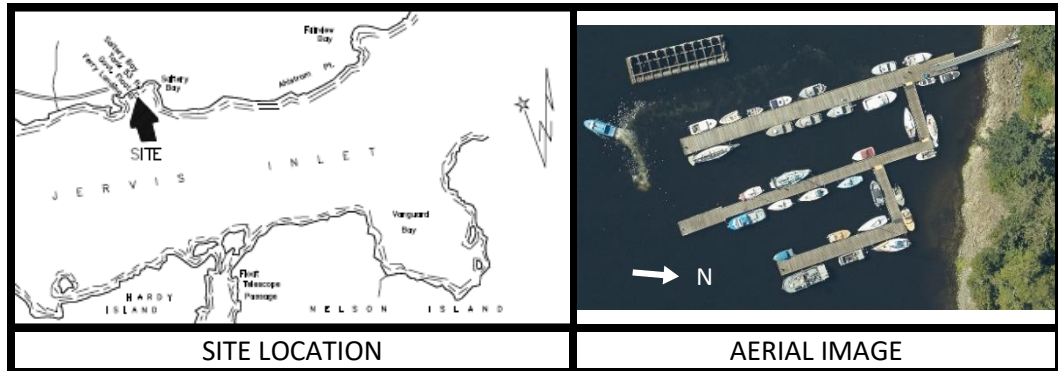




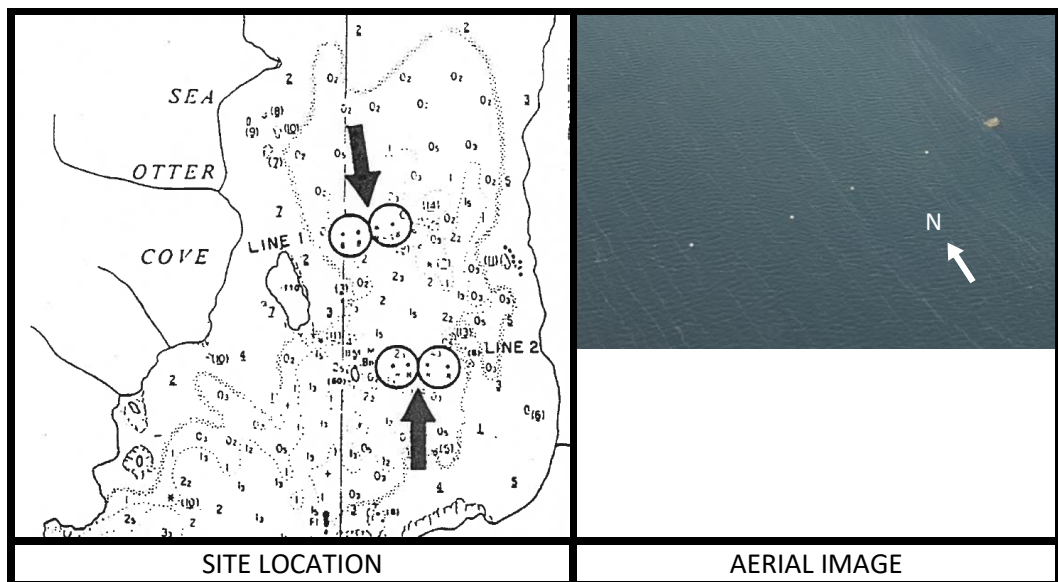
- .7 Mansons Landing Small Craft Harbour is located on the south west coast of Cortes Island, British Columbia, Canada. Refer to site maps below.



- .8 Saltery Bay Small Craft Harbour is located in the Sunshine Coast of southern British Columbia, Canada. Refer to site maps below.



- .9 Sea Otter Cove (Mooring Buoys) Small Craft Harbour is located in a remote place near the north-western end of Vancouver Island, north of Mount St. Patrick and San Josef Bay. Refer to site maps below.

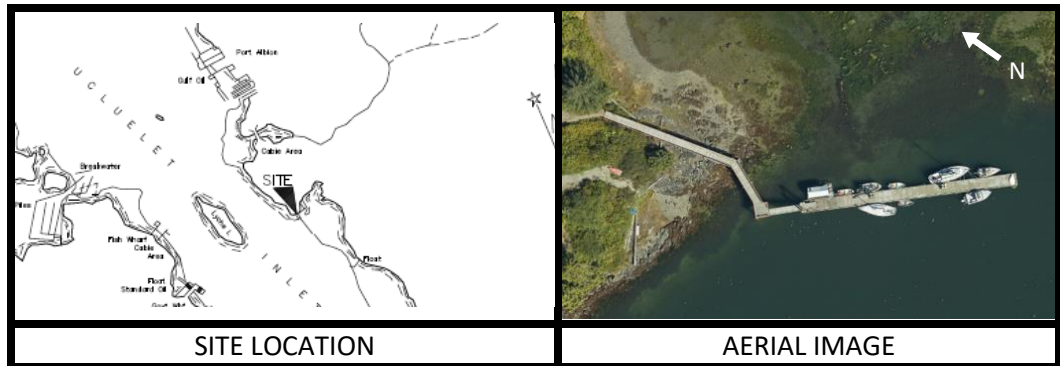




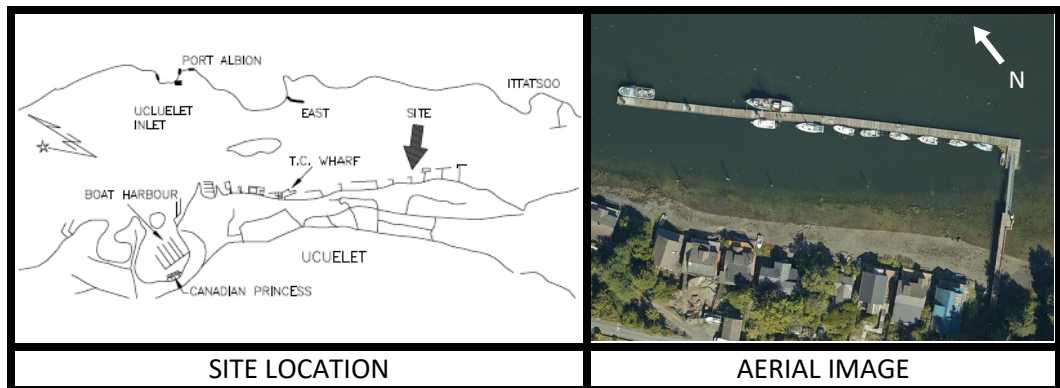
- .10 Tofino (Wingen Lane) Small Craft Harbour is located at the end of Wingen Lane in Tofino, BC. Refer to site maps below.



- .11 Ucluelet
  - .1 Ucluelet East Small Craft Harbour is located at the bend of Port Albion Rd. across from the municipality of Ucluelet, on the west coast of Vancouver Island, BC. Refer to site maps below.



- .2 Ucluelet Otter Street Small Craft Harbour is located at the end of Otter Street, on the Ucluelet Peninsula on the west coast of Vancouver Island, BC. Refer to site maps below.





## 2 DEFINITIONS

- .1 Throughout contract documents, the words “Contracting Authority”, “Project Authority/Owner”, “Harbour Authority”, “Engineer” and “Contractor” shall be defined as follows:
- .1 Contracting Authority  
Materiel and Procurement Services, Department of Fisheries and Oceans  
301 Bishop Drive, Fredericton, NB E3C 2M6
- .2 Project Authority/Owner  
Small Craft Harbours (SCH) - Department of Fisheries and Oceans,  
200-401 Burrard Street, Vancouver BC V6C 3S4
- .3 Harbour Authorities
- .1 Alert Bay: Alert Bay Harbour Authority,
- .2 Bamfield: Bamfield Harbour Authority
- .3 Deep Bay: Harbour Authority of Deep Bay
- .4 Degnen Bay: Degnen Bay Harbour Authority,
- .5 Gilford Island: No harbour authority
- .6 Ladysmith: Ladysmith Fisherman’s Wharf Association
- .7 Manson’s Landing: Harbour Authority of Cortes Island
- .8 Saltery Bay: Saltery Bay Harbour Authority
- .9 Sea Otter Cove: Winter Harbour Authority
- .10 Tofino Wingen Lane: Tofino Harbour Authority
- .11 Ucluelet: District of Ucluelet
- .4 Engineer  
The Engineer could be an employee, a consultant or a consultant’s representative of the Owner.
- .5 Contractor  
The party accepted by the Contracting Authority with whom a formal contract is entered to complete the work of the project.



### 3 NATURE OF WORK

- .1 In general, work consists of mooring system inspection and repairs in various Small Craft Harbour facilities. Mooring repairs may include mooring line replacements, mooring line protection (firehose installation), shackle replacements, anchor relocation and mooring line tensioning. The Owner will provide specific scope for the day rate. Refer to the reference drawings for details about the mooring systems for each site.

### 4 MATERIALS

- .1 The Contractor shall supply all materials required to complete the contract.

### 5 SCH GENERAL CONDITIONS

- .1 Work may commence **Upon Award**; however, mobilization to each Small Craft Harbour facility is subject to **minimum 2 week notice** to the Owner.
- .2 All work, including cleanup and demobilization, shall be completed by **March 31<sup>st</sup>, 2023**.
- .3 The awarded Contractor shall be the Prime Contractor for the work. The crew shall include a supervisor/foreman for the coordination and safety of the crew. The crew shall be professional, self-sufficient and capable of completing work described herein.
- .4 The Contractor is expected to work around tides, understand tide cycles and how long they last and supply accurate hourly tidal elevation data while working.
- .5 The harbours ~~is~~ *are* expected to be remain in operation during the work.
- .6 Co-operation with the Harbour Authority:  
  
The Contractor shall give the Harbour Authority **minimum 2 weeks notice** of mobilization/demobilization dates, work that requires vessels to be moved and work that may interrupt harbour operations including access to the floats.
- .7 Within 2 weeks of award, Contractor is to submit to the Owner a work plan that includes planned methodology and start and end dates.
- .8 The Contractor is required to provide equipment and labour in compliance with all National and Provincial laws and regulations for Commercial Diving.
- .9 The sites will be accessible to bidders to visit on their own schedule. No visit will be organized by the Owner.



## 6 DFO GENERAL CONDITIONS

- .1 Construction General Conditions:  
<http://www.dfo-mpo.gc.ca/contract-contrat/general-generale-eng.htm>

## 7 DESCRIPTION OF ITEMS

The following is a description of each item referenced to the **Combined Price Form**.

### Mandatory Items:

- .1 Mobilization/Demobilization – Alert Bay – The lump sum cost to move all equipment, materials and crew on and off Alert Bay Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .2 Mobilization/Demobilization – Bamfield – The lump sum cost to move all equipment, materials and crew on and off Bamfield Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .3 Mobilization/Demobilization – Deep Bay – The lump sum cost to move all equipment, materials and crew on and off Deep Bay Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .4 Mobilization/Demobilization – Degnen Bay – The lump sum cost to move all equipment, materials and crew on and off Degnen Bay Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .5 Mobilization/Demobilization – Gilford Island – The lump sum cost to move all equipment, materials and crew on and off Gilford Island Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .6 Mobilization/Demobilization – Ladysmith – The lump sum cost to move all equipment, materials and crew on and off Ladysmith Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .7 Mobilization/Demobilization – Manson’s Landing – The lump sum cost to move all equipment, materials and crew on and off Manson’s Landing Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.





- .8 Mobilization/Demobilization – Saltery Bay – The lump sum cost to move all equipment, materials and crew on and off Saltery Bay Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .9 Mobilization/Demobilization – Sea Otter Cove – The lump sum cost to move all equipment, materials and crew on and off Sea Otter Cove Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .10 Mobilization/Demobilization – Tofino (Wingen Lane) – The lump sum cost to move all equipment, materials and crew on and off Tofino Wingen Lane Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .11 Mobilization/Demobilization – Ucluelet
  - .1 Ucluelet East – The lump sum cost to move all equipment, materials and crew on and off Ucluelet East Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
  - .2 Ucluelet Otter Street – The lump sum cost to move all equipment, materials and crew on and off Ucluelet Otter Street Small Craft Harbour. This item includes all crew costs, any overhead costs not included in other items, and handling and transporting materials around the site.
- .12 Mooring Inspection and Repairs – The unit cost per day for mooring inspection and repairs includes all crew costs (including food and overnight accommodations), equipment, labour and materials. Provide 8 hours of construction diving or inspection to complete scope identified by the Engineer/Owner. The day rate also includes preparation, breaks and shutdown that are in addition to the 8 hours of dive work. Typical work may include mooring line replacements, shackle replacements, anchor relocation and mooring line tensioning.

Inspection may include the following:

Float/Wharves:

- Provide a condition rating for each pile based on underwater inspection from high water to the seabed.
- Provide a condition rating for submerged float components such as flanges, stringers, and pontoons.
- For timber piles, provide the cross-sectional loss (CSL) of any damage / decay / marine borer intrusion.



#### Mooring Systems:

- Measure existing mooring material types and sizes (ie: 32mm galv shackle connected to 25mm double braid rope, connected to 32mm galv shackle, connected to 32mm long link black chain, connected to 51mm lug on anchor).
- Inspect the full length of each mooring line including connections and anchors (within water depth limits).
- Measure the typical remaining dia. of mooring chain sections every 3 meters.
- Measure the minimum remaining dia. of each mooring chain section.
- Measure the minimum remaining dia. of each shackle and anchor lugs.
- If there are chain sections with less than 12mm dia. remaining, measure the length of the chain sections.
- Report any mooring line contact points and measure the distance from the float to each contact point.
- If there are mooring line contact points, determine if changing the line order or re-tensioning will correct the issue. If there is cross-sectional loss (CSL), measure the % CSL.
- Provide a sketch of the mooring system(s).
- Provide the inspection results the Owner prior to demobilization.

- .13 Supply 32mm Rope – The unit cost per meter to supply rope includes the following. Supply White 32mm (1.25”) dia. Double Braid Nylon Rope with minimum 13,000kg breaking strength.
- .14 Supply 25mm Chain – The unit cost per meter to supply chain includes the following. Supply Black 25mm (1”) dia. Long Link mooring chain with minimum 35,000kg breaking strength.
- .15 Supply 63mm Firehose – The unit cost per meter to supply firehose includes the following. Supply 63mm (2.5”) dia. Double Jacket Firehose for wrapping and protecting mooring lines.
- .16 Supply 32mm Shackles – The unit cost per shackle to supply shackles includes the following. Supply Galvanized 32mm (1.25”) dia. Rated Screw Pin shackles with minimum 12 Ton working load limit (WLL).



### Optional Items:

These optional items are included in the evaluation of the bid but may or may not be executed at the discretion of the Owner.

- .17 Mooring Inspection and Repairs – The unit cost per day for mooring inspection and repairs includes all crew costs (including food and overnight accommodations), equipment, labour and materials. Provide 8 hours of construction diving or inspection to complete scope identified by the Engineer/Owner. The day rate also includes preparation, breaks and shutdown that are in addition to the 8 hours of dive work. Typical work may include mooring line replacements, shackle replacements, anchor relocation and mooring line tensioning.
- .18 Ultrasonic Testing – The unit cost per day for ultrasonic testing includes the mobilization and use of testing equipment required to perform ultrasonic testing of piles. Use UT testing equipment to measure the remaining thickness of any significant corrosion or damage. Owner to provide scope of UT readings that will be site dependant.

## 8 SPECIFICATIONS

- .1 Equipment
  - .1 Mob/demob equipment capable of tensioning mooring lines up to 10,000 lbs underwater.
  - .2 Mob/demob a digital or mechanical scale calibrated and in good working condition to accurately measure the tension in a mooring line up to 10,000 lbs.
  - .3 Mob/demob UT testing equipment as per optional item Ultrasonic Testing.
- .2 Execution
  - .1 All rope that is cut shall be wrapped in electrical tape (minimum 20 wraps) prior to cutting and the ends shall be torched (melted) if accessible above water.
  - .2 All knots shall be a clove hitch or anchor bend with a minimum of two half hitches. The remaining tail of the rope shall be secured with heavy duty zap straps.
  - .3 All shackles shall be installed bell-to-pin (not bell-to-bell), wrenched tight and 'moused' (locked) with a heavy duty nylon zip tie or SS316 cotterpin.



.3 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.