



Sunshine Coast Regional District

Request for Proposal

Number: 2534501

for

Wharf Repairs - Keats Island

Issue Date:

May 7th, 2025

Closing Date of

June 9th, 2025 at 3:00 PM local time

CONTACT: All enquiries related to this Request for Proposal, including any requests for information and clarification, are to be submitted by May 26th, 2025 and directed, in writing, to purchasing@scrd.ca, who will respond if time permits with a Q&A on BCBid by June 2nd, 2025. Information obtained from any other source is not official and should not be relied upon. Enquiries and any responses providing new information will be recorded and posted to BC Bid or otherwise distributed to prospective Proponents.

DELIVERY OF PROPOSALS: Proposals must be in English and must be submitted using one of the submission methods below, and must either **(1)** include a copy of this cover page that is signed by an authorized representative of the Proponent or **(2)** be submitted by using the e-bidding key on BC Bid (if applicable), in accordance with the requirements set out in the RFP.

BC Bid Electronic Submission: Proponents may submit an electronic proposal using BC Bid. Proposals must be submitted in accordance with the BC Bid requirements and e-bidding key requirements (found at <https://www.bcbid.gov.bc.ca/>). Only pre-authorized electronic bidders registered on the BC Bid system can submit an electronic proposal using the BC Bid system. Use of an e-bidding key is effective as a signature.

OR

Hard Copy Submission: Proponents must submit **ONE (1)** hard-copies and **ONE (1)** electronic copy on a USB Drive of the proposal. Proposals submitted by hard copy must be submitted by hand or courier to:

**Sunshine Coast Regional District
1975 Field Road
Sechelt, BC V7Z 0A8**

Regardless of submission method, proposals must be received before Closing Time to be considered.

CONFIRMATION OF PROPONENT'S INTENT TO BE BOUND:

The enclosed proposal is submitted in response to the referenced Request for Proposal, including any Addenda. By submitting a proposal the Proponent agrees to all of the terms and conditions of the RFP including the following:

- a) The Proponent has carefully read and examined the entire Request for Proposal;
- b) The Proponent has conducted such other investigations as were prudent and reasonable in preparing the proposal; and
- c) The Proponent agrees to be bound by the statements and representations made in its proposal.

PROONENT NAME (please print): _____

NAME OF AUTHORIZED REPRESENTATIVE (please print): _____

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____

DATE: _____

TABLE OF CONTENTS**Page**

1. GENERAL TERMS & CONDITIONS	3
2. INTRODUCTION	9
2.1 Purpose.....	9
3. SITUATION/OVERVIEW	9
3.1 Background	9
3.2 Project Objectives	9
3.3 Scope.....	9
4. CONTRACT	10
4.1 General Contract Terms and Conditions.....	10
4.2 Service Requirements	10
4.3 Environmental Requirements	11
5. REQUIREMENTS	12
5.1 Capabilities	12
5.2 Sustainable Social Procurement	14
5.3 Approach	14
5.4 Workplan	15
5.5 Site Safety Plan	15
5.6 Value Add.....	15
5.7 Price	16
5.8 Bid Bond	16
6. PROPOSAL FORMAT.....	16
7. EVALUATION	17
7.1 Mandatory Criteria.....	17
7.2 Weighted Criteria	18
7.3 Price Evaluation.....	18
Appendix 1 Specifications	19
Appendix 2 CCDC 18 2023	87
Appendix 3 Supplemental General Conditions CCDC 18	88
Appendix 4 Schedule of Quantities and Prices	93
Appendix 5 Fisheries and Oceans Canada (DFO) Permit	95

1. GENERAL TERMS & CONDITIONS

1.1 DEFINITIONS

Throughout this Request for Proposal, the following definitions apply:

"Addenda" means all additional information regarding this RFP, including amendments to the RFP; **"BC Bid"** means the BC Bid website located at <https://www.bcbid.gov.bc.ca/> ;

"Closing Location" includes the location or email address for submissions indicated on the cover page of this RFP, or BC Bid, as applicable;

"Closing Time" means the closing time and date for this RFP as set out on the cover page of this RFP;

"Contract" means the written agreement resulting from the RFP executed by the Regional District and the successful Proponent;

"Contractor" means the successful Proponent to the RFP who enters into a Contract with the Regional District;

"Must", or **"mandatory"** means a requirement that must be met in order for a proposal to receive consideration;

"Proponent" means a person or entity (excluding its parent, subsidiaries or other affiliates) with the legal capacity to contract, that submits a proposal in response to the RFP;

"Proposal" means a written response to the RFP that is submitted by a Proponent;

"Request for Proposals" or **"RFP"** means the solicitation described in this document, including any attached or referenced appendices, schedules or exhibits and as may be modified in writing from time to time by the Regional District by Addenda; and

"Should", **"may"** or **"weighted"** means a requirement having a significant degree of importance to the objectives of the Request for Proposals.

"SCRD", **"Regional District"**, **"Organization"**, **"we"**, **"us"**, and **"our"** mean Sunshine Coast Regional District.

1.2 FORM OF PROPOSAL

This Proposal must be completed in its entirety. Failure to properly complete this Proposal form may cause your Proposal to be rejected. The signing officer must initial all corrections. The Sunshine Coast Regional District (Regional District) reserves the right to permit a correction, clarification or amendment to the Proposal or to correct minor errors and irregularities.

1.3 SUBMISSION OF PROPOSAL

- a) Proposals must be submitted before Closing Time to the Closing Location using one of the submission methods set out on the cover page of this RFP. Proposals must not be sent by fax. The Proponent is solely responsible for ensuring that, regardless of submission method selected, the Regional District receives a complete Proposal, including all attachments or enclosures, before the Closing Time.
- b) For electronic submissions (BC Bid or email), the following applies:
 - (i) The Proponent is solely responsible for ensuring that the complete electronic Proposal, including all attachments, is received before Closing Time;
 - (ii) The Regional District limits the maximum size of any single email message to 20MB or less.
 - (iii) Proponents should endeavour to submit emailed proposal submissions in a single message and avoid sending multiple email submissions for the same opportunity. If an electronic submission exceeds the applicable maximum single message size, the Proponent may make multiple submissions (BC Bid upload or multiple emails for the same opportunity). Proponents should identify the order and number of emails making up the email proposal submission (e.g. "email 1 of 3, email 2 of 3...");
 - (iv) For email proposal submissions sent through multiple emails, the Regional District reserves the right to seek clarification or reject the proposal if the Regional District is unable to determine what documents constitute the complete proposal;
 - (v) Attachments must not be compressed or encrypted, must not contain viruses or malware, must not be corrupted, and must be able to be opened using commonly available software (e.g. Adobe Acrobat). Proponents submitting by electronic submission are solely responsible for ensuring that any emails or attachments are not corrupted. The Regional District has no obligation to attempt to remedy any message or attachment that is received corrupted or cannot be viewed. The Regional District may reject proposals that are compressed encrypted, cannot be opened or

that contain viruses or malware or corrupted attachments.

- c) For BC Bid e-submissions only pre-authorized e-bidders registered on BC Bid can submit electronic bids on BC Bid. BC Bid is a subscription service and the registration process may take two business days to complete. If using this submission method, Proponents should refer to the BC Bid website or contact BC Bid Helpdesk at 250-387-7301 for more information. An electronic proposal submitted on BC Bid must be submitted using the e-bidding key of an authorized representative of the Proponent. Using the e-bidding key of a subcontractor is not acceptable.
- d) For email proposal submissions, including any notices of amendment or withdrawal referred to in Section 1.6, the subject line of the email and any attachment should be clearly marked with the name of the Proponent, the RFP number and the project or program title.
- e) The Regional District strongly encourages Proponents using electronic submissions to submit proposals with sufficient time to complete the upload and transmission of the complete proposal and any attachments before Closing Time.
- f) The Proponent bears all risk associated with delivering its Proposal by electronic submission, including but not limited to delays in transmission between the Proponent's computer and the Regional District Electronic Mail System or BC Bid.
- g) While the Regional District may allow for email proposal submissions, the Proponent acknowledges that email transmissions are inherently unreliable. The Proponent is solely responsible for ensuring that its complete email proposal submission and all attachments have been received before Closing Time. If the Regional District Electronic Mail System rejects an email proposal submission for any reason, and the Proponent does not successfully resubmit its proposal by the same or other permitted submission method before Closing Time, the Proponent will not be permitted to resubmit its proposal after Closing Time. The Proponent is strongly advised to contact the Regional District Contact immediately to arrange for an alternative submission method if:
 - (i) the Proponent's email proposal submission is rejected by the Regional District Electronic Mail System; or
 - (ii) the Proponent does not receive an automated response email from the Regional

District confirming receipt of each and every message transmitted, within a half hour of transmission by the Proponent.

An alternate submission method may be made available, at the Regional District's discretion, immediately to arrange for an alternative submission method, and it is the Proponent's sole responsibility for ensuring that a complete proposal (and all attachments) submitted using an approved alternate submission method is received by the Regional District before the Closing Time. The Regional District makes no guarantee that an alternative submission method will be available or that the method available will ensure that a Proponent's proposal is received before Closing Time.

1.4 SIGNATURE REQUIRED

Proposals must be properly signed by an officer, employee or agent having authority to bind the Proponent by that signature.

1.5 CLARIFICATIONS, ADDENDA & MINOR IRREGULARITIES

If any Proponent finds any inconsistencies, errors or omissions in the proposal documents or requires information, clarification of any provision contained therein, they shall submit their query in writing or email, addressed as follows:

Purchasing Division
Sunshine Coast Regional District
1975 Field Road, Sechelt, BC V7Z 0A8

purchasing@scrd.ca

Any interpretation of, addition to, deletions from or any corrections to the proposal documents will be issued as written addendum by the Regional District.

All Addenda will be posted on BC Bid. It is the sole responsibility of the Proponent to check for Addenda on BC Bid. Proponents are strongly encouraged to subscribe to BC Bid's email notification service to receive notices of Addenda.

1.6 WITHDRAWAL OR REVISIONS

Proposals or revisions may be withdrawn by written notice provided such a notice of withdrawal is received prior to the closing date and time. Proposals withdrawn will be returned to the Proponent unopened. Revisions to the proposals already received shall be submitted only by electronic mail, or signed letter. The revision must state only the amount by which a figure is to be increased or decreased, or specific directions as to the exclusions or inclusion of particular words.

1.7 CONDUCT OF THE CONTRACT

Unless otherwise specified within this document, any queries regarding this Request for Proposal are to be directed to purchasing@scrd.ca. No other verbal or written instruction or information shall be relied upon by the Bidder, nor will they be binding upon the Regional District.

1.8 CONFLICT OF INTEREST/NO LOBBYING

- (a) A Proponent may be disqualified if the Proponent's current or past corporate or other interests, or those of a proposed subcontractor, may, in the Regional District's opinion, give rise to an actual or potential conflict of interest in connection with the services described in the RFP. This includes, but is not limited to, involvement by a Proponent in the preparation of the RFP or a relationship with any employee, Contractor or representative of the Regional District involved in preparation of the RFP, participating on the evaluation committee or in the administration of the Contract. If a Proponent is in doubt as to whether there might be a conflict of interest, the Proponent should consult with the Regional District Contact prior to submitting a proposal. By submitting a proposal, the Proponent represents that it is not aware of any circumstances that would give rise to a conflict of interest that is actual or potential, in respect of the RFP.
- (b) A Proponent must not attempt to influence the outcome of the RFP process by engaging in lobbying activities. Any attempt by the Proponent to communicate, for this purpose directly or indirectly with any employee, Contractor or representative of the Regional District, including members of the evaluation committee and any elected officials of the Regional District, or with the media, may result in disqualification of the Proponent.

1.9 CONTRACT

By submitting a proposal, the Proponent agrees that should its proposal be successful the Proponent will enter into a Contract with the Regional District on substantially the same terms and Conditions set out in www.scrd.ca/bid and such other terms and conditions to be finalized to the satisfaction of the Regional District, if applicable.

1.10 SUSTAINABLE PROCUREMENT

The Regional District adheres to its sustainable consideration factors. Proposals will be considered

not only on the total cost of services, but Proposals that addresses the environment and social factors.

1.11 INVOICING AND PAYMENT

Unless otherwise agreed, the Regional District payment terms are Net 30 days following receipt of services or approved invoices, whichever is later. Original invoices are to be forwarded to the accounts payable department of the Regional District. The purchase order number assigned by the Regional District must be stated on the invoice otherwise payment may be delayed.

1.12 PRICING, CURRENCY AND TAXES

Offered prices are to be attached as a price schedule in Canadian dollars with taxes stated separately when applicable.

1.13 IRREVOCABLE OFFER

This Proposal must be irrevocable for 90 days from the Proposal closing date and time.

1.14 TIME IS OF THE ESSENCE

Time shall be of the essence in this contract.

1.15 ASSIGNMENT

The Proponent will not, without written consent of the Regional District, assign or transfer this contract or any part thereof.

1.16 OWNERSHIP OF DOCUMENTS & FREEDOM OF INFORMATION

All documents submitted in response to this Request for Proposal shall become the property of the Regional District and as such will be subject to the disclosure provisions of the *Freedom of Information and Protection of Privacy Act* and any requirement for disclosure of all or a part of a Proposal under that Act.

The requirement for confidentiality shall not apply to any Proposal that is incorporated into a Contract for the Work. Further, the Regional District may disclose the top scoring proponent's aggregate pricing to the Regional District Board at a public meeting, when making a recommendation for the award of the Contract.

For more information on the application of the Act, go to http://www.cio.gov.bc.ca/cio/priv_leg/index.page.

1.17 AWARD OF CONTRACT

The Purchasing Policy at the Regional District offers contracts to businesses through an open, fair and consistent competitive bidding process. This ensures that the Regional District will receive the best overall value for the goods and services it requires. The Regional District reserves the right to cancel, award all or part of the scope of work described in this

document to a single Proponent or may split the award with multiple Proponents.

All awards are subject to Board approval that meets the needs as determined by the Board. The Regional District, in receipt of a submission from a Proponent, may in its sole discretion consider the Proponent to have accepted the terms and conditions herein, except those expressly excluded or changed by the Proponent in writing.

The RFP shall not be construed as an agreement to purchase goods or services. The lowest priced or any proposal will not necessarily be accepted. The RFP does not commit the Regional District in any way to award a contract and that no legal relationship or obligation regarding the procurement of any good or service will be created between Regional District and the proponent unless and until Regional District and the proponent execute a written agreement for the Deliverables

1.18 COST OF PROPOSAL

The Proponent acknowledges and agrees that the Regional District will not be responsible for any costs, expenses, losses, damage or liability incurred by the Proponent as a result of or arising out submitting a Proposal for the proposed contract or the Regional District's acceptance or non-acceptance of their proposal. Further, except as expressly and specifically permitted herein, no Proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in this RFP, and by submitting a proposal each Proponent shall be deemed to have agreed that it has no claim.

1.19 PROPONENT'S RESPONSIBILITY

It is the Proponent's responsibility to ensure that the terms of reference contained herein are fully understood and to obtain any further information required for this proposal call on its own initiative. The Regional District reserves the right to share, with all proponents, all questions and answers related to this bid call.

1.20 EVALUATIONS

Proposals will be evaluated in private, including proposals that were opened and read in public, if applicable. Proposals will be assessed in accordance with the evaluation criteria.

If only one Proposal is received, the Regional District reserves the right to open the Proposal in private or if the total bid price exceeds the estimated budget for the Contract, the Regional District may cancel and re-tender, accept, not accept and cancel or re-scope the Work seeking a better response, with or without any substantive changes being made to the solicitation

documents. If more than one Proposal is received from the same Proponent, the last Proposal received, as determined by the Regional District, will be the only Proposal considered.

1.21 ACCEPTANCE OF TERMS

The submission of the Proposal constitutes the agreement of the Proponent that all of the terms and conditions of the RFP are accepted by the Proponent and incorporated in its Proposal, except those conditions and provisions which are expressly excluded and clearly stated as excluded by the Proponent's proposal.

1.22 MANDATORY REQUIREMENTS

Proposals not clearly demonstrating that they meet the mandatory requirements will receive no further consideration during the evaluation process.

1.23 INSURANCE & WCB

The Proponent shall obtain and continuously hold for the term of the contract, insurance coverage in accordance with the requirements of CCDC 41 (summarized below) with the Regional District Listed as "Additional Insured" the minimum limits of not less than those stated below:

- (a) General liability insurance shall be with limits of not less than \$10,000,000 per occurrence, an aggregate limit of not less than \$10,000,000 within any policy year with respect to completed operations, and a deductible not exceeding \$10,000.
- (b) Automobile liability insurance in respect of vehicles that are required by law to be insured under a contract by a Motor Vehicle Liability Policy, shall have limits of not less than \$5,000,000 inclusive per occurrence for bodily injury, death and damage to property, covering all vehicles owned or leased by the Contractor.
- (c) Manned Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft (if used directly or indirectly in the performance of the Work), including use of additional premises, shall have limits of not less than \$10,000,000 inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof and limits of not less than \$10,000,000 for aircraft passenger hazard.
- (d) Unmanned aerial vehicle liability insurance with respect to owned or non-

owned aircraft (if used directly or indirectly in the performance of the Work), shall have limits of not less than \$5,000,000 per occurrence or accident for bodily injury, death and damage to property or such amounts as required by any applicable law or regulation.

- (e) "Broad form" property insurance shall have limits of not less than the sum of 1.1 times Contract Price and the full value, as stated in the Contract, of Products and design services that are specified to be provided by the Owner for incorporation into the Work, with a deductible not exceeding \$10,000.
- (f) Contractors' equipment insurance coverage written on an "all risks" basis covering Construction Equipment used by the Contractor for the performance of the Work, shall be in a form acceptable to the Owner and shall not allow subrogation claims by the insurer against the Owner.
- (g) Contractors' Pollution liability insurance shall have limits of not less than \$5,000,000 per occurrence for bodily injury, death and damage to property;
- (h) Professional liability insurance in the amount of not less than \$2,000,000 for any professionals that the Contractor may engage in performing the Work in this Contract;"
- (i) A provision requiring the Insurer to give the Owners a minimum of 30 days' notice of cancellation or lapsing or any material change in the insurance policy.

The Proponent must comply with all applicable laws and bylaws within the jurisdiction of the work. The Proponent must further comply with all conditions and safety regulations of the *Workers' Compensation Act* of British Columbia and must be in good standing during the term of any contract entered into from this process.

1.24 COLLUSION

Except otherwise specified or as arising by reason of the provisions of these documents, no person, or corporation, other than the Proponent has or will have any interest or share in this proposal or in the proposal contract which may be completed in respect thereof. There is no collusion or arrangement between the Proponent and any other actual or prospective Proponent in connection with proposals submitted for this project and the Proponent has no knowledge of the context of other proposals and has

no comparison of figures or agreement or arrangement, express or implied, with any other party in connection with the making of the proposal.

1.25 CONFLICT OF INTEREST

Proponents shall disclose in its Proposal any actual or potential conflict of interest and existing business relationship it may have with the Regional District, its elected or appointed officials or employees.

1.26 LIABILITY FOR ERRORS

While the Regional District has used considerable efforts to ensure an acute representation of information in these bid documents, the information contained is supplied solely as a guideline for Proponents. The information is not guaranteed or warranted to be accurate by the Regional District nor is it necessarily comprehensive or exhaustive.

1.27 TRADE AGREEMENTS

This RFP is covered by trade agreements between the Regional District and other jurisdictions, including the following:

- a) Canadian Free Trade Agreement; and
- b) New West Partnership Trade Agreement.
- c) Canada-European Union Comprehensive Economic and Trade Agreement

1.28 LAW

This contract and any resultant award shall be governed by and construed in accordance with the laws of the Province of British Columbia, which shall be deemed the proper law thereof.

1.29 REPRISAL CLAUSE

Tenders will not be accepted by the Regional District from any person, corporation, or other legal entity (the "Party") if the Party, or any officer or director of a corporate Party, is, or has been within a period of two years prior to the tender closing date, engaged either directly or indirectly through another corporation or legal entity in a legal proceeding initiated in any court against the Regional District in relation to any contract with, or works or services provided to, the Regional District; and any such Party is not eligible to submit a tender.

1.30 FORCE MAJEURE (ACT OF GOD)

Neither party shall be liable for any failure of or delay in the performance of this Agreement for the period that such failure or delay is due to causes beyond its reasonable control including but not limited to acts of God, war, strikes or labour disputes, embargoes, government orders or any other force majeure event. The Regional District may terminate the Contract by notice if the event lasts for longer than 30 days.

1.31 CONFIDENTIAL INFORMATION OF PROPONENT

A proponent should identify any information in its proposal or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by Regional District. The confidentiality of such information will be maintained by Regional District, except the total proposed value, which must be publicly released for all proposals, or otherwise required by the Freedom of Information and Protection of Privacy Act ("FOIPPA"), law or by order of a court or tribunal. Proponents are advised that their proposals will, as necessary, be disclosed, on a confidential basis, to advisers retained by Regional District to advise or assist with the RFP process, including the evaluation of proposals. If a proponent has any questions about the collection and use of personal information pursuant to this RFP, questions are to be submitted to the RFP Contact.

1.32 DISPUTE RESOLUTION

All unresolved disputes arising out of or in connection with this Proposal or in respect of any contractual relationship associated therewith or derived therewith shall be referred to and finally resolved by arbitration as prescribed by Mediate BC services pursuant to its rules, unless otherwise mutually agreed between the parties.

1.33 DEBRIEFING

At the conclusion of the RFP process, all Proponents will be notified. Proponents may request a debriefing meeting with the Regional District.

2. INTRODUCTION

2.1 Purpose

The Regional District is seeking proposals from qualified Contractors to replace the deteriorated, damaged, or otherwise compromised components of the Keats Landing Wharf facility. The Regional District has an approximate project budget of \$370,000 to complete the necessary repairs.

3. SITUATION/OVERVIEW

3.1 Background

In October 2023, a comprehensive professional assessment was conducted to evaluate the overall physical condition of this Port facility. This assessment included a review of previously completed routine inspection reports, along with a visual and tactile examination of the accessible wharf elements both above and below the waterline.

As a result of the findings from the 2023 condition assessment, the vehicle access portion of the facility was closed to the public in late December 2023. Subsequently, in June 2024, the Regional District commissioned Herold Engineering Ltd to be the Engineer of Record and to complete the to develop detailed improvement plans and specifications for the facility's enhancements.

3.2 Project Objectives

The objective of this project is to restore the ports facility so that it can be reopened to the public, this will include but is not limited to completing the structural and public safety related repairs to allow the wharf to reopen to all public traffic in late 2025 or early 2026.

3.3 Scope

The Project scope of the work entails completion of all repairs and replacement work outlined in the Issued for Tender Drawings and Specifications. Primarily, the project focuses on replacing deteriorated, damaged, or otherwise compromised components of the Keats Island Landing Wharf facility, as detailed in the design documents.

The repair activities on site will generally follow the following key activities:

- a) Barge mobilization/demobilization/spudding which includes transportation of materials to site, spudding of a barge in the nearshore in the project area, and reversal on completion of the Project.
- b) Removal, disposal and replacement of the following wharf components:
 - a. Vehicle guarding.
 - b. Individual deck boards.

- c. Concrete footings.
 - d. Treated timber cross bracing.
 - e. Treated timber wales.
 - f. Treated timber bearing piles.
 - g. Treated timber pile cap.
- c) Remedial repairs generally include:
 - a. Stainless steel banding repairs on pilings.
 - b. Steel strap retrofits on pile-to-pile cap connections.
 - c. Pile wrapping
 - d. Fender pile aluminum flashing installation on tops of fender piles
- d) Minimize the project timeline and impact on the environment.
- e) Contractor compliance with all environmental laws and regulations and work restriction windows.

4. CONTRACT

4.1 General Contract Terms and Conditions

Proponents should review carefully the terms and conditions set out in CCDC 18 2023 as found in Appendix 2.

4.2 Service Requirements

The Contractor's responsibilities will include the following:

- a) Provision of a Performance and Labour and Material Bond within 15 days of receipt of the written notice of award, will deliver to the Regional District a performance bond and a labour and material bond, utilizing one of the methods below:
 - a. The Performance and Labour and Material bonds will be each in the amount of 50% of the contract price, covering the performance of the work including the Contractor's obligations during the maintenance period. The bonds must be issued by a surety company that is licensed to carry on the business of suretyship in the province of British Columbia and in a form acceptable to the Regional District.
 - b. If the Contractor provides an e-bond the e-bond must be verifiable, containing a digital signature, digital corporate seal and a verification tag or a to check that the bond document has not been altered.
- b) Working closely with the Regional District staff and representatives throughout the term of the contract.
- c) Submitting Weekly progress reports with photos are to be submitted to the Regional District.
- d) Provision of all the deliverables as outlined above and in the Appendices.
- e) Conforming to all applicable codes, guidelines regulations and all laws as required by the authorities having jurisdiction.

- f) Employing skilled and qualified people to complete the work including subcontractors.
- g) Complying with all by-laws or regulations regarding noise for each respective jurisdiction.
- h) Obtaining all permits, licenses, approvals and certificates required for the performance of the work.
- i) Provision of all temporary facilities and construction site maintenance.
- j) Submittal of a Quality Control Program prior to commencing the works (the program should include every item in the scope of work).
- k) Notifying the Regional District when the work has reached substantial performance and shall review all completed work with the Regional District for the purposes of final inspection, deficiencies, and commissioning. The Contractor will provide the Regional District with a written completion schedule for the correction of all deficiencies identified for review and acceptance.
- l) Notify the Regional District and Engineer of Record prior to pile driving activities commencing. Provide minimum two working days' notice prior to pile driving activities and other required site visits.
- m) Warrant that the work is completed in a good and skilful manner and provide a minimum of one year warranty on their work after issuance of Notice of Substantial performance by the Regional District.
- n) During the warranty period, any part of the work found by the Regional District to be defective or faulty due to imperfect or poor construction or material, the Contractor will replace such defective items without expense to the Regional District.
- o) Provision of two hard copies and one electronic copy in PDF format of record drawings, commissioning reports, testing and verification reports, and operation and maintenance manuals.

4.3 Environmental Requirements

The Contractor will comply with the applicable requirements and implement mitigation measures for work that applies to the Contractor. The Contractor will have to follow the Construction Environmental Control Plan and any other environmental standards, guidelines, and Best Management Practices throughout the term of the contract.

In-water works, the Contractor's undertakings and activities are to be scheduled to respect timing windows to protect marine life. The timing window during which in-water works should be conducted is from August 16 of any given year to January 31 of the following year.

5. REQUIREMENTS

In order for a proposal to be considered, a Proponent must clearly demonstrate that they meet the mandatory requirements set out in Section 7.1 (Mandatory Criteria) of the RFP.

This section includes “Response Guidelines” which are intended to assist Proponents in the development of their proposals in respect of the weighted criteria set out in Section 7.2 of the RFP. The Response Guidelines are not intended to be comprehensive. Proponents should use their own judgement in determining what information to provide to demonstrate that the Proponent meets or exceeds the Regional District’s expectations.

Please address each of the following items in your proposal in the order presented. Proponents may find it helpful to use the individual Response Guidelines as headings for proposal responses.

5.1 Capabilities

5.1.1 Relevant Experience

The Proponent and any subcontractors of the Proponent included in its proposal should have a minimum of five years within the past ten years providing services of a similar scope and complexity. Similar scope and complexity is defined as

- a) Successful experience managing and constructing (conducting major repairs) including piles extraction and installation at least three port’s facility upgrades of similar size and complexity. With at least one of the port’s facility upgrades completed and has obtained substantial completion within the last five years.
- b) Experience working within limited road access.
- c) Preferable the above with Local Government (Municipalities and Regional Districts).

5.1.2 Project Team and Qualifications

The Proponent will develop a team has qualified personal to perform the services, the project team will ideally include team members from the following disciplines:

Position	Ideal Experience	Ideal Experience / Qualifications
Project Manager	5-7 years	PMP (Project Management Professional) or equivalent; experience in marine construction projects.
Site Superintendent	5-7 years	Gold Seal Certification (GSC) from the Canadian Construction Association; extensive construction experience.

Lead Hand / Foreman	3-5 years	Journeyman certification in a relevant trade; supervisory experience.
Crane Operator	2 – 3 years	Certification from BC Crane Safety; Class 1 or 2 operator license.
Pile Driver Operator	2-3 days	Similar if not the same operator as the Crane.
Environmental QEP	5 years	Can be a subcontractor to author and review compliance with the CECP

Proponents need to provide the curriculum vitae for the key members of the project team.

Proponents need to identify any subcontractors, trade and associated qualification as part of there response.

5.1.3 References

Proponents need to provide a minimum of three references (i.e. names and contact information) of individuals who can verify the quality of work provided specific to the relevant experience of the Proponent and of any subcontractors named in the proposal. References from the Proponent's own organization or from named subcontractors are not acceptable.

The Regional District reserves the right to seek additional references independent of those supplied by the Proponent, including internal references in relation to the Proponent's and any subcontractor's performance under any past or current contracts with the Regional District or other verifications as are deemed necessary by it to verify the information contained in the proposal and to confirm the suitability of the Proponent.

5.1.4 Environmental Requirements

Proponent should provide details on how they will address:

- a) Any physical habitat displacement.
- b) Water quality impacts.
- c) Noise and vibration impacts.
- d) Sediment bed impacts.
- e) potential introduction of invasive species.
- f) Any other environmental considerations.

Proponents should provide details on how they will:

- a) Comply with all applicable regulatory and environmental requirements and what are they.
- b) Implement mitigation measure to ensure that all environmental requirements are met.
- c) Reuse (upcycle) or recycling any of the components. This should be considered as the preferred method of disposal whenever possible.
- d) How they will handle and dispose of any hazardous waste including special hazardous waste.

Proponent should provide details on how they will address:

- a) Any physical habitat displacement.
- b) Water quality impacts.
- c) Noise and vibration impacts.
- d) Sediment bed impacts.
- e) potential introduction of invasive species.
- f) Any other environmental considerations.

5.2 Sustainable Social Procurement

A factor in the Regional District evaluation process is sustainable social procurement and the evaluation of proposals will take this into consideration.

As part of any submission the Proponent is encouraged to identify how they may contribute to the following key social, employment and economical goals, but not limited to the following:

- a) Contribute to a stronger local economy by:
 - promoting a Living Wage
 - Using fair employment practices;
 - Increase training and apprenticeship opportunities;
- b) Local expertise knowledge by:
 - Being locally owned;
 - Utilization of local subcontractors;
- c) Environmental Cost of Ownership;
- d) Energy efficient products;
- e) Minimal or environmental friendly use of packing materials; and
- f) Reducing hazardous materials (toxics and ozone depleting substances).

5.3 Approach

Proponents need to provide a proposal that illustrates an understanding of the Regional District context, project requirements and the process that will be used to complete the services. The Proponent's approach should address but is not limited to the following:

- a) What is your proposed project management approach, including work planning, managing milestones and deliverables, communication with Regional District staff and a timeline that will keep the project on time and on budget.
- b) What strategies do you have in place to reduce overall project time and impact on the environment, and include methods of transportation for equipment, material and labour.
- c) What is your proposed augmentation to the scope of work, such as additional tasks or processes, that may improve the project outcome. Explain why such tasks or processes are recommended.
- d) Describe any known risks, issues, and assumptions made when explaining the proposed approach and methodology.
- e) How will minimize the impact on access roads and areas used by public (when applicable) and what considerations and details will be taken into account.
- f) Do you have any proposed areas that would be used for construction, storage and access and where are they located?

5.3.1 Equipment List

Proponents need to provide an equipment list that outlines the size, model and make of the equipment which will be placed on the project and used during the course of construction.

5.4 Workplan

Proponents need to provide a detailed critical path project schedule identifying all major work tasks and milestones including but not limited to start date, key project milestones, any tentative shutdowns and phase completion date.

5.5 Site Safety Plan

Proponents need to provide a site safety plan that outlines how the work will be performed safely. The plan needs to be compliant with WorkSafe BC and other regulatory bodies. Proponents should include details on how they will access the site, ensure the safety of members of the public as well as staff, details on traffic control measures and any other safety considerations that are required to perform work of this nature.

5.6 Value Add

Proponents need to provide details about any value-added services that they are offering in connection with this project. Value-added is considered to be additional offerings that are of no additional cost. Added value considerations could be but is not limited to innovations to complete the work more efficiently and effectively, discounts, additional services being included as part of the base scope of work, community outreach and communication, training and education programs, scheduling efficiencies, etc.

5.7 Price

Proponents need to submit a fee proposal that sets out all inclusive cost as outlined in the Schedule of Quantities and Prices as well as provide separate hourly rates and material markup percentages.

Prices quoted will be deemed to be:

- in Canadian dollars;
- inclusive of duty, tariffs, FOB destination, and delivery charges where applicable; and
- exclusive of any applicable taxes.

Bidder's must provide a list of all major suppliers and manufacturers involved in the contract, including their country of origin and whether they are based in the United States.

5.8 Bid Bond

The proposal must be accompanied by a bid security in the form of a bid bond issued by a surety licensed to carry on the business of suretyship in British Columbia in a form reasonable satisfactory to the Regional District or a certified cheque or bank draft or letter of credit in a form acceptable to the Owner in the amount equal to 10% of the proposal price. If the Proponent chooses to use the BC Bid e-submission method the Proponent will need to upload an electronic copy of the Bid Bond, Certified Check, Letter of Credit or Bank Draft with their BC Bid e-submission and the original will need to be received by the Regional District within 5 business days of the closing date. If the Proponent submit an e-bond the bond must be verifiable, containing a digital signature, digital corporate seal and a verification tag or a to check that the bond document has not been altered.

6. PROPOSAL FORMAT

Proponents should ensure that they fully respond to all requirements in the RFP in order to receive full consideration during evaluation.

The following format, sequence, and instructions should be followed in order to provide consistency in Proponent response and ensure each proposal receives full consideration. All pages should be consecutively numbered.

- a) Signed cover page (see section 7.1 Mandatory Criteria).
- b) Table of contents including page numbers.
- c) A short (one or two page) summary of the key features of the proposal.
- d) The body of the proposal, including pricing, i.e. the "Proponent Response".
- e) Appendices, appropriately tabbed and referenced.
- f) Identification of Proponent (legal name)
- g) Identification of Proponent contact (if different from the authorized representative) and contact information.

7. EVALUATION

Evaluation of proposals will be by a committee formed by the Regional District and may include other employees and contractors.

The Regional District's intent is to enter into a Contract with the Proponent who has met all mandatory criteria and minimum scores (if any) and who has the highest overall ranking.

Proposals will be assessed in accordance with the entire requirement of the RFP, including mandatory and weighted criteria.

The Regional District reserves the right to be the sole judge of a qualified proponent.

The Evaluation Committee may, at its discretion, request clarifications or additional information from a Proponent with respect to any Proposal, and the Evaluation Committee may make such requests to only selected Proponents. The Evaluation Committee may consider such clarification or additional information in evaluating a Proposal.

7.1 Mandatory Criteria

Proposals not clearly demonstrating that they meet the following mandatory criteria will be excluded from further consideration during the evaluation process.

Mandatory Criteria
The proposal must be received at the Closing Location before the Closing Time.
The proposal must be in English.
The proposal must be submitted using one of the submission methods set out on the cover page of the RFP
The proposal must either (1) include a copy of the Confirmation of Proponent's Intent to be Bound that is signed by an authorized representative of the Proponent, this is also required for email submissions or (2) be submitted by using the e-bidding key on BC Bid (if applicable), in accordance with the requirements set out in the RFP
Bid Bond

7.2 Weighted Criteria

Proposals meeting all of the mandatory criteria will be further assessed against the following weighted criteria.

Weighted Criteria	Weight (%)
Capabilities	25
Project Approach and Workplan	25
Environmental Requirements	10
Site Safety Plan	10
Sustainable Social Procurement	5
Value Add	5
Price	20
TOTAL	100

7.3 Price Evaluation

The lowest priced Proposal will receive full points for pricing. All other prices will be scored using the following formula: lowest priced proposal/price of this proposal* total points available for price.

Appendix 1 Specifications

SECTION 00 01 10

Table of Contents

DIVISION 00 - Procurement and Contracting Requirements

00 01 10 Table of Contents

00 01 15 List of Drawing Sheets

DIVISION 01 - General Requirements

01 11 00 Summary of Work

01 29 13 Measurement and Payment

01 31 13 Project Coordination

01 31 19 Project Meetings

01 33 00 Submittal Procedures

01 33 20 Shop Drawings, Product Data, Material Testing, and Samples

01 35 43 Environmental Procedures / Environmental Protection Plan

01 41 00 Regulatory Requirements

01 45 00 Quality Control

01 52 00 Construction Facilities

01 60 10 Materials and Equipment

01 77 00 Closeout Procedures

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

35 05 51 Marine General Site Work

ATTACHMENTS

Attachment 1 – Department of Fisheries and Oceans (DFO)
Best Management

Practices for Pile Driving

Attachment 2 – Department of Fisheries and Oceans Best
Management Permitting

Letter of Advice

Attachment 3 – Contract Drawings

***** END OF SECTION *****

SECTION 00 01 15

List of Drawing Sheets

<u>Drawing Number</u>	<u>Title</u>	<u>Revision</u>
4551-014-S00	Cover Sheet	
4551-014-S01	General Notes and Key Plan	
4551-014-S02	General Arrangement - Sheet 1	
4551-014-S03	General Arrangement - Sheet 2 and Repair Table	
4551-014-S04	Details - Sheet 1	
4551-014-S05	Details - Sheet 2	

***** END OF SECTION *****

DIVISION 01

General Requirements

SECTION 01 11 00

Summary of Work

1 PLACE OF THE WORK

- a) The Place of the Work is located on the Keats Island Landing dock, located on the north – west side of Keats Island adjacent to the Plumper Cove Marine Provincial Park.

2 CONTRACT METHOD

- a) The Work will be performed as a Unit price Contract in accordance with the Contract Documents and paid for with measurement and payment in accordance with Section 01 29 13 - Measurement and Payment.

3 CONTRACT SECURITY

A.1 The *Contractor* shall, at least 15 days of receipt of the notice of award and prior to the commencement of construction, provide to the *Owner* a performance bond and a labour and material payment bond, each in the amount of 50% of the *Contract Price* covering the performance of the *Work*.

A.2 All bonds shall be issued by a duly licensed surety company authorized to transact a business of suretyship in British Columbia and in a form acceptable to the Owner, and shall be maintained in good standing until the fulfillment of the *Contract* including all warranty obligations pursuant to GC12.3 WARRANTY.

If the Contractor provides an e-bond the e-bond must be verifiable, containing a digital signature, digital corporate seal and a verification tag or a to check that the bond document has not been altered.

4 SCOPE OF WORK

General

- a) The Work to be completed is as shown in the Contract Documents, Drawings, and Specification.
- b) Comply fully with the provisions of the Contract Documents.
- c) The Contractor shall accept the Site in its prevailing condition at the time of commencement of Work.
- d) No temporary construction power will be available at the Site. Contractor

to provide temporary power as required.

- e) Maintain sufficient stocks of materials near the Site at all times to meet the demands of the construction schedule and milestones with a reasonable reserve to compensate for changes in the Work or changes in the construction program.
- f) Supply all construction tools and consumables required to complete the Work of this Contract.
- g) Supply and erect temporary barriers around the working area of the Site as required for safety and the protection of operating equipment.
- h) Maintain the Site security with a view for the protection of the public.
- i) Maintain cleanliness at the Place of the Work. All debris shall be moved daily into containers. Remove debris that could in any way interfere with neighbouring operations.

***** END OF SECTION *****

SECTION 01 29 13

Measurement and Payment

1 Method of Measurement

a) Mobilization and Demobilization, Site Preparation, and Plant Moves

- .1 Units: A single lump sum for all mobilization and demobilization, Site Preparation, and Plant Moves on this project as specified herein.
- .2 Plant moves will include all Work required to move material, plant and labour from one Site of the Work to another during the Contract period and payment will be under the Lump Sum item Mobilization and Demobilization, Site Preparation and Plant Moves.
- .3 Site Preparation will include all Work required to complete the requirements of the Site Work as specified herein and payment will be made under the Lump Sum item Mobilization, Demobilization, Site Preparation and Plant Moves.

b) Removal and Disposal of Specified Existing Timber Vehicle Guard, Pile Cap, Cross Bracing, and Decking

- .1 Units: A single lump sum for all Work associated with removal and appropriate disposal of the existing treated timber vehicle guard, pile cap, cross bracing, and decking members.
- .2 Includes all existing, associated connections, risers, and hardware.

c) Removal and Disposal of Existing Specified Creosote Timber Piles

- .1 Units: Disposal of existing creosote treated bearing piles as shown in the drawing set will be measured by the Kilogram (Kg), truck measure, with corresponding certified weight truck measure tickets.

d) Removal and Disposal of Specified Existing Concrete Footings

- .1 Units: A single lump sum for all Work associated with removal and appropriate disposal of existing concrete footings, as shown in the drawing set.

- .2 Includes all existing footing elements, rebar, associated connections, and hardware.
- .3 Supply and Install of 190mm x 190mm Vehicle Guard (Approach)
- .4 Units: Each lineal meter of 190mm x 190mm vehicle guard on 38mm x 190mm x 190mm risers supplied, installed and remaining an integral part of the completed Works as specified. C/W 19Ø bolt, nut, and washers.
- .5 Refer to General Notes on drawing S01 for specifications and Detail on S05.

e) Supply and Install of 190mm x 241mm Vehicle Guard (Wharfhead)

- .1 Units: Each lineal meter of 190mm x 241mm vehicle guard on 102mm x 203mm x 203mm risers supplied, installed and remaining an integral part of the completed Works as specified. C/W 19Ø bolt, nut, and washers.
- .2 Refer to general notes on drawing S01 for specifications and Detail on S05.

f) Supply and Install of 102mm x 305mm Deck Boards

- .1 Units: Each lineal meter of 102mm x 305mm deck boards supplied, installed and remaining an integral part of the completed Works as specified. C/W hardware.
- .2 Refer to general notes on drawing S01 for specifications.

g) Supply and Install of 900mm x 900mm x 900mm Formed Concrete Footings on Bedrock

- .1 Units: Each 900mm x 900mm x 900mm formed concrete footings supplied, formed, installed onto the bedrock and remaining an integral part of the completed Works as specified. Payment also includes installation of the drilled anchors, rebar, and epoxy.
- .2 Refer to general notes on drawing S01 for specifications and Detail on S04.

h) Supply, Install, and Securement of Existing Pile to Pile Cap (Existing)

- .1 Units: Each pile-to-pile cap securement connection supplied, installed and remaining an integral part of the

completed Works as specified. C/W 305mm x 305mm corbel, hardware, 25Ø bolts, nuts, washers, and strapping plate 13 on both sides.

- .2 Refer to general notes on drawing S01 for specifications and Detail on S04 and S05.

i) Supply and Install of 273mm x 305mm Pile Cap (New)

- .1 Units: Each 273mm x 305mm pile cap supplied, installed and remaining an integral part of the completed Works, as specified. C/W 19Ø x 500mm drift pins or L 102mm x 102mm, hardware, 25Ø bolts, nuts, washers, and strapping plate 13 on both sides.

- .2 Refer to general notes on drawing S01 for specifications and Detail on S04 and S05.

j) Supply and Install of Size 36 (305mm) Diameter Timber Bearing Pile

- .1 Units: Each timber bearing pile, installed and remaining an integral part of the completed Works as specified. This item includes all hardware and labour required to secure new piling to pile cap as specified, regardless of the length of pile installed to the achieved embedment depth.

- .2 Refer to general notes on drawing S01 for specifications and Detail on S04.

k) Supply and Install of HDPE Pile Wrapping

- .1 Units: Each pile wrapped with stainless steel strapping, installed and remaining an integral part of the completed Works as specified. This item includes all application products and fastening of the specified system.

- .2 Refer to general notes on drawing S01 for specifications and Detail on S04.

l) Supply and Install of Stainless-Steel Pile Strapping

- .1 Units: Each pile strapped with stainless steel strapping as required, installed and remaining an integral part of the completed Works, as specified. This item includes all application products and fastening of the strapping.

- .2 Refer to general notes on drawing S01 for specifications

and Detail on S04.

m) Supply and Install of 152mm x 203mm Cross Bracing

- .1 Units: A single lump sum of all Work associated with supply and install of 152 mm x 203mm cross bracing as specified. This item includes all hardware, materials, and labour required to secure new bracing as specified.
- .2 Refer to general notes on drawing S01 for specifications and Detail on S04.

n) Supply and Install of 141mm x 191mm Wale Timber

- .1 Units: A single lump sum of all Work associated with supply and install of 141 mm x 191mm wale timber as specified. This item includes all hardware, materials, and labour required to secure new timber as specified.
- .2 Refer to general notes on drawing S01 for specifications and Detail on S04.

o) Supply and Install of Treated Timber Fender Chocks

- .1 Units: A single lump sum of all Work associated with supply and install of treated timber fender chocks in kind as specified. This item includes all hardware, materials, and labour required to secure new timber as specified.
- .2 Refer to general notes on drawing S01 for specifications and Detail on S04.

p) Supply and Install of Aluminum Flashing on Fender Piles

- .1 Units: each aluminum flashing supplied, installed and remaining a part of the integral Works as specified. This item includes all hardware, materials, and labour required to secure flashing as specified.
- .2 Refer to general notes on drawing S01 and locations on S02/S03.

q) Re-align and Re-secure Bearing Pile F19

- .1 Units: A single lump sum for all Work associated with re-alignment of bearing pile F19. This item includes all the hardware, material, and labour required to re-align and secure bearing pile as specified.

- .2 Refer to general notes on drawing S01 and locations on S02/S03.

r) Contractor Prepared Environmental Protection Plan

- .1 Unit. A single lump sum for all Work in the Contractor preparation, implementation, and execution of the Contractor prepared Environmental Protection Plan as specified herein these contract documents.

***** END OF SECTION *****

SECTION 01 31 13

Project Coordination

.1 COORDINATION

- a) Assume full responsibility for all construction means, methods, techniques, sequences and procedures, and for coordinating all portions of Work under the Contract Documents. If conflicts arise, refer the matter to the Consultant for his decision.
- b) Examine the construction Drawings and Specifications, and the Work of all other Contractors which may affect the performance of the Work. Report to the Consultant immediately, any defects or incomplete Work which may affect proper execution of the Work. Commencement of Work constitutes acceptance of surfaces and conditions except as to latent defects not apparent at the time of commencement and all claims waived against the Owner.
- c) Inform the Consultant and other parties concerned prior to performing Work which attaches to or affects Work of other Contractors, utilities, or the Owner.
- d) Ensure cooperation with Subcontractors so that Work is carried out expeditiously and satisfactorily until completion, and cooperate and coordinate the Work with other Contractors.
- e) Maintain existing exits and provide safe means of egress from all parts of the Work area at all times.
- f) Coordinate Work with the Consultant and other Contractors who will be working on the Site.
- g) Refer to Section 01 11 00 - Summary of Work for the designation of the Prime Contractor in the event that multiple Contractors are on the Site and other coordination related responsibilities.
- h) The Contractor must provide at least five days advance written notice to the Owner for all periods of full dock closure to accommodate those portions of work that must remain closed to the public. The Contractor must minimize the duration of those full public closures and will be responsible and will be responsible for providing the advance public notification signage.
- i)

.2 SITE ORGANIZATION

- a) Upon notification of Contract award, appoint key personnel to supervise and direct the Work on-Site and to be available to accept instructions from the Consultant. The Owner reserves the right to remove any personnel from the Site if the performance of such personnel concerned is detrimental to the performance of the Work.
- b) Determine and review manpower requirements on a regular basis with the Consultant.
- c) Ensure that sufficient numbers of each class and type of trade are available when required to carry out the Work.

.3 CUTTING AND PATCHING

- b) Coordinate the execution of the Work with other Contractors to the satisfaction of the Consultant as required for the satisfactory and expeditious completion of the Work ensuring the most efficient arrangement of elements and equipment in the available space.
- c) Executing cutting, fitting, or patching of Work which may be required to:
 - .1 Make several parts fit correctly.
 - .2 Uncover Work to provide for installation of ill-timed Work.
 - .3 Remove and replace defective Work.
 - .4 Remove and replace Work not conforming to Specifications.
 - .5 Remove samples of installed Work as specified for testing.
 - .6 Install specified Work in existing construction.
- d) In addition to Contract requirements, upon written instructions of the Consultant:
 - .1 Uncover Work for inspection by the Consultant.
 - .2 Remove samples of installed material for testing.
 - .3 Remove Work to provide for alteration of existing Work.
 - .4 Provide form, templates, anchors, sleeve inserts, and accessories required to be fixed to or inserted in the Work of other Contractors together with clear and precise Drawings and instructions. Check for correct installation as the Work proceeds.
 - .5 Pay for the cost of extra Work and make up time required

as a result of failure to provide necessary coordination information or items to be fixed or built-in in adequate time or for Work wrongly installed.

- .6 Ensure safety of new and/or existing Work when cutting or carrying out alterations to any part of the Work.
- .7 Do not cut or alter Work performed under separate Contract without the Consultant's permission.
- .8 Submit written notice to the Consultant, requesting approval to proceed with cutting, designating the time to allow for observation.
- .9 Provide shoring, bracing, supports, or other means of protection as required to maintain structural integrity of the Work.
- .10 Restore Work which has been cut or removed, install new materials to provide complete Work in accordance with Specifications.

.4 SCHEDULING

- a) Contractor shall schedule its operations to avoid any delays to the Work of other Contractors.
- b) Contractors will cooperate fully with other Contractors and obtain their approval for any operations which could impede or prevent their Work from continuing as requested. In the event of any conflicts which cannot be resolved by the parties concerned, the decision of the Consultant will be final. In general, that Work that is most critical to completing the Project on schedule will have priority.
- c) Refer to Section 01 11 00 - Summary of Work for the scheduling commitments of zones of the Work for the Marine Contractor.

***** END OF SECTION *****

SECTION 01 31 19

Project Meetings

.1 PRE-CONSTRUCTION MEETING

- a) After notification of Contract award, the Owner will arrange and conduct a pre- construction meeting to be attended by authorized representatives of the Contractor and major Subcontractors. The Owner will advise all other interested parties whose coordination is required during construction and request their attendance.
- b) Topics for discussion will include methods and means by which full cooperation and coordination of all participants can be achieved during construction.
- c) The Owner may document the responsibilities and necessary activities of participants as discussed and distribute copies to each participant.

.2 PROGRESS MEETINGS

- a) The Owner will conduct, chair, and document weekly progress meetings throughout the construction period and will inform all parties concerned in advance of starting time and venue of the proposed meeting. The Contractor shall make representative(s) available for meetings as required. In general, meetings will be held at the Site in suitable facilities provided by the Contractor.
- b) Topics for discussion will include construction schedule, Contractor's forecast Work, and equipment and methods. If the Work schedule is deemed to be slipping, the Contractor shall be prepared to discuss his methods to bring the Work back on and maintain the schedule.
- c) Ensure responsible persons attend who have the required authority to commit the Contractor to solutions agreed upon at the meeting. Assign the same person(s) to attend such meetings throughout the construction period. The Consultant shall endeavour to make expeditious technical decisions should such issues develop.
- d) Subcontractors, material Suppliers, and others may be invited with approval of the Owner to attend meetings in which their aspects of the Work are involved. The relations between such participants and discussions related to, are not the responsibility of the Owner and do not form part of the meeting's content.
- e) Inform the Owner in advance of meetings regarding all items to be added to the agenda.

- f) The Owner will distribute copies of the minutes of the meetings to all participants accordingly.

.3 SAFETY MEETINGS

- a) The Contractor must undertake responsibility for managing overall Site safety and conduct safety meetings as required to inform workers.

***** END OF SECTION *****

SECTION 01 33 00

Submittal Procedures

.1 GENERAL

- a) Be responsible for the following:
 - .1 Verification of field measurements, field construction criteria, catalogue numbers, and similar data.
 - .2 Coordinate each submittal with the requirements of the Work and the Contract Documents. Individual submittal will not be reviewed until all related information is available.
 - .3 Errors and omissions in submittal. The Consultant's review of submittal does not relieve this responsibility.
 - .4 Notify the Consultant in writing at the time of Bid submission, of any deviation in submittal from requirements of the Contract Documents.
- b) Deliver submittals as required by the Specifications well in advance of schedule dates or fabrication, manufacture, erection, and installation to provide adequate time for reviews, securing necessary approvals, possible revisions and re-submittals, placing orders, and securing delivery to avoid construction delays. Allow a minimum of ten Working Days for Consultant/ Owner's review of each submittal.
- c) Accompany each submittal with a letter of transmittal containing all pertinent information required for identification and checking of transmittals including date of submission, Project name, Contractor's name and contact information, contact person's name and position, and subject identification such as colour, finish, material type, trade name, and texture.
- d) When submittals are resubmitted for any reason, transmit under a new letter of transmittal.
- e) Do not carry out Work until submittals have been reviewed by the Consultant/ Owner. Work adjacent to or impacted by the submittal shall not proceed until review of the submittal is complete and has been returned to the Contractor.
- f) Provide the Owner with advanced notice for any necessary Site visits including field reviews.

- g) Contractor is responsible for the distribution of submittals reviewed by the Consultant/ Owner to all trades necessary to complete the Work. The Contractor shall always maintain an up-to-date file of all submissions and revisions on Site.
- h) Shop Drawings, Product data, samples, and mock-ups shall be submitted in SI metric units. Where items or information are not in SI metric units, provide converted values in brackets adjacent to imperial units.
- i) Contractor to revise submittals as indicated by the Consultant's written mark-ups or comments and resubmit as required. Fabrication, selection or purchase of components described in the submittal prior to review by the Consultant is at the Contractor's own risk.

.2 SAMPLES

- a) Before delivery of materials to the Site, submit samples of materials as required by sections of the Specifications or as requested by the Consultant.
- b) Label samples as to origin and intended use in the Work and in accordance with the requirements in each section of the Specifications.
- c) Samples must represent physical examples to illustrate materials, equipment, or workmanship, and to establish standards by which completed Work is judged.
- d) Ensure samples are of sufficient size and quantity, if not already specified, to illustrate:
 - .1 The quality and functional characteristics of Product or material, with integrally related parts and attachment.
 - .2 Full range of colours available.
 - .3 After acceptance, samples may be used in the construction of the Project.
 - .4 Submit number of samples as specified in each section of the Specifications.

.3 TEST REPORTS AND CERTIFICATES

- a) Clearly show on each certification the name and location of the Work, name and address of the Contractor, quantity and date of shipment, and delivery and name of manufacturing or fabricating company. Ensure certificates are signed by an authorized representative of the

manufacturing or fabricating company.

- b) Submit two copies of all test reports submitted with certificates of compliance showing date or dates of testing, the specified requirements for which the testing was performed, and results of the test or tests.
- c) Provide certificates and test results, fully identifiable with the items, stating that requirements have been met for items conforming to special materials or testing requirements or designed or manufactured in accordance with special codes.

.4 SCHEDULE OF WORK

- a) Submit proposed schedule of Work in accordance with the following requirements.
- b) Update schedule on a weekly basis. Submit for review by the Owner on the first day of every month unless otherwise directed by the Consultant.
- c) Coordinate each revised schedule of Work with schedules of Subcontractors, Consultants, and the Owner.
- d) Adjust the schedules of Work as required by the Owner to expedite the Work to meet the completion date.
- e) Obtain approval by the Owner of each revised schedule of Work prior to proceeding with the Work.

.5 RECORD DRAWINGS

- a) After award of Contract, the Owner will prepare a set of reproducible Drawings for purpose of maintaining record Drawings. Accurately and neatly record deviations from the Contract Documents caused by Site conditions and changes ordered by the Owner.
- b) Record locations of concealed components of municipal, mechanical and electrical services discovered or located during the Work.
- c) Identify Drawings as "as-built copy". Maintain in new condition and make a copy to submit to the Owner for review on a monthly basis.
- d) On completion of the Work and prior to final inspection, submit record Drawings to the Owner.

.6 CERTIFICATION OF TRADESMEN

- a) Provide certificates, at the request of the Consultant and/or Owner, to establish qualifications of personnel employed on the Work where such

certification is required by authorities having jurisdiction, by the Consultant or by the Contract Documents.

.7 WARRANTIES AND GUARANTEES

- a) Submit warranties and guarantees as requested in sections of the Specifications showing title and address of Contract, guarantee commencement date, and duration of guarantee.
- b) Clearly indicate what is being guaranteed and what remedial action is to be taken under guarantee.
- c) Ensure guarantees bears the signature and seal of Contractor.

.8 PROCEDURES

- a) Review by the Owner of Contractor's technical methods, procedures, installation, and erection sequences, is for general concept only and in no way relieves or mitigates the Contractor's obligation for the safe execution and completion of the Work in accordance with the Specifications and Drawings and all applicable codes and ordinances.

.9 BREAKDOWN OF COSTS

- a) Furnish to the Owner, upon request, a detailed breakdown of costs for those portions of the Work requested from time to time by the Owner.

***** END OF SECTION *****

SECTION 01 33 20

Shop Drawings, Product Data, Material Testing, and Samples

.1 GENERAL

a) Description of Work

- .1 This section specifies requirements for Contractor submissions of the following to the Owner and/or Consultant for review:

- .1 Shop Drawings.
- .2 Product data.
- .3 Samples and mock-ups.

- .2 Material testing reports.

- .1 Additional specific requirements for submissions are specified in individual sections.

b) Submittal Requirements

- .1 All submissions of Project components, Products, samples, etc. shall be clearly marked with the following information:

- .1 Date of submission.
- .2 Project title and number.
- .3 Name, address, telephone, e-mail address, contact person of the following:
 - Subcontractor.
 - Supplier.
 - Manufacturer.
- .4 In addition to the above information, the Contractor shall indicate via stamp on transmittal (if submittal is a Product), Shop Drawing, or Product information sheet, their corporate name, address, and telephone number signed by Contractors authorized representative certifying

approval of submissions, verification of field measurements, and compliance with Contract Documents. Submittals which do not contain this information will be returned without being examined and shall be rejected.

.2 Shop Drawings shall include, but are not limited to, the following information:

- .1 Fabrication details.
- .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 with adjacent Work.
- .11 Materials.
- .12 Finishes.

.3 Should the Contractor feel it is necessary to deviate from the details to fully meet the intended requirements of the Project, they are to provide written documentation and rationale for the deviation to the Owner at the time of submission.

.2 SHOP DRAWINGS

- a) Shop Drawings are defined as original Drawings, or modified standard Drawings, catalogue information, illustrations, schedules, performance charts, brochures, and other Product data provided by the Contractor, to illustrate details of portions of Work, which are specific to Project requirements.

- b) Adjustments made to Shop Drawings by the Owner are not intended to change the Contract Price. If adjustments affect the value of Work, state such in writing to the Owner
- c) Do not proceed with Work until such time a Change Order has been issued.
- d) Cross reference Shop Drawing information to applicable portions of Contract Documents.

.3 SAMPLES

- a) Samples include but are not limited to examples of materials, Products, equipment, hardware, etc. that clearly illustrate the quality, finishes, and workmanship indicated in the Contract Documents.
- b) Unless otherwise noted on the Contract Documents, the Contractor shall submit two samples of each element.
- c) Unless otherwise indicated in the Contract Documents, samples are to be delivered prepaid to the Consultant's business address or Site office.
- d) Where colour, pattern, or texture is a criterion, submit full range of samples.
- e) Comments made by the Owner regarding the sample review are not intended to change the Contract Price. If adjustments affect the value of Work, state such in writing to the Owner. Do not proceed with Work until such time a Change Order has been issued.
- f) Reviewed samples will become standard of workmanship and material against which installed Work will be compared.

.4 SHOP DRAWING, AND SAMPLE REVIEW

- a) The review of Shop Drawings, and samples by the Owner and/or Consultant is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that the Owner and/or the Consultant approves the detailed design inherent in the Shop Drawings, responsibility for which shall remain with the Contractor, and such review shall not relieve the Contractor of responsibility for requirements of the construction and Contract Documents.

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 coordination of the

Work of all sub-trades.

.5 MATERIAL TESTING AND INSPECTIONS

- a) The Contractor, at no cost to the Owner and as part of their Work, shall coordinate the performance of all inspections and material testing and approvals required by this Contract. Should the test require a representative sample or repair of as constructed area as a result of testing, the Contractor at no cost to the Owner will undertake the selection and delivery of samples to the testing agency and carry out repairs to constructed Work as required by the Consultant. Unless otherwise noted, all tests performed by an independent testing agency will be paid for by the Contractor.
- b) Prior to the start of Work, the Contractor shall provide the Owner with a schedule outlining the required tests and inspections and indicate the dates or frequency of testing or inspections to ensure that they are fully coordinated with the requirements of the Contract Documents.
- c) The Contractor shall provide certificate of inspections and test results to the Owner via e-mail noting within the body of the e-mail whether the tests or inspections conform to the requirements of the Contract Documents.
- d) Should the Contractor cover Work to be tested or inspected prior to carrying out required testing or inspections, then the Owner has the right to request at no cost to the Owner to have the Work in question be uncovered and tested. Following positive test results or inspection, the Work in question is to be reinstated at no cost to the Owner as per the Contract Documents.
- e) Should the inspection or test results indicate that the Work by the Contractor do not meet the requirements of the Contract Documents, the Consultant has the right to request at no cost to the Owner that the Work be demolished or removed from the Site, replaced, or re- executed in accordance with the Contract Documents and retested or inspected to ensure conformance with the Contract Documents.

***** END OF SECTION *****

SECTION 01 35 43

Environmental Procedures/Environmental Protection Plan

.1 GENERAL

a) Summary

- .1 This Section covers performance-based environmental standards to be met by the Contractor for the Work.

b) References

- .1 Environmental protection practices to comply with the following acts, regulations, and guidelines, as applicable:
 - .1 Environment Management Act; Ministry of Environment.
 - .2 Archeological Site Surveillance provided by Owner.
 - .3 *Fisheries Act*; Fisheries and Oceans Canada.
 - .4 Land Development Guidelines for the Protection of Aquatic Habitat (1992); Fisheries and Oceans Canada and Ministry of Environment.
 - .5 Occupational Health & Safety Regulation; WorkSafeBC.
 - .6 Waste Management Act; Ministry of Environment.
 - .7 Best Management Practices for Pile Driving and Related Operations – BC Marine and Pile Driving Contractors Association.
 - .8 Wildlife Act, Ministry of Environment.
 - .9 Environmental Protection Practices.

c) Submittals

- .1 Action Submittals:
 - .1 Environmental Protection Plan (EPP), including spill prevention and emergency

response plan.

.2 Informational Submittals:

- .1 Details of incidents, non-compliance, and non-conformance events with the associated corrective action(s) within one working day of the observation of the incident or event.
- .2 On a weekly basis, provide a written update to the Owner demonstrating that the Contractor is complying with the reviewed EPP, detailing all incidents, non-compliance, and non-conformance events, and associated corrective actions.

d) Permits

- .1 Permits and/or authorizations for the handling, storage, transport and/or disposal of materials, including but not limited to sediment and water, for the Work are the responsibility of the Contractor.
- .2 Owner has submitted a Request for Review to Fisheries and Oceans Canada under the *Fisheries Act*.
- .3 The Owner has determined that a permit or approval is not required under the Navigation Protection Act.
- .4 The Owner will obtain any permits required under the BC Heritage Conservation Act.

e) Environmental Manager

- .1 The Owner has retained a Qualified Environmental Professional (QEP) to ensure that environmentally sound construction practices are followed by the Contractor at all times, to monitor the impact of construction on the environment, and to ensure that permit requirements are satisfied.
- .2 The Owner's QEP duties include:
 - .1 Defining sensitive areas.
 - .2 Providing construction guidelines.

- .3 Recommending and developing appropriate mitigation measures.
- .4 Liaising with the Contractor, the Consultant, and government agencies.
- .5 Preparing environmental documentation for the Owner and government agencies, including report on all environmental measures that are required and being undertaken at the Work Site.
- .6 Routine inspections of construction activities and practices and throughout in-water activities.
- .7 Reviewing the spill prevention and emergency response plan.
- .8 Emergency spill response and facilitating subsequent cleanup activities.
- .9 Incident investigation and reporting.
- .10 Stopping Work if it appears that permit or approval conditions are not being followed.

f) Environmental Protection Plan

- .1 The EPP will be prepared by the Contractor. The plan will include, where appropriate, Site-specific strategies to deal with the following matters:
 - .1 A description of the environmental management responsibilities of the Work.
 - .2 A description and an organization chart of the Contractor's and external agencies organizational lines of reporting and communication.
 - .3 A list of the environmental precautions, actions, and mitigation measures that are applicable to the implementation of the Work and how the Contractor will implement these items in the Work.

- .4 Details of Site-situated Contractor's Equipment.
 - .5 Liquid storage, fueling and equipment operation and maintenance plan and procedures.
 - .6 Hazardous materials handling procedures.
 - .7 Concrete installation procedures.
 - .8 Spill prevention and emergency response planning.
 - .9 Solid wastes handling procedures, including dust suppression.
 - .10 Erosion and sediment control.
 - .11 Noise and vibration mitigation, including mitigations for piling activities.
 - .12 Work Site inspection and reporting.
 - .13 Archaeological chance find procedure.
- .2 The EPP will be submitted to the Owner's QEP and Consultant for review and approval.

g) Contractor's Responsibility

- .1 Undertake the Work in strict compliance with the conditions contained in the appropriate acts, authorization permits, licenses, and approvals. Do not perform, omit, or permit, any act or thing which contravenes the requirements of this Section, or contravenes applicable legislation, regulations and/or bylaws, or which causes, or has the potential to cause, environmental damage.
- .2 In the event of a discrepancy between any of the requirements of this Section, and the provisions of any legislation, regulations, or municipal bylaws, the provisions of existing laws, regulations and bylaws must prevail.
- .3 Prepare the Environmental Protection Plan that demonstrates that the requirements of the Contract will be met and includes prevention and response measures for spills and other emergency events.

- .4 Should any of the Contractor's activities contravene the requirements of the Contract Documents, report the incident to the QEP. The Owner's QEP may issue a stop Work order directing the immediate cessation of such activities. The Owner may itself undertake remedial measures, or may order the Contractor to do so, as deemed necessary. The costs of any Work stoppages, and/or remedial Works thus undertaken, must be paid by the Contractor.
- .5 Notify the Owner, in writing within 30 minutes, upon the discovery of any hazardous conditions within or immediately adjacent to the Work Site. The Contractor must take suitable precautions to prevent injury to people, and damage to the environment or property, until the hazardous conditions are remedied or removed by the responsible party.

.2 EXECUTION

a) Environmental Monitoring and Supervision

- .1 The Owner's QEP may direct the Contractor to immediately suspend Work if the results of environmental monitoring indicate that Work is contravening the EPP, and/or the terms and conditions of permits, licenses, and approvals, including, but not limited to:
 - .1 The release of deleterious substances into the environment.
 - .2 Activities which appear to be an infraction of any environmental regulations or requirements.
 - .3 Physical degradation of the environment.
 - .4 Imminent risk of any such events.
- .2 If the Work is suspended, Work shall not resume without the prior approval of the Owner or Environmental Manager. Approval may be conditional upon demonstrations to the satisfaction of the QEP, and all authorities having jurisdiction, that the Contractor has taken appropriate steps, and instituted sufficient safeguards, to prevent a repeat of such incidents. The Contractor will not be entitled to additional time or monetary compensation for

suspension delays.

- .3 Environmental monitoring and inspection by, or on behalf of, the Owner does not relieve the Contractor of its sole responsibility for the performance of the Work in accordance with the terms of the Contract and the terms and conditions of permits, licenses, and approval.

b) Air Quality and Dust Control

- .1 Control fugitive dust and other airborne emissions generated from the operation and movement of vehicles and machinery, and from the handling and stockpiling of soils and other construction materials in laydown areas.
- .2 When performing demolition, cleaning, or other Site preparation Work, utilize dust collection and filtration equipment (e.g., vacuum filter bags).
- .3 Cover or wet down all friable materials to prevent blowing dust and debris.
- .4 When watering roads to control dust, appropriate silt control measures must be employed to ensure silt laden water does not enter the storm sewers or watercourses.
- .5 Burning of refuse or other construction waste materials is strictly prohibited.
- .6 Properly maintain all equipment to reduce gaseous pollutant emissions.

c) Drainage and Sediment Control

- .1 Control, collect, treat and discharge to the sanitary sewer system all dewatering, storm, and process water within on-land construction Work areas.
- .2 The methods of control, handling, and disposal of erosion, sediment and water are to be by whatever means are necessary and in conformance with this Section to obtain satisfactory working conditions and maintain the progress of the Work.
- .3 Handle and dispose of all sediment, construction and excavation wastes, or other substances deleterious to aquatic life to prevent their entry into the ocean.

d) Environmentally Harmful Products

- .1 Store and handle fuels, oils, bitumen, cement, paints, solvents, cleaners, used fuel and oil filters, and other Work materials that may be environmentally harmful, in a way to eliminate leakage and spillage, and to allow containment and recovery in the event of a spill.
- .2 Should the Work involve the storage, handling, or use of any environmentally harmful products, or should hazardous wastes be generated, or be likely to be generated, using such products, include relevant details thereof in the Environmental Protection Plan. The terms “environmentally harmful products” and “hazardous wastes” are collectively referred to as “hazardous materials” hereinafter.
- .3 The disposal of hazardous waste is to be governed by the *Environmental Management Act*, the Special Waste Material Regulation thereto, and any other relevant regulation to the Act.
- .4 Environmentally harmful products not in use, or earmarked for use, and/or hazardous materials, must be removed promptly from the Work Site by the Contractor.
- .5 The Contractor is not permitted to place petroleum storage containers on the Work Site, neither underground nor above ground. The Contractor may store petroleum required for the Project on Work barges provided proper containment, spill supplies, and fuel handling procedures are in place.
- .6 All refueling shall take place >30m from water to the greatest extent possible. In circumstances where this is not possible (i.e. refueling of barge-based cranes), refueling activities must be isolated from receiving environment by use of drips trays and spill pads while fueling.

e) Solid Non-Hazardous Waste

- .1 Dispose of demolition, land clearing, and construction waste in accordance with the intent of the provincial *Environmental Management Act*, and with the applicable bylaw requirements.

- .2 Do not dump or burn garbage or any other waste associated with the Work. Should garbage or Work-related waste be dumped within 30 minutes act to clean up and remove the waste material to an approved location. The costs of the clean-up and removal of garbage and dumped materials to be paid by the Contractor.
- .3 The Work Site must be kept in a clean and orderly state. All waste materials shall be placed promptly in bins or similar. No waste shall enter the water or placed in the intertidal area.

f) Spill Prevention and Emergency Response Planning

- .1 Undertake regular scheduled inspections of all hazardous materials, and equipment containing hazardous materials, for signs of leakage. During such inspections, ensure that all personal protective clothing and equipment, and other emergency response items, are in place and in good working order.
- .2 The Contractor shall have a written Work Site emergency response plan appropriate to the scale of the proposed construction activities. The plan is to include:
 - .1 The probability and severity of an adverse effect to health, property, or the environment, of a spill of sewage, chlorinated water, or hazardous materials, used, handled, or stored on the Work Site.
 - .2 Spill/release notification and alerting procedures.
 - .3 Spill containment, recovery, and clean-up procedures.
 - .4 On-[Site](#) spill/release clean-up materials, equipment, and locations.
 - .5 Names and telephone numbers of persons and organizations that may be contacted in the event of a potential environmental incident.
- .3 The emergency response plan to be available for inspection

by the Owner and regulatory agency personnel and be posted at conspicuous locations throughout the Work Site.

- .4 All equipment operating within Work areas below the High-Water Mark shall utilize readily biodegradable and non-toxic lubricants and hydraulic oils, unless specifically consented by the QEP.
- .5 Maintain a, readily available, supply of suitable spill prevention and emergency response equipment on the Work Site at all times. All equipment must be in effective working condition and ensure that personnel are adequately trained in its use to deal with environmental emergency situations.
- .6 In the event of an environmental emergency, notify the QEP within 30 minutes. If the environmental emergency is a spill to land of a hazardous material in quantities equal to or greater than those listed in the Spill Reporting Regulation under the *Environmental Management Act*, immediately notify the Provincial Emergency Response Program (PEP) at 1-800-663-3456. Spills of any hazardous material, or any other material, which could be deleterious to fish, must be reported to Environment Canada at 604-666-6100.
- .7 Submit written incident reports to the QEP within 12 hours of any environmental incident or spill/release. The incident report to identify the reporting organization, date, time, location, hazardous materials involved, source and persons or organizations notified. In addition, the report must describe how the spill or release occurred, remedial action taken or planned, and actions necessary to prevent recurrence.

g) Sedimentation and Water Handling

- .1 Silts and fine materials introduced into water systems can have adverse effects on the aquatic environment. Suspend operations if there is evidence that Site water is entering the storm drains or natural drainages, or if surface street runoff surrounding the Work Site enters the storm drainage system.
- .2 Should water quality criteria (Canadian Council of Ministers for the Environment and BC Water Quality Guidelines) for turbidity be exceeded, construction will be stopped until the

situation is rectified to the satisfaction of the Environmental Manager.

- .3 Underwater noise from the in-water pile driving must not exceed 30kPa @1m from the pile. A marine mammal exclusion zone will be established by the Environmental Manager to a maximum distance of 150 m, if the noise produced during pile driving exceeds 160 dB. Pile driving will be suspended if a marine mammal enters the exclusion zone. Hydrophone monitoring will be required at the onset of piling to determine levels of piling noise generated.
- .4 Vibratory pile driving should be used whenever possible. If impact pile driving is required, it must be performed out-of-water.

h) Sensitive Areas

- .1 The Contractor shall provide flagging to limit access and impact to sensitive areas prior to commencement the Work, as defined by the QEP.

i) Navigation

- .1 Contractor shall submit a Notice to Shipping prior to construction.
- .2 The Contractor will comply with all regulatory requirements relating to navigation, including the marking and lighting of Works.

***** END OF SECTION *****

SECTION 01 41 00

Regulatory Requirements

.1 GENERAL

- a) Throughout the Specification (Divisions 01 through 35), references are made to codes and standards to establish minimum acceptable standards of materials and workmanship.
- b) Perform Work in accordance with the latest published edition at the date of submission of the Bid unless otherwise stated.
- c) Provide materials and workmanship which meet or exceed the specifically named codes or standard.

.2 CODES, REGULATIONS, AND BYLAWS

- a) All Work to be executed in accordance with all applicable codes, laws, and regulations of the national, provincial, and municipal building codes, and other Acts, Regulations and Codes pertinent to Place of the Work.
- b) Give all requisite notices in connection with this Work to the proper authorities necessary for the construction and completion of the Work on land or in the water and deliver to the Owner all certificates for any branch of the Work for which such certificates may be required in connection with the Contract.
- c) Comply with all municipal bylaws, including in relation to noise. The Owner will not issue a variance to the noise bylaw relating to the hours of construction for the Work.
- d) The Contractor must prepare and deliver notices to all residents, and occupiers of property adjacent to the construction Site to notify them of the hours of construction. The notice should include a description of the Work being undertaken and a contact person and telephone number that residents may contact their concerns. Best industry practices must be undertaken to minimize excessive noise, particularly during early morning and evening hours.
- e) Comply with all Federal and Provincial Acts, Regulations and Codes of Practice so that the Work does not adversely affect the environment of all streams, rivers, lakes, and other bodies of water within the scope of the Contract.
- f) Refer to Section 01 35 43 Environmental Procedures for applicable environmental regulations.

.3 ARCHAEOLOGICAL

- a) The Owner has retained a professional archeologist and chance-find procedures that define the steps that will be taken in the event that any archeological sites or artefacts are discovered will be prepared. The professional archeologist and Indigenous representatives may be onsite during construction to provide oversight and guidance to the Contractor.

.4 TRADEMARKS AND LABELS

- a) Keep intact all trademarks and labels as required by authorities having jurisdiction to enable identification of materials and equipment.

***** END OF SECTION *****

SECTION 01 45 00

Quality Control

.1 TESTING AND INSPECTION

- a) Unless specified otherwise in individual sections, all testing and inspection shall be carried out by qualified independent testing and inspection agencies approved by the Owner and paid for by the Contractor.
- b) Implement a quality control plan to continuously monitor the quality of all aspects of the Work. Assign one individual to be responsible for implementation of the quality control plan for the duration of the Work.

.2 REVIEW AND TESTING BY CONSULTANT

- a) Give timely notice requesting field review if Work is designated by the Specification or bylaw for special tests, inspections, or approvals by the Consultant or governing authority.
- b) The Consultant may order any part of the Work to be examined if such Work is suspected to be not in accordance with the Contract. If, upon examination such Work is found not in accordance with the Contract Documents, correct such Work and pay the cost of examination and correction.
- c) Review and testing by the Consultant or the appointed inspector shall not relax the Contractor's responsibility to execute the Work in accordance with the Contract.
- d) If defects are revealed during inspection and/or testing, the Consultant or the appointed inspector may perform additional inspection and/or testing to ascertain the full degree of the defect. Correct defects and irregularities as directed by the Consultant at no cost to the authority. Pay costs for retesting and re-inspection.

.3 REJECTED WORK

- a) Remove defective Work, whether the result of poor workmanship, use of defective Products, or damage, and whether incorporated in the Work or not, which has been rejected by the Consultant as failing to conform to the Contract. Replace or re-execute in accordance with the Contract.
- b) If, in the opinion of the Contractor, it is not expedient to correct defective Work or Work not performed in accordance with the Contract, provide a detailed Non-Conformance Report complete with a proposed solution to the Owner for evaluation. If, in the opinion of the Owner, it is not expedient to correct defective Work or Work not performed in accordance

with the Contract, the Owner may deduct from the Contract Price the difference in value between the Work performed and that called for by the Contract, the amount of which shall be determined by the Consultant, after due consultation with the Contractor and the Owner.

.4 REPORTS

- a) Submit two copies of inspection and test reports promptly to the Owner.
- b) Submit two copies of material test certificates as may be requested or as required in individual Specification sections.

***** END OF SECTION *****

SECTION 01 52 00

Construction Facilities

.1 GENERAL

- a) Refer also to Section 01 11 00 - Summary of Work, for specific requirements associated with construction facilities and temporary control.
- b) Provide temporary facilities and services required for the construction of the Work and as required by the jurisdictional authorities.
- c) Obtain approval of the Owner for location, appearance, and arrangement of temporary facilities and services.
- d) Ensure facilities are kept clean. Paint, improve, or replace as directed by the Owner.
- e) On completion of the Work, remove all temporary utilities, buildings, facilities, and foundations, and any debris resulting from such Work.
- f) Restore areas used for temporary facilities and leave them in a condition satisfactory to the Owner.
- g) Provide and maintain all temporary facilities and services required to accomplish the Work in accordance with the construction schedule.
- h) Submit to the Owner a list of temporary buildings that the Contractor intends to bring to the Place of the Work.

.2 Documents Required

- a) Maintain at Contractor's Work area, one copy each of the following:
 - .1 Contract Documents.
 - .2 Contract Drawings.
 - .3 Copy of Approved Construction Schedule.
 - .4 Specifications.
 - .5 Addenda.
 - .6 Reviewed Shop Drawings.
 - .7 Change Orders.
 - .8 Field Work Orders.

- .9 Field Memos.
- .10 Other Modifications to Contract.
- .11 Field Test Reports.
- .12 Letters of Environmental Approval.

.3 TEMPORARY UTILITIES

a) Power and Lights

- .1 Provide lighting and power facilities as required for the execution of the Work, in accordance with rules and regulations of the Canadian Electrical Code, and the local authority having jurisdiction.
- .2 Whenever any part of the Work is required to be performed at night, Contractor shall provide and maintain, from sunset to sunrise, such lights on or about the Works as the Owner deems necessary for the proper observation of the Works and performance of the Work; but, in any event, in compliance with any applicable laws and regulations.

b) Water Supply

- .1 The Contractor shall pay for all costs associated with installing temporary water service to the construction area.
- .2 Connect to water supply source and provide a water distribution system on and to Work for all construction purposes.
- .3 Prohibit wastage of water.

c) Sanitary Facilities

- .1 Sanitary facilities for the workforce are not available at the Site. The Contractor shall provide portable facilities as required.
- .2 Maintain facilities in proper sanitary condition.

d) Compressed Air

- .1 Provide compressed air as required for construction purposes.

.4 FIELD OFFICES AND SHEDS

a) Site Offices and Storage Facilities

- .1 The Contractor shall provide his own field office that shall be suitable to hold routine Project meetings.
- .2 Provide covered Work areas and storage facilities required to protect equipment and materials from weather. Provide storage sheds with security locks to protect materials, equipment, and tools from pilferage and weather.

.5 WORK AREAS AND ACCESS

a) Work Areas

- .1 Work areas may be restricted or Work rescheduled to avoid interference with other Work at the Site.
- .2 Maintain the worksite in a neat, orderly condition during construction to the satisfaction of the Owner.
- .3 Dispose of debris and surplus materials off-Site on a routine basis.

b) Access

- .1 Avoid obstructing access routes. Do not clutter with temporary storage, equipment, or debris, those areas where Work has been completed, particularly areas where other Contractors may be working. Maintain access to all areas served by existing access routes.

.6 CONSTRUCTION AIDS

a) Enclosures

- .1 Include temporary enclosures for the Work as required to protect it in its entirety or any part of it, against elements, to maintain the environmental conditions required for Work within the enclosure, and to prevent damage to materials and equipment stored within.
- .2 Provide enclosures to withstand wind pressures required for the building by authorities having jurisdiction.
- .3 Erect enclosures to permit complete access for installation of Work during the time enclosures remain in place.
- .4 Take precautions to ensure that shoring, Construction

Equipment, materials, or any operations, or forces of nature which apply loads to any part of the Work shall not damage the Work.

.7 EXISTING SERVICES AND WORKS

a) Existing Services

- .1 The Contractor shall be responsible for obtaining information concerning services, whether below, upon, or above the ground, and for the repair of damage to services caused by the Work of this Contract. Obtain approval of the Owner for methods of protecting services.
- .2 Before commencing Work, complete a BC OneCall to notify facility Owners in the vicinity of the Site.
- .3 Before commencing Work, establish location and extent of service lines in area of Work and notify the Owner of findings.
- .4 Where unknown services are encountered, immediately advise the Owner and confirm findings in writing.
- .5 Record locations of maintained, re-routed, and abandoned service lines.

b) Existing Works

- .1 All existing Works, property, and facilities (public and private) in or adjacent to the construction area shall be adequately protected by the Contractor from damage or loss of any kind and/or interruption of services at all times.
- .2 All costs connected with the supply and installation of adequate protection Works to existing structures and their removal, when no longer required, shall be borne by the Contractor as part of this agreement.
- .3 Any damage to the above-mentioned existing Work or loss resulting from the Contractor's operations and/or his failure to provide and install adequate protection for these Works shall be his responsibility alone and he shall immediately repair or replace such damage or make good such loss at his own expense to the satisfaction of the Owner.

.8 SECURITY

- a) Be responsible for the security of the Work at the Site, from time of commencement at the Place of the Work until the Work is completed and accepted by the Owner.
- b) Be responsible for materials, tools, and equipment provided for the Work and protect them from damage, theft, atmospheric corrosion, fire, sabotage, and other foreseeable hazards.
- c) Be responsible for the security of own tools and equipment.
- d) Maintain security at all times in the event that construction is shut down due to off shifts, holidays, strikes, or lockouts.

.9 FIRST AID

- a) Provide an adequately equipped first aid station in accordance with WorkSafe BC and other authorities having jurisdiction.
- b) Place employees in charge of first aid who are familiar with first aid procedures and are certified to practice in the Place of the Work.
- c) Ensure at least one such employee is available at the Place of the Work during the performance of Work.

.10 CONSTRUCTION SAFETY

- a) The Contractor is fully responsible for the safety of its workers.
- b) The Contractor is to accommodate all pedestrian and motorboat traffic during construction with proper safety signage and barricades around the active work areas.
- c) The Contractor must provide at least five days advance written notice to the Owner for all periods of full dock closure to accommodate those portions of work that must remain closed to the public. The Contractor must minimize the duration of those full public closures and will be responsible and will be responsible for providing the advance public notification signage.

.11 FIRE PROTECTION

- a) Prohibit open fires on the Site. Remove waste at regular intervals and when directed. Take precautions to avoid fire by spontaneous combustion.
- b) Prohibit smoking in areas where flammable materials are in use or stored.

Post "NO SMOKING" signs prominently in such areas and see that they are strictly obeyed.

- c) Comply with fire regulations of the Owner and of the authorities having jurisdiction.
- d) Be responsible for fire protection within areas of Work. Provide and maintain in good working order, sufficient firefighting equipment for this purpose including, but not limited to, fire extinguishers, asbestos blankets, and portable fire pumps.
- e) Assign workers to fire watch while welding, metal cutting, or soldering is in progress and longer where necessary, especially after quitting times, etc. If necessary, use asbestos blankets to protect adjacent areas. Provide appropriate fire extinguishers immediately at hand.
- f) Familiarize employees with proper use of firefighting equipment.

.12 WEATHER

- a) No Work shall be undertaken by the Contractor when, in the opinion of the Owner, the weather is unsuitable or unfavorable for a particular class of Work.

.13 DANGEROUS OR FLAMMABLE MATERIALS

- a) Contractors shall ensure at all times and at all locations under his control within this Contract that explosive materials, fuels, and all other dangerous or flammable materials are stored, covered, and protected in a manner recognized as standard practices for the particular materials and fluids, but, in any event, in accordance with any applicable laws or regulations.

***** END OF SECTION *****

SECTION 01 60 10

Materials and Equipment

.1 GENERAL

- a) Ensure uniform pattern and quality of new materials and equipment throughout the job, bearing approval labels of authorities having jurisdiction.
- b) Material and equipment shall be on hand well in advance of being required.
- c) Use Products of one manufacturer for equipment or material of same type or classification unless otherwise specified.
- d) Handle and install manufactured articles, materials, and equipment in strict accordance with manufacturer's instructions unless otherwise specified.
- e) Remove from the Place of the Work, materials or equipment condemned by the Owner as not approved for use. Provide and install suitable replacement materials.
- f) Provide all labour and equipment to unload, transport, and store at the Place of the Work any Owner supplied materials and equipment.

.2 HANDLING AND STORAGE

- a) Carefully offload equipment and materials and place them in storage until ready for installation.
- b) Use the storage area as designated by the Owner.
- c) Use the equipment and techniques for offloading and handling suited to the type of equipment and materials being handled.
- d) Follow any special handling instructions applicable to the equipment and materials.
- e) Store packaged materials undamaged, in their original wrappings or containers with the manufacturer's labels and seals intact.
- f) Remove crating and packing only to the extent necessary to permit inspection of the contents and replace after inspection.
- g) Provide heated indoor storage for electronic and pneumatic controls and instrumentation, electrical items, and other items or materials which could be damaged by damp or cold.

- h) Store large electrical items, which cannot be placed indoors because of their weight or bulk, outdoors on raised pedestals. Provide electrical power for plug-in of motor heaters to protect from adverse weather conditions.
- i) Store and confine materials and equipment in accordance with the laws, ordinances, and regulations applicable to the storage of such materials and equipment.
- j) Store equipment and materials not requiring indoor storage, outdoors subject to the following provisions:
 - .1 Protect against weather conditions which may be detrimental to the equipment and materials.
 - .2 Provide adequate supports to prevent the equipment and materials from coming into contact with the ground and arrange such supports as to prevent dimensional distortion of the equipment and materials.
 - .3 Ensure special external surface finishes, sealing faces and edges, or parts having close dimensional tolerances are covered or provided with additional protection as may be required to prevent damage.
 - .4 Seal openings to prevent ingress of dirt.
 - .5 Maintain adequate ventilation to prevent condensation of moisture on equipment and materials.
- k) Make good damages resulting from improper handling or storage, to the manufacturer's standard, at no cost to the Owner and subject to final acceptance by the Consultant.

.3 PROTECTION

- a) Protect all equipment and materials from damage during handling and installation.
- b) Provide waterproofing covers, tarpaulins, temporary walkways, and any other suitable method of protection during and after installation.
- c) Repair or replace damaged Work caused by failure to provide suitable protection at no cost to the Owner.

.4 IDENTIFICATION OF MATERIALS AND EQUIPMENT

- a) Clearly identify equipment and materials as to the manufacturer and class

of quality, with the manufacturer's name or logo and sufficient information such as quality, standards of design and manufacturer, dimensional classification, catalogue or serial numbers to establish identity of the item in relation to the Contract Documents.

- b) Ensure equipment and materials are clearly identified in the manufacturer's, Supplier's, and fabricator's shops and yards should it be necessary to protect the Owner's property in the event of bankruptcy.

.5 **PRODUCT OPTIONS**

- a) For Products specified only by reference standards, select any Product meeting these standards in accordance with the manufacturer's printed literature.
- b) For Products specified by naming several Products or manufacturers, select any Product and manufacturer named.
- c) For Products specified by naming one or more Products, but indicating the option of selecting equivalent, submit product information to the Owner for review in support that the submitted product is an "or equal" Product,

***** END OF SECTION *****

SECTION 01 77 00

Closeout Procedures

.1 FINAL CLEANING

- a) Remove waste Products and debris from Site, other than that resulting from the Work of the Owner, other Contractors or their employees, and leave the Work clean and suitable for occupancy by the Owner before attainment of Substantial Performance of the Work. Remove Products, tools, construction machinery, and equipment not required for the performance of the remaining Work.
- b) Prior to application for the final certificate for payment, remove Products, tools, construction machinery and equipment, and waste Products and debris, other than that resulting from the Work of the Owner, other Contractors, or their employees.
- c) Inspect finishes, fittings, and equipment and ensure specified workmanship and operation.
- d) Broom clean and wash exterior walks, steps, and surfaces. Remove dirt and other disfigurements from exterior surfaces. Sweep and wash clean Site paved areas.

.2 DOCUMENTS

- a) Submit Record Drawings as specified in Section 01 33 20.
- b) Collect and assemble documents executed by Subcontractors, Suppliers, and manufacturers. Submit material prior to applying for the final certificate for payment. For equipment put into use with the Owner's permission during construction, submit within ten days after start-up.
- c) For items of Work delayed materially beyond date of Substantial Performance of the Work, provide updated submittals within ten days after acceptance, listing date of acceptance as start of warranty period.
- d) Provide warranties and bonds fully executed and notarized.
- e) Execute transition of performance bond and labour and materials payment bond to warranty period requirements.
- f) Submit a final statement of accounting giving total adjusted Contract Price, previous payments, and monies remaining due.
- g) The Owner will issue a final Change Order reflecting approved adjustments to Contract Price not previously made.

.3 PROJECT COMMISSIONING

- a) Expedite and complete correction of deficiencies and defects identified by the Owner.

.4 INSPECTION/TAKEOVER PROCEDURES

- a) Prior to applying for certificate of Substantial Performance of the Work, carefully inspect the Work and ensure it is complete, that major and minor construction deficiencies are complete, and defects are corrected. Notify the Consultant and Owner in writing, of satisfactory completion of the Work and request an inspection.
- b) Correct all deficiencies and defects noted during the Consultant's/ Owner's review.
- c) When the Consultant/ Owner considers deficiencies and defects have been corrected and it appears requirements of Contract have been performed, make application for certificate of Substantial Performance of the Work.

***** END OF SECTION *****

DIVISION 35

WATERWAY AND MARINE CONSTRUCTION

SECTION 35 05 31

MARINE GENERAL SITEWORK

.1 GENERAL

a) References

.1 American Society for Testing and Materials (ASTM):

- ASTM A123/A123M-02, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- ASTM A252-98 (2002), Specification for Welded and Seamless Steel Pipe Piles.
- ASTM A307-04, Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.

.2 Canadian Coast Guard (CCG):

- MA 2080, General Specifications for Moorings for Aids to Navigation, Issue C (September 1999).

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.3 Canadian Institute of Treated Wood/Western Wood Preservers Institute (CITW/WWPI):

- Best Management Practices for the Use of Treated Wood in Aquatic Environments (BMP), July 1996.
- BMP Amendment #1, 17 April 2002.

.4 Canadian Standards Association (CSA):

- CSA B111-1974 (R2003), Wire Nails, Spikes and Staples.
- CSA G40.21-04, Structural Quality Steels.
- CAN/CSA-G164-M92 (R2003), Hot Dip

Galvanizing of Irregularly Shaped Articles.

- CAN3-O56-M79 (R2001), Round Wood Piles.
- CSA-O80 Series- 08, Wood Preservation.
- CSA O121-M1978 (R2003), Douglas Fir Plywood.
- CAN/CSA-S16-01, Limit States Design of Steel Structures.
- CSA W47.1-03, Certification of Companies for Fusion Welding of Steel.
- CSA W59-03, Welded Steel Construction (Metal Arc Welding).

.5 National Lumber Grades Authority (NLGA):

- Standard Grading Rules for Canadian Lumber, 2003 edition.

b) Inspection and Acceptance

- .1 At its discretion, the Owner/Consultant may review materials and products at any stage of manufacture, transportation and assembly. Satisfactory review at any stage does not preclude future rejection if the materials or products are subsequently found to lack uniformity or fail to conform to the specified requirements.
- .2 The Contract Work will not be accepted until the materials or products are satisfactorily installed in the completed structure as specified.
- .3 Additional costs incurred by the Owner that results from unsatisfactory materials or workmanship will be charged to the Contractor.

.3 PRODUCTS

a) General

- .1 Use only new materials except where specified otherwise.
- .2 Refer to General Notes on the project drawings for product specifications and requirements.

.4 EXECUTION

a) Handling of Treated Materials

- .1 Creosoted piling will be rejected if sharp or pointed tools (i.e. dogs, pike poles, peavies, etc.) are used beyond 1 metre from either end in handling them during construction.
- .2 Treated material will be rejected if damaged in any manner during handling, including damage from strapping and slings.

b) Field Preservative Treatment

- .1 Untreated materials:
 - Treat in field as indicated unless specified otherwise.
 - Wood preservative: In accordance with CSA O80 for field treatment preservative.
 - Thoroughly treat, by soaking with brush, roller or equivalent, the following items with 2 coats of wood preservative acceptable to the Departmental Representative:
 - Pile tops.
 - Raw timber ends.
 - Framed joints.
 - Timber-to-timber or timber-to-iron contact.
 - Bolt holes.
 - Do not treat decking and handrail materials.

.3 Treated materials:

- Do not make field cuts in treated material unless permitted by the Owner. When specified, field treat cuts as specified with field treatment preservative.
- Pile tops, pile bolt holes, pile bracing bolt holes, and cap-to-pile bolt holes may be field cut. Treat as specified.
- Treated piles and timbers, pile tops, raw timber ends, field framed joints, field drilled holes, and raw timber from other causes: when field treating is permitted, field treat to CSA O80, using 2 coats of wood preservative for field treatment indicated in CSA O80.

c) Pile Top Treatment

- Bearing piles and posts:
 - Cut off to provide full bearing for the cap.
 - Protection: treat end cut-offs and drilled bolt holes with preservative in accordance with CSA O80.
 - Immediately after cut-off and preservative treatment, cover the tops of all piles or posts with an aluminum cap.
- Mooring piles, dolphin piles, brace piles, Fender piles: treat tops with 2 coats of approved wood preservative.
- Provide further protection by covering each pile top with a sheet of 0.8 mm annealed corrosion-resistant aluminum, cut 150 mm larger than pile top diameter, edges turned down and secured to the pile with 8 aluminum roofing nails. Do not cut or otherwise puncture aluminum sheet.

d) Timber Wharf Decking

- Decking shall meet in square cut butt joints. Stagger joints a minimum of 600 mm apart in

any direction

e) Material Disposal

- General:
 - Debris specified to be removed and disposed of becomes the property of the Contractor. Disposal of the debris shall be performed in an environmentally sensitive manner and the Contractor will be responsible to dispose of the debris off the Keats Island at an approved disposal site approved by the *Ministry of Water, Land and Air Protection under the B.C. Waste Management Act*, and by other agencies having jurisdiction, including municipal authorities.
 - All disposal sites must be operating with up-to-date permits and licenses.
 - The Contractor shall submit proof of approval(s), copies of current permits and licenses to the Departmental Representative ten days before the initial disposal of debris.
- Certificates of Disposal:
 - Provide the Consultant/Owner with certificates of disposal from the disposal Site, noting the dates, quantities, weights and general description of the debris received and proof of payment of all disposal fees.
 - Provide certificates within five days of disposal.
 - The Contract Work will not be accepted until all certificates have been received by the Departmental Representative.
- Disposal of lead acid batteries:
 - Any transport of lead acid batteries over 5

kg requires a Transportation of Dangerous Goods shipment document.

- Lead acid batteries shall be disposed of or recycled at an approved facility.

f) Restoration

- Salvage and reinstall, using new galvanized hardware, existing decking, raisers, guards and handrails where the Work necessitates their removal.
- Any portion of the existing structure or other facilities at the Site that are damaged due to construction activities are to be restored to new condition at the Contractor's expense.

g) Bolt Holes in Treated Material

- Re-use existing bolt holes wherever possible.
- Plug unused bolt holes with a tight-fitting creosote-treated plug and cover with a copper patch as specified and as shown on the drawings.

***** END OF SECTION *****

ATTACHMENT 1

Department of Fisheries and Oceans (DFO) Best Management Practices For Pile

Driving

Best Management Practices for Pile Driving and Related Operations – BC Marine and Pile Driving Contractors Association - March, 2003

The BC Marine and Pile Driving Contractors Association and Fisheries and Oceans Canada (DFO) have developed a Best Management Practices Policy for pile driving operations and related activities when working on the water within the province of British Columbia.

The Pile Driving Industry utilizes many different construction methods, equipment and materials in order to complete the contractual obligations for its client. Hammers, including drop, diesel, air, vibratory and hydraulic, vibroflot, and rotary, air and churn drills are the primary instruments in a pile driving operation. These hammers and drills are supported by a wide variety of heavy equipment, including a range of conventional cranes (truck mounted, crawler and pedestal mounted), spud scows, support barges and other water borne equipment. The piling types include treated timber (primarily creosote), concrete and steel (pipe, h-beam and sheet). Construction projects have the potential to utilize a number of different combinations of equipment and materials. It is the purpose of this document to examine the characteristics of each potential combination and develop a Best Management Practices Policy that will meet the following criteria:

- Maximize environmental protection
- Avoid contravention of the Fisheries Act
- Provide construction services economically

1)- Basic Rules of Operation

When in an aquatic environment, contractors will employ the following BASIC Best Management Practices:

- All equipment will be maintained in good proper running order to prevent leaking or spilling of potentially hazardous or toxic products. This includes hydraulic fluid, diesel, gasoline and other petroleum products.
- Storage of fuels and petroleum products will comply with safe operating procedures, including containment facilities in case of a spill.
- Pile cut-offs, waste or any miscellaneous unused materials will be recovered for either disposal in a designated facility or placed in storage. Under no circumstances will materials be deliberately thrown overboard.
- Contractors will have emergency spill equipment available whenever working near or on the water.
- Contractors, where possible, will position their water borne equipment in a manner that will minimize damage to identified fish habitat (i.e. eelgrass). Where possible, alternative methods will be employed (i.e.: use of anchors instead of spuds). In the event that circumstances will not allow an alternative, contractors will minimize the

damage and where required restore habitat to its original state at the completion of the project.

- Prior to the commencement of any work, the contractor will complete and forward the attached "Notice of Project" to the Department of Fisheries and Oceans. Letters of advice or Habitat Authorizations may be required, depending on the scope of work proposed.
- If contractors are working and a herring (or other fish) spawning occurs, the work will be temporarily suspended and the appropriate DFO contact notified.
- There will be no restriction of work during closure periods (the only exception being when spawning is present), provided the contractors employ an exclusion device (protective netting or geotextile material suspended in the water column around pile driving area) around the work area to prevent fish access or when required, an effective method of mitigating shock waves (bubble curtain).
- Whenever shock wave monitoring (hydrophone) is performed at a marine construction site and the findings are available to the contractor, the data will be forwarded to the BC Marine and Pile Driving Contractors Association and Svein Vagle at the Institute of Ocean Sciences in Sidney, BC. It is hoped that a database can be built that will catalogue work procedures and reflect the safest and most economical approach to protecting the fish and their habitat.

2)-Timber Piling (creosote):

When driving timber piling, the following Best Management Practices will be employed to minimize/prevent impact to marine fish and their habitat:

- Where possible, new timber piles will comply with the best Management Practices for the use of treated wood in aquatic environments as developed by the Canadian Institute of Treated Wood and the Western Wood Preservers Institute and the DFO document "Guidelines to Protect Fish and Fish Habitat from Treated Wood Used in Aquatic Environments in the Pacific Region".
- Where the above is not possible creosote piling will stand (weather) for a minimum of 45 days prior to installation.
- These requirements are for new piling only. Reused piling will not be subject to any additional treatments, however, pilings with excessive creosote should be avoided.
- Timber piling is normally driven using a drop hammer, a diesel/air impact hammer or a small vibratory hammer. Because of the relative small diameter of the timber pile, and its excellent energy absorbing quality, there is little threat of sound pressure impacts to fish and their habitat when driving timber piles.
- Environmental monitoring of sound pressure impacts is not required.
- When demolition is required on timber pile structures, the contractor will remove the piling by mechanical means and avoid breaking the piling at the mud line or below. All demolition operations should be monitored in order to control and contain the construction debris and to determine whether there are any effects on fish.

3)-Concrete Piles

When driving concrete piles, regardless of which hammer is being used, the following Best Management Practices will be employed to minimize/prevent impacts to fish habitat:

Less than 24 inch diameter

- The physical design of 24 inch concrete pile dictates that: 1/ the energy required must be controlled in order to prevent the pile from breaking and 2/ the concrete construction of the pile will absorb the energy. These two factors are expected to result in low level shock wave emission (less than 30 kPa.) and minimal or no effects to fish and their habitat should result.
- Environmental monitoring of sound pressure levels is generally not required.

Greater than 24 inch diameter

- When driving concrete piles with a diameter greater than 24 inches using an impact or hydraulic hammer, the following Best Management Practice will be employed to minimize the impact on fish habitat:
- Visual and hydrophone monitoring of the impact on fish by the sound waves emitted will be required. If sound pressures over 30 kPa is measured or a fish kill is evident, the contractor will introduce effective means of reducing the level of the shock waves. Appropriate mitigating measures would be the deployment of a bubble curtain over the full length of the wetted pile. This should reduce the shock waves to an acceptable level.
- If, despite the introduction of preventive measures, further visual/hydrophone monitoring reveals unacceptable conditions (fish kill or sound pressure over 30 kPa), then the work will stop immediately and the methods will be reviewed and corrected.

4)-Steel Pipe Piles

Less than 18 inch diameter

When driving steel piles 18 inches in diameter and less, regardless of the type of hammer being used, the following Best Management Practices will be employed to minimize/prevent impacts to fish habitat:

- Because of the small diameter of the pile it is assumed that the energy required to drive the pile to the final point of installation will not result in shock waves in excess of 30 kPa, therefore, protective measures to reduce shock waves are not expected to be required.

- If, however, ground conditions during pile installation cause a fish kill, work will cease and contractors will be responsible for introducing effective means of reducing the level of shock waves or will introduce measures that will prevent fish from entering the potentially harmful shock wave area. Appropriate mitigating measures would include the deployment a bubble curtain over the full length of the wetted pile. This technique should reduce the shock waves to an acceptable level.
- If, despite the introduction of preventive measures, further visual/hydrophone monitoring reveals unacceptable conditions (fish kill or sound pressure over 30 kPa), then the work will stop immediately and the methods will be reviewed and corrected.

Greater than 24 inches in diameter

When driving steel pipe piles with a diameter greater than 24 inches using impact or hydraulic hammers, the following Best Management Practices will be employed to minimize/prevent impacts to fish habitat:

- Hydrophone and visual monitoring of the effects of the shock waves on fish will be required. If a fish kill occurs, the contractor will introduce effective means of reducing the level of the shockwave. Appropriate mitigating measures would be the deployment of a bubble curtain over the full length of the wetted pile.
- If, despite the introduction of preventive measures, further visual/hydrophone monitoring reveals unacceptable conditions (fish kill or sound pressure over 30 kPa), then the work will stop immediately and the methods will be reviewed and corrected.

5)-Steel Sheet Piles and H-piles

When driving steel sheet piles and H-piles with a drop hammer, an impact hammer or a vibratory hammer, the following Best Management Practices will be employed to minimize the impact on fish habitat:

- It is anticipated that the driving of these types of piles will not generate shock waves in excess of 30kPa, therefore, mitigating measures are not expected to be required.
- If, however, ground conditions during pile installation cause a fish kill, work will cease and contractors will be responsible for introducing effective means of reducing the level of shock waves or will introduce measures that will prevent fish from entering the potentially harmful shock wave area. Appropriate mitigating measures would include the deployment a bubble curtain over the full length of the wetted pile. This technique should reduce the shock waves to an acceptable level.
- If, despite the introduction of preventive measures, further visual/hydrophone monitoring reveals unacceptable conditions (fish kill or sound pressure over 30 kPa), then the work will stop immediately and the methods will be reviewed and corrected.

6)-Stone Column Construction

When installing stone column using a vibroflot, the following Best Management practices will be employed to minimize/prevent impacts to fish habitat:

- The vibrating action and air flush associated with the operation of the probe results in a high degree of turbidity. When this level exceeds the criteria as outlined in the British Columbia Approved Water Quality Guidelines, the contractor will introduce containment methods that are designed to isolate the contaminated area and to prevent fish from entering the contaminated area. Silt curtains and netting are two methods that can provide the necessary protection.
- When supplying the aggregate to the probe, the contractor will ensure that spillage is prevented, thereby providing additional protection to fish habitat.
- An independent environmental consultant will be used to monitor turbidity levels.

7)-Underwater Drilling and Blasting

When performing underwater drilling and blasting the following Best Management Practices will be employed to minimize/prevent impacts to fish habitat:

Underwater Drilling

- Generally, drilling underwater is a process that has very little impact on fish or fish habitat. The procedure does not generate shock waves.
- Contractors will ensure that all attachments (hydraulic connections and couplings) are in good operating order and inspected prior to the start of every day. Spill kits and containment booms must be maintained on-site in case of spills.
- Depending on soil conditions and the potential for turbidity, drill cuttings will be deposited adjacent to the operation, contained on the sea bed or pumped to the surface for deposit into containment skiffs or scows for land disposal when it is determined that the drill cuttings are unsuitable for return to the environment.

Underwater Blasting

Contractors required to perform blasting underwater will provide the following protection to minimize/prevent impacts to fish habitat:

- Because of the potential for harmful shock waves resulting from a blast, a protection shield will surround the immediate blast area. This would be in the form of an air-induced bubble curtain, which has the primary purpose of absorbing the shock wave and a secondary purpose of preventing fish from entering the blast area.
- In order to protect against flying rock, mats (rubber) will be placed over the blasting area. The placement of the mats may also provide protection for any fish swimming in the immediate area.

- Monitoring of fish movement and concentrations will be conducted using a sounder to determine if fish herding or scaring techniques (seal bombs) can be utilized to reduce the presence of fish in the blast area.

8)-Cleaning out Pipe Piles:

When cleaning out pipe piles (i.e.: air lifting) the following Best Management Practices will be employed to minimize/prevent impacts to fish habitat:

- Generally, sediment contained in the pipe is will be pumped to the surface and processed through an approved containment system and disposed of at an approved landfill site.
- In exceptional circumstances, if the sediment is non-toxic, fish are not present in the area, and adjacent fish habitats are not a concern (contact DFO) it may be acceptable to:
 1. Pump the sediment through a discharge tube and allowed it to settle in the immediate area with or without a silt curtain to contain the sediment.
 2. Pump the sediment through a discharge tube and additional flex hosing and redirect it back to the base of the pile.

9) Containment of Concrete Residue and Water Run Off

When placing concrete in form work over or in water, the following Best Management Practices will be employed to minimize/prevent the impacts to fish habitat:

Pouring concrete

- Spills: When pouring concrete all spills of fresh concrete must be prevented. Concrete is toxic to fish due its high pH. If concrete is discharged from the transit mixer directly to the formwork or placed by wheelbarrow, proper sealed chutes must be constructed to avoid spillage. If the concrete is being placed with a concrete pump, all hose and pipe connections must be sealed and locked properly to ensure the lines will not leak or uncouple. Crews will ensure that concrete forms are not filled to overflowing.
- Sealing forms: All concrete forms will be constructed in a manner which will prevent fresh concrete or cement-laden water from leaking into the surrounding water.

Curing concrete

- When fresh water is used to cure concrete, the run off must be monitored for acceptable pH levels. If the pH levels are outside the allowable limits then the run off water must be contained and neutralized.

Grinding concrete

- When grinding cured concrete, the dust and fines entering the water must not exceed the allowable limits for suspended solids. When grinding green or incompletely cured concrete and the dust or fines are entering the water, pH

monitoring will be conducted to ensure allowable ranges are maintained. In the event that the levels are outside the acceptable ranges, preventative measures will be introduced. This may include introducing silt curtains to contain the solids and prevent fish from entering a contaminated area or constructing catch basins to recover the run off and neutralizing it prior to disposal.

Patching concrete

- Spills: When patching concrete, all spills must be contained and prevented from entering the water.

Washing hand tools, pumps and transit mixer

- All tools, pumps, pipes, hoses and trucks used for finishing, placing or transporting fresh concrete must be washed off in such a way as to prevent the wash water and excess concrete from entering the marine environment. The wash water will be contained and disposed of upland in an environmentally acceptable manner.

Whenever there is the possibility of contaminants entering water, the contractor will monitor pH levels to ensure acceptable levels.

APPENDIX

Fisheries and Oceans Canada

Contact List

Name	Telephone No.	Fax. No.
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NOTICE OF PROJECT

To: Fisheries and Oceans Canada

Attention:

Fax. No.:

From: "Contractor"

Telephone No.:

Fax. No.:

Representative:

Please be advised of the following marine/pile driving project:

Project Name:

Project Location:

Project Manager/Superintendent:

Project Telephone No.:

Project Fax. No.:

Project commencement date:

ATTACHMENT 2

LETTER OF ASSURANCE



Fisheries and Oceans
Canada

Pacific Region
Ecosystem Management Branch
200 – 401 Burrard Street
Vancouver, BC
V6C 3S4

Pêches et Océans
Canada

Région du Pacifique
Direction de la gestion des écosystèmes
Pièce 200 – 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

August 19, 2024

Our file / Notre référence
24-HPAC-00850

Sunshine Coast Regional District
ATTENTION: Kelly Koper
1975 Field Road
Sechelt, BC V7Z 0A8

Via email: Kelly.Koper@scrd.ca

Dear Kelly Koper:

Subject: Wharf Repairs, Howe Sound, Gibsons – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on August 12, 2024. We understand that you propose to conduct works to repair and replace various components of the Keats Landing Port Facility on Keats Island, Howe Sound. All components replaced will be in the same configuration and the footprint of the Port will not increase. The works will involve the following:

- Replacement of vehicle guarding.
- Replacement of individual deck boards.
- Steel strap retrofits on pile-to-pile cap connections.
- Replacement of treated timber pile caps.
- Replacement of 3 concrete footings (each 0.9 m x 0.9 m square).
- Replacement of 3 treated timber bearing piles (each 0.305 m diameter).
- Stainless steel banding repairs on pilings.

We understand the following aquatic species listed under the *Species at Risk Act* may use the area in the vicinity of where your proposal is to be located:

- Killer Whale (NE Pacific southern resident population), Leatherback Sea Turtle (Pacific population), Northern Abalone - listed as Endangered;
- Killer Whale (NE Pacific northern transient population) - listed as Threatened; and
- Steller Sea Lion, Humpback Whale (North Pacific population), Harbour Porpoise (Pacific Ocean population), Yelloweye Rockfish (Pacific Ocean outside waters population), Longspine Thornyhead, Rougheye Rockfish types I and II - listed as Special Concern.

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1/5

24-HPAC-00850

- 2 -

Our review considered the following information:

- DFO Request for Review Form signed by Kelly Koper, Sunshine Coast Regional District dated 12/08/2024 received via email on August 12, 2024.
- Email sent to Brian Naito, Fisheries and Oceans Canada (DFO) from Kelly Koper on August 16, 2024 regarding "24-HPAC-00850 - Wharf Repairs, Howe Sound, Gibsons" with attached Herold Engineering Project No. 4551-014 titled "Keats Landing Wharf Repairs 2024/2025 Keats Island BC Sunshine Coast Regional District (SCRD)" Drawings.
- Email sent to Brian Naito from Kelly Koper on August 16, 2024 regarding "24-HPAC-00850 - Wharf Repairs, Howe Sound, Gibsons" with photographs.

Your proposal has been reviewed to determine whether it is likely to result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*; and
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*.

The aforementioned outcomes are prohibited unless authorized under their respective legislation and regulations.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), it is important that all proposed measures are implemented as set out in the information that was submitted to the Program in relation to your project. In addition, we recommend implementing the measures listed below. If there is a conflict between the proposed measures as set out in the information that was submitted to the Program and the following measures, the following measures shall prevail:

1. An experienced Qualified Environmental Professional (QEP) should be on site during any in-water activities to oversee the works, implement mitigation measures and suggest improvements, as necessary.
2. The disturbance to the seabed is to be kept to a minimum.
3. Limit the duration of in-water works, undertakings and activities so that it does not diminish the ability of fish to carry out one or more of their life processes (spawning, rearing, feeding, migrating).
4. In-water works, undertakings and activities are to be scheduled to respect timing windows to protect fish, including their eggs, juveniles, spawning adults, and/or the organisms on which they feed and migrate. The timing window during which in-water works should be conducted is from August 16 of any given year to January 31 of the following year.
5. Complete the works as quickly as possible once they are started.
6. Ensure vessels are not operating in shallow water causing direct physical impacts to the seabed and fish habitat from propeller scour.
7. Water-based equipment is not to ground upon the seabed except for the use of anchors or spuds needed to keep the water-based equipment in place.

2/5

24-HPAC-00850

- 3 -

8. Minimize movements/repositioning of barge and subsequent spudding down and anchoring to minimize direct physical disturbance to the seabed. No spudding or anchoring is to occur within sensitive habitats such as eelgrass or kelp beds.
9. Conduct in-water works during daylight hours and when weather conditions permit visual observations of fish and marine mammals.
10. If there is a risk of harm to a marine mammal from direct contact with pilings, barges, etc., temporarily suspend works until there is no longer risk of harm from direct contact or the individual has not been re-sighted for 30 minutes.
11. Salvage motile invertebrate species in association with pile extraction and return to nearby waters outside of the project footprint.
12. Vibratory extraction is the preferred method for pile extraction followed by direct pulling. Contractors should be experienced in creosote pile removal. Piles should be removed slowly to minimize turbidity in the water column as well as sediment disturbance.
13. Dispose of removed creosote piles so that deleterious substances do not enter freshwater or marine environments. Deploy containment booms around creosote piles prior to removal.
14. Piles should not be dragged on the seabed following removal, but lifted clear by machine.
15. Manage sediment that may be adhered to removed timber piles by disposing of the sediment in an appropriate location (e.g., at an upland facility approved to take the material) rather than depositing in fish habitat or in any area where it may re-enter fish-bearing waters.
16. Develop and implement a debris management plan for pile and dock removal works to address construction materials and debris (e.g., treated wood fragments, sawdust, cuttings, etc.) entering the marine environment.
17. An experienced QEP is to monitor the area in the vicinity of the piles for the presence of fish during all pile driving activities. If injured or dead fish are observed, pile driving must cease immediately. Pile driving should only resume after additional mitigation measures are implemented to avoid and mitigate further impacts to fish.
18. Vibratory pile driving is the preferred method for pile installation rather than impact pile driving. The following mitigation measures are applicable to pile installation by vibratory hammer only:
 - o Establish a 500 m marine mammal exclusion zone around the project site prior to pile installation.
 - o Monitor for marine mammals for at least 30 minutes prior to the start of pile installation by vibratory hammer. If a cetacean enters the exclusion zone, temporarily suspend pile installation until the individual has left the exclusion zone or has not been sighted for 30 minutes.
19. If impact pile driving is required, the following mitigation measures are to be applied:
 - o A QEP is to conduct hydroacoustic monitoring during all pile driving to verify that underwater acoustic thresholds are not exceeded.
 - o Install an effective sound attenuation device (e.g., bubble curtain) to be used prior to and during pile driving to ensure sound levels do not exceed 207 dB re: 1 µPa

3/5

24-HPAC-00850

- 4 -

- and a SEL_{cum} of 203 dB re: 1 µPa²s outside of the sound attenuation device. If hydroacoustic monitoring indicates that these thresholds are being exceeded, work must be halted and additional measures (e.g., bubble curtain) implemented to effectively reduce sound levels below the above thresholds.
- Establish separate fish and marine mammal exclusion zones (e.g., perimeter) around the sound source prior to pile driving. The pinniped exclusion zone is to be a minimum 75 m. The cetacean exclusion zone is to be a minimum of 500 m or the distance to where sound levels do not exceed 160 dB_{RMS} re 1 µPa during pile driving, whichever is greater.
 - Monitor the exclusion zones for the presence of fish for at least 10 minutes and for marine mammals for at least 30 minutes prior to the start of pile driving.
 - An experienced and qualified marine mammal observer(s) must monitor for marine mammals in the exclusion zone for 30 minutes prior to the start of and during all pile driving.
 - If fish and marine mammals are not observed in the respective exclusion zones during the prestart period, a soft start procedure is recommended where the impact energy is gradually increased over a 10 minute period. The soft start procedure is also recommended any time after there is a break of 30 minutes or more during pile driving.
 - If a marine mammal enters the marine mammal exclusion zone, temporarily suspend pile driving until the individual has left the exclusion zone or has not been resighted for 30 minutes.
20. Avoid introducing or inducing sediments (e.g., silts, clays and sand) into the waterbody.
21. Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the waterbody.
22. Do not deposit substances deleterious to fish directly or indirectly into fish bearing waters. It should be noted that uncured concrete or water containing uncured concrete may be deleterious to aquatic life.
23. Develop and implement a response plan to avoid a spill of deleterious substances.
24. Report spills of deleterious substances that have caused, or are about to cause, the unauthorized death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat to Observe, Record, Report at 1-800-465-4336 or DFO.ORR-ONS.MPO@dfo-mpo.gc.ca.

Provided that you incorporate these measures into your plans, the Program is of the view that your proposal is not likely to result in the contravention of the above mentioned prohibitions and requirements.

Should your plans change or if you have omitted some information in your proposal, further review by the Program may be required. Consult our website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) or consult with a qualified environmental consultant to determine if further review may be necessary. It remains your responsibility to remain in compliance with the *Fisheries Act*, the *Species at Risk Act* and the *Aquatic Invasive Species Regulations*.

24-HPAC-00850

- 5 -

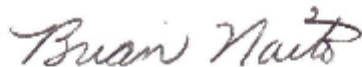
It is also your Duty to Notify DFO if you have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to the DFO-Pacific Observe, Record and Report phone line at 1-800-465-4336 or by email at DFO.ORD-ONS.MPO@dfo-mpo.gc.ca.

Please notify the Program by email at Brian.Naito@dfo-mpo.gc.ca at least 10 days before starting your project, ensuring your file number and appropriate on-site contact information is included. We recommend that a copy of this letter be kept on site while the work is in progress. It remains your responsibility to meet all other federal, provincial and municipal requirements that apply to your proposal.

Please note that the advice provided in this letter will remain valid for a period of one year from the date of issuance. If you plan to execute your proposal after the expiry of this letter, we recommend that you contact the Program to ensure that the advice remains up-to-date and accurate. Furthermore, the validity of the advice is also subject to there being no change in the relevant aquatic environment, including any legal protection orders or designations, during the one year period.

If you have any questions with the content of this letter, please contact the undersigned at our Vancouver office by email at Brian.Naito@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Sincerely,



Brian Naito
Senior Biologist
Fish and Fish Habitat Protection Program
Ecosystems Management Branch
Fisheries and Oceans Canada / Government of Canada

cc: Shannon Summersides, Herold Engineering Email: ssummersides@heroldengineering.com

Appendix 2 CCDC 18 2023

(Provided as a separate document)

Appendix 3 Supplemental General Conditions CCDC 18

DEFINITIONS

The following definitions are added to the Agreement:

"Builders Lien Act

Builders Lien Act means the *Builders Lien Act*, S.B.C. 1997, c45, as amended, and all regulations thereto, and any successor legislation in the Province of British Columbia in relation to builders liens."

GENERAL CONDITIONS

GC 1.1 Contract Documents

Add new paragraph 1.1.12 as follows:

"1.1.12 The table of contents and the headings of all the articles, paragraphs, parts and sections of any of the *Contract Documents* are provided for convenience of reference only and shall not affect the construction or interpretation of the *Contract Documents*."

GC 3.4 DOCUMENT REVIEW

Add new paragraph 3.4.2 as follows:

"Notwithstanding the foregoing, inconsistencies and omissions shall not include lack of reference on the *Drawings* or in the *Specifications* to labour and/or *Products* that are required or normally recognized within respective trade practices as being necessary for the complete execution of the *Work*."

GC 2.4 DEFECTIVE WORK

Amend paragraph 2.4.1 by adding:

", at the *Contractor's* expense," after "*Contract Documents*".

GC 5.6 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

Amend paragraph 5.6.4 by adding:

"The *Contractor* shall submit the following documents with its request for review by the *Consultant* to establish *Substantial Performance of the Work*. These requirements do not limit the *Contractor's* obligations for *Substantial Performance* noted elsewhere in the *Contract*. A deficiency holdback will be retained in the amount of two times the estimated value of correcting or supplying the following items until they are all submitted, reviewed and accepted by the *Consultant*:

- .1 The list of all deficient and incomplete items of *Work* including the estimated value of each item.

A complete demonstration of all mechanical and electrical systems and electrically-operated devices to the Owner's operating and maintenance staff and any training required by the specifications, to the Owner's satisfaction.

- .2 All maintenance manuals, operating instructions, maintenance and operating tools, replacement parts or materials and warranties as specified in the Contract Documents.
- .3 A complete set of marked up construction Drawings and other data in the form specified in the Contract Documents, or as required by the Consultant, for the production of as built Drawings to show all significant changes to the Work made during construction.
- .4 Current certification by the *Workers' Compensation Board* that the *Contractor* and all *Subcontractors* are in good standing.
- .5 A statement that all claims and demands for extra work or otherwise, under or in connection with the *Contract*, have been presented to the *Consultant* and that the *Contractor* expressly releases the *Owner* from all claims and demands except those made in writing prior to that date and still unsettled.
- .6 A statutory declaration.

The requirement to provide documents and other items listed in sub-paragraphs .1 through .8 does not limit the *Contractor's* obligations for *Substantial Performance of the Work* noted elsewhere in the *Contract*. A deficiency holdback will be retained for documents and other items not submitted and an estimated value is to be submitted for review and acceptance by the *Consultant*.

GC 5.6 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

Add new paragraph 5.6.7 and 5.6.8 as follows:

A.3 “5.6.7 At the time of *Substantial Performance of the Work*, the *Owner* may retain a deficiency holdback established by the *Consultant* based upon two times the estimated value of the outstanding items to be completed or corrected. The amount will be released by the *Owner* in one lump sum only upon correction of all deficiencies.

5.8.8 In addition to the deficiency holdback, the *Owner* may retain additional holdbacks as specified in the *Contract Documents* to be retained until receipt of items specified, such as close-out documentation, as-built documentation and *Owner's* manuals.”

GC 6.2 CHANGE ORDER

Add paragraph 6.2.4 to provide as follows:

“6.2.4 The allowance for overhead and profit charged by the *Contractor* and *Subcontractors* shall be as follows:

- .1 Cost of materials and labour plus 10% mark-up by the *Contractor* for changes in the *Work* performed by the *Contractor*;
- .2 Cost of labour and materials plus 10% mark-up by the *Contractor* on changes in the *Work* performed by the *Subcontractors*;
- .3 Cost of labour and materials plus 10% mark-up by the *Subcontractors* for changes in the *Work* performed by the *Subcontractors*; and
- .4 The overhead and profit for changes in the *Work* shall include supervision, administrative costs, small tools, miscellaneous materials, layout, additional bonding costs, and recording of the changes on the record drawings.”

GC 6.5 DELAYS

Add paragraph 6.5.6 as follows:

“6.5.6 If the *Contractor's* operations expose any items which may indicate an archaeological find, such as building remains, hardware, accumulations of bones, pottery, or arrowheads:

- .1 The *Contractor* shall immediately notify the *Consultant* and suspend operations within the area identified by the *Consultant*. *Work* shall remain suspended within that area until otherwise directed by the *Consultant* in writing.
- .2 Any delay in the completion date of the *Contract* that is caused by such a cessation of construction operations will be considered to be beyond the *Contractor's* control in accordance with paragraph GC 6.5.3 but will not be considered to be a delay resulting from an action of the *Owner* or the *Consultant* or anyone employed or engaged by them directly or indirectly.
- .3 Any work directed or authorized by the *Consultant* with an archaeological find will be considered a change in *Work* authorized by a *Change Directive*, and GC 6.3 shall apply."

GC 9.1

PROTECTION OF WORK AND PROPERTY

Add paragraph 9.1.5, 9.1.6, 9.1.7, 9.1.8 and 9.1.9 as follows:

"9.1.5 The Contractor shall be responsible generally for the care, maintenance and protection of the Work during construction and during any shut-down or suspension of the Work.

9.1.6 The Contractor shall ensure that all rights and privileges presently accorded to all properties adjacent to the Place of the Work are maintained.

9.1.7 When carrying out excavation work, the Contractor may encounter underground utilities or archeological artifacts such as, without limitation, sewers, gas mains, telephone cables, power cables, and water mains. The Contractor shall be fully responsible for any breakage or damage to such utilities, and the Contractor shall pay the full cost of repairing such damages and making good any losses or damages which are caused as a result of his or her operation in carrying out this Contract. In the case of an archeological find, the contractor must stop all work and immediately notify the Owner in writing and verbally.

9.1.8 It shall be the Contractor's responsibility to obtain written permission and to make any required arrangements with the owners of any adjacent properties on which the Contractor may encroach.

9.1.9 The Contractor shall furnish and bear the cost of any watchman the Contractor may require for protection to perform this Contract."

GC 11.1 INSURANCE

Delete paragraph 11.1.1.2 and replace it with the following:

“Vehicle liability insurance in the amount of not less than \$5,000,000 per occurrence from the date of commencement of the *Work* until one year after the date of issue of the *Certificate of Completion*.”

GC 11.1 INSURANCE

Delete paragraph 11.1.1.5 in its entirety.

GC 11.1 INSURANCE

Add paragraph 11.1.9 as follows:

“.9 Professional liability insurance in the amount of not less than \$2,000,000 for any professionals that the *Contractor* may engage in performing the *Work* in this *Contract*.”

GC 11.1 INSURANCE

Add paragraphs 11.1.10 as follows:

“1.1.10 All insurance policies shall contain provisions to the effect that thirty (30) days prior notice of cancellation will be given in writing to each insured, including the *Owner*. In the event that some or all of the insurance policies required under this *Contract* are cancelled, the *Contractor* shall promptly obtain insurance with other insurers so as to comply with the provisions of this *Contract*.”

END OF SECTION

Appendix 4 Schedule of Quantities and Prices

The following Unit Prices shall be used to determine the value of authorized changes in the Work in accordance with the General and Supplementary Conditions. The Unit Prices listed for additions apply to performing additional work during the time scheduled for performance of similar work already included in the Bid Price and will increase the Contract Price. Unit Prices for deletions will decrease the Contract Price. Unit Prices do NOT include GST.

Item No.	Description of Work	Units	Quantity	Unit Price	Total
1	Mobilization and Demobilization, Site Preparation, and Plant Moves	lump sum	1		
2	Removal and Disposal of Specified Existing Treated Timber Elements excluding Creosote Treated Timber Pilings	kg	3945		
3	Removal and Disposal of Specified Existing Creosote Timber Piles	each	3		
4	Removal and Disposal of Specified Existing Concrete Footings	each	0		
5	Supply and Install of 190mm x 190mm Vehicle Guard (Approach) C/W Risers and Hardware	lineal meter	19.2		
6	Supply and Install of 190mm x 241mm Vehicle Guard (Wharfhead) C/W Risers and Hardware	lineal meter	50		
7	Supply and Install of 102mm x 305mm Deck Boards	lineal meter	80		
8	Supply and Install of 900mm x 900mm x 900mm Concrete Formed Footing on Bedrock	each	6		
9	Supply, Install, and Securement of Existing Pile to Pile Cap	lump sum	1		
10	Supply and Install of 273mm x 305mm Pile Cap	lineal meter	5.1		
11	Supply and Install of Size 36 (305mm) Timber Bearing Piles	each	3		
12	Supply and Install of HDPE Pile Wrap	each	6		
13	Supply and Install of Stainless-Steel Pile Strapping	each	2		
14	Supply and Install of 152mm x 203mm Cross Bracing	lineal meter	30		
15	Supply and Install of 140mm x 191mm Wale Timber	lineal meter	9		
16	Supply and Install Treated Timber Fender Chock	lineal meter	16.5		
17	Supply and Install Aluminum Flashing on Fender Piles	each	3		
18	Re-align and Re-secure Bearing Pile F19	lump sum	1		
19	Contractor Prepared Environmental Protection Plan	lump sum	1		
SUB TOTAL					
GST					
TOTAL INCLUDING PST AND GST					

Force Account Rates

The following personnel and equipment rates will form the basis of payment for force account work carried out in accordance with Article 40 of the General Conditions. (Complete Schedule or attach similar information)

Personnel:		
List by Occupation	Hourly Rate	Overtime Rate
Superintendent	\$	\$
Forman	\$	\$
Labourer	\$	\$
Other Specify:		
	\$	\$
	\$	\$
	\$	\$
	\$	\$
	\$	\$

Equipment (complete with operator):		
Description:	Hourly Rate	Model and size
Utility Boat	\$	
Crane	\$	
Pile Driving Hammer	\$	
Vibratory Hammer		
Other Specify:		
	\$	
	\$	
	\$	
	\$	
	\$	

Appendix 5 Fisheries and Oceans Canada (DFO) Permit

(Provided as a separate document)

