REQUEST FOR PROPOSALS
Maersk Wharves and Boardwalk Design-Build Services

For Develop Nova Scotia
(Consecutive Negotiations)

Date Issued: June 3rd, 2020
Questions Deadline: June 22nd, 2020
Submission Deadline: June 29th, 2020 @ 2:00PM Atlantic Daylight Time

Request for Proposal Number: RFP DNS-2020-0042
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PART 1 – INVITATION AND SUBMISSION INSTRUCTIONS

1.1 Invitation

This Request for Proposals (the “RFP”) issued by Develop Nova Scotia Limited (“Develop Nova Scotia”) is an invitation to prospective and qualified Design-Build contractors to submit proposals for the Maersk Wharves and Boardwalk Project as further described in the RFP Particulars included in Appendix D (the “Deliverables”). This RFP is being conducted pursuant to the Nova Scotia Sustainable Procurement Policy and Procurement Manual.

Develop Nova Scotia, waterfront tenants and stakeholders, are working to improve coastal infrastructure at the Maersk Wharves on the Halifax side of the harbour (Pilot, Svitzer, Old Salvage Wharves and adjacent boardwalk area). This initiative is intended to utilize the waterside areas, while maximizing the existing resources located nearby and potentially building new infrastructure and facilities. Work described in this RFP comprises the demolition of the existing Svitzer building and Svitzer Wharf; design and construction of a new Halifax Svitzer Wharf; a new contiguous section of boardwalk extension (between Pilot and Svitzer Wharves); the demolition of Old Salvage Wharf structure and building; and repairs to the existing Pilot’s wharf. All new infrastructure is expected to be designed and constructed to enhance accessibility and adapt to climate change projections.

The project is located at 5051 Salter Street, and adjacent areas, in Halifax, Nova Scotia. Site Visit shall be Wednesday, June 10th, 2020 at 10:00 am Atlantic Daylight Time at the project location. Proponents are to meet along the Halifax Boardwalk (adjacent to the Waterfront Warehouse) and bring respective PPE, inclusive of face masks, exercise safe distancing and all health and safety guidelines outlined by the Province of Nova Scotia. Deadline for Questions is Monday, June 22nd, 2020 at 4:30 pm.

About Develop Nova Scotia

Develop Nova Scotia is the crown corporation responsible for leading sustainable development of high potential property and infrastructure across Nova Scotia to drive inclusive economic growth in our province.

As Develop Nova Scotia, our mission is to support the creation of sustainable places right across Nova Scotia that attract and inspire people and investment.

Develop Nova Scotia will focus on planning, development and management of land and infrastructure by and for and with people. When we make people the centre of our work, we develop strong places that are diverse and authentic and unique in character, not to mention environmentally sustainable and socially inclusive.

More information can be found at: developns.ca

1.2 RFP Contact

For the purposes of this procurement process, the “RFP Contact” shall be:
Proponents and their representatives are not permitted to contact any employees, officers, agents, elected or appointed officials or other representatives of Develop Nova Scotia, other than the RFP Contact or their designate, concerning matters regarding this RFP. Failure to adhere to this rule may result in the disqualification of the bidder and the rejection of the bidder’s response.

1.3 Contract for Deliverables

The selected proponent will be requested to enter into direct contract negotiations to finalize an agreement with Develop Nova Scotia for the provision of the Deliverables. The terms and conditions found in the Form of Agreement (Appendix A) are to form the basis for commencing negotiations between Nova Scotia and the selected proponent. The final agreement will be substantially in the form of Appendix A, subject to negotiation within the framework of this RFP. The initial term of the agreement will be for a period of nine month(s). Develop Nova Scotia reserves the right to extend the agreement for six months extension(s) beyond the initial term, for an overall potential maximum of fifteen (15) months in total. The successful bidder will be issued a Service Agreement by Develop Nova Scotia for the Deliverables.

1.4 RFP Timetable

<table>
<thead>
<tr>
<th>Event</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue Date of RFP</td>
<td>Wednesday, June 3rd, 2020</td>
</tr>
<tr>
<td>Deadline for Questions</td>
<td>Monday, June 22nd, 2020</td>
</tr>
<tr>
<td>Deadline for Issuing Addenda</td>
<td>See Section 3.3.3</td>
</tr>
<tr>
<td>Submission Deadline Date and Time</td>
<td>Monday, June 29th, 2020 @ 2:00 PM Atlantic Daylight Time</td>
</tr>
<tr>
<td>Rectification Period</td>
<td>5 business days</td>
</tr>
<tr>
<td>Anticipated Ranking of Proponents</td>
<td>Tuesday, July 7th, 2020</td>
</tr>
<tr>
<td>Contract Negotiation Period</td>
<td>5 business days</td>
</tr>
<tr>
<td>Anticipated Execution of Agreement</td>
<td>Tuesday, July 14th, 2020</td>
</tr>
</tbody>
</table>
The RFP timetable is tentative only and may be changed by Develop Nova Scotia at any time prior to the Submission Deadline.

1.5 Submission of Proposals

1.5.1 Electronic Submissions
All submissions are to be delivered electronically (by email) to procurement@developns.ca. Hard copy submissions (mailed) or faxed copies will not be accepted. Proponents will automatically receive notification of submission delivery – this will act as the proof of delivery. Proponents who do not receive this notification should seek clarification (please check your junk folder first).

Submission/file details shall contain details as follows:
1.5.1.1 Submission subject lines MUST read “DNS-2021-0042” only;
1.5.1.2 Submissions should be sent in one email, if possible, and be less than 100 mb in size. Proponents whose submissions exceed their internet service delivery limits may send their emails in multiple parts. Proponents who split submissions into multiple emails should indicate this in the opening line of their email’s free text. For example, “Email 1 of 2” followed by “Email 2 of 2”. Proponents should make every effort to minimize submission file sizes;
1.5.1.3 Submissions must be in Adobe PDF, Microsoft Word and/or Microsoft Excel format (unless a specific change is indicated and approved by the Tender process Point of Contact); and
1.5.1.4 Submissions may be Zipped.

1.5.2 Proposals to be submitted on Time
Proposals must be submitted as set out above on or before the Submission Deadline. Proposals submitted after the Submission Deadline will be rejected. Develop Nova Scotia’s time clock will be assumed to be correct.

1.5.3 Proposals to be submitted in Prescribed Format
Proponents are responsible to ensure prescribed formats and submission protocols are strictly followed. Proponents who deviate from directions provided in Tender documents may be disqualified at Develop Nova Scotia’s sole discretion.

1.5.3.1 Include (1) file as the Technical Electronic Submission proposal. Technical proposal files should be named as “Technical Proposal” with the RFP title and number (DNS-2021-0042) and an abbreviated form of the proponent’s name. Unless specifically requested in this solicitation document, Proponents should not submit product catalogues, swatches, or other marketing materials with their bid.

Technical proposals should be comprised of:

a) completed Appendix B Submission Form and attachments,
b) completed response to Appendix D – RFP Particulars, and
c) other mandatory submission requirements, as applicable.
1.5.3.2 Include (1) file as the Pricing Electronic Submission Proposal. Pricing proposal files should be named as “Pricing Proposal” with the RFP title and number (DNS-2021-0042) and an abbreviated form of the proponent’s name; submission shall include response to Appendix C – Submission Pricing Form.

Develop Nova Scotia will not accept proposals submitted by facsimile transfer, or any other means.

1.5.4 Amendment of Proposals Prior to Submission Deadline
Proponents may amend their proposals prior to the Submission Deadline by submitting the amendment electronically marked with the RFP title and the company’s abbreviated name as set out above in section 1.5.1. Any amendment must clearly indicate which part of the proposal the amendment is intended to amend or replace. Any amendments received after the Submission Deadline will not be accepted. Amendment must include the name and electronic signature of the person who signed the original bid submission, or a person authorized to electronically sign on his or her behalf.

1.5.5 Withdrawal of Bid
At any time throughout the RFP process until the execution of a written agreement for provision of the Deliverables, a proponent may withdraw a submitted proposal. To withdraw a proposal, a notice of withdrawal must be sent to the RFP Contact as set out in section 1.2 and must be signed by an authorized representative of the proponent. Develop Nova Scotia is under no obligation to return withdrawn bids.

[End of Part 1]
PART 2 – EVALUATION AND NEGOTIATION

2.1 Stages of Evaluation and Negotiation

Develop Nova Scotia will conduct the evaluation and negotiation of proposals in the following four stages:

Stage I: Mandatory Submission Requirements
Stage II: Evaluation
Stage III: Pricing
Stage IV: Ranking and Contract Negotiations

2.2 Stage I – Mandatory Submission Requirements

Stage I will consist of a review to determine which proposals satisfy all of the Mandatory Submission requirements. If a proposal fails to satisfy all of the mandatory submission requirements, Develop Nova Scotia will issue the proponent a rectification notice identifying the deficiencies and providing the proponent an opportunity to rectify the deficiencies. If the proponent fails to satisfy the mandatory submission requirements within the Rectification Period, its proposal will be excluded from further consideration. The Rectification Period will begin to run from the date that Develop Nova Scotia issues a rectification notice to the proponent.

The Mandatory Submission Requirements for this RFP are as follows:

2.2.1 ELECTRONIC TECHNICAL PROPOSAL: Submission Form (Appendix B and Appendix D)
Each proposal must include a Submission Form (Appendix B) completed and electronically signed by an authorized representative of the proponent and completed response to Appendix D – RFP Particulars.

Other mandatory submission requirements:
  1) Evidence of a current WCB Clearance Letter.
  2) Statement of Insurability (Refer to Appendix D, Item D.3.1)
  3) Bid Security (Refer to Appendix D, Item D.3.2 and Appendix F)

2.2.2 ELECTRONIC PRICING PROPOSAL: Submission Pricing Form (Appendix C)
Each proposal must include a Submission Pricing Form (Appendix C) completed according to the instructions contained in the form.

2.3 Stage II – Evaluation

The following is an overview of the categories and weighting for the rated criteria of the RFP. Proponents who do not meet a minimum threshold score for a category will not proceed further in the evaluation process. Refer to Appendix D for a description of each rated criteria.

<table>
<thead>
<tr>
<th>Rated Criteria Category</th>
<th>Weighting (Points)</th>
<th>Minimum Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.5.1. Design-Builder and Individual Subconsulting Team(s) Relevant Experience and Qualifications</td>
<td>10 points</td>
<td>5</td>
</tr>
<tr>
<td>D.5.2 Proposed Design-Build Team Work Plan and Schedule</td>
<td>20 points</td>
<td>10</td>
</tr>
</tbody>
</table>
Stage II will consist of the following two sub-stages:

2.3.1 Mandatory Technical Requirements
Develop Nova Scotia will review the proposals to determine whether the mandatory technical requirements as set out in Appendix B and Section D.3 of the RFP Particulars (Appendix D) have been met. Questions or queries on the part of Develop Nova Scotia as to whether a proposal has met the mandatory technical requirements will be subject to the verification and clarification process set out in Section 3.3.4. If the proponent fails to satisfy the mandatory technical requirements, its proposal will be excluded from further consideration.

2.3.2 Rated Criteria
Develop Nova Scotia will evaluate each compliant proposal on the basis of the rated criteria as set out in Section D.5 of the RFP Particulars (Appendix D).

2.4 Stage III – Pricing
Stage III will consist of a scoring of the submitted pricing of compliant proposals in accordance with the price evaluation method set out in the Submission Pricing Form (Appendix C). The evaluation of price will be undertaken after the evaluation of mandatory submission requirements, mandatory technical requirements, and rated criteria has been completed, and only for those proposals that have met all minimum threshold scores.

2.5 Stage IV – Ranking and Contract Negotiations

2.5.1 Ranking of Proponents
After the completion of Stage III, all scores from Stage II and Stage III will be added together and each proponent will be ranked based on its total score. The top-ranked proponent will receive a written invitation to enter direct contract negotiations to finalize an agreement with Develop Nova Scotia. Upon finalization of the Agreement with Develop Nova Scotia, the proponent shall thereafter be known as the successful Proponent.

2.5.2 Consecutive Negotiations Process
Any negotiations will be subject to the process rules contained in the terms and conditions of the RFP Process (Part 3) and will not constitute a legally binding offer to enter into a contract on the part of Develop Nova Scotia or the proponent and there will be no legally binding relationship created with any proponent prior to the execution of a written agreement. The terms and conditions found in the Form of Agreement (Appendix A) are to form the basis for commencing negotiations between Develop Nova Scotia and the selected Proponent. Negotiations may include requests by Develop Nova Scotia for supplementary information from the Proponent to verify, clarify or supplement the information provided in its proposal or to confirm the conclusions reached in the evaluation, and may include requests by Develop Nova Scotia for reduced scope, improved pricing or performance terms from the
Proponent. The selected proponent will be required to present any requested changes to the agreement upon commencement of the Consecutive Negotiations Process.

2.5.3 **Time Period for Negotiations**
Develop Nova Scotia intends to conclude negotiations and finalize an agreement with the top-ranked proponent during the Contract Negotiation Period, commencing from the date Develop Nova Scotia invites the top-ranked proponent to enter negotiations. A proponent invited to enter into direct contract negotiations should therefore be prepared to provide requested information in a timely fashion and to conduct its negotiations expeditiously. Requested changes are to be identified during the Consecutive Negotiations Process (section 2.5.2.). Develop Nova Scotia is not obligated to entertain further changes following the conclusion of this phase.

2.5.4 **Failure to Enter into Agreement**
If the top-ranked proponent and Develop Nova Scotia cannot conclude negotiations and finalize the agreement for the Deliverables within the Contract Negotiation Period, Develop Nova Scotia may, upon notice, discontinue negotiations with the top-ranked proponent and may invite the second ranked proponent to enter into negotiations. This process shall continue until an agreement is finalized, until there are no more proponents remaining that are eligible for negotiations or until the Province elects to cancel the RFP process.

2.5.5 **Successful Proponent Selection and Notification to Other Proponents**
Once an agreement is finalized and executed by Develop Nova Scotia with a proponent, the other proponents will be notified in accordance with the Terms and Conditions of the RFP Process (Part 3). The successful proponent will be issued a Service Agreement in accordance with Part 3.

[End of Part 2]
PART 3 – TERMS AND CONDITIONS OF THE RFP PROCESS

3.1 General Information and Instructions

3.1.1 RFP Incorporated into Bid
All of the provisions of this RFP are deemed to be accepted by each proponent and incorporated into each of their proposals. A proponent who submits conditions or contingent statements inconsistent with the terms set out in this RFP, including the terms of the form of Service Agreement in Appendix A, either as part of its bid or after receiving notice of selection, will be disqualified.

3.1.2 Proponents to Follow Instructions
Proponents should structure their proposals in accordance with the instructions in this RFP.

3.1.3 Language
All proposals are to be in English only, or both English and French. If there is a conflict or inconsistency between the English version and the French version of the bid, the English version of the bid shall prevail.

3.1.4 No Incorporation by Reference
The entire content of the bidder’s bid should be submitted in a fixed form, and the content of websites or other external documents referred to in the bidder’s bid but not attached will not be considered to form part of its bid.

3.1.5 Proponents to Bear Their Own Costs
The bidder shall bear all costs associated with or incurred in the preparation and presentation of its bid, including, if applicable, costs incurred for interviews or presentations.

3.1.6 Proposals to be retained by Develop Nova Scotia
Develop Nova Scotia will not return proposals, or any accompanying documentation submitted by a proponent.

3.1.7 No Guarantee of Volume of Work or Exclusivity of Contract
Develop Nova Scotia makes no guarantee of the volume to be assigned to the successful bidder. The Service Agreement will not be an exclusive contract for the provision of the described Deliverables. Develop Nova Scotia may contract with others for the same or similar Deliverables or may obtain such Deliverables from resources within Develop Nova Scotia.

3.2 Business Registration

Proponents may be required to be registered to carry on business in accordance with applicable laws. For information on the business registration requirements of the Nova Scotia Registry of Joint Stock Companies, please consult: http://www.novascotia.ca/snsmr/access/business/registry-joint-stock-companies.asp

The status of a bidder’s business registration does not preclude the submission of a bid in response to this RFP. A bid can be accepted for evaluation, regardless of (i) whether the company is registered, or (ii) whether its business registration is in good standing. However, a contract cannot be awarded unless the successful bidder is registered and in good standing, in accordance with applicable laws.
If the bidder’s business is not required to register in Nova Scotia, the bidder will be required to submit registration from their applicable jurisdiction.

### 3.3 Communication after Issuance of RFP

#### 3.3.1 Proponents to Review RFP

Proponents shall promptly examine all of the documents comprising this RFP, and

a. shall report any errors, omissions or ambiguities; and
b. may direct questions or seek additional information

in writing by email to the RFP Contact on or before the Deadline for Questions. All questions or comments submitted by Proponents by email to the RFP Contact on or before the deadline for questions shall be deemed to be received once the email has entered into the RFP Contact’s email inbox. Develop Nova Scotia is not obligated to respond to questions or comments received after the Deadline for Questions has passed. No such communications are to be directed to anyone other than the RFP Contact, and Develop Nova Scotia shall not be responsible for any information provided by or obtained from any source other than the RFP Contact. Develop Nova Scotia is under no obligation to provide additional information but may do so in its sole and absolute discretion. It is the responsibility of the proponent to seek clarification from the RFP Contact on any matter it considers to be unclear. Develop Nova Scotia shall not be responsible for any misunderstanding on the part of the bidder concerning this RFP or its process.

#### 3.3.2 All New Information to Proponents by Way of Addenda

This RFP may be amended only by addendum in accordance with this section. If Develop Nova Scotia, for any reason, determines that it is necessary to provide additional information relating to this RFP, such information will be communicated by addendum on the Nova Scotia Procurement Web Portal. Each addendum forms an integral part of this RFP and may contain important information, including significant changes to this RFP. Proponents are responsible for obtaining all addenda issued by Develop Nova Scotia.

#### 3.3.3 Post-Deadline Addenda and Extension of Submission Deadline

If Develop Nova Scotia determines that it is necessary to issue an addendum after the Deadline for Issuing Addenda, Develop Nova Scotia may extend the Submission Deadline for a reasonable period of time.

#### 3.3.4 Verify and Clarify

During the evaluation process, Develop Nova Scotia may request further information from the proponent or third parties in order to verify or clarify the information provided in the proponent’s proposal, including but not limited to clarification with respect to whether a proposal meets the mandatory technical requirements set out in Section D.3 of the RFP Particulars (Appendix D). Develop Nova Scotia may revisit and re-evaluate the proponent’s response or ranking on the basis of any such information.

### 3.4 Notification and Debriefing

#### 3.4.1 Notification of Outcome of Procurement Process

Once an agreement is executed by Develop Nova Scotia with a proponent, notification of the outcome of the procurement process will be posted on the Nova Scotia Procurement Web Portal.
3.4.2 **Debriefing**
Proponents may request a debriefing after posting of the outcome of the RFP process on the Nova Scotia Procurement Web Portal. All requests must be in writing to the RFP Contact and must be made within sixty (60) days of posting of the outcome of the RFP process. The intent of the debriefing information session is to aid the bidder in presenting a better bid in subsequent procurement opportunities. Any debriefing provided is not for the purpose of providing an opportunity to challenge the procurement process or its outcome.

3.4.3 **Supplier Complaint Procedure**
If a bidder wishes to file a complaint in regards to the RFP process, it must provide written notice to the RFP Contact within sixty (60) days of posting of the outcome of the RFP process on the Nova Scotia Procurement Web Portal, and Develop Nova Scotia will respond in accordance with its Supplier Complaint Protocol.

3.5 **Conflict of Interest and Prohibited Conduct**

3.5.1 **Conflict of Interest**
Develop Nova Scotia may disqualify a proponent for any conduct, situation or circumstances, determined by Develop Nova Scotia, in its sole and absolute discretion, to constitute a Conflict of Interest. For the purposes of this Section, “Conflict of Interest” has the meaning ascribed to it in the Submission Form (Appendix B).

3.5.2 **Disqualification for Prohibited Conduct**
Develop Nova Scotia may disqualify a proponent, if in its sole and absolute discretion, it determines that the proponent has engaged in any conduct prohibited by this RFP.

3.5.3 **Prohibited Proponent Communications**
A bidder shall not engage in any communications that could constitute a Conflict of Interest and should take note of the Conflict of Interest declaration set out in the Submission Form (Appendix B).

3.5.4 **Proponent not to Communicate with Media**
A proponent may not at any time directly, or indirectly, communicate with the media in relation to this RFP or any agreement entered into pursuant to this RFP without consent of Develop Nova Scotia, and then only in coordination with Develop Nova Scotia.

3.5.5 **No Lobbying**
A proponent shall not, in relation to this RFP or the evaluation and selection process, engage directly or indirectly in any form of political or other lobbying whatsoever to influence the selection of the successful proponent.

3.5.6 **Illegal or Unethical Conduct**
Proponents shall not engage in any illegal business practices, including activities such as bid-rigging, price-fixing, bribery, fraud, coercion or collusion. Proponents shall not engage in any unethical conduct, including lobbying, as described above, or other inappropriate communications; offering gifts to any employees, officers, agents, elected or appointed officials or other representatives of Develop Nova Scotia; submitting proposals containing misrepresentations or other misleading or inaccurate
information; or any other conduct that compromises or may be seen to compromise the competitive process provided for in this RFP.

3.5.7 **Rejection of Proposals**
Develop Nova Scotia may reject a bid based on past performance or based on inappropriate conduct, including but not limited to the following:

a. illegal or unethical conduct as described above;
b. the refusal of the Contractor to honour its submitted pricing or other commitments;
c. any conduct, situation or circumstance determined by Develop Nova Scotia, in its sole and absolute discretion, to have constituted an undisclosed Conflict of Interest; or
d. Develop Nova Scotia’s past experience with the bidder within the last 18 months for similar or related services.

3.6 **Confidential Information**

3.6.1 **Confidential Information of Develop Nova Scotia**
All information provided by or obtained from Develop Nova Scotia in any form in connection with this RFP either before or after the issuance of this RFP:

a. is the sole property of Develop Nova Scotia and must be treated as confidential;
b. is not to be used for any purpose other than replying to this RFP and the performance of any subsequent contract for the Deliverables; and
c. must not be disclosed without prior written authorization from Develop Nova Scotia.

3.6.2 **Confidential Information of Bidder**
A bidder should identify any information in its proposal, or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by Develop Nova Scotia. The confidentiality of such information will be maintained by Develop Nova Scotia, except as otherwise required by 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 Develop Nova Scotia to advise or assist with the RFP process, including the evaluation of bids.

3.6.3 **Personal Information International Disclosure Protection Act**
The ‘*Personal Information International Disclosure Protection Act*’ creates obligations for the Government of Nova Scotia and its service providers when personal information is collected, used or disclosed. A copy of the Act is available online at:

http://nslegislature.ca/legc/statutes/persinfo.htm

3.7 **Reserved Rights, Limitation of Liability and Governing Law**

3.7.1 **Reserved Rights of Develop Nova Scotia**
Develop Nova Scotia reserves the right to:

a. make public the names of any or all Proponents;
b. request written clarification in relation to a proponent’s bid;
c. waive minor formalities that do not constitute Mandatory Submission requirements or mandatory technical requirements;
d. verify with any bidder or with a third party any information set out in a proposal;
e. where references are requested, check references other than those provided by any proponent;
f. disqualify any proponent whose bid contains misrepresentations or any other inaccurate or misleading information;
g. disqualify any proponent or a bid submitted by any proponent who has engaged in conduct prohibited by this RFP;
h. amend this RFP process without liability at any time prior to the issuance of a Service Agreement by Develop Nova Scotia.
i. cancel this RFP process without liability at any time prior to the issuance of a Service Agreement form set out in Appendix A, and may in its sole discretion issue a new RFP for the same or similar Deliverables; or
j. reject any or all proposals
and these reserved rights are in addition to any other express rights or any other rights that may be implied in the circumstances.

3.7.2 Limitation of Liability
By submitting a bid, each bidder agrees that neither Develop Nova Scotia nor any of its employees, officers, agents, elected or appointed officials, advisors or representatives will be liable, under any circumstances, for any claim arising out of this RFP process including but not limited to costs of preparation of the bidder, loss of profits, loss of opportunity or for any other claim.

3.7.3 Governing Law and Interpretation
These Terms and Conditions of the RFP Process:
a. are intended to be interpreted broadly and independently (with no particular provision intended to limit the scope of any other provision);
b. are non-exhaustive and shall not be construed as intending to limit the pre-existing rights of Develop Nova Scotia; and
c. are to be governed by and construed in accordance with the laws of Develop Nova Scotia of Nova Scotia and the federal laws of Canada applicable therein.

3.8 Procurement Process Non-binding

3.8.1 No Contract A and No Claims
This procurement process is not intended to create or be deemed to create a formal, legally binding bidding process and shall instead be governed by the law applicable to direct commercial negotiations. For greater certainty and without limitation, this RFP shall not give rise to any Contract A-based tendering law duties or any other legal obligations arising out of any process contract or collateral contract.

3.8.2 No Contract until Execution of Written Agreement
This RFP process is intended to identify prospective suppliers for the purposes of negotiating a potential agreement for the Deliverables. No legal relationship or obligation regarding the procurement of any good or service shall be created between a proponent and Develop Nova Scotia by this RFP process until the successful negotiation and execution of a written agreement between a proponent and Develop Nova Scotia for the acquisition of such goods and/or services.

3.8.3 Non-binding Price Estimates
While the pricing information provided in proposals will be non-binding prior to the execution of a written agreement, such information will be assessed during the evaluation of the proposals and the ranking of the proponents. Any inaccurate, misleading or incomplete information, including withdrawn
or altered pricing, could adversely impact any such evaluation or ranking or the decision of Develop Nova Scotia to enter into an agreement with a proponent for the Deliverables.

3.8.4 Cancellation
Develop Nova Scotia may cancel the RFP process without liability at any time prior to the execution of a written agreement between the Province and a proponent.
APPENDIX A – SERVICE AGREEMENT

THIS AGREEMENT made this xxx day of xxxxxxx, 20xx

(Reference: REQUEST FOR QUOTATION “RFP DNSXXXXX”)

BETWEEN:

DEVELOP NOVA SCOTIA CORPORATION LIMITED,
(“Develop Nova Scotia”)

OF THE FIRST PART

- and –

xxxxxxxxxxxxxxxxxxxx
(the “Supplier”)

OF THE SECOND PART

WHEREAS Develop Nova Scotia issued the above referenced Request for Quotation dated xxxxxxxx, 20xx, (the “RFP”), inviting submission of proposals to provide the Services, as hereinafter defined;

AND WHEREAS the Supplier submitted a proposal to Develop Nova Scotia dated xxxxxxxxx, 20xx, (the “Proposal”) in response to the RFP;

AND WHEREAS Develop Nova Scotia has agreed to retain the Supplier to provide the Services, subject to the parties entering into an agreement with respect thereto;

NOW THEREFORE THIS AGREEMENT WITNESSES that in consideration of the mutual covenants and agreements set out herein, the Supplier and Develop Nova Scotia covenant and agree as follows:

1.0 SERVICES AND TERM

1.1 The Supplier agrees to provide and deliver the services and/or products and perform the work (collectively the “Services”) described in Schedule A hereto, in accordance with the terms and conditions of this Agreement, during the period commencing on the xx day of xxxxxxx, 20xx, and expiring on the xx day of xxxxxxxx, 20xx (the “Term”).

1.2 The Supplier shall provide the Services and discharge its duties to Develop Nova Scotia hereunder in a competent, professional and timely manner, and shall assign only duly qualified, competent and skilled personnel to carry out its obligations to Develop Nova Scotia under this Agreement.

1.3 The Services shall be delivered on time and in accordance with the delivery schedule agreed to by Develop Nova Scotia and conform in all respects with Develop Nova Scotia’s requirements. The Services shall not be deemed to be completed to the satisfaction of
Develop Nova Scotia or accepted by Develop Nova Scotia until all requirements have been met by the Supplier in accordance with the terms and conditions hereof.

1.4 If Develop Nova Scotia, in its sole discretion, agrees to renew this Agreement any such renewal shall be on such terms and conditions as the parties may agree, and any amendment to this Agreement reflecting such renewal shall be signed by the parties prior to the expiration of the Term. Nothing in this Article 1.4 shall constitute or be deemed to constitute any assurance or representation by Develop Nova Scotia to the Supplier that this Agreement will be renewed.

2.0 PRICE AND PAYMENT

2.1 The total amount payable to the Supplier under this Agreement, including out of pocket expenses, shall not exceed xxxxxxxxx dollars ($xxxxxxx) (exclusive of applicable taxes) without the prior written authorization of Develop Nova Scotia. The Supplier shall not be entitled to receive payment for any Services it provides hereunder that exceed this amount (“Excess Services”) unless Develop Nova Scotia has given prior written authorization to the Supplier to undertake the performance of any Excess Services.

2.2 Develop Nova Scotia shall, subject to the terms and conditions of this Agreement, pay the Supplier for the Services in accordance with Schedule B.

2.3 Each invoice submitted by the Supplier for payment shall contain a detailed description of the Services in respect of which it is being remitted, and all such other information as specified by Develop Nova Scotia from time to time for inclusion therein. Subject to verification by Develop Nova Scotia, invoices will be paid thirty (30) days following receipt.

2.4 If Schedule B provides that Develop Nova Scotia will retain a holdback on payments to the Supplier, payment of such holdback shall be made by Develop Nova Scotia in accordance with and subject to the terms and conditions set out in Schedule B.

2.5 No payment by Develop Nova Scotia to the Supplier hereunder shall be or construed to be an acceptance or approval by Develop Nova Scotia of incomplete, defective or improper performance by the Supplier of any of its obligations under this Agreement, or operate to relieve the Supplier from the performance of any of its obligations hereunder that have not been performed in accordance with the requirements set out herein.

2.6 If the Supplier is not a resident of Canada, the Supplier acknowledges and agrees that Develop Nova Scotia shall be authorized, if required by law, to withhold income tax from any amounts payable to the Supplier hereunder and to remit that tax to the Receiver General for Canada on the Supplier’s behalf.
3.0 TERMINATION OF AGREEMENT

3.1 Develop Nova Scotia shall be entitled to immediately terminate this Agreement for cause, upon the occurrence of any of the following events, each of which shall constitute an “Event of Default:

   a) The Supplier breaches or fails to comply with any of the terms and conditions of this Agreement, and such breach or failure is not remedied by the Supplier to the reasonable satisfaction of Develop Nova Scotia within five (5) days after written notice from Develop Nova Scotia to remedy the breach or failure;

   b) The Supplier becomes insolvent, commits an act of bankruptcy, makes an assignment for the benefit of creditors, or otherwise acknowledges its insolvency, or a receiver or receiver manager is appointed for any property of the Supplier; or

   c) Any statement, representation or warranty made by the Supplier in its Proposal or in this Agreement is untrue or incorrect at the time it was made.

3.2 If this Agreement is terminated for cause pursuant to Article 3.1 as a result of an Event of Default, the Supplier shall be responsible for and shall reimburse Develop Nova Scotia for all loss, costs and damages incurred by Develop Nova Scotia as a result of or arising from the Event of Default, including any costs incurred by Develop Nova Scotia to correct any defects or deficiencies in any of the Services, and any costs incurred by Develop Nova Scotia to procure the Services or any part thereof from another provider.

3.3 Develop Nova Scotia may, at its sole discretion, terminate this Agreement without cause at any time prior to the expiration of the Term, upon giving thirty (30) days prior written notice of termination to the Supplier. In such event, the Supplier shall be entitled to receive payment for the Services it has satisfactorily performed up to the date of termination, and where applicable, to the payment of any holdback which Develop Nova Scotia is then holding at such time. Payments to the Supplier of the foregoing amounts shall constitute full and final satisfaction of Develop Nova Scotia’s obligations to the Supplier under this Agreement. In the event this Agreement is terminated by Develop Nova Scotia pursuant to this Article 3.3, the Supplier shall not be reimbursed for any profits that may have been anticipated but not earned up to the termination date, and the Supplier shall not have any claim or entitlement to any additional compensation or damages arising from such termination.

3.4 Neither the expiration nor the earlier termination of this Agreement shall relieve, or be deemed to relieve, the Supplier from any duties, obligations or liabilities hereunder that accrued prior to such expiration or termination, or which by their nature are intended to survive the expiration or earlier termination of this Agreement, including but not limited to all warranties given by the Supplier in respect of the Services, and those duties and obligations of the Supplier set out in Article 4 (Confidentiality), Article 5 (Material Rights), Article 8 (Liability and Indemnity) and Article 15 (Accounts and Audit).
4.0 CONFIDENTIALITY

4.1 The Supplier acknowledges and confirms that all information provided to it by Develop Nova Scotia hereunder, or to which the Supplier has access as a result of providing the Services to Develop Nova Scotia is confidential information ("Confidential Information"). Unless required by law or an order of a court of competent jurisdiction, such Confidential Information shall not, either during the Term or at any time thereafter, be disclosed by the Supplier, without the prior written consent of Develop Nova Scotia, to any third party or to any employees of the Supplier, other than its employees who are directly involved in providing the Services.

4.2 The Supplier shall implement and maintain security standards and procedures for the safeguarding of Develop Nova Scotia’s Confidential Information to prevent unauthorized access thereto and to ensure compliance with applicable legislation. The Supplier agrees to promptly notify Develop Nova Scotia in writing upon becoming aware of a breach of either the Supplier’s security standards and procedures or Develop Nova Scotia’s security policies, or any unauthorized disclosure of information that the Supplier is required to keep confidential under applicable law. The Supplier shall take immediate steps to mitigate any breach or unauthorized disclosure described in this Article 4.

4.3 The Supplier acknowledges and agrees that Develop Nova Scotia may disclose this Agreement or portions thereof as may be required pursuant to the provisions of the Freedom of Information and Protection of Privacy Act (Nova Scotia).

4.4 If the Supplier is a “service provider” as defined in the Personal Information International Disclosure Act, (Nova Scotia) ("PIIDPA") as a result of the type of Services that it is providing to Develop Nova Scotia under this Agreement, the Supplier represents, warrants and undertakes to Develop Nova Scotia that it shall comply with its obligations under PIIDPA and the terms and conditions contained in the PIIDPA Schedule, attached as Schedule C to this Agreement.

4.5 The Supplier acknowledges that Develop Nova Scotia has entered into a service agreement with SAP Canada for the provision of contract management software solutions and related services and may enter into service agreements with other providers of comparable services.

The Supplier irrevocably agrees that notwithstanding anything contained in this Agreement, Develop Nova Scotia is authorized to disclose this Agreement or portions thereof to SAP Canada and to any other provider of comparable services to Develop Nova Scotia, solely to enable SAP Canada, and where applicable such other service provider, to fulfill its obligations under its service agreement with Develop Nova Scotia, and for no other purpose whatsoever.
5.0 MATERIAL RIGHTS

5.1 All findings, data, surveys, research, working papers, drawings, spreadsheets, evaluations, databases and documents, regardless of storage format or whether in draft or final form that are collected, created or produced by the Supplier in the performance of this Agreement (collectively the “Materials”) are the exclusive property of Develop Nova Scotia. All intellectual property rights, including patents, copyrights, trademark and industrial design in the Materials, with the exception of any pre-existing intellectual property rights of the Supplier therein, are the sole property of Develop Nova Scotia, are hereby irrevocably assigned by the Supplier to Develop Nova Scotia and the Supplier herewith waives all moral rights in those Materials.

5.2 All research reports, surveys, findings, data and other information comprising the Materials are Confidential Information of Develop Nova Scotia and are subject to the provisions of Article 4 of this Agreement.

5.3 Develop Nova Scotia reserves the right, in its sole discretion, to publish or release, in whole or in part, or to refrain from publishing or releasing, any research, reports, information, audio visual materials, information or data produced by the Supplier in the performance of the Services under this Agreement.

5.4 The Supplier shall ensure that Develop Nova Scotia has all licences that are needed for any software that Develop Nova Scotia will require to lawfully continue using all deliverables that the Supplier has agreed to provide as part of the Services.

5.5 The Supplier hereby grants to Develop Nova Scotia a perpetual non-exclusive licence to use any computer software or designs of a generic nature to which the Supplier holds copyright, and that may be included in any work product comprising any part of the Services delivered to Develop Nova Scotia under this Agreement.

6.0 INDEPENDENT CONTRACTOR

6.1 This Agreement is a contract for the performance of the Services. The Supplier is engaged by Develop Nova Scotia hereunder as an independent contractor and shall not at any time hold itself out as an employee, servant or agent of Develop Nova Scotia. No partnership, joint venture, agency or other legal relationship is created or deemed to be created by this Agreement or any actions of the parties hereunder. The Supplier shall not have authority under this Agreement to bind Develop Nova Scotia, or to commit Develop Nova Scotia to the payment of money to any third party.

7.0 COMPLIANCE WITH LAWS

7.1 The Supplier shall comply with all applicable laws governing the conduct of its business and the provision of the Services to Develop Nova Scotia. The Supplier agrees to maintain in good standing all licences, permits, registrations or authorizations it is required to obtain in order to lawfully provide the Services in Nova Scotia.
Without limiting the foregoing, professional personnel performing any part of the Services on behalf of the Supplier shall be required to comply with all applicable professional registration or licensing requirements in effect in Nova Scotia at the time such Services are being performed.

7.2 Neither the acceptance of the Supplier’s Proposal, nor the execution of this Agreement by Develop Nova Scotia, shall be or deemed to be approval or authorization by Develop Nova Scotia to anything related to the business or operations of the Supplier or the provision of the Services that requires any permit or licence or approval pursuant to federal, provincial or municipal legislation, regulations or bylaws.

7.3 The Supplier shall promptly provide to Develop Nova Scotia, upon request, copies of all permits, licences, authorizations and registrations that it is required to obtain in order to provide the Services, as well as evidence of the Supplier’s compliance with laws applicable to the performance of the Services, including without limitation, the Workers’ Compensation Act (Nova Scotia) and the Occupational Health and Safety Act (Nova Scotia).

8.0 LIABILITY AND INDEMNITY

8.1 The Supplier shall indemnify and hold harmless Develop Nova Scotia, its employees, servants and agents from and against all damages, costs, loss, expenses (including legal fees), claims, actions, suits or other proceedings of any kind or nature, which they, or any of them, may at any time incur or sustain as a result of or arising out of an Event of Default, or any act, omission or negligence of the Supplier, or any of its employees, servants, agents, or subcontractors, in the performance of this Agreement, including without limitation, any injury or death to persons, or loss of or damage to property. Notwithstanding the foregoing, the Supplier shall not be liable for any indirect or consequential damages sustained by Develop Nova Scotia unless such damages result from the negligence or wilful default of the Supplier, its servants, agents or subcontractors.

8.2 Develop Nova Scotia shall not be liable for any damages or injury (including death) to any person or to any property of the Supplier as a result of or arising out of this Agreement or the provision of the Services by the Supplier under this Agreement, unless such damages are direct damages and are caused solely and directly by or as a result of the negligence of Develop Nova Scotia.

In no event shall Develop Nova Scotia be liable for any indirect or consequential damages that are sustained by the Supplier, howsoever caused, as a result of or arising out of this Agreement or the provision by the Supplier of any Services hereunder.
9.0 RESOURCES

9.1 In the event that the Supplier requires access to equipment or office space of Develop Nova Scotia in order to carry out any part of the Services, the Supplier shall comply with all applicable safety and security legislation and all policies and directives of Develop Nova Scotia relating to any buildings, premises, equipment or software to which the Supplier is given access.

9.2 The Supplier shall assign a sufficient number of qualified, competent and skilled personnel to carry out its obligations under this Agreement. In the event that the Supplier’s Proposal included the names or titles of specific personnel or any proposed subcontractor to provide the Services, or any part thereof, the Supplier’s personnel and any subcontractors so indicated in the Proposal shall be required to provide the Services and no substitutions shall be permitted without the prior written consent of Develop Nova Scotia. If Develop Nova Scotia, in its sole discretion, considers a proposed substitute to be acceptable, Develop Nova Scotia may consent to the substitution, provided however that such consent may be subject to such terms and conditions as Develop Nova Scotia designates in writing to the Supplier. Notwithstanding the foregoing, Develop Nova Scotia shall have the right at any time, in its sole discretion, to require that the Supplier replace, at no cost or expense to Develop Nova Scotia, any Supplier personnel or subcontractor involved in providing the Services whom Develop Nova Scotia determines to be unsuitable, and in such event, the Supplier shall immediately appoint a duly qualified, competent and skilled replacement to fill the position vacated.

10.0 TITLE AND ACCEPTANCE

10.1 Unless otherwise expressly provided in this Agreement, title to all deliverables, or any part thereof, comprising the Services to be provided by the Supplier shall vest in Develop Nova Scotia on delivery and acceptance by Develop Nova Scotia. Upon payment being made by Develop Nova Scotia on account of materials, parts, work in process, or finished work, title therein shall vest in and remain with Develop Nova Scotia, provided however that the risk of any loss or damage thereto shall remain with the Supplier until their acceptance by Develop Nova Scotia. Vesting of title in Develop Nova Scotia as a result of payments made by Develop Nova Scotia to the Supplier shall not constitute acceptance, or be deemed to constitute acceptance, by Develop Nova Scotia of any such materials, parts, work in progress or finished work, and shall not relieve the Supplier of its obligations to perform the Services in accordance with the requirements of this Agreement.

10.2 The Supplier shall promptly pay for all labour, services and materials that it requires to provide the Services. The Supplier agrees that it shall not do or permit anything to be done that would result in any liens, charges or encumbrances being placed on or attaching to any materials, parts, work in process, finished work or deliverables comprising the Services to be provided to Develop Nova Scotia under this Agreement.
FORCE MAJEURE

11.1 The Supplier shall not be liable for a failure or delay in performing any of its obligations hereunder that occurs without the fault or negligence of the Supplier and is attributable solely to a cause beyond its reasonable control (“Force Majeure Event”). For the purposes of this Agreement, the following shall be considered to be a Force Majeure Event: floods, fire, explosion, power failure, acts of God, war, civil commotion, the enactment of any law, order, regulation or bylaw, labour strikes, slowdowns, picketing and boycotts.

11.2 Where the Supplier claims that a Force Majeure Event has occurred, the Supplier shall be required to give immediate written notice thereof to Develop Nova Scotia, which notice shall describe the Force Majeure Event, its cause, the probable duration of the delay resulting therefrom, and the steps being taken by the Supplier to mitigate the impact of the Force Majeure Event on the performance of the Supplier’s obligations hereunder.

11.3 Notwithstanding the foregoing provisions of this Section 11, if a delay or failure arising from a Force Majeure Event continues for ten (10) consecutive days, Develop Nova Scotia may, in its sole discretion, terminate this Agreement upon three (3) days prior written notice to the Supplier. In the case of termination by Develop Nova Scotia pursuant to this Article 11.3, the Supplier shall be entitled to receive payment only for the Services provided prior to the termination date which have met the requirements of this Agreement, and such payment shall constitute full and final satisfaction of Develop Nova Scotia’s obligations to the Supplier hereunder.

REPRESENTATIONS AND WARRANTIES

12.1 The Supplier represents and warrants to Develop Nova Scotia, with the intention and knowledge that Develop Nova Scotia is relying on each such representation and warranty in entering into this Agreement, that:

a) All statements contained in the Supplier’s Proposal, and any certificate or other document delivered to Develop Nova Scotia under this Agreement or in connection with the Services to be provided hereunder are true and correct;

b) The Supplier has no knowledge of any fact that may materially adversely affect the Supplier’s business or operations or its financial condition, or its ability to fulfill its obligations to Develop Nova Scotia under this Agreement;

c) The Supplier has the personnel, experience, qualifications and other resources to provide the Services in accordance with the requirements of this Agreement;

d) The Supplier has the corporate power and legal capacity to enter into, fully perform, and meet all of its obligations under this Agreement on the terms and conditions set out herein;
e) This Agreement has been duly authorized, executed and delivered by the Supplier and constitutes a valid and binding obligation of the Supplier; and

f) The Supplier can perform the Services, and Develop Nova Scotia shall be entitled to utilize the Services, in accordance with the requirements of this Agreement without infringing any trade secret, patent, copyright, industrial design or other intellectual property right enforceable in Canada, and the Supplier has obtained, and will maintain, at its own expense, all requisite and appropriate authorizations and permissions, including those concerning any licenses, assignments, copyrights, patents and other intellectual property rights that are required by the Supplier to meet its obligations to Develop Nova Scotia hereunder.

13.0 CONFLICT OF INTEREST

13.1 The Supplier shall not permit an actual or potential conflict of interest to arise between its obligations to Develop Nova Scotia under this Agreement and its obligations to any third party. The Supplier shall immediately notify Develop Nova Scotia in writing if any such potential or actual conflict of interest should arise at any time during the Term.

14.0 ASSIGNMENT AND SUBCONTRACTING

14.1 The Supplier shall not assign this Agreement or any of its rights or obligations hereunder, or subcontract the performance of any of the Services without the prior written consent of Develop Nova Scotia, which consent may be withheld by Develop Nova Scotia in its sole discretion. Any purported assignment or subcontracting by the Supplier without such consent shall be of no force or effect.

14.2 Develop Nova Scotia’s consent to an assignment of this Agreement, or the subcontracting of the performance of any of the Services to be provided by the Supplier hereunder, shall not relieve the Supplier from any of its obligations under this Agreement and the Supplier shall, notwithstanding any such consent by Develop Nova Scotia, remain responsible for the performance of the Services and all other obligations of the Supplier set out herein.

15.0 ACCOUNTS AND AUDIT

15.1 The Supplier shall keep proper and accurate books and records, including all invoices, receipts and vouchers, relating to the Services and all expenditures and commitments made in connection therewith. The Supplier shall make such books and records available to Develop Nova Scotia for review or audit within ten (10) days following receipt of a request from Develop Nova Scotia to do so. The Supplier agrees that it shall retain all such books and records and make them available for review or audit by Develop Nova Scotia for a period of three (3) years after the date of final payment by Develop Nova Scotia hereunder. Any review or audit by Develop Nova Scotia pursuant to this Article 15.1 shall be carried out by Develop Nova Scotia at Develop Nova Scotia’s expense.
16.0 NOTICES

16.1 Any notice to be given under this Agreement by Develop Nova Scotia or the Supplier shall be in writing and delivered by hand, by facsimile transmission or by registered mail, to the other party at the address and to the attention of the contact individual indicated below:

To Develop Nova Scotia:
Tim Jordan, P.Eng.
Old Red Store – Historic Properties
Suite 301 – 1875 Upper Water Street
Halifax, Nova Scotia
B3J 1S9

To the Supplier:
xxxxxxxxxxxxxxxxx

A notice shall be deemed to be duly given and received upon delivery, if delivered by hand; upon receipt of the facsimile transmission, if the transmission is received by the intended recipient prior to the recipient’s close of business (and otherwise on the next business day of the recipient); or three (3) business days after posting, if sent by registered mail with a return receipt. Either party may change its address or contact for receipt of notices, provided that such party gives notice thereof in accordance with this Article 16.1 and confirms the effective date of the change in such notice.

17.0 AGREEMENT AND AMENDMENTS

17.1 This Agreement constitutes the entire agreement and understanding between the Supplier and Develop Nova Scotia with respect to the Services, and supersedes all prior negotiations, communications and other agreements, whether written or oral, relating to the subject matter hereof. Any amendment or modification to this Agreement shall have no force or effect unless it is in writing and signed by duly authorized representatives of each of Develop Nova Scotia and the Supplier.

17.2 The following documents form part of this Agreement:

a) These Articles of Agreement; and
b) The Schedules;

In the event of any conflict or inconsistency between or among any of the foregoing, the documents comprising this Agreement shall be given precedence in the following order:

a) These Articles of Agreement; and amendments hereto;

b) Schedule A.1;

c) Deleted.

d) Schedule B.1; and B.2

e) Schedule C
18.0 WAIVER

18.1 No term or provision of this Agreement, and no breach of this Agreement by the Supplier, shall be deemed to be waived or excused by Develop Nova Scotia unless such waiver is in writing and signed by Develop Nova Scotia. The waiver by Develop Nova Scotia of any breach of a term or provision of this Agreement shall not be or be deemed to be a waiver of any continuing or subsequent breach by the Supplier of the same or any other term or provision of this Agreement.

19.0 REMEDIES CUMULATIVE

19.1 The rights and remedies of Develop Nova Scotia set out in this Agreement are cumulative, and are in addition to and not in substitution for any other rights or remedies available to Develop Nova Scotia at law or in equity.

20.0 DISPUTES

20.1 If a dispute arises between Develop Nova Scotia and the Supplier arising out of or relating to this Agreement, or the subject matter hereof, Develop Nova Scotia and the Supplier agree that they shall each make all reasonable efforts to resolve any such dispute on a timely basis through amicable negotiations. Disputes shall promptly be referred by each party to their respective senior management representatives who have the authority to resolve and settle any such disputes on their behalf. In the event that such representatives cannot resolve the dispute within ten (10) days, or such longer period as the parties may agree in writing, either party may elect, upon giving prior written notice to the other party, to resolve the matter through litigation proceedings. Notwithstanding the foregoing, nothing in this Article 20.1 shall prevent Develop Nova Scotia from exercising its rights of termination set out in Article 3.1 or Article 11.3 hereof, in the circumstances described therein.

21.0 ENUREMENT

21.1 This Agreement shall endure to the benefit of and be binding on Develop Nova Scotia and on the successors and permitted assigns of the Supplier.

22.0 GENERAL

22.1 Develop Nova Scotia’s Representative All references in this Agreement to Develop Nova Scotia, include any person duly authorized to act on behalf of Develop Nova Scotia hereunder

22.2 Headings and Interpretation The division of this Agreement into Articles and the insertion of headings are for convenience of reference only and do not affect its interpretation. Except where the context requires otherwise, references to the terms “herein,” “hereof,” “hereunder” and similar expressions refer to this Agreement as a whole, and not to any specific Article or Schedule.
22.3 **Time of the Essence** Time shall be of the essence in this Agreement.

22.4 **Currency**: All dollar amounts referred to in this Agreement are Canadian dollars, unless expressly provided.

22.5 **Offers of Employment**: Each of the parties agrees that it shall not, without the prior written consent of the other party, at any time prior to the expiration or earlier termination of this Agreement, or within a period of six (6) months thereafter, solicit personnel then in the employ of the other party, who either are, or were, directly involved in the performance or administration of this Agreement, to terminate their employment with that other party.

22.6 **Partial Invalidity**: If any term or provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid or unenforceable, it shall be deemed to be severed from this Agreement, and the remaining terms and conditions shall nevertheless remain in full force and effect.

22.7 **Counterparts**: This Agreement may be signed by Develop Nova Scotia and the Supplier in separate counterparts, each of which when signed and delivered, shall constitute an original and binding agreement for all purposes. Counterparts may be executed in original, faxed form, or portable document format (PDF), provided that the party which submitted its signature in faxed form or in PDF shall promptly forward the originally signed copy of this Agreement to the other party.

22.8 **Further Assurances**: The Supplier and Develop Nova Scotia agree to execute and deliver all such further documents and instruments, and do or cause to be done all such acts and things, as either party may reasonably consider necessary to evidence the intent and meaning of this Agreement.

22.9 **RFP References**: All references in this Agreement to “RFP” mean and include any amendments that were made thereto by Develop Nova Scotia.

22.10 **Words in the Singular**: Where the context so requires in this Agreement, words in the singular include the plural and vice versa.

### 23.0 GOVERNING LAW

23.1 This Agreement shall be governed by and interpreted in accordance with the laws of Nova Scotia and the laws of Canada applicable therein.
IN WITNESS WHEREOF Develop Nova Scotia and the Supplier have caused this Agreement to be signed by their duly authorized representatives on the dates set forth below.

WITNESSED BY:  

DEVELOP NOVA SCOTIA CORPORATION LIMITED

Witness Signature  
For Develop Nova Scotia

DATED AT Halifax, Nova Scotia
Xxx day of xxxxxxxx, 20xx

xxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Witness Signature  
For the Supplier

DATED AT Halifax, Nova Scotia
Xxx day of xxxxxxxx, 20xx
SCHEDULE A

This Schedule A incorporates by reference the documents referred to under each of Schedule A.1 as per below:

Schedule A.1 Request for Proposals

a) Appendix B: Submission Form and related attachments.
b) Appendix C: Pricing Form and related attachments
c) Appendix D: Response to RFP

Proponent’s Initials: _______________  Develop Nova Scotia’s Initials: _______________
SCHEDULE B

This Schedule describes the payment terms for the Services:

Schedule B.1 Payment

The total amount payable under the Agreement is set out in Article 2.1, and shall be invoiced by
the Supplier as follows:

Progress monthly invoices, subject to a 10% holdback shall show the percentage of work
completed through the end of the billing period and amounts previously paid in a predefined
schedule of values defined with Develop Nova Scotia in advance of the first invoice. Before
Develop Nova Scotia approves monthly progress certificates for payment, the Design-BUILDER
will be required to submit proof that all their Sub-Contractors, Consultants and Suppliers have
received payments in the amounts of claim on the previous monthly certificate. Refer to the
tender documents for the balance of requirements. Receipts shall be provided by the
Consultant for all expenses if requested. Subconsultant work is not subject to holdback.

Payment of Supplier invoices will be made by Develop Nova Scotia in accordance with the terms
of Article 2 of the Agreement and this Schedule B.

Schedule B.2 Changes in the Work

a. Change in the Work
Change in the Work means an addition, deletion, or other revision to the Work within the general
scope of the Contract Documents.

b. Extra Work
Extra work means any work or service, the performance of which is beyond the general scope for the
Contract Documents.

c. Contemplated Change Order (CCO)
If a change arises on the project and when applicable, the Design-BUILDER will discuss the change with
the Develop Nova Scotia Project Manager. Upon approval, the Design-BUILDER will detail the change
on CCO document. This CCO, along with the Design-BUILDER’s letter explaining the reason for the
contemplated change and outlining the cost associated (as per section f. below), will be forwarded to
Develop Nova Scotia for formal approval. Upon approval, Develop Nova Scotia will issue a Change
Order (CO) to the Design-BUILDER.

d. Change Order (CO)
A Change Order is a written instrument prepared by the Consultant or Develop Nova Scotia and
signed by Develop Nova Scotia, with written recommendation from the Consultant stating their
agreement upon all of the following:
1. A Change in the Work or Extra Work;
2. the change in the Contract Price, if any;
3. the change in the Contract time, if any.

e. Change Directive (CD)
A Change Directive is a written order prepared by the Consultant or Develop Nova Scotia and signed by Develop Nova Scotia, directing a Change in the Work and stating a proposed basis for adjustment, if any, in the Contract Price or Contract time, or both. A Change Directive is used in the absence of total agreement necessary for a Change Order.

f. Quotations for Changes in the Work submitted in response to Develop Nova Scotia's request or Consultant acting on their behalf, shall be fully detailed and itemized to facilitate reviewing and processing by Develop Nova Scotia. Quotations shall include all work to be executed by the Contractor’s own forces and / or such work carried out by Subcontractors. All applicable labour, material, shop hours, equipment, etc., shall be listed along with quantities and unit rates.

g. The value of any change shall be determined in one or more of the following ways as determined by Develop Nova Scotia:
   1. By estimate and acceptance in a lump sum, submitted with subcontractors and supplier’s signed quotation and breakdown estimate for materials, equipment and labour and all applicable mark ups as defined in Schedule B.2.i and B.2.j.
   2. By unit prices included in Appendix C inclusive of all overhead and profit.
   3. By cost and fixed fee as defined in Schedule B.2.j.

h. In cases of additional work to be paid for under method "g.3", the Contractor shall keep and present in such form as the Consultant or Develop Nova Scotia may direct, a correct account of the net cost of labour and materials, together with vouchers. In any case, Develop Nova Scotia or the Consultant shall certify to the amount due to the Contractor including the profit and overhead as described in the Schedule. Pending final determination of value, payments on account of changes shall be made on the Payment certificate.

i. The labour cost to be calculated by the actual estimated hours at an hourly rate determined as follows.
   1. The hourly labor rate to be the total payroll cost including; base hourly wage rate of worker, statutory contribution to EI, UIC, WCB and CPP and other applicable labour burdens paid directly by the employer such as vacation pay, holiday pay, pension plan etc. Such burdens shall be verified by submission of payroll evidence.
   2. To the direct labour rate the following percentage factors will be recognized:
      - Small tools / expenditures: 5% (on payroll costs)
      - Site supervision: 5% (on payroll costs)
   3. For Design Work: Billable hourly rates are to include all head office cost, finance costs, administration, supervision, insurance, bonds, site office expenses, benefits and profits etc.

j. The cost of any authorized change shall be determined by the net total, estimated or actual, on-site labour, shop labour and material and/or equipment as outlined in Schedule B.2 (above), on which the following percentage markup shall be added depending upon total estimated or actual value:

   For changes up to $5,000:
   1. Work completed by Design-Builder’s own forces: 15%
   2. Design-Builder’s markup on work completed by Subcontractor(s) and/or Subconsultant(s): 10%
   3. No percentage markup shall apply to deductions.
For changes above $5,000:
1. Work completed by Design-Builder’s own forces: 10%
2. Design-Builder’s markup on work completed by Subcontractor(s) and/or Subconsultant(s): 8%
3. No percentage markup shall apply to deductions.

The above defined percent (%) of markups are to include all normal overhead costs such as: head office cost, project management costs, safety supervision and materials, finance costs, administration, supervision, insurance, bonds, site office expenses, foreman benefits and profits etc.

k. The issuance of a change order shall be deemed to be formal acceptance by the Consultant of the quotation. Following the issue of a change order the Consultant will not entertain claims for extra payments due to errors alleged to have been made in the Contractor's quotation.

l. Where it is proposed that a change in the scope of work affects the construction schedule, this must be identified at the time of submission of quotation. Claims to access the impact of changes on the schedule at a later date will be rejected. Time extension to the project schedule will be considered only where it can be shown with the overall project schedule that the work area and or trades affected by the change are on the critical path. Time extensions granted for changes to the scope of work will not give rights to claim any additional cost.

Proponent’s Initials: _______________  Develop Nova Scotia’s Initials: _______________
SCHEDULE C

PERSONAL INFORMATION INTERNATIONAL DISCLOSURE PROTECTION ACT

The Supplier acknowledges and confirms that it is a "service provider" as defined in the Personal Information International Disclosure Protection Act, SNS 2006 c. 3 ("PIIDPA"), that it has read and understands its obligations as a service provider thereunder and that as a service provider it is legally bound by the obligations imposed on it by PIIDPA. It is a condition precedent to Develop Nova Scotia entering into the Agreement with the Supplier that the Supplier irrevocably undertakes, covenants and agrees to be bound by and comply with the obligations imposed on it as a service provider under PIIDPA.

The Supplier further covenants, warrants and represents to Develop Nova Scotia that it will not at any time provide or allow the release of personal information to which it has access in its capacity as a service provider to Develop Nova Scotia in response to any "foreign demand for disclosure" or permit or allow the "unauthorized disclosure of personal information" as each of those terms are defined in PIIDPA.

The Supplier shall implement and strictly enforce security arrangements that will ensure that all personal information that it collects or uses on behalf of Develop Nova Scotia is protected at all times from unauthorized access or disclosure and shall confirm in writing to Develop Nova Scotia, upon request, the details of such security arrangements. The Supplier also agrees to implement and enforce any additional security procedures as may be required by Develop Nova Scotia from time to time to protect the personal information that the Supplier collects or uses on behalf of Develop Nova Scotia. Develop Nova Scotia shall be authorized, upon giving prior written notice to the Supplier, to enter the premises of the Supplier during normal business hours for the purpose of conducting an audit of the security arrangements referenced herein.

All personal information that the Supplier obtains or becomes aware of while providing services to Develop Nova Scotia is not and shall not be or be deemed to be the property of the Supplier. The Supplier acknowledges and agrees that it will not, either directly or indirectly, acquire any rights to use or own any such personal information other than the right to use it for the sole purpose of fulfilling its obligations to Develop Nova Scotia under the Agreement.

The Supplier expressly confirms that the laws of Develop Nova Scotia of Nova Scotia shall apply to its obligations as a service provider to Develop Nova Scotia, notwithstanding the laws or the order of any court outside Canada.

Proponent’s Initials: ________________  Develop Nova Scotia’s Initials: ________________
APPENDIX B – SUBMISSION FORM  
RFP DNS-2021-0042 MAERSK WHARVES AND BOARDWALK  
DESIGN-BUILD SERVICES  
Halifax, Nova Scotia  

B.1 PROPOSENT INFORMATION  

<table>
<thead>
<tr>
<th>Please fill out the following form, naming one person to be the bidder’s contact for the RFP process and for any clarifications or communication that might be necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Legal Name of Proponent:</strong></td>
</tr>
<tr>
<td><strong>Any Other Relevant Name under which Bidder Carries on Business:</strong></td>
</tr>
<tr>
<td><strong>Street Address:</strong></td>
</tr>
<tr>
<td><strong>City, Province/State:</strong></td>
</tr>
<tr>
<td><strong>Postal Code / Zip Code:</strong></td>
</tr>
<tr>
<td><strong>Phone Number:</strong></td>
</tr>
<tr>
<td><strong>Fax Number:</strong></td>
</tr>
<tr>
<td><strong>Company Website (if any):</strong></td>
</tr>
<tr>
<td><strong>Proponent Contact Name and Title:</strong></td>
</tr>
<tr>
<td><strong>Proponent Contact Phone:</strong></td>
</tr>
<tr>
<td><strong>Proponent Contact Fax:</strong></td>
</tr>
<tr>
<td><strong>Proponent Contact Email:</strong></td>
</tr>
<tr>
<td><strong>Nova Scotia Registry of Joint Stock Number (Leave blank if NOT applicable):</strong></td>
</tr>
<tr>
<td><strong>HST / GST Registration Number (Leave blank if NOT applicable):</strong></td>
</tr>
<tr>
<td><strong>SIN # (only required if you do not have an HST/GST or NSRJST number):</strong></td>
</tr>
</tbody>
</table>

B.2 ACKNOWLEDGEMENT OF NON-BINDING PROCUREMENT PROCESS  

The proponent acknowledges that the RFP process will be governed by the terms and conditions of the RFP, and that, among other things, such terms and conditions confirm that this procurement process does not constitute a formal, legally binding bidding process (and for greater certainty, does not give rise to a Contract A bidding process contract), and that no legal relationship or obligation regarding the procurement of any good or service shall be created between Develop Nova Scotia and the proponent unless and until Develop Nova Scotia and the proponent execute a written agreement for the Deliverables.
B.3 ABILITY TO PROVIDE DELIVERABLES

The proponent has carefully examined this RFP and has a clear and comprehensive knowledge of the Deliverables required. The bidder represents and warrants its ability to provide the Deliverables in accordance with the requirements of the RFP for the rates set out in the completed Pricing Form (Appendix C).

B.4 MANDATORY FORMS

The Proponent encloses as part of the proposal the mandatory forms set out below:

<table>
<thead>
<tr>
<th>FORM</th>
<th>INITIAL TO ACKNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELECTRONIC TECHNICAL PROPOSAL (File #1)</td>
<td></td>
</tr>
<tr>
<td>Appendix B - Submission Form</td>
<td></td>
</tr>
<tr>
<td>Appendix E – Bid Security Form</td>
<td></td>
</tr>
<tr>
<td>ELECTRONIC PRICING PROPOSAL (File #2)</td>
<td></td>
</tr>
<tr>
<td>Appendix C - Submission Pricing Form</td>
<td></td>
</tr>
</tbody>
</table>

B.5 NON-BINDING PRICING

The proponent has submitted its pricing in accordance with the instructions in the RFP and in the Pricing Form (Appendix C). The proponent confirms that the pricing information provided is accurate. The proponent acknowledges that any inaccurate, misleading or incomplete information, including withdrawn or altered pricing, could adversely impact the acceptance of its proposal or its eligibility for future work with Develop Nova Scotia.

B.6 ADDENDA

The bidder is deemed to have read and taken into account all addenda issued by Develop Nova Scotia. The onus is on Proponents to make any necessary amendments to their proposals based on the addenda.

B.7 PROHIBITED CONDUCT

The bidder declares that it has not engaged in any conduct prohibited by this RFP.

B.8 CONFLICT OF INTEREST

For the purposes of this RFP, the term “Conflict of Interest” includes, but is not limited to, any situation or circumstance where:

a. in relation to the RFP process, the bidder has an unfair advantage or engages in conduct, directly or indirectly, that may give it an unfair advantage, including but not limited to (i) having, or having access to, information of Develop Nova Scotia in the preparation of its bid that is not available to other Proponents, (ii) communicating with any person with a view to influencing preferred treatment in the RFP process (including but not limited to the lobbying of decision makers involved in the RFP process), or (iii) engaging in conduct that compromises, or could be seen to compromise, the integrity of the open and competitive RFP process or render that process non-competitive or unfair; or
b. in relation to the performance of its obligations contemplated in the subject matter of this RFP, the proponent’s other commitments, relationships or financial interests (i) could, or could be seen to, exercise an improper influence over the objective, unbiased and impartial exercise of its independent judgement, or (ii) could, or could be seen to, compromise, impair or be incompatible with the effective performance of its contractual obligations.

Proponents should disclose the names and all pertinent details of all individuals (employees, advisers, or individuals acting in any other capacity) who participated in the preparation of the bid; **AND** who were employees of Develop Nova Scotia within twelve (12) months prior to the Submission Deadline.

If the box below is left blank, the bidder will be deemed to declare that (a) there was no Conflict of Interest in preparing its bid; and (b) there is no foreseeable Conflict of Interest in performing the contractual obligations contemplated in the RFP.

Otherwise, if the statement below applies, check the box.

- The proponent declares that there is an actual or potential Conflict of Interest relating to the preparation of its bid, and/or the bidder foresees an actual or potential Conflict of Interest in performing the obligations contemplated in the RFP.

If the bidder declares an actual or potential Conflict of Interest by marking the box above, the bidder must set out below details of the actual or potential Conflict of Interest:

---

B.9  **CONFIDENTIAL INFORMATION OF PROPOSANT**

A proponent should identify any information in its proposal, or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by Develop Nova Scotia. The confidentiality of such information will be maintained by Develop Nova Scotia, except as otherwise required by law or by order of a court or tribunal.
The proponent agrees that its RFP will, as necessary, be disclosed on a confidential basis to Develop Nova Scotia’s advisers retained to advise or assist with this RFP process, including with respect to the evaluation of this bid.

_______________________________  ______________________________
Signature of Witness              Signature of Proponent Representative

_______________________________  ______________________________
Name of Witness                   Name of Proponent Representative

_______________________________
Title of Proponent Representative

_______________________________
Date

I have the authority to bind the Proponent.
APPENDIX C – SUBMISSION PRICING FORM
RFP DNS-2021-0042 MAERSK WHARVES AND BOARDWALK
DESIGN-BUILD SERVICES
Halifax, Nova Scotia

C.1 INSTRUCTIONS ON HOW TO COMPLETE SUBMISSION PRICING FORM

a) Rates shall be provided in Canadian funds, inclusive of all applicable duties and taxes except for HST, which must be itemized separately.

b) Rates quoted by the proponent shall be all-inclusive and shall include all labour and material costs, all travel and carriage costs, all insurance costs, all costs of delivery to Develop Nova Scotia, all costs of installation and set-up, including any pre-delivery inspection charges, and all other overhead, such as any applicable fees or other charges.

c) The successful proponent shall be required to provide agreement security, within ten (10) days from notification of award in a form acceptable to Develop Nova Scotia. Agreement security shall be provided as follows:
Bonds in the amount of 50% of the tendered price, not including HST, for:
- A performance bond or equivalent, and
- A labour and material bond or equivalent.

C.2 EVALUATION OF PRICING

Pricing is worth 40 points of the total score.

Pricing will be scored based on a relative pricing formula using the “Total Cost” set out in the Pricing Form. Each proponent will receive a percentage of the total possible points allocated to the “Total Cost” it has bid on, which will be calculated by dividing that proponent’s “Total Cost” into the lowest bid “Total Cost”. For example, if a proponent bids $120.00 for a “Total Cost” and that is the lowest bid “Total Cost”, that proponent receives 100% of the possible points (120/120 = 100%). A proponent who bids $150.00 receives 80% of the possible points (120/150 = 80%), and a proponent who bids $240.00 receives 50% of the possible points (120/240 = 50%).

\[
\begin{align*}
\text{Lowest rate} & \quad \text{X} \quad \text{Total available points} = \text{Score for second-lowest rate} \\
\text{Second-lowest rate} & \\
\text{Lowest rate} & \quad \text{X} \quad \text{Total available points} = \text{Score for third-lowest rate} \\
\text{Third-lowest rate} & \\
\end{align*}
\]

And so on, for each proposal.
C.3 PRICING FORM – TOTAL POINTS = [40 POINTS**]

Develop Nova Scotia has allotted a fixed budget of $6,840,000.00 (excluding all taxes) for the completion of all RFQ particulars (“The Deliverables”) at Appendix D for all Preconstruction and Construction expenses.

Prepare a fixed price per deliverable for your proposed services. Provide supporting details, assumptions and/or clarifications to support these figures, including expanded estimates of the work effort and a breakout of expected expenses. Attach such detail to Appendix C-Pricing Form. Summarize the cost of work under the categories shown below;

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>COST (CDN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRECONSTRUCTION:</td>
<td></td>
</tr>
<tr>
<td>• DESIGN FEES, ESTIMATING AND PROCUREMENT</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION:</td>
<td></td>
</tr>
<tr>
<td>• GENERAL CONDITIONS (Mobilization, Supervision and management, temp. services and structures, temporary fencing, bond costs, etc.)</td>
<td></td>
</tr>
<tr>
<td>• SITWORKS - ELECTRICAL AND LIGHT STANDARDS</td>
<td></td>
</tr>
<tr>
<td>• SITWORKS – UTILITY AND SERVICE DISCONNECTIONS</td>
<td></td>
</tr>
<tr>
<td>• SVITZER BUILDING DEMOLITION</td>
<td></td>
</tr>
<tr>
<td>• OLD SALVAGE WAREHOUSE DEMOLITION</td>
<td></td>
</tr>
<tr>
<td>• SVITZER WHARF DEMOLITION AND REMOVALS</td>
<td></td>
</tr>
<tr>
<td>• OLD SALVAGE WHARF DEMOLITION AND REMOVALS</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION - PILE REPAIR</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – PILE CAP REPAIR</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – TIMBER WALTERS</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – TIMBER FENDERS</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – TIMBER BRACING</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – MOORING BOLLARDS</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – NEW FASTENERS</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – WHEELGUARD REPAIR</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – MISC. (Ladders, Fenders, etc.)</td>
<td></td>
</tr>
<tr>
<td>• PILOT WHARF RECAPITALIZATION – WATER CONNECTION</td>
<td></td>
</tr>
</tbody>
</table>
C.4 EMPLOYEE RATES

The proponent shall enter into a Contract to perform and complete any Change in the Work considered additional to the Contract with the below listed employee rates. Rates are inclusive of office and administration fees, overhead and profit (refer to Schedule B), small tools, transportation, training, misc. expenses, etc.

C.4.1 Subconsultant / Design Team:
Prepare a table for inclusion in your proposal including, at a minimum, the following rates:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>LUMP SUM TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>HST (add 15%)</td>
</tr>
<tr>
<td></td>
<td>TOTAL PRICE INCLUDING HST</td>
</tr>
</tbody>
</table>
C.4.1.1 Architectural/Engineer Senior Team Lead $________/hr
C.4.1.2 Architectural/Engineer Technician $________/hr
C.4.1.3 Structural Team Lead $________/hr
C.4.1.4 Electrical Design Team Lead $________/hr
C.4.1.5 Mechanical and Fire Protection Design Team Lead $________/hr
C.4.1.6 Civil Design Team Lead $________/hr
C.4.1.7 CAD Technician $________/hr
C.4.1.8 Other (if applicable) $________/hr
C.4.1.9 Other (if applicable) $________/hr
C.4.1.10 Other (if applicable) $________/hr

C.4.2 Construction Team:
Prepare a table for inclusion in your proposal including the following rates as applicable:

<table>
<thead>
<tr>
<th>Employee Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.4.2.1 Project Manager $________/hr</td>
</tr>
<tr>
<td>C.4.2.2 Project Coordinator $________/hr</td>
</tr>
<tr>
<td>C.4.2.3 Project Superintendent $________/hr</td>
</tr>
<tr>
<td>C.4.2.4 Carpenter $________/hr</td>
</tr>
<tr>
<td>C.4.2.5 Labour $________/hr</td>
</tr>
<tr>
<td>C.4.2.6 Other (if applicable) $________/hr</td>
</tr>
<tr>
<td>C.4.2.7 Other (if applicable) $________/hr</td>
</tr>
<tr>
<td>C.4.2.8 Other (if applicable) $________/hr</td>
</tr>
</tbody>
</table>

C.5 UNIT RATES:
The proponent shall enter into a Contract to perform and complete any Change in the Work considered additional to the Contract with the below listed Unit Rates. Rates are inclusive of office and administration fees, project management, overhead and profit (refer to Schedule B), small tools, transportation, training, misc. expenses, etc.

<table>
<thead>
<tr>
<th>Unit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.5.1 Timber Decking $________/m3</td>
</tr>
<tr>
<td>C.5.2 Timber Stringers (including end blocking) $________/m3</td>
</tr>
<tr>
<td>C.5.3 Timber Pile Caps $________/m3</td>
</tr>
<tr>
<td>C.5.4 Timber Piles (batter and bearing) $________/m</td>
</tr>
<tr>
<td>C.5.5 Timber Fender Piles $________/m</td>
</tr>
<tr>
<td>C.5.6 Timber Wheelguards (including chock) $________/m3</td>
</tr>
<tr>
<td>C.5.7 Steel Piles (for floating docks) $________/m</td>
</tr>
<tr>
<td>C.5.8 Floating Docks $________/m2</td>
</tr>
<tr>
<td>C.5.9 Timber Cross Bracing $________/m3</td>
</tr>
<tr>
<td>C.5.10 Rip-Rap $________/m3</td>
</tr>
<tr>
<td>C.5.11 In-Water Over Excavation (for rip-rap) $________/m3</td>
</tr>
</tbody>
</table>
C.6  SEPARATE PRICE

At Develop Nova Scotia’s sole discretion and subject to funding availability, the value of any of the below may be added to the successful proponent’s final contract price. The price shall be stand alone, and include all costs inclusive of overhead, profit, etc. as required to provide a turn-key deliverable. Alternate pricing shall not be included in the Lump Sum Price established in Appendix C, Item C.3. (above). It shall, however, be subject to the applicable scope and obligations established in this RFP.

C.6.1. Provide New Floating Dock infrastructure for the New Boardwalk Extension (including steel pile guides, gangway, receiver, etc.) as per Appendix D, Section D.2.4.3 and noted in Annex 1.

$__________________+HST

C.7  ADDENDUMS (IF APPLICABLE)

The bidder acknowledges that addenda No. _______ to _______ inclusive were carefully examined, and that all the above were taken into consideration in preparation of this bid.

Bidders are deemed to have read and considered all addenda issued by Develop Nova Scotia. The onus is on each bidder to make any necessary amendments to its bid prior to the closing date based on any addenda issued. Develop Nova Scotia may, in its sole discretion, disqualify a bid or require a bidder to acknowledge all addenda in writing prior to contract award if the bidder fails to do so in its bid.

_______________________________
Name of Proponent Representative

_______________________________
Signature of Proponent Representative
D.1 THE DELIVERABLES

Provide the required design and construction of the Maersk Wharf and Boardwalk Design-Build Services as outlined in the Tender Documents; refer to section D.2 MATERIAL DISCLOSURES for a listing of Tender Documents, specific scope Items and related requirements.

The proponent will work closely with representatives from both Develop Nova Scotia and the Authorities having jurisdiction. Develop Nova Scotia will be administering, operating and programming the public space upon completion.

A concept plan (referenced in Appendix D.2.1, Annex #1) has been developed in collaboration with Develop Nova Scotia Operations team.

D.1.1 Utilities
The Contractor will be responsible for the arrangement of the relocation of any existing utilities and the like within the boundaries of work. This includes, but may not be limited to, telephone, power lines, cables, poles, conduits, water, etc. NSPI Electrical Fees will be paid by Develop Nova Scotia. No claim will be entertained for any damage or slowdown of work due to delay with respect to the relocation of any utilities. Refer to Annex #1 – Concept Plan for project location and areas of work.

D.1.2 Temporary Works
The Contractor shall provide all temporary works as required to safely complete the work, and he shall remove them before completion of the contract. The Contractor shall also protect the work from the effects of wind, rain, snow, ice, erosion etc. The Contractor shall be fully responsible for the design, supply and installation of temporary works.

D.1.3 Noise and Dust Control
The Contractor shall exercise effective noise and dust control measures at all times. Debris shall be cleaned up daily during the work as required by Develop Nova Scotia and the Project Manager.

The Contractor, relative to spilled debris, mud, dust, etc., shall keep streets used for trucking in a satisfactory condition. Make good any damage to roads, streets, access routes, parking areas etc., resulting from Contractor’s activities at Contractor’s expense.

D.1.4 Clean Up
Upon completion of the work, all surplus construction materials, all tools, the Contractor shall remove equipment and temporary structures from the site. All debris, timbers, other materials, etc., shall be cleaned up and removed. The site shall be left in a clean and tidy state, fully acceptable to Develop Nova Scotia and the Project Manager.

D.1.5 Environmental Protection
The Contractor shall take all necessary measures to protect the environment, and he shall comply with environmental regulations and with the requirements of environmental agencies. The contractor shall
make provisions for and include all costs associated with complying with environmental regulations and requirements.

Ensure that no harmful materials or substances, i.e. Biocides, wood preservatives, fresh cement, lime, paint or concrete, etc. are discharged into the harbour.

D.1.6. Guarantee
The Contractor shall be required to guarantee the work and all associated items for a period of 12 months after the contract total completion date, (i.e. total completion) against all defects due either to defective workmanship and/or materials. The Contractor as directed by the Project Manager and/or Owner shall carry out any repairs required within 12 months of the formal completion of the contract expeditiously.

D.2 MATERIAL DISCLOSURES

D.2.1 Contract Documents and Drawings
The following items shall form part of this contract. Proponents are required to review all the below documentation. For those interested in responding to this RFP, notify the RFP Contact by including full proponent’s contact information with a request to receive access to technical links from Develop Nova Scotia. Contact Develop Nova Scotia should there be any discrepancies or omissions.

D.2.1.1 DRAWINGS
Annex #1 – MAERSK Concept Plan

D.2.1.2 RELATED DOCUMENTS AND REPORTS
a. Appendix F - Pilot Wharf Assessment and recommended repairs conducted by EXP Services Inc., dated June 3rd, 2020;
b. Appendix G - Pilot Wharf Assessment Underwater Visual Inspection conducted by Connors Diving, dated June 3rd, 2020;
c. Appendix H - Pictures of existing wharves to be repaired and demoed;
d. Appendix I - Pictures of existing buildings to be demoed;
e. Appendix J - Existing information on buildings to be demoed; Contact DNS for link.
f. Appendix K - Topographical and Bathymetric Surveys conducted by Strum Consulting. To Follow via Addendum;
g. Appendix L - LiDAR Survey Report: Topographic Survey data at a resolution >=5 ppm will be made available to interested proponents via Link. The following maps and data files are provided:
   I. Classified point cloud data (LAS file) at >= 5 ppm. To Follow via Addendum;
   II. Gridded elevation models (DEM and DSM file) at a cell resolution equal to or better than 1 m2. Contact DNS for link.
   III. Multispectral ortho imagery at a resolution of <= 5 cm; To Follow via Addendum;
   IV. Contour mapping (DWG file) at an accuracy equal to or better than 0.15 m; To Follow via Addendum;
h. Appendix M - Geotechnical Investigation conducted by Harbourside Geotechnical Consultants. To be followed by Addendum;
i. Appendix N - Benthic Habitat Survey conducted by CBCL Limited, dated June 1st, 2015;
j. Appendix O - Locates conducted by Strum Consulting. To be followed by Addendum;
k. Appendix P - Hazardous Materials Removals Report conducted by Stantec, To be followed by Addendum;
I. Appendix Q - Archeological Screening and Reconnaissance Report (or ARIA report conducted by Boreas Heritage Consulting, To be Followed by Addendum;

m. Appendix R – Coastal Engineering Study: Being conducted by CBCL (To be followed by Addendum). The Addendum will include Coastal Flood Hazard mapping on a digital Terrain Model using LiDAR information (above), at (3) different planning horizons: year 2021, 2070 and 2100 as. Each planning horizon will include at least (3) risk levels: 1%, 5% and 20% annual exceedance probability (AEP). Study will also include a wave transformation analysis to provide maximum water level locations each key improvement proposed;

n. Appendix S – Floating Infrastructure Proposed Designs and Parameters;

o. Appendix T – Boardwalk Area Abutments Drawings by EXP, dated 2011 (Design Drawings for Boardwalk Area between Salter Block and existing Svitzer Pier);


D.2.2 Agreement Security
The Successful Proponent shall be required to provide agreement security within ten (10) days after execution of a Service Agreement, following the requirements in Appendix C, Item C.1.

D.2.3 Project Administration

D.2.3.1. General Requirements

D.2.3.1.1. DNS Project Manager
a. The Project Manager assigned to the project shall represent Develop Nova Scotia.
b. The Project Manager is directly concerned with the project and is responsible for its progress on behalf of DNS.
c. The Project Manager is the liaison between the Community, Tenants and other stakeholders.
d. DNS administers the project and exercises continuing control over the project during all phases of development.

D.2.3.1.2. Lines of Communication
a. Unless otherwise directed by the Project Manager, conduct all project communication through the Project Manager only.
b. Direct communication between members of the Project Team on routine matters is required to enable the discussion and resolution of technical matters. However, no communication shall alter the terms of the project scope, budget or schedules unless directed in writing by the Project Manager.

D.2.3.1.3. Media
Do not respond to requests for project related information or questions from the media. Direct such inquires to the Project Manager.

D.2.3.1.4. Project Response Time
Key personnel of the Consultant and Sub-Consultant and/ or specialists shall be personally available, or have an acceptable substitute available, to attend meetings or respond to inquiries within one (1) working day.

D.2.3.1.5. Project Progress Meetings
a. Design-Builder Lead shall arrange and chair Project Progress Meetings. These shall be held generally every 2 weeks throughout the project development and construction periods. Attendees will include
the Design-Builder Lead, Consultant and sub-consultants as required, DNS Project Team Members, and may include other stakeholders as required. Items shall include, but are not limited to:
- Design and Construction 2 week “look ahead” schedules describing progress of critical path items and final substantial completion date AND review of overall project schedule
- Review and discuss results of studies, analysis, etc.
- Project planning, monitoring and control
- Cost
- Risk
- Quality
- Scope
- Environment
- Health and Safety
b. The Design-Builder will record the issues and decisions, as well as prepare and distribute minutes to all participants within seventy-two (72) hours of the adjournment of the meeting.
c. These meetings shall be held remotely or in the main offices of Develop Nova Scotia.

D.2.3.2 Submissions, Reviews and Approvals during Design
Unless otherwise specified, where deliverables and submissions include summaries, reports, cost estimates, schedules, drawings, plans, specifications, submit electronic copies in the following formats:

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Software Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Reports and Studies</td>
<td>Microsoft Word and PDF</td>
</tr>
<tr>
<td>Spreadsheets and Budgets</td>
<td>Microsoft Excel and PDF</td>
</tr>
<tr>
<td>Schedules</td>
<td>Microsoft Project or Merlin</td>
</tr>
<tr>
<td>Drawings</td>
<td>AutoCAD (.dwg) and PDF</td>
</tr>
<tr>
<td>Specifications</td>
<td>Microsoft Word and PDF</td>
</tr>
</tbody>
</table>

D.2.3.3 Acceptance of Project Deliverables during Design
a. While DNS acknowledges the Design-Builder’s obligation to meet project schedule requirements, the project delivery process entitles DNS to review the work. DNS reserve the right to reject undesirable or unsatisfactory work. The Design-Builder shall obtain from the Project Manager acceptance during each of the project phases I, II, and III outlined under D.2.4.
b. Acceptances indicate that based on a general review of material for specific issues, the material is considered to comply with DNS objectives and practices, and that overall project objectives are being satisfied.
c. The acceptance does not relieve the Design-Builder of professional responsibility for their work and compliance the contract, with applicable codes, standards and regulations.
d. DNS acceptances do not prohibit rejection of the work, which is determined to be unsatisfactory at later phases of review. If progressive design development, or time, cost, or risk updates or technical investigation reveals that earlier acceptances shall be withdrawn, the Design-Builder is responsible for re-designing work and re-submitting for acceptance at the Design-Builder’s cost.
e. During each design review period, maintain full production on the project, and revise documents as necessary and when review comments are received.
f. Comply with the approved submissions and direct Sub-consultants to coordinate their work in accordance with the approved submissions.
g. Obtain acceptance by stakeholders and other agencies to supplement DNS acceptances. Assist the Project Manager in securing all such acceptance and adjust documentation as required by such Authorities when securing acceptance.
D.2.4 Design Deliverables

D.2.4.1 Overview
The Design-Builders Prime Consultant, supported where necessary by a multidisciplinary team of SubConsultants, shall provide full engineering and technical services to review all documentation, recommend further examination as required, preparation of conceptual design alternatives, preparation of technical specifications and drawings for the preferred option, preparation of construction documents for the Maersk’s Wharves and Boardwalk, and various post-design services are required.

The Design Deliverables has been subdivided into three (3) main phases in order to accommodate critical decision making and design procedures during the course of the overall project:

- Phase I: Project Background Analysis and 30% Schematic Design;
- Phase II: 60% Design Development;
- Phase III: Complete Construction Documents including Post Design Services such as Letters of Undertaking, Consultant’s review of Submittals, RFIs, observation reports and execution of intermediate and final observation reports as required by the progression of work and as detailed in this RFP.

At each stage of Design, there will be review period by Develop Nova Scotia of no greater than (3) working days. The Design-Builders, at their discretion, may bring forward value engineering alternatives during design development or throughout the project.

DNS will contemplate a 50% cost savings sharing participation with the Design-Builders for those Value Engineering or savings options that do not compromise quality, schedule, scope, operational value or design service life (see design service life in D.2.4.2 ‘C’ below). Such Deduct cost options shall follow the Change Order parameters stipulated within Schedule B.2. Develop Nova Scotia, at their discretion, reserves the right to accept or refuse the savings participation offered by the Design-Builders.

The proponent’s design duties and responsibilities will include, but not necessarily be limited to, the following:

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Deliverables (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I: Project Background and Schematic Design</td>
<td>• Analysis and interpretation of supporting Studies. Listing of pre-design design requirements for each of the elements.</td>
</tr>
<tr>
<td>(30%)</td>
<td>• Design Development Report: Preliminary Site Plan Drawings including key elevations for each design element.</td>
</tr>
<tr>
<td>Phase II: 60% Design Development</td>
<td>• Drawings including plans, elevations, sections and key details.</td>
</tr>
<tr>
<td></td>
<td>• Specifications as a separate document following the Master Format.</td>
</tr>
<tr>
<td>Phase III: Complete Construction Documents and Post</td>
<td>• Detail Design including plans, elevations, sections and all details required to tender the work.</td>
</tr>
<tr>
<td>Design Services</td>
<td></td>
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</tbody>
</table>
D.2.4.2 Design Principles

The Design-Builder will be required to adhere to all appropriate design principles and shall design Maersk Wharves and Boardwalks, as it applies, to accommodate the following:

a. To safely carry the loads specified in accordance with the National Building Code of Canada, and any utility requirements (Halifax Water Commission, NSPI, etc.)
b. Dimensions shall be provided in metric or SI Units.
c. Seismic requirements
   - As listed for Nova Scotia in the Building Code or the Natural Resources Canada website at www.earthquakescanada.ca
d. Design Loading Combinations
   - Live loading (please specify applicable codes/guidelines)
   - Dead loading (please specify applicable codes/guidelines)
   - Load Factors (Fatigue Limit State (FLS); Serviceability Limit State (SLS); Ultimate Limit State (ULS)) – assumed to be from CSA-S6 (Canadian Highway Bridge Design Code)
e. ISO 21650 (Action from Waves and Currents on Coastal Structures) is recommended.
f. Structural codes:
   - CSA-A23.3 Design of Concrete Structures (specify if other)
   - CSA-O86 Engineering Design in Wood (specify if other)
   - CSA-S16 Design of Steel Structures (specify if other)
   - NBCC
g. Geotechnical Codes
   - UFC Design: Piers and Wharves (specify if other)
   - Canadian Foundation Engineering Manual (specify if other)
h. Accessibility Code
   - Per Schedule C of the Nova Scotia National Building Code, Item 3.8.3. Design, subsection 3.8.3.3 and 3.8.3.5.
i. To meet or exceed inundation levels in accordance to sea level rise predictions and wave action resulting from the Halifax Harbour Marginal Coastal Study (Appendix R - in progress). The coastal engineer study is to provide hydraulic boundary conditions including wave heights, periods, runup and extreme water levels. However, the calculation of wave forces will be provided by the Design-Builder to complete the design of future upgrades, with hydraulic input parameters provided by this coastal study.
j. To have a minimum design service life of seventy-five (75) years.
k. To avoid areas of any archeological significance as identified in the Archeological Screening and Reconnaissance Report and integrate the improvements with surrounding elements or potential interpretation opportunities.
l. Efficient operation and maintenance, with complete operating manuals and drawings
D.2.4.3 Phase 1: Project Background and Schematic Design (30%)

D.2.4.3.1 General Requirements
The Design-Build shall review the supporting studies (Appendix D.2.1), develop and analyze options to prepare a schematic design in sufficient detail to:

a. Translate the project requirements into design criteria and parameters
b. Illustrate the Design Concepts that optimize the achievement of all Project Requirements and of all design criteria and parameters
c. Develop alternative construction implementation strategies as it applies
d. Recommend a preferred option to be developed further under later phases.

At this stage the Design-Build shall also review all required analysis of Regulatory Requirements including but not limited to:

a. Regulatory or statutory requirements affecting this project and describe their potential impact on the project;
b. Identify all Authorities having Jurisdiction over the project and confirm their technical and regulatory requirements, as well as their review and approval requirements at the various project phases;
c. Confirm all applicable codes, regulations and standards that shall govern the design and implementation of the project;
d. Prepare and submit, for the review and approval of the Project Manager a summary of the Analysis and Regulatory requirements for the project.

In addition to the studies described in Appendix D.2.1. and without being limited to the following, the Design-Build shall visit and inspect the project site and surrounding areas to:

a. Conduct all necessary site inspections, surveys, measurements, evaluations, etc. to obtain additional detailed data required to supplement information contained in existing documentation;
b. Become familiar with the site’s geographical and hydrological features;
c. Correlate the information contained in existing project documentation with actual on-site features and conditions;
d. Verify information contained in the site plans and record all discrepancies or needed adjustments;
e. Identify possible locations for mobilization and storage of construction materials and equipment;
f. Verify the availability and capacity of local utility services that may have an impact on the project;
g. Identify local issues and constraints that may affect the project;
h. Identify issues and/or opportunities relating to environmental protection, sustainable development, or waste management, that may warrant further consideration;
i. Consult with local personnel with respect to site-specific performance issues and operational requirements;
j. Prepare and submit, for the review and approval of the Project Manager a summary of the Site Surveys and Inspections, including recommendation for adjustments to the Project Requirements.

From the above, identify, develop and analyze at least three (3) design options for review and approval by DNS, for each of the following elements identified in the following set of User Requirements (design of building/wharf demolition to occur in addition to new/infrastructure improvements below);

a. New Svitzer Wharf:
   - New Wharf approximately 115m X 13.05m. Final wharf elevation to be informed by Appendix R- Coastal Study.
- Pile Installation; coordinate with Appendix K- Topographic and Bathymetric Survey and Appendix M- Geotechnical study for appropriate pile embedment.
- Pile Cap Installation.
- Stringers/Blocking Installation.
- Decking (complete with ramp/blending due to elevation change for boardwalk connection).
- Wheelguards.
- Bracing.
- Consideration for wave action and associated vertical forces during storm events; Coastal Engineer engaged by DNS to assist.
- Access Ladders: (2) along the North, (2) along the South and (1) along the East. Each to be constructed of 150mmx200mm timber extended below low tide, galvanized rungs and with spacers attached to stringers and a ladder extension with holdfast.
- Floating Docks (South Side approx. 97.5m X 3.05m wide; North Side approx. 73.1m X 3.05m) and Steel Guide Piles (refer to Item b. below).
- One gangway/side (two total) (refer to Item b. below).
- One receiver/side (two total) (refer to Item b. below).
- Solar Navigational Light mounted on a timber life ring stand as noted in Appendix S, Drawing S-205, detail 9.
- Light Standard installation Cree Edge Series LED High Output Area/Flood Luminaire (or equivalent).
- Water Service Connections (subject to change during design development):
  - Disconnect water where existing Svitzer Wharf meets the main line.
  - Establish feeds from the water main to the extents of new Svitzer Wharf and the boardwalk.
- Electrical Service Connections – New Svitzer Wharf (subject to change during design development):
  - 2 x Eaton Lighthouse SS, each with:
    - 2 x 100 AMP 480 Volt 3 Phase receptacle
    - Integrated metering for each connection
  - 4 x Eaton Lighthouse SS, each with:
    - 2 x 50 AMP 125/250 Volt 1 Phase receptacle
    - 2 x 30 AMP 125 Volt 1 Phase receptacle
    - 1 x 20 AMP GFI receptacle
    - Integrated metering for each connection

b. New Floating Infrastructure for Svitzer Wharf (Refer to Appendix S):
- Floating Docks
  - Quantity of floating docks: (8) along the South side and (6) along the North side of the new wharf.
  - Size: 3m wide x 10 m long.
  - Materials: Treated Timber and galvanized fasteners. Decking/Stringer Details and filler blocks (Refer to Appendix S).
  - Bollard Types: B-2 type or equivalent.
  - Galvanized transition plates to connect floating docks to each other: similar to those specified at Georges Island Wharf (Appendix S).
  - Styrofoam Billets: Epoxy coated Styrofoam billets; refer to specification in Appendix S.
- Design lift points within each floating dock.

  - Steel pile guides:
    - Number of Piles: (16) along the South Side and (12) along the North.
    - Steel Piles and connections to floating docks: As recommended by designer for the expected bathymetric conditions. Refer to Appendix K for Bathymetric data. Include (1) coat of Corroseal product or equivalent from tidal zone to top of pile.

- Gangway and receiver:
  - Quantity of elements: (2) gangways each with a receiver (front/side) as per Annex #1.
  - Expected location: As per Annex #1.
  - Fabrication of Receiver: aluminum or galvanized steel.
  - Gangway dimensions: 9.1m long and wheelchair accessible.
  - Gangway specifications: Aluminum or similar construction to Appendix S.
  - Other requirements guidelines (refer to Appendix S, Pic 1 to 4):
    - Outside C-channel shall be turned so the flat side is on the outside.
    - Eliminate the 2” stainless steel rod used to connect the gangway to the receiver. (Appendix S, Pic 4). Replace this with a bolt on bracket and connector will also be used on the receiver (Appendix S, Pic 3).
    - The upright handrail posts can be bolted to the sides (or welded); no plate welded to the bottom of the uprights (Appendix S, Pic 2).
    - Gangway point of contact with the floating dock: The gangway requires a 4” Teflon roller wheel on the end for resting on the float with a cover plate to ensure that the ramp is wheelchair accessible. Design Builder may use upright rails rings welded to the outside or safety rope (Appendix S, Pic 1).

c. New Boardwalk Extension:
  - Approximately 985m2 area between Pilot Wharf and New Svitzer Wharf (See Annex #1 – Concept Plan). Final new boardwalk elevation to be informed by Appendix R- Coastal Study.
  - Accessible Ramps from existing boardwalk to New Boardwalk Extension.
  - Consideration for wave action and associated vertical forces during storm events; Coastal Engineer engaged by DNS to assist.
  - Consideration for raised Boardwalk extension to allow for sea level rise; Refer to Appendix R – Coastal Study.
  - Pile Installation/Seawall; coordinate with Appendix M – Geotechnical study for appropriate pile embedment. Coordinate with Appendix K- Topographic and Bathymetric Survey.
  - Pile Cap Installation (if piled timber structure).
  - Stringers (if piled timber structure).
  - Decking (complete with blending due to elevation change for boardwalk connection).
  - Wheelguards.
  - Bracing (if piled timber structure).
  - Access Ladders: (2) spaced equally along its length. Each to be constructed of 150mmx200mm timber extended below low tide, galvanized rungs and with spacers attached to stringers and a ladder extension with holdfast.
  - Existing Bollards to be removed along the existing boardwalk and reinstalled along the new water’s edge of the Boardwalk Extension, similar to Svitzer Wharf Bollards.
  - Life Ring stand as noted in Appendix S, Drawing S-205, detail 9.
- Light Standard installation Cree Edge Series LED High Output Area/Flood Luminaire (or equivalent).
- Water Service Connections:
  o Disconnect water where the boardwalk extension meets the main line.
  o Establish feeds from the water main to the extents of the new boardwalk.
- Electrical Service Connections – New Boardwalk (subject to change during design development):
  o 1 x Eaton Lighthouse SS with:
    § 2 x 100 AMP 480 Volt 3 Phase receptacle
    § Integrated metering for each connection
  o 1 x Eaton Lighthouse SS with:
    § 2 x 50 AMP 125/250 Volt 1 Phase receptacle
    § 2 x 30 AMP 125 Volt 1 Phase receptacle
    § 1 x 20 AMP GFI receptacle
    § Integrated metering for each connection

d. Separate Price: New Floating Infrastructure for New Boardwalk Extension (Refer to Appendix S, Annex 1):
   - Steel pile guides:
     o Number of Piles: (8).
     o Steel Piles and connections to floating docks: As recommended by designer for the expected bathymetric conditions. Refer to Appendix K for Bathymetric data. Include (1) coat of Corroseal product or equivalent from tidal zone to top of pile.
   - Gangway and receiver:
     o Quantity of elements: (1) gangway with a receiver.
     o Expected location: adjacent to New Boardwalk.
     o Fabrication of Receiver: aluminum or galvanized steel.
     o Gangway dimensions: 9.1m long and wheelchair accessible.
     o Gangway specifications: Aluminum or similar construction to Appendix S.
     o Other requirements guidelines (refer to Appendix S, Pic 1 to 4):
       • Outside C-channel shall be turned so the flat side is on the outside.
       § Eliminate the 2” stainless steel rod used to connect the gangway to the receiver. (Appendix S, Pic 4). Replace this with a bolt on bracket and connector will also be used on the receiver (Appendix S, Pic 3).
       § The upright handrail posts can be bolted to the sides (or welded); no plate welded to the bottom of the uprights (Appendix S, Pic 2).
       § Gangway point of contact with the floating dock: The gangway requires a 4” Teflon roller wheel on the end for resting on the float with a cover plate to ensure that the ramp is wheelchair accessible. Design Builder may use upright rails rings welded to the outside or safety rope (Appendix S, Pic 1).

e. Pilot Wharf Recapitalization (Refer to Appendix F and G);
   - Pile Repairs (batter, bearing, or fender).
   - Pile Cap Repairs (if req’d).
   - Timber Bracing Repairs.
   - Stringer Repairs (if req’d).
   - Decking Repairs (if req’d).
   - Misc. Repairs (bollards, wheel guards, ladders, etc.).
- Light Standard installation Cree Edge Series LED High Output Area/Flood Luminaire (or equivalent).
- Water Service Connections:
  o Disconnect water where Pilot Wharf meets the main line (if applicable).
  o Establish feeds from the water main to the extents of rehabilitated Pilot Wharf and the boardwalk.
- Electrical Service Connections – Pilot Wharf (subject to change during design development):
  o 200 AMP outdoor rated breaker panel (exact location to be determined during the Design Build Process)
- Life Ring stand as noted in Appendix S, Drawing S-205, detail 9.
- Access Ladders: (2) spaced equally along its length. Each to be constructed of 150mmx200mm timber extended below low tide, galvanized rungs and with spacers attached to stringers and a ladder extension with holdfast.

f. Granular Infill For Scour Protection (South of Svitzer to Piered Boardwalk; refer to Appendix T)
   - Excavation.
   - New Design shall give consideration to avoid any impacts to existing Halifax Water outfall infrastructure operations or maintenance located adjacent to the existing Old Salvage Wharf during or after construction. Coordinate designs with Halifax Water Commission.
   - Rip-Rap Placement.
   - Coordinate with the Appendix M - Geotechnical study for rock and surface conditions.
   - Coordinate with the hydraulic calculations from the Coastal Engineer (engaged by DNS).

Among the design deliverables at this 30% Design stage provide:
- Design Development Report: Preliminary Site Plan Drawings including key elevations for each design element for all options proposed.
- Identify specific critical design issues that shall have to be resolved in design development, with broad recommendations on possible alternative solutions.

D.2.4.4. Phase II: 60% Design Development

D.2.4.4.1 General Requirements
The Design-Builder shall obtain written authorization from the Project Manager before proceeding with the services related to Design Development from 30% to 60%. Based on the approved Design Concept Documents, the Design-Builder shall further develop the design option selected for refinement at the Design Concept phase, as selected by DNS and produce Design Development Documents to describe the scope, quality and cost of the project in sufficient detail to:
- Define the details of the design components, systems and materials, for all applicable disciplines and confirm their compliance with codes, standards and all other Project Requirements.
- Elaborate the detail of construction implementation strategies (e.g. phased construction, demolition, dewatering, traffic control, mobilization, duration, etc.).
- Identify and assess potential risks and recommend mitigation measures.
- Facilitate reviews, discussions and decisions relating to the design.

D.2.4.4.2 60% Design Development Scope and Activities
- Project Requirements/ Design Criteria and Parameters
- Verify and confirm the ongoing validity of the approved Project Requirements, including applicable Regulatory Requirements, Codes and Standards.
- Recommend adjustments to the Project requirements that may be deemed necessary as the Design Development progresses, or as other pertinent project data becomes available.
- Revise the Project Requirements as required, to reflect approved adjustments.

b. Based on the latest approved Project Requirements and confirmed regulatory requirements, codes and standards:
   - Further develop all Phase I design elements, update as required and describe, with supporting background and technical justification, the Detailed Design Criteria and Parameters that shall govern the design development.
   - Prepare and submit, for the Project Manager’s review and approval, a list of Detailed Design Criteria and Parameters.

c. Design Development Documents
   - Coordinate the design work of all relevant disciplines and prepare an integrated set of Design Development Documents, using appropriate combination of drawings, specifications and narrative reports, which shall cover all of the activities and requirements outlined in the paragraphs that follow.
   - Clearly describe and substantiate the details of all design components, systems, materials and appurtenances associated with the various major technical elements comprising this project, including but not limited to:
     - The superstructure and substructure components (including foundation system and hydraulic features, as applicable). At this stage the coastal engineer employed by DNS, in coordination with the coastal study will assist the Consultant in the determination of the design loads as a result of wave action on substructures;
     - Any plumbing, mechanical and electrical systems required for the delivery of services along the boardwalk extension and the wharf shall be designed in detail;
   - Demonstrate how the design incorporates and responds to the latest approved Detailed Design Criteria and Parameters, and the latest approved Project Requirements covering all elements listed in prior sections including but not limited to:
     - Project objectives, issues, constraints and challenges.
     - Technical and performance requirements.
     - Design principles, criteria and parameters.
     - All applicable codes, regulations and standards.
     - Findings and recommendations from the Environmental Assessment.
     - Findings and recommendations from the various Site Studies and Technical Investigations, as they become available.
     - O&M requirements.
   - Demonstrate how the design incorporates and responds to Construction Implementation Strategies and Requirements including, but not limited to:
     - Mobilization.
     - Construction staging and scheduling, including lead times for special equipment, components and materials.
     - Seasonal and environmental constraints.
     - Demolition staging and duration.
     - Excavation and noise control.
     - On site granite crushing activities.
Among the design deliverables at this 60% Design stage provide:
a. Develop and submit fully coordinated and integrated Design Development drawings at a sufficient level of detail.
b. The Design Development drawings shall include all necessary sketches, plans, elevations, cross-sections and perspective views to ensure effective graphical representation of all design features and Construction Implementation Strategies and Requirements.
c. Ensuring that all design and construction elements, components, systems and materials included in the project are covered, and integrating all applicable disciplines. Develop and submit lists and outlines of:
   - All applicable Provincial and National Master Specifications (NMS) sections to be used including draft Commission Specifications;
   - Any additional specifications, not currently covered in the NMS, that shall have to be created based on Manufacturers’ technical information, on provincial specifications or on other information from a recognized technical authority.
d. Describe and submit detailed technical information and support data relating to the Design Development including, but not limited to:
   - A description and explanation of technical and/ or operational assumptions that may have been made, and based on which the design was developed.
   - Design calculations and results of technical analyses.
   - Design loads, geotechnical/ foundation design requirements, hydrologic and hydraulic design requirements, seismic design requirements, traffic control requirements, etc.
   - Dimensions, locations, alignments and sizes of all design components in sufficient detail to enable the design to be checked.
   - Proposed materials and products requiring approval, with all related manufacturers’ technical literature and specifications.
e. Provide a construction schedule that reflects the design and the proposed Construction Implementation Strategies and Requirements described in an earlier sub-section, and assess the impact on the overall project schedule.
f. Identify/ quantify potential risks associated with the design and construction, recommend risk mitigation measures.

D.2.4.5 Phase III: Complete Construction Documents and Post-Design Services

D.2.4.5.1 General Requirements

The Design-Builder shall obtain written authorization from the Project Manager before proceeding with the services related to the development of the Construction Documents.

D.2.4.5.2 Complete Construction Documents Scope and Post Design Services during Construction

The Design-Builder shall, for each stage of Construction Document preparation:

a. Coordinate all disciplines and prepare integrated sets of construction drawings and specifications covering all disciplines.
b. Submit drawings and specifications for DNS review and approval, allowing 3 working days for this review.

c. Upon approval from the Project Manager, submit drawings and specifications at appropriate stages, to Authorities Having Jurisdiction including the Office of the Fire Marshall, for review and, as required, for approval. Report to the Project Manager comments received, approvals granted and changes requested.

d. Provide details and report on Construction Implementation Strategies including such elements as: mobilization, phased construction, demolition, dewatering, traffic control, duration, field office and storage areas, sediment and erosion control, etc.

e. Submit all recommended adjustments to Project Requirements. Update the Report on Project Requirements, as required to reflect approved adjustments.

f. Provide updated Construction and Project Schedule.

Among the design deliverables at this Construction Document and Post Design Services During Construction stage the Consultant shall:

a. Submit Final For Permit Documents to Authorities Having Jurisdiction for review and obtain necessary permits. Report to Project Manager comments received, approvals granted or changes requested.

b. 100% Design drawings and specifications (NMS Format) shall be marked “Issued for Construction”.

c. The drawings shall be reviewed and stamped by Professional Engineers licensed to practice in Nova Scotia, and they shall be provided in electronic (AutoCAD 2013 or later and PDF) formats.

d. Within five (5) days of start of Construction for Demolition and/or new work, attend (1) Construction Kick Off Meeting remotely or at DNS’s office. Attendance by the Lead Consultant is required. Attendance by sub-consultants shall be at the discretion of the Design-Build. The purpose of the meeting is to:

- Introduce and confirm the key functions of the stakeholders involved in the project which shall include the following participants: DNS, Stakeholders, etc.
- Consultant Representatives (Project Manager, Sub-Consultants/ Specialists as required).
- Contractor and Subcontractors.
- Representatives from Authorities Having Jurisdiction.

- Confirm project objectives, issues, constraints and challenges to ensure that they are clearly defined, fully understood, and appropriately addressed during construction.
- Review and discuss the Design-Builders, Consultants and Subtrades’ proposed Detailed Construction Schedule in conjunction with the latest approved Detailed Project Schedule and identify adjustments required to meet the project time objectives.
- Attend Construction Progress Meetings: At the request of DNS, the Design-Build and requested sub-consultants may be required to attend bi-weekly Construction Progress Meetings.

e. The Design-Build shall review the Contractor’s Environmental plan requirements to ensure that it is well thought out and sufficient to prevent negative environmental effects.

f. The Design-Build or its Consultants and/or Subconsultants, shall coordinate, review, respond to all administrative requirements related to construction inclusive of submittals and RFIs for all their Subtrades.

g. Design-Build, or its Consultants and/or Subconsultants shall be required to attend Site Visits and inspections as follows:

- Carry out inspections of the Work at key milestones to satisfy if Work is in conformity with Construction Documents.
- Advise the Project Manager in writing of all cases where the work does not conform with the Contract Documents.
- Advise the Project Manager on remedial action to be undertaken to correct all cases where the work does not conform with the Contract Documents.

h. The Design-Builder, or its Consultants and/or Subconsultants may be required to do the following as it relates to Construction Changes:
- Review changes or substitutions proposed by the Design-Builder’s own construction team or subtrades, as requested by the Project Manager regarding materials or equipment, assess compliance with design intent and construction specifications, make recommendations of acceptance or rejection.
- The time to review and provide recommendations on changes may be done on a per diem basis as it relates in conformance to Schedule B.

i. Commissioning Plan; throughout the course of the Construction Phase, the Design-Builder will be required to:
- Warranty period for DNS projects is 12 months from Substantial Completion.
- Review and verify that the work and deliverables, pertaining to Commissioning, are produced in accordance with Contract specifications and with the requirements of the Commissioning Plan.
- Review, and report on the progress of all Commissioning activities and documents, including problems and recommended courses of action.
- Submit a copy of the draft Operation and Maintenance Manual to the Project Manager for review and comments.
- Ensure the Operation and Maintenance (O&M) Manual is finalized before the staff training sessions.

j. The Design-Builder shall be required to do the following as it relates to Substantial Performance:
- Conduct with the Project Manager the Substantial Performance Inspection and record any deficiencies.
- Estimate the costs for correcting deficiencies and completing the Work, including any work that shall be postponed for operational, climatic or environmental reasons, and request from the Trades or Subtrades a work plan and a schedule for carrying out all corrective actions.

k. The Design-Builder shall be required to do the following as it relates to Certification of Completion:
- Conduct with the DNS Project Manager a final inspection of the work and verify that the work is fully complete. Provide a report with the final inspection to DNS.
- Estimate the costs for correcting deficiencies and completing the Work prior to the final invoice submission, including any work that shall be postponed for operational, climatic or environmental reasons, and request from the Contractor a work plan and a schedule for carrying out all corrective actions.
- Verify that all items are correctly stated and that all required signatures are obtained.
- Submit completed documents and all supporting document.

l. The Design-Builder shall obtain as-built marked-up hard copies and electronic copies and provide to the Project Manager and verify that as-built drawings are:
- Are complete and accurate.
- Reflect actual post construction conditions and measurements.
- Incorporate relevant data from approved shop drawings and installed component data.
- Show deviations in construction from the original contract drawings, including changes resulting from change orders or from on-site instruction.
- Produce record drawings by incorporating As-built information into project drawings.
- Prepare and submit, for the Project Manager’s approval a complete set of record drawings, stamped and signed by Consultant:
  o As-built drawings
  o Final shop drawings
  o Record drawings

**D.2.5 Construction Deliverables**

The below items intend to describe the construction requirements from Develop Nova Scotia. When the word “Provide” is mentioned in this scope of work, it shall mean “supply and install”. Reference Design Requirements under section D.2.4.3.1.

a. Schedule is the essence for this project. Project shall be complete no later than late March 31st, 2021. Design-Builder shall sequence the work to meet the completion date, including but not limited to, providing two (2) separate crews or more to advance the Boardwalk Extension and the new Svitzer Wharf construction, inclusive of the Pilot Wharf repairs, simultaneously or in any other fashion as required.
b. Maintain emergency access during the course of the project to adjacent properties.
c. Contractor shall coordinate construction operations and laydown space requirements with Develop Nova Scotia so that pedestrian traffic can be safely re-routed and that tenant’s use or vehicular parking in adjacent lot is not obstructed.
d. It is imperative that contractor activities or workers with vehicles shall not block access or disrupt services to nearby tenants. Should there be any disruption of services for deliveries, installation, testing or turnover of services, the Design-Builder is to inform DNS (48) hours in advance of the work so that Tenant notices can be issued. Any disruption of services, if required, shall be scheduled during non-working hours (before 8:00 am and after 5:00 pm Mon-Fri and/or weekends).
e. All General Conditions costs required for the completion of the Work shall be included in the tender price such as; supervision, project management, overhead and profit, travel expenses including room and board, parking, surveying, locates, waste collection, haul off and disposal, temporary toilets, field office expenses (printers, phones, reproduction costs, etc. as required), temporary works, tools and equipment, safety supervision and materials, and all tools, equipment and materials expenses, etc.
f. Provide temporary fence, as well as all related signage and traffic control required for the safe execution of the Work.
g. Coordination with all utility companies impacted by the work, Halifax Water Commission, Heritage Gas, Nova Scotia Power (NSPI), etc. shall be included.
h. Included is all coordination with Halifax Water for construction activities impacting the existing outfall (adjacent to the existing Old Salvage Wharf).
i. The tender price shall include all applicable permit fees for the completion of the Work inclusive of trade permits. Design Builder shall assist with the application to all authorities having jurisdiction inclusive of DFO Requests for Review and Transport Canada permits.
j. Phase the design and construction work so that it may start as soon as early design packages are issued and approved. Provide all submittals required for the Work within (3) weeks of award or as required as to not delay the progress of the work. Provide all P.Eng. stamped drawings as required for the completion of work; i.e. temporary structure supports as needed for demolition, repair and new work, etc.
k. All winter conditions costs necessary for the execution of the work are to be included in the tender price.
l. Prior to the start of the Work, submit a P.Eng stamped written Erosion and Sedimentation Control Plan for Develop Nova Scotia’s review. Ensure that such plan includes measures to control and prevent construction debris from entering ocean waterways and meet all other requirements outlined in the tender documents. Erosion and Sedimentation Control Plan shall not impede access to surrounding properties access and their operations.

m. Supply, install, monitor and maintain all erosion and sedimentation control measures as outlined in the tender documents throughout construction. Remove erosion and sedimentation control measures upon completion, testing and acceptance of all new site utilities as shown in tender documents.

n. All means and methods for the completion of the work are included.

o. Field verify all site dimensions and incorporate such field measurement in the shop drawings.

p. Provide a site survey of all dimensions required for the Work; confirm and control all critical dimensions in the field prior to start of construction.

q. Verify location all existing utilities with pertinent utility company and prior to excavation in accordance to the project requirements.

r. Identify, disconnect, and relocate power where required. Coordinate with Halifax Regional Municipality, Develop Nova Scotia and Nova Scotia Power prior to such disconnection and reconnection.

s. Demolish, remove, haul off and legally dispose of all demoed materials for two (2) buildings located on the existing Old Salvage Wharf and Svitzer Wharf, including but not limited to fuel tanks, building wood frame structures, furnishings, lights, furniture, insulation, vapour barrier, roofing, exterior materials, siding, windows, doors, concrete, paint, drywall, flooring, ceiling tiles, timber members, creosote timber, potential asbestos abatement, electrical equipment, mechanical equipment, fencing, etc. Refer to pictures included in Appendix I and J - Photos and Appendix P - Hazardous Materials Report.

t. Included are the demolition and removal of Svitzer Wharf and Old Salvage Wharf. Refer to Appendix H – Photos and Appendix P- Hazardous Materials Report. Demolish, remove, haul off and legally dispose of all demoed materials for the two wharves, including but not limited to wooden piles, pile caps, concrete slab, stringers, bracing, decking, blocking, etc. Existing piles to be cut at the seabed.

u. Remove, haul off and legally dispose of all materials associated with the Pilot Wharf Recapitalization. Refer to Appendix F and G.

v. Provide all excavation and grading necessary to install rip-rap materials.

w. Provide all dewatering necessary for the execution of the work. No construction water shall enter existing waterways.

x. Provide all temporary supports where required to construct the work.

y. Provide all timber piles, pile caps, stringers, decking, bracing, ladders, fenders, etc., for the construction of a new Svitzer Wharf to match existing dimensions and as described in Annex 1 and design parameters outlined in Appendix D, Section D.2.4.3.

z. Provide a new extension of boardwalk between the Pilot and Svitzer Wharves in accordance to the design requirements referenced in Appendix D, Section D.2.4.3.

aa. Provide all pile repairs, pile caps, timber bracing, ladders, fenders, etc. for the Pilot Wharf Recapitalization with design parameters outlined in Appendix D, Section 2.4.3. Appendices F and G may serve as reference documents.

bb. Provide Rip-Rap material to ensure scour protection in the location between the Svitzer Wharf and South Boardwalk (approximate location of Old Salvage Wharf). Coordinate hydraulic calculations with the Coastal Engineer (engaged by DNS) and reference rock gradations and characteristics as
outlined in the Geotechnical Recommendations from Appendix M. Refer to Appendix T for prior work and adjacent conditions.

c. Provide New Floating Dock infrastructure for Svitzer wharf (including floating docks, steel pile guides, gangways, receivers, etc.) as shown in Annex #1 – Concept Plan, Appendix S and Appendix D, Section D.2.4.3.

d. Clean and reinstate all bollards and/or provide new as required for the Svitzer, Pilot Wharves and Boardwalk Extension. Final bollard layout to be coordinated with DNS representative.

e. Provide new ladders for Svitzer Wharf, Pilot Wharf and Boardwalk Extension; reference Appendix D, Section D.2.4.3.

f. Provide all water and electrical servicing as required for the Pilot and Svitzer Wharves and New Boardwalk Extension as outlined in D.2.4.3.

g. Provide all light standards as required for the Svitzer, Pilot Wharves and New Boardwalk Extension, Cree Edge Series LED High Output Area/Flood Luminaire (or equivalent).

h. All third-party testing such as wood, concrete, gravels, soils, compaction testing as required by the tender documents, shall be provided by Develop Nova Scotia. This Contractor shall however communicate and manage the Testing required on site with the sequence of work. Any retesting deemed to be required by the third-party testing company and caused by this Contractor’s actions, shall be covered at this Contractor’s expense.

i. Provide electronic copies of stamped shop drawings, product data and at project close out, all required demonstrations of electrical and mechanical systems as well as Operations and Maintenance Manuals.

j. Work not included:
   i. Third party testing.
   ii. Nova Scotia Power Easement costs or Nova Scotia Service Fees related to relocation of power poles.
   iii. Right of way charges.
   iv. New Floating Dock infrastructure for the New Boardwalk Extension (including steel pile guides, gangway, receiver, etc.) as per Appendix D, Section D.2.4.3; this is a Separate Price.

D.2.6 Examination of Drawings, Contract Documents and Site

Each proponent, before submitting his proposal, shall carefully examine the contract documents and shall visit the site to determine the existing conditions and limitations, and will not claim at any time after the submission of the proposal, or the subsequent execution of a contract, that there was any misunderstanding with regard to the conditions imposed by the contract.

Each proponent shall carefully examine the site of the work, and he shall investigate all matters relevant to the project including, but not limited to, site conditions, access and egress, obstacles, adjacent uses, rights and interests which may affect the work and services, regulations, By-Laws, Acts, Codes, etc., which relate to the area and the work.

D.2.7 Design Documents

The design documents are qualified as follows:
“These design documents are prepared solely for the use of the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the professional has not entered into a contract.”

D.2.8 Existing Conditions
The Contractor shall be held to have visited the site and to have become conversant and familiar with all existing conditions prior to having tendered on the project. He shall have investigated all existing conditions, facilities, and difficulties which may affect the carrying out of the contract, including access, adjacent buildings, existing services, grade, soils conditions and water table, etc. Develop Nova Scotia will give no consideration whatsoever to any claim by the Contractor resulting from his failure to have made all the necessary investigations prior to tendering.

D.2.9 Access and Use of Site
The Contractor shall liaise directly with Develop Nova Scotia Project Manager to establish approved access routes, storage areas, security and public safety measures, etc.

D.2.10 Safety
Before starting the work, the Contractor shall inform the industrial safety branch of the provincial Department of Environment and Labour of the details of the project. All work shall be done in compliance with the appropriate federal, provincial, municipal and other regulations.

The Contractor shall be solely responsible for on-site safety and for compliance with all applicable health and safety acts and regulations. The Contractor shall be the “constructor” for this project as defined by the Occupational Health and Safety Act and Regulations, which pertain to all portions of the work.

The Contractor shall pay any court’s and any regulatory authority’s fines/charges against the Contractor, and/or Develop Nova Scotia and/or the Project Manager resulting from the Contractor’s failure to comply fully with applicable health and safety and all other applicable regulations, or resulting from any charges against Develop Nova Scotia and/or the Project Manager relating in any way to labour, safety and health issues. The Contractor shall maintain on site first aid materials.

D.2.11 Services
The Contractor shall make arrangement and pay for the supply of water, power, and any other services, which he may require during the course of the project. The Contractor shall provide and maintain, as long as his workmen are employed on the works, adequate sanitary conveniences located on the Contractors floating plant for their use, and the removal of it shall be in accordance with pertinent health regulations.

D.2.12 Cooperation and Coordination
The contractor will be required to cooperate with Develop Nova Scotia, adjacent land Owners and property managers and all other parties involved in the same general area. The Contractor shall schedule his work so that he does not interfere with activities of others.

The Contractor shall permit others to enter upon the site as required. The Contractor shall, to the satisfaction of the Engineer, allow all others reasonable access to the work and cooperate with them in the performance of their duties and obligations. No claim will be entertained by Develop Nova Scotia for any inconvenience, slow down or delay relating to the activity of others.
D.3 MANDATORY TECHNICAL REQUIREMENTS

Each proponent shall refer to Appendix B, Item B.2. for the completed mandatory Forms to be included in their proposal. In addition to these forms, the following mandatory documents must be provided within each File (File #1: Technical Proposal and File #2: Pricing Proposal) as follows:

### TECHNICAL PROPOSAL (File #1)

Appendix B - Submission Form including:
- a. Evidence of a current WCB Clearance Letter
- b. Statement of Insurability (Refer to item D.3.1)
- c. Bid Security (Refer to item D.3.2)

Appendix D – RFP Particulars Completed Response including:
- a. Design-Build and Individual Subconsulting Team(s) Relevant Experience and Qualifications
- b. Proposed Design-Build Team Work Plan and Schedule
- c. Design-Build Team Added Value
- d. Design-Build Relevant References
- e. Sustainability
- f. Health and Safety

### PRICING PROPOSAL (File #2)

Appendix C - Submission Pricing Form

D.3.1 Statement of Insurability

The respondent must provide a Statement of Insurability from a duly licensed Canadian insurance company or insurance brokerage firm confirming the respondent’s ability to obtain the following insurance policies:

a. **General Liability Insurance** covering for the benefit of Develop Nova Scotia, the Supplier, Sub Contractors, the Construction Manager, Consultants, and other such persons, firms and Corporations as Develop Nova Scotia may determine with a limit of liability per occurrence for bodily injury, death and property damage in an amount of $5,000,000.00.

b. **Professional (Errors & Omissions) Liability Insurance** with an insured limit of not less than five million dollars ($5,000,000) per claim and in the annual aggregate covering legal liability for economic losses arising from the performance of work provided under the Agreement. The policy will be maintained for a period of not less than two (2) years following service start date;

c. **“All Risks” Insurance or Builder’s Risk Insurance** covering owned, and non-owned mobile equipment, property and construction tools, machinery and equipment used by the Supplier for the performance of the work, including boiler insurance on temporary boilers and pressure vessels.

d. **Automobile Liability Insurance** with respect to automobiles used directly or indirectly in the performance of the work and which are owned, leased, or used by the Supplier and covering liability for bodily injury, death and property damage with a limit of not less than $2,000,000.00 inclusive for each and every loss.

e. The Supplier shall provide Develop Nova Scotia with a Certificate of Insurance that names Develop Nova Scotia as an additional insured.

f. The Supplier shall at all times pay or cause to be paid any assessment or compensation required to be paid pursuant to the Workers’ Compensation Act.

g. The Supplier unconditionally guarantees to Develop Nova Scotia full compliance with the conditions, regulations and laws relating to Workers’ Compensation by itself and by all Sub Contractors.
D.3.2. **Bid Security**

Each Proponent must submit with its proposal submission(s) a bid security in the amount of 10% of the Contribution Eligible Project Costs. The form of bid security shall be in the form of bonds, irrevocable standby letters of credit, money order or certified cheque in amounts and in the prescribed forms specified in APPENDIX F of this RFP.

The bid security of the unsuccessful proposals will be returned within thirty (30) days of award to the successful Proponent(s).

D.4 **PERIOD OF CONTRACT**

The contract period with the successful proponent will begin on the signing date of the Service Agreement (Appendix A). The successful bidder shall complete all tendered work and have the site cleaned up with all equipment and materials removed, and any building debris or trash properly disposed of off-site by March 2021. The work will be considered complete once a final inspection is conducted by Develop Nova Scotia and any and all deficiencies identified by Develop Nova Scotia have been corrected.

D.5 **Rated Criteria**

D.5.1. **Design-Builder and Individual Subconsulting Team(s) Relevant Experience and Qualifications – Total Points = [10 points]**

Each proponent should provide the following in its proposal:

a. Organization Chart for Design (by Subconsulting Team) and Construction Services indicating how the proponent intends to structure its working relationship with Develop Nova Scotia;

b. Identity those who will make part of the multidisciplinary Design-Build Team, Subconsulting Team, Subtrades along with their roles and responsibilities, whether these are employed by the Design-Build and/or by an external Subconsulting Firm including total hours estimated, per team member, for the design phase of the project;

c. Provide the identity and resume of the team member who will take on the Lead Design-Build role;

d. Resumes of the proponent’s Construction and Subconsulting Team leads clearly indicating years of design and construction experience;

e. A description of the services the proponent’s Construction and Subconsulting Team or Firm has previously delivered together and/or is currently delivering, with an emphasis on experience relevant to the Deliverables;

f. And its knowledge, skills and expertise in the following areas:
   - Civil Engineering marine design specialty
   - Civil Engineering hydrology, hydraulics, water management specialty
   - Civil Engineering geotechnical
   - Civil Engineering municipal services
   - Civil Engineering coastal specialty
   - Mechanical and Electrical Engineering for relocations and new marine service requirements
   - Landscape Architect
   - Land Surveying
   - Accessibility
   - Ability to coordinate work with Authorities Having Jurisdiction
   - Construction Management
- Cost Estimating
- Constructability reviews

D.5.2. **Design-Build Team(s) Proposed Plan and Schedule – Total Points = [20 points]**

Each proponent should provide the following in its proposal:

a. Provide Design-Build approach to successfully conform to the requirements stipulated herein and that is harmonized existing Halifax Waterfront offerings;

b. Identify how the Design-Builder will phase the work so that relocation of utilities, demolition, and new marine structure can begin as early as possible;

c. Risk Management: The proponent should identify the likelihood of the risks occurring, identify risk mitigation strategies for each and, in the event the risk occurs, assess the impact and identify the corrective action. The proponent should identify potential significant risks not listed above and provide the risk mitigation for each inclusive of corrective action strategies that the proponent would take in such circumstances;

d. Project Work Breakdown Preliminary Project Schedule: preliminary project schedule indicating critical path, owner and Design-builder milestones, scope and duration of design development, procurement of trades materials and phased demolition and construction, including project closeout;

e. How does the Design-Build team(s) propose to perform Cost Control measures throughout the project including budget cost cash flow projects?

f. Resource Management: Develop Nova Scotia acknowledges that instances can arise where a proposed resource is no longer employed by or associated with the proponent, or is otherwise unavailable to the proponent at the time of the service requirement. In these cases, the proponent agrees to provide replacement resources with equivalent (or greater) experience and capability, and the selection of the replacement resources will be subject to the approval of the client department.

g. In the proposal, describe the process that would be used for including the client department in the selection of replacement resources and for securing client department approval. Describe how changes in the project manager in particular would be handled, if this becomes necessary.

h. If new service requirements emerge during the project, the client department will make every effort to provide the successful proponent with as much advance notice as possible. Describe the process and typical timelines involved in making additional resources available to this project. Describe the process that would be used to resolve a situation where the client department concludes that an assigned resource from the proponent is not performing their responsibilities adequately.

D.5.3. **Design-Build Team Added Value – TOTAL POINTS = [15 POINTS]**

‘Added value’ is the realization of additional benefits beyond the inherent worth of a good or service. Some examples for services include approach, creativity, expertise, references, resources, management, tools and/or methodologies, etc., or a combination of these.

Describe examples where the Design-Builder have demonstrated out-of-the-box solutions or creative ideas to a complex situation while maintaining the pre-established life-cycle unchanged through design and construction, and where strategies such as cost-savings or value engineering alternatives were implemented successfully. The ‘added value’ component will be measured on the team’s ability to demonstrate that future design options will not be offered on the basis of compromises to the intended life-cycle described in Appendix D, Item D.2.4.2 – Design Principles.
D.5.4 Design-Build Team Relevant References – TOTAL POINTS = [5 POINTS**]

Each proponent is requested to provide three (3) references from clients who have obtained goods or services similar to those requested in this RFP from the proponent in the last [5] years.

Provide the name of each project reference, along with his/her phone number and email address. The project reference information provided should identify the size of the projects conducted, as well as demonstrate the extent of your previous experience, the clients’ overall satisfaction with your services and the results achieved, including your adherence to interim and final deadlines.

The Develop Nova Scotia will only evaluate three (3) references. If more than three (3) references are provided by the proponent only the first three (3) listed in the proposal will be evaluated.

Develop NS Staff may not act as a respondent’s reference.

D.5.5 Sustainability = [5 POINTS**]

Develop Nova Scotia is committed to purchasing goods, services, and construction in a manner that is better for our economy, our environment, and our communities. To find out more about this initiative go to:

To aid Develop Nova Scotia better understand the sustainable attributes for these services the proponent should prepare the following:

a. A brief statement, to maximum of (2) pages, that outlines the proponent’s commitment to the sustainable prosperity of Nova Scotia (e.g. meeting today’s needs without compromising the needs of tomorrow).

b. Given the requirements in this RFP, describe how the service that you are proposing will be provided in a sustainable manner (e.g. considering greenhouse gas reduction, waste reduction, toxicity reduction, worker health and safety, and local economic development).

D.5.6 Health and Safety = [5 POINTS**]

Each proponent should provide the following in its proposal:


b. Describe how the respondent will ensure that all respondent personnel (including subcontractors) will complete the Deliverables in a manner that is safe for themselves and the general public.

c. Provide the most recent experience rating statement available from WorkSafe.

d. Describe any charges/violations as a result of contravention by the Respondent over the past 5 years of the Occupational Health and Safety Act SNS 1996, Chapter 7 and Regulations, including but not limited to:

i. Workplace Health and Safety Regulations

ii. First Aid Regulations

iii. Workplace Hazardous Material Information System Regulations

iv. Occupational Safety General Regulations
APPENDIX E – BID SECURITY FORM
RFP DNS-2021-0042 MAERSK WHARVES AND BOARDWALK
DESIGN-BUILD SERVICES
Halifax, Nova Scotia

BID BOND

Bond Number: __________________________ Contract Number: __________________________
Amount: __________________________

KNOW ALL PERSONS BY THESE PRESENTS, that we __________________________, as Principal (hereinafter
(Contractor)
called the “Principal”) and __________________________
(Bonding Company)
hereinafter called the “Surety”, are jointly and severally held and firmly bound unto __________________________
as Obligee, hereinafter called the “Obligee”, and Her Successors, or its heirs, executors, administrators, successors or assigns as the case may be, in
the full and just sum of __________________________

Dollars ($_________). of lawful money of Canada, to be paid unto the Obligee, for which payment well and truly to be made, we the Principal and the Surety bind ourselves, and each of our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these Presents.

SIGNED AND SEALED with our respective seals and dated this ____________ day of ________, 20__

WHEREAS the Principal has submitted a written tender to the Obligee, dated the ____________ day of ____________, 20__
for: __________________________

NOW THEREFORE THE CONDITION OF THIS OBLIGATION is such that if the Principal shall have the said tender accepted within sixty (60) days from the closing date of the tender call, and shall, within ten (10)
days after the said tender is accepted, enter into the required contract with the Obligee and furnish to the Obligee a Performance Bond and Payment Bond each in the amount of fifty per cent (50%) of the contract and satisfactory to the Obligee, then this obligation shall be void, BUT OTHERWISE it shall remain in full force and effect.

PROVIDED HOWEVER, that the Surety shall not be (a) liable for a greater sum than the specified penalty of this Bond; or (b) liable for a greater sum than the difference between the amount of the Principal’s tender and the amount of the tender that is accepted by the Obligee from another party to perform the work if the latter amount should be in excess of the former.

IN WITNESS WHEREOF the Principal and the Surety have executed these Presents the day and year first above-written.

SIGNED, SEALED AND DELIVERED in the presence of

________________________________________________________________________

WITNESS

________________________________________________________________________

PRINCIPAL

________________________________________________________________________

(Address)

________________________________________________________________________

(Occupation)

________________________________________________________________________

WITNESS

________________________________________________________________________

SURETY

________________________________________________________________________

(Address)

________________________________________________________________________

(Occupation)

* NOTE Bid Bond Form must designate the Obligee as follows: “DEVELOP NOVA SCOTIA”
ANNEX 1 - MAERSK PROJECT CONCEPT PLAN

- New and elevated Svitzer wharf.
- 6 floating docks (40ft sections)
- Recapitulation of Pilot's wharf. No deck being raised.
- Straight angle perspective
- 8 floating docks (40ft sections)
- Added and elevated boardwalk and ramp measuring 10,600 sf (985 m2).
- Added RipRap for coastal protection of existing boardwalk
- Existing bollards to be left in place
APPENDIX F – Draft Pilot Wharf Assessment and Recommended Repairs
Assessment of Pilot Wharf

Develop Nova Scotia

Type of Document:
Draft Report

Project Number:
HFX-00259988-A0

Prepared By:
Matt Fennell, P.Eng.

Reviewed By:
Normand Landry, P.Eng.

EXP Services Inc.
90 Lovett Lake Court
Halifax, NS B3S 0H6
t: +1.902.453.5555

Date Submitted:
2020-05-31
Legal Notification

This report was prepared by EXP Services Inc. for Develop Nova Scotia. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. The report, which specifically includes Appendices A to D is based on observations and information collected during the Structural Condition Assessment conducted by EXP Services Inc. It is based solely on the condition of the structure encountered at the times of the site visit completed on May 21, 2020, and on the report from Connors Diving (dated May 27, 2020) as reported herein.

The assessment of structural conditions and possible hazards at the site has been made using the results of visual analyses of the structure. The site conditions between and beyond these locations have been inferred based on conditions observed at adjacent or related locations. Additional study, including intrusive investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive review, to dismiss the possibility that structural problems or potentially hazardous situations on parts of the site may remain undetected. If new information is discovered in future work, including destructive testing or other studies, EXP should be requested to re-evaluate the conclusions of this report and to provide amendments as required.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.
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1 Overview

1.1 Introduction

Develop Nova Scotia contacted EXP Services Inc. (EXP) to provide engineering services to complete an inspection of the wharf structure located east of 1601 Lower Water Street on the Halifax Waterfront, Nova Scotia. The age of the structure is unknown.

Develop Nova Scotia requested a detailed inspection be completed and documented in a report, complete with photographs taken during the site inspection to record the current condition of the wharf. The scope of work was also to include the following components:

- Description of the Wharf Facilities
- Wharf Inspection (above-water and under water portions)
- Develop Class D cost estimates for recommended structural and safety related upgrades and repairs.
  - Immediate Repairs (Covering a life span of 0-5yrs)
  - Program of repairs to facilitate a 25 Year Life Span.

The inspection was completed by Matt Fennell, P.Eng. and Jonathan Durling on May 21, 2020. The in-water inspection was completed by Chris Dupuis and crew from Connors Diving Services Ltd.

The wharf structure was visually reviewed to assess the present condition and look for specific instances of:

- deterioration, failure or absence of structural/non-structural timbers;
- deterioration, failure or absence of piles, pile caps, cross-bracing, wales; and
- any other relevant deterioration or safety concerns.

The effects of sea level rise and climate change on the wharf structure have not been assessed as part of this report.

1.1.1 History

The subject wharf, located on the Halifax Waterfront, is primarily utilized by pedestrians on the boardwalk and by pilot boats used to guide ships and large boats in and around Halifax Harbour. The main wharf structure is a straight pier and is approximately 8 metres wide by 40 metres long.

1.2 Reference Materials

1.2.1 Survey Drawing

A survey drawing dated July 06, 2018 prepared by Servant, Dunbrack, McKenzie & MacDonald Ltd. has been provided to EXP by Develop Nova Scotia for use in this assessment. The drawing is included in Appendix C.

2 Observations

2.1 General Construction

2.1.1 Description and Type of Construction

The Pilot Wharf is a straight pier structure which extends out from the Halifax waterfront approximately 40 metres and is approximately 8 metres wide. The wharf consists of a timber deck, timber stringers, timber pile caps and timber piles. A plan of the wharf substructure and deck complete with inspection notes is provided in Appendix B. Photographs referenced in the following sections can be found in Appendix A.
2.2 Support Structure and Foundation

2.2.1 Timber Piles
The wharf is supported on 350 +/- mm diameter creosoted timber piles.
Overall, the timber piles were found to be in good condition (with a few exceptions), with marine growth covering approximately 40% of the pile surface area, both above and below water level.
The wharf consists of twelve pile bents, with each pile bents generally consisting of four vertical piles spaced at 1.2 m on centre, and four battered piles; two at each end of each bent. Pile bents are spaced at approximately 3.6 m on centre.
Conditions and status of the above-water portions of piles can be seen in the attached EXP Wharf Plan Drawing in Appendix B. For piles below-water, refer to Appendix D – Connors Diving Report.

2.2.2 Timber Pile Caps
Pile caps consist of 300 mm square incised, preservative-treated timbers. Several pile caps appear to be in relatively new condition and are likely not part of the original construction of the wharf.
The exposed ends of most of the pile caps are deteriorated and splitting, however, they generally appear to be sound at the outside bearing pile locations.

2.3 Decking System

2.3.1 Timber Deck
The decking system consists of 75 mm thick incised, preservative-treated timber deck boards.
Rotted and loose deck boards were observed in six locations, but generally the deck is in very good condition.
The decking system appears relatively new and does not appear to be part of the original construction of the wharf.

2.3.2 Stringers
The stringers consist of 150 mm wide x 300 mm deep incised, preservative-treated timbers.
All stringers were observed to be in very good condition.
The stringers appear relatively new and do not appear to be part of the original construction of the wharf.

2.4 Operations

2.4.1 Wheel Guard
The wharf is enclosed by a 300 mm square preservative-treated timber wheel guard on wood chocks.
All wheel guards were observed to be in very good condition.
The wheel guards appear relatively new and do not appear to be part of the original construction of the wharf.

2.4.2 Fenders
Fenders consist of older 300 mm diameter timbers and newer 300 mm square incised, preservative-treated fenders located around the perimeter of the wharf.
Generally, the newer fenders are in good condition and the older fenders are in poor condition. Extensive rot was observed in all older fenders. Older piles contain approximately 40% of pile remaining.
2.4.3 Wales

There is a single row of wales on this wharf. All wales were observed to be in poor condition, and vary in composition, with 0-30% material remaining. On approximately half of the structure, the wales have deteriorated completely and are no longer attached to the wharf.

2.4.4 Braces

The majority of braces are covered heavily (80%+) with marine growth and appear to be in poor condition. Several braces were observed to have one end completely detached from the wharf structure.

2.4.5 Ladders

There are no existing ladders on this wharf.

2.4.6 Mooring Cleats/Bollards

There are three metal cleats on this wharf, and all appear to be in good condition.

There are four wood bollards on this wharf, all of which appear to be in poor condition.

2.4.7 Electrical

One small obsolete/disconnected electrical box was found attached to a fender pile above the timber deck on the north side of the wharf (see Photo _). There is also one light standard on the north side of the wharf (see Photo _).

2.4.8 Floating Dock Infrastructure

There are no floating docks attached to this wharf.

3 Conclusions and Recommendations

3.1 Conclusions

3.1.1 General Condition

The wharf structure was found to be generally in good condition. Repairs to the structure will be needed to ensure continued use of the wharf. In particular, there are braces, fenders, and wales that are deteriorated to the point of being ineffective. The timber deck and stringers appear to be in very good condition. The piles and pile caps appear to be in good to fair condition. EXP’s opinion is that moderate investment to complete the recommended structural upgrades will ensure a minimum 25-year service life without the need for significant reconstruction.

3.2 Recommendations

Structural repairs, operational upgrades and maintenance are recommended to ensure the wharf remains serviceable. We understand the purpose of a renovation project is to return the wharf to a serviceable condition that will allow it to remain in operation for at least 25 years.

Recommended structural repairs include reinstatement of dislodged piles and replacement of severely deteriorated vertical and batter piles.

Recommended operational upgrades includes the following items.

- Replacement of the entirety of the timber wales and old timber fenders.
- Replacement of detached/deteriorated timber braces. New fasteners should be provided.
- Replacement of old mooring bollards.
The estimated cost of the recommended work is broken down in the following sections under immediate repairs, and proposed renovation work.

3.3 Class D Cost Estimate

[To be included in next submission.]
Appendix A – Wharf Inspection Photos

CLICK HERE TO ACCESS
Appendix B –
EXP Wharf Plan Drawing
Appendix C – SDMM Survey Drawing
Appendix D – Connors Diving Report

* SEE APPENDIX G
In APPENDICES
APPENDIX G – Draft Pilot Wharf Underwater Visual Inspection
Appendix G - Pilot Wharf Underwater Visual Inspection

Halifax Pilot Dock
Underwater Visual Inspection

Prepared for:

EXP
90 Lovett Lake Court
Suite 401
Halifax, Nova Scotia B3L 2C2

Prepared by:

Connors Diving Services Ltd
11- 2 Lakeside Park Drive
Halifax NS Canada B3T 1L7
Tel: 1.902.) 876.7078
Fax: 1.902. 876.7079

CDS Job # 6249

Completed:

May 27, 2020
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<td>General Information</td>
<td>03</td>
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<tr>
<td>Scope of Work / Procedure</td>
<td>04</td>
</tr>
<tr>
<td>Results</td>
<td>06</td>
</tr>
<tr>
<td>Inspection Results</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

As directed by Mr. Matt Fennel of EXP, Connors Diving Services carried out an underwater visual inspection of the Halifax Pilot Dock. The survey is to determine the condition of all supporting timbers below the tidal zone.

Figure 1  Satellite view of Halifax Pilot Dock

General Information

Task: Underwater Visual Inspections of Timber Dock
Reference: Matt Fennel – EXP

Personnel

Diving Supervisor  Chris Dupuis
Diver #1  Joel Belliveau
Diver #2  Keith Langille
Diver #3  Logan Murray

Date/Time Commenced: 0700 – May 27, 2020
Date/Time Completed: 1900 – May 27, 2020
Location: Halifax, Nova Scotia
Weather  Variable – Clear, Calm
Sea Conditions  Light
Visibility - Surface  Unlimited
Visibility – U/W  10’ to 15’
Procedure

As per the Nova Scotia Occupational Diving Regulations a four-man dive team was dispatched to the work site. Upon arriving, a hazard assessment of the area was conducted. This, in conjunction with the dive plan is reviewed by the dive team prior to the start of any work. In addition, the scope of the work and procedures are discussed.

Divers used surfaced supplied diving equipment (SSDE) and closed circuit T.V. (CCTV). This gives the supervisor and client representative a real-time look at what the diver is experiencing. This ability also allows questions to be asked during the dive, eliminating the chance of missing valuable data. All diving operations were conducted from a boat.

The main focus of this survey was to determine the condition of the piles and cross bracing from the tidal zone to the sea bed. The inspection was visual only with 10% of the piles (1 per Bent) subject to removal of marine growth preceding the inspection.

The results of the survey have been formatted into tables for each bent, outlining deficiencies and overall condition.

The findings of the survey are detailed in the following report and accompanying video.
Results

The following is a summary of findings from the visual inspection of the dock.

A total of twelve (12) bents were inspected, each bent has varying numbers of timber bearing and batter piles which were inspected from the tidal zone to the seabed, cross bracing and whalers were also subject to the inspection.

**Bent 1**

**Timber Piles**

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth Light (Cleaned Pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 40% Good Condition</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth 40% Good Condition</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth 40% Good Condition</td>
</tr>
</tbody>
</table>

**Cross Bracing – N/A**

**Bent 2**

**Timber Piles**

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth Light (Cleaned Pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good (Slight Damage in tidal zone)</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 40% Good Condition</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth 40% Condition: Fair (Pile hollowed out at mudline 40%)</td>
</tr>
<tr>
<td>C</td>
<td>Batter</td>
<td>Marine Growth 40% Good Condition (small vertical gouges along pile)</td>
</tr>
</tbody>
</table>

**Cross Bracing**

| West Face | N/A
| East Face | Marine Growth 100% Detached @ Bravo Pile, still attached at the cap Outer core is decayed 10% approx. |
### Bent 3
#### Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>A</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth Light (Cleaned Pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good (Vertical scarring in pile)</td>
</tr>
<tr>
<td>C</td>
<td>Batter</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>D</td>
<td>Batter</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
</tbody>
</table>

### Cross Bracing

<table>
<thead>
<tr>
<th></th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Face</td>
<td>N/A</td>
</tr>
<tr>
<td>East Face</td>
<td>Marine Growth 100%</td>
</tr>
<tr>
<td></td>
<td>Condition Poor</td>
</tr>
</tbody>
</table>

### Bent 4
#### Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth 60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>A</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>B</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth Light (Cleaned Pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Extremely Poor, Entire pile is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hollowed out 60% to 70% from seabed to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>surface</td>
</tr>
<tr>
<td>E</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>E</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
</tbody>
</table>
Bent 4 (Cont.)
Cross Bracing

<table>
<thead>
<tr>
<th>Face</th>
<th>Condition</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Face</td>
<td>100% Marine Growth</td>
<td>Fastened at Piles: Only fastened at Pile C &amp; Cap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fasteners have excessive play</td>
</tr>
<tr>
<td>West Face</td>
<td>Marine Growth 100%</td>
<td>Only fastened at Pile Cap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fasteners have excessive play</td>
</tr>
</tbody>
</table>

Bent 5
Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>A</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Batter</td>
<td>Marine Growth 60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good, pile appears to be a larger diameter</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth Light (Cleaned Pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Fair, Cross Bracing fastening holes are decayed - 4” to 6”</td>
</tr>
<tr>
<td>E</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>E</td>
<td>Batter</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
<tr>
<td>F</td>
<td>Bearing</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Poor, several deep hollowed out holes in pile at various</td>
</tr>
<tr>
<td></td>
<td></td>
<td>elevations and of various sizes</td>
</tr>
<tr>
<td>F</td>
<td>Batter</td>
<td>Marine Growth 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Very Good</td>
</tr>
</tbody>
</table>

Cross Bracing

<table>
<thead>
<tr>
<th>Face</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Face</td>
<td>Brace runs from Pile 5A to 5C and to Cap</td>
</tr>
<tr>
<td></td>
<td>Brace is decayed and hollowed out, although there is no play</td>
</tr>
<tr>
<td>West Face</td>
<td>Brace runs from pile 5F to 5C</td>
</tr>
<tr>
<td></td>
<td>Large crack running the length of brace</td>
</tr>
<tr>
<td></td>
<td>No play in fasteners</td>
</tr>
</tbody>
</table>
**Bent 6**  
**Timber Piles**

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
</table>
| A    | Bearing | Marine Growth 50%  
Condition: Good |
| A    | Batter  | Marine Growth 50%  
Condition: Good |
| B    | Bearing | Marine Growth 50%  
Condition: Good (Small amount of rot noticed around old cross bracing  
fastener holes) |
| B    | Batter  | Marine Growth 50%  
Condition: Good |
| C    | Bearing | Marine Growth Light (Cleaned Pile)  
Condition: Fair, vertical 1" W x 1" D crack from waterline running down 4’ deep |
| C    | Batter  | Marine Growth 40%  
Condition: Good |
| D    | Bearing | Marine Growth 40%  
Condition: Good |
| D    | Batter  | Marine Growth 40%  
Condition: Good |

**Cross Bracing**

<table>
<thead>
<tr>
<th>East Face</th>
<th>West Face</th>
</tr>
</thead>
</table>
| N/A       | 100% Marine Growth  
Brace runs from pile 6A to 6C only fastened at 6C, with play  
Good Condition |
**Bent 7**  
**Timber Piles**

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth 60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Poor, pile hollowed out 24” off mudline 4” D x 6” W x 36” H</td>
</tr>
<tr>
<td>A</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth Light (Cleaned Pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>D</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>E</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>E</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
</tbody>
</table>

**Cross Bracing**

<table>
<thead>
<tr>
<th>Face</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Face</td>
<td>Brace runs from pile 7E to 7D and to Cap</td>
</tr>
<tr>
<td></td>
<td>Brace is broken off at Pile 7D,</td>
</tr>
<tr>
<td></td>
<td>Condition: Extremely poor</td>
</tr>
<tr>
<td>West Face</td>
<td>100% Marine Growth</td>
</tr>
<tr>
<td></td>
<td>Brace runs from pile 7A to 7C,</td>
</tr>
<tr>
<td></td>
<td>Brace is secure, no damage,</td>
</tr>
<tr>
<td></td>
<td>Condition: Good</td>
</tr>
</tbody>
</table>
## Bent 8 Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
</table>
| A    | Bearing| Marine Growth 50%  
Condition: Good |
| A    | Batter | Marine Growth 50%  
Condition: Poor, 60” off mudline there’s a 36” long hollowed out section of the pile approx. 4” deep |
| B    | Bearing| Marine Growth 50%  
Condition: Good |
| B    | Batter | Batter-Marine Growth 50%  
Condition: Poor, 48” off mudline there’s a 10” H x 4” W hollowed out section of the pile approx. 10” deep |
| C    | Bearing| Marine Growth 50%  
Condition: Good |
| C    | Batter | Marine Growth 50%  
Condition: Good |
| D    | Bearing| Marine Growth 50%  
Condition: Good |
| D    | Batter | Marine Growth 50%  
Condition: Good |

### Cross Bracing

<table>
<thead>
<tr>
<th>Face</th>
<th>Notes</th>
</tr>
</thead>
</table>
| East   | Brace runs from pile 8A to 8C  
Brace is secure, no damage  
Condition: Good |
| West   | 100% Marine Growth  
Brace runs from pile 8B to 8D  
Brace is secure, no damage  
Condition: Good |
**Bent 9**  
**Timber Piles**

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>A</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth Light (cleaned pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>C</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good. approx. 24” up from the mudline pile has some minor splitting approximately 1” deep with localized light rot surrounding it.</td>
</tr>
<tr>
<td>D</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Fair, approx. 36” up from the mudline pile is hollowed out 12” H x 1” W x 1.5” D</td>
</tr>
</tbody>
</table>

**Cross Bracing**

<table>
<thead>
<tr>
<th>Face</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>Brace is missing</td>
</tr>
<tr>
<td>West</td>
<td>Brace runs from pile 9A to 9B and Cap</td>
</tr>
<tr>
<td></td>
<td>Brace is secure, no damage</td>
</tr>
<tr>
<td></td>
<td>Condition: Good</td>
</tr>
</tbody>
</table>
### Bent 10

#### Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
</table>
| A    | Bearing | Marine Growth 60%  
Condition: Good |
| A    | Batter  | Marine Growth 50%  
Condition: Extremely Poor, 1/2” to 1” gouges running along pile from tidal zone to seabed;  
From the seabed up 8” pile is hollowed out 70%;  
From that 8 “mark on bottom up 96” there are numerous hollowed out decayed holes in the pile of various sizes. |
| B    | Bearing | Marine Growth 50%  
Condition: Good |
| B    | Batter  | Marine Growth 40%  
Condition: Extremely poor, up 60” from the mudline the pile is 90% hollowed spanning 24” upward and day light can be viewed through it |
| C    | Bearing | Marine Growth Light (cleaned pile)  
Condition: Good, Approx. 36” up from the mudline there is a 36” area of deep gouging 2” D x 6” W |
| C    | Batter  | Marine Growth 50%  
Condition: Good |
| D    | Bearing | Marine Growth 50%  
Condition: Good |
| D    | Batter  | Marine Growth 40%  
Condition: Extremely poor, bottom 24” of pile is 95% hollowed out;  
Remaining portion of pile is hollowed out 75% |

### Cross Bracing

<table>
<thead>
<tr>
<th>Face</th>
<th>Notes</th>
</tr>
</thead>
</table>
| East Face | Fastened at pile cap only  
Split at the surface and down to halfway mark  
Condition: Poor |
| West Face | Brace runs from pile 10A to 10B and Cap,  
Brace is secure, no damage  
Condition: Good |
Bent 11
Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>A</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>B</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>C</td>
<td>Bearing</td>
<td>Marine Growth light (cleaned pile)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>C</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>D</td>
<td>Bearing</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>D</td>
<td>Batter</td>
<td>Marine Growth 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition: Fair, approx. up 60” from the mudline, pile is hollowed out 4” to 5” deep</td>
</tr>
</tbody>
</table>

Cross Bracing

<table>
<thead>
<tr>
<th>Face</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Face</td>
<td>Brace runs from pile 11c to 11D and to Cap</td>
</tr>
<tr>
<td></td>
<td>Pile is loose at 11D</td>
</tr>
<tr>
<td></td>
<td>Condition: Good</td>
</tr>
<tr>
<td>West Face</td>
<td>Brace runs from pile 11A to 11B and the cap</td>
</tr>
<tr>
<td></td>
<td>Brace is secure, no damage</td>
</tr>
<tr>
<td></td>
<td>Condition: Good</td>
</tr>
</tbody>
</table>
Bent 12
Timber Piles

<table>
<thead>
<tr>
<th>Pile</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
</table>
| A    | Bearing | Marine Growth 50%  
Condition: Good (Pile does not contact pile cap.) |
| B    | Bearing | Marine Growth 50%  
Condition: Good |
| C    | Bearing | Marine Growth 50%  
Condition: Good |
| C    | Batter  | Marine Growth 50%  
Condition: Good |
| D    | Bearing | Marine Growth 50%  
Condition: Good |
| D    | Batter  | Marine Growth 50%  
Condition: Good |

Cross Bracing

<table>
<thead>
<tr>
<th>Face</th>
<th>Notes</th>
</tr>
</thead>
</table>
| East Face | Brace runs from pile 11B to 11D and to Cap  
Pile is secure  
Condition: Good |
| West Face | Brace missing (on seabed)                  |
Whalers - North Face

<table>
<thead>
<tr>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bents 1 - 2</td>
<td>Small whaler just off seabed spanning bents 1 to 2</td>
</tr>
<tr>
<td>Bents 2 - 5</td>
<td>Section of whaler spanning from bents 2 to 5 approx. 2 feet below upper whale</td>
</tr>
<tr>
<td></td>
<td>A small 4’ long piece of whaler was found, fastened at only 1 point on a fender pile between bent 5 - 6</td>
</tr>
<tr>
<td></td>
<td>No other whalers other than the upper one was found from bent 6 - 12</td>
</tr>
</tbody>
</table>

Whalers East Face

<table>
<thead>
<tr>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bent 12</td>
<td>Only section of whaler found is laying on the seabed under what appeared to be the East cross brace missing from bent 12</td>
</tr>
</tbody>
</table>

Whalers South Face

<table>
<thead>
<tr>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bent 12</td>
<td>Section of whaler just below the upper whale starts at bent 12 to 9</td>
</tr>
<tr>
<td></td>
<td>Section of whaler was found starting at bent 5 and stops in between bents 4 and 3. Whaler is loose.</td>
</tr>
</tbody>
</table>

Fender Piles – North Face

<table>
<thead>
<tr>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Face</td>
<td>At bent 11 there is a fender pile that the top has sheared off</td>
</tr>
<tr>
<td></td>
<td>For the most part the fender piles below water appear to be in Fair to Good condition with the sections in the splash zones going from Fair to Poor</td>
</tr>
<tr>
<td>South Face</td>
<td>The fender piles below water appear to be in Fair to Good condition with the sections in the splash zones going from Fair to Poor</td>
</tr>
</tbody>
</table>

If you have any further questions, please feel free to contact me at any time,

Tim Connors
General Manager
Connors Diving Services Limited
Tel: 902-876-7078 Fax: 902-876-7079
Cell: 902-4717002
E-mail: tim@connorsdiving.com
ISO 9001 Registered
APPENDIX H – Pictures of Existing Wharves To Be Repaired Or Demoed (To Be Provided At Proponents Request)
APPENDIX I – Pictures of Existing Buildings To Be Demoed
(To Be Provided At Proponents Request)
APPENDIX J –Existing Information On Buildings To Be Demoed
(To Be Provided At Proponents Request)
APPENDIX K – Topographical and Bathymetric Surveys
(To Be Followed By Addendum)
APPENDIX L – LiDAR Survey Report
(Data To Be Provided At Proponent Request)
APPENDIX M – Geotechnical Investigation
(To Be Followed By Addendum)
APPENDIX N – Benthic Habitat Survey
Benthic Habitat Survey
Halifax Waterfront
Halifax, Nova Scotia
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June 1, 2015

Mr. Andrew Cranmer  
CBRE Limited  
Real Estate Brokerage  
5855 Spring Garden Road, Suite A200  
Halifax, NS B3H 4S2  

Dear Mr. Cranmer:


CBCL limited is pleased to provide CBRE Limited (CBRE) with a draft report of the Benthic Habitat Survey that was conducted in Water Lot D-2 along the Halifax Waterfront, NS. The survey has been conducted to characterize the fisheries habitat located within the subject water lot and facilitate the preparation of a DFO Request for Review pertaining to activities associated with a proposed multi-story, mixed use (i.e.; commercial/residential) development at this location.

The survey was completed on May 6, 2015. The information was used to classify and identify habitat types, flora and fauna within the proposed study area.

Yours very truly,

CBCL Limited

[Signature]

Jason Bernier, P. Eng., PMP  
Senior Project Team Contact  
Direct: 902-492-6744  
E-Mail: jbernier@cbcl.ca

Project No: 151218.00
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A Underwater Video Interpretation Photos
CHAPTER 1  **SCOPE AND METHODOLOGY**

1.1  **Project Background**
CBCL limited was engaged by CBRE on behalf of MAERSK to conduct a benthic habitat survey to characterise the benthic habitat within Water Lot D-2 along the Halifax Waterfront, located in the vicinity of Salter Street, Halifax, Nova Scotia. MAERSK proposes to construct a multi-story, mixed use (i.e.; commercial/residential) development at this location. Based on initial concept designs, the proposed works will require infilling approximately 6,700 m² of Water Lot D-2 (Figure 1). No dredging is anticipated at this juncture of the project. The existing wharves and associated infrastructure would require removal prior to development of the site. Currently, the earliest proposed start date for this development is anticipated to be September 1st, 2016.

1.2  **Project Location**
The sample locations were completed within, or in the immediate vicinity, of the proposed infill and development areas (Figure 1) within Water Lot D-2. Underwater photographs were taken using camera drops along the existing piers and wharves currently constructed within the water lot, as well as from a boat.

1.3  **Project Scope**
This survey will support a Request for Project Review to Fisheries and Oceans Canada (DFO). The data collected will allow for the semi-quantitative characterization of epibenthic fauna and flora on the substrate and on the adjacent wooden piling of the wharf structure.

1.4  **Methodology: Benthic Habitat Survey Plan**
An Underwater Benthic Habitat Survey (UBHS) was undertaken on May 6th, 2015, in Halifax Harbour, NS, to characterize the existing benthic habitat within Water Lot D-2 (Figure 1). CBCL Limited collected underwater photographs and videos at forty-seven (47) locations spaced throughout the subject water lot (Figure 1). The coordinates and depths of these locations can be found in Table 1. Most of the survey was carried out using a 40-ft ‘Cape Islander’ vessel. The remainder of the drops were performed from existing wharf and pier structures within Water Lot D-2. The position of each drop was determined using a handheld Global Positioning System (GPS). Depths were determined using an on-board sounder when drops were performed from the vessel. A high resolution drop-camera system was used to take pictures of the underwater benthic habitat. The camera which was mounted on the frame provided photos of the bottom in both plan and oblique views.
MAP DESIGN

- Drawn By: MD
- Checked By:
- Date: 01/06/2015
- CBCL Project Number: 151218.00

SCALE
- Scale @ 22x34" : 1:400

PARMETERS AND DATA SOURCES

MAP DESIGN
- Service Layer Credits: Halifax Regional Municipality (LiDAR)

DATA SOURCES
- Service Layer Credits: Halifax Regional Municipality (LiDAR)
- Property Boundary Data: Halifax Regional Municipality
- Utility Data: Halifax Regional Municipality
- Topographic Data: Halifax Regional Municipality
- Groundwater Data: Halifax Regional Municipality
- Highway Data: Halifax Regional Municipality
- Marine Data: Halifax Regional Municipality

NOTES
- GPS Locations were collected using a Garmin 76CSx which has a 3-5 metre accuracy.
The camera was set up to take simultaneously High Definition video at a 1920x1440 pixels and pictures (jpg format) every five (5) seconds at a resolution of 4000x3000 pixels. Location specific information was recorded on the camera prior to each deployment to identify sampling stations. The drop-camera system was slowly lowered to the bottom and remained in place to take photographs for at least 30 seconds.

Digital images and video were interpreted by a CBCL Limited marine biologist. Benthic habitat, including substrate composition and observations on fauna and flora, was tabulated with identification of fauna and flora to the most specific taxonomic level possible. It is noted that this assessment provides a semi-quantitative estimate of habitat and epibenthic organisms based on professional opinion. The qualifiers used are: Occasional, Common and Abundant, as defined below:

- Abundant (A) – Numerous (not quantifiable) observations made on one or more photographs at the same sampling location;
- Common (C) – Frequent (not quantifiable) observations made on one or more photographs at the same sampling location;
- Occasional (O) – Intermittent (quantifiable) observations made on one or more photographs at the same sampling location; and,
- Uncommon (U) – Infrequent (quantifiable) observations made on one or more photographs at the same sampling location.

A qualitative characterization of the surface sediment was estimated from the digital images using the Wentworth scale described below (Wentworth, 1922):

- Boulder >256 mm;
- Cobble 64-256 mm;
- Gravel 2-64 mm; and,
- Fines <2 mm.

Table 1. GPS Coordinates of Sampling Locations (Datum: NAD83)

<table>
<thead>
<tr>
<th>Station ID</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Depth (ft)</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

*Station was sampled from existing wharves or waterfront boardwalk, as such, an accurate depth measurement is not available.
CHAPTER 2  UNDERWATER IMAGE INTERPRETATION RESULTS

Summaries of findings for each of the forty-seven (47) sampling locations are provided in Table 2 below. Representative photos of the benthic habitat, as well as photographs of commonly observed macrofuana and macroflora are provided in Appendix A.

2.1  Benthic Habitat
At the intertidal level, barnacles, mussels and macrophytes, mostly kelp, were observed on the wooden piles and other wharf structures. At the benthic level five substrate types were identified within the water lot, these were:

- Fines (silts and sand);
- Apparent bedrock outcroppings;
- Mixed substrate (gravels, cobbles and fines);
- Fines and empty mussel shells; and,
- Large cobbles/small boulders (armour stone).

Two generalized habitat types were observed during the video interpretation within the water lot. One consisted almost entirely of finer materials, such as silts and sand; and another was more of a mixed substrate consisting of cobbles, gravels and some small boulders overlain by a blanket of finer materials (Figure 1). Accumulation of anthropogenic debris on the seafloor was observed at all sites. The debris seems to have largely originated from the adjacent urbanized land consisting of wooden timbers, rope, cabling and tires, but there was also a variety of littered objects associated with areas near human habitation, such as plastic containers, plastic bags and a variety of other items. Flocculent material was also observed at all sites suspended within the water column. Overall, the observed habitat was typical for an active harbour with many anthropogenic influences.

2.2  Fauna
Benthic faunal diversity was found to be very similar across all of the study area; however, faunal abundance was greater within the mixed substrate area. Sea stars (*Asterias spp.*), green sea urchins (*Strongylocentrotus droebachiensis*), waved whelk (*Buccinum undatum*) and frilled anemones (*Metridium senile*) were the most commonly observed macro-fauna across all stations. Sea stars were mostly found on the benthic substrate, but occasionally were observed on the standing piles.
Numerous tiny sea stars were observed alongside mature adults at various sites. A fair portion of the sea stars were in feeding position on clumps of mussels, fallen from the wharf structure, and nearly ubiquitous shell debris on the sediment suggest that their most common prey are mussels.

The green sea urchins were observed throughout the study area primarily on the benthic substrate, however, they were occasionally observed on the existing wharf piles. Depending on the area, anemones were observed where hard substrate was available for them to attach, whether on the benthic substrate or existing wharf structure. Finally, waved whelk were observed infrequently both on wooden pilings and throughout the study area’s benthic habitat. Aside from two rock crabs (Cancer irroratus), and excluding the barnacles observed on the piles near the surface, other crustaceans were not observed within Water Lot D-2. Worm holes and an occasional clam were observed suggesting that some endo-benthic fauna is present. Epifaunal trails on the sediment, commonly made by gastropods or hermit crabs, were not observed at any of the sites. Generally, overall species diversity was low and no species at risk were observed. This low species diversity, however, is typical of an active harbour subject to many anthropogenic influences (DFO, 2001).

2.3 Flora
Flora within the study area was sparse, but was overwhelmingly dominated by kelp (Laminaria spp.), sea lettuce (Ulva spp.) and brushy red weed (Cystoclonium spp.). However, also observed were sour weed (Desmarestia spp.), rockweed (Fucus vesiculosus), cordweed (Corda spp.) and a species of crustose coralline algae. Diversity was typically greater on the piles of existing wharf structures in the area. One notable observation was the possible identification of Bonnemaison’s Hook Weed (Bonnemaisonia hamifera) on existing wharf pilings. This species is thought to have been introduced to the North-Eastern Atlantic from Japan and is thought to be invasive (Guiry, M.D. & Guiry, G.M. 2015). Overall the diversity of flora within the study area was low. Some algae growth was likely mitigated due to flocculent material, turbid water (i.e. low light levels) and an abundance of soft, fine substrates that are unsuitable for many species.

<table>
<thead>
<tr>
<th>Station ID</th>
<th>Depth</th>
<th>Substrate Composition</th>
<th>Observed Flora</th>
<th>Observed Fauna</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>*IN-1</td>
<td>N/A</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Rock Crab - U</td>
<td>Fucus sp. debris - U, Chorda sp. debris - U. Wooden debris - U. Rope debris - U. Infrequent empty Blue Mussel shells.</td>
</tr>
<tr>
<td>IN-2</td>
<td>44'</td>
<td>Fines (100 %)</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Sabellid Worms - O</td>
<td>Laminaria sp. debris - U. Wooden debris - U. High degree of suspended flocculent material at this site.</td>
</tr>
<tr>
<td>IN-3</td>
<td>N/A</td>
<td>Fines (100%)*</td>
<td>N/A</td>
<td>Green Sea Urchin - O, Asterias sp. - C, Waved Whelk - U</td>
<td>*Substrate heavily littered with empty Blue Mussel shells. Sponge debris - U. Rubber tires - U. Infrequent Urchin tests observed.</td>
</tr>
<tr>
<td>Station ID</td>
<td>Depth</td>
<td>Substrate Composition</td>
<td>Observed Flora</td>
<td>Observed Fauna</td>
<td>Comments</td>
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</tr>
<tr>
<td>IN-4</td>
<td>38' - 43'</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Green Sea Urchin - U,</td>
<td>Laminaria sp. debris - U. Wooden debris - U. Infrequent Urchin tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Asterias sp. - U, Bamboo Worms</td>
<td>observed.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>- C</td>
<td></td>
</tr>
<tr>
<td>IN-5</td>
<td>47'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>Green Sea Urchin - U,</td>
<td>Wooden debris - U. Moderated degree of suspended flocculent material</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Asterias sp. - U, Rock Crab -</td>
<td>at this site. Occasional Urchin tests observed.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>U, Bamboo Worms - C</td>
<td></td>
</tr>
<tr>
<td>IN-6</td>
<td>30'</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Asterias sp. - U, Sabellid</td>
<td>Laminaria sp. debris - U, Ulva sp. - U, Cladophora sp. debris - U.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Worms - U, Burrowing Anemone</td>
<td>Wooden debris - U. Infrequent Urchin tests observed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- U</td>
<td></td>
</tr>
<tr>
<td>IN-7</td>
<td>30'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>Green Sea Urchin - O,</td>
<td>Wooden debris - U. Rubber tires - U. Most Urchins were observed on the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Asterias sp. - U, Sabellid</td>
<td>wooden debris.</td>
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<td></td>
<td></td>
<td>Worms - U, Bamboo Worms - O</td>
<td></td>
</tr>
<tr>
<td>*IN-8</td>
<td>N/A</td>
<td>Fines (75%), Boulder</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Asterias</td>
<td>Laminaria sp. debris - U, Ulva sp. debris - U, Cystoclonium sp. debris</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(25%)</td>
<td></td>
<td>sp. - U,</td>
<td>- U. Infrequent empty Blue Mussel shells and Urchin tests observed.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Possible Rock gunnel or sand lance observed.</td>
</tr>
<tr>
<td>*IN-9</td>
<td>N/A</td>
<td>Fines (50%), Cobble</td>
<td>Crustose Coralline Algae - O</td>
<td>Asterias sp. - U, Waved Whelk</td>
<td>Laminaria sp. debris - U, Ulva sp. debris - U. Infrequent Urchin tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(25%), Boulder (25%)</td>
<td></td>
<td>- U</td>
<td>observed.</td>
</tr>
<tr>
<td>*IN-10</td>
<td>N/A</td>
<td>Fines (40%), Boulder</td>
<td>Crustose Coralline Algae - O</td>
<td>Asterias sp. - U, Bryozoan</td>
<td>Large metal mesh screen on bottom. Laminaria sp. debris - U, Cladophora</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(60%)</td>
<td></td>
<td>sp. - U, Shrimp sp. - U</td>
<td>sp. debris - U, Ulva sp. debris - U. Metal debris - U. Infrequent Urchin</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>tests observed.</td>
</tr>
<tr>
<td>*IN-11</td>
<td>N/A</td>
<td>Fines (50%), Cobble</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Asterias</td>
<td>Wooden debris - U. Infrequent Urchin tests observed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(25%), Boulder (25%)</td>
<td></td>
<td>sp. - U, Waved Whelk - U</td>
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<tr>
<td>Station ID</td>
<td>Depth</td>
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<tr>
<td>*IN-12</td>
<td>N/A</td>
<td>Fines (90%), Cobble (10%)*</td>
<td>N/A</td>
<td>Asterias sp. - U</td>
<td>*Substrate heavily littered with empty Blue Mussel shells. Laminaria sp. debris - U, Ulva sp. debris - O, Cladophora sp. debris - U. Frequent Urchin tests observed.</td>
</tr>
<tr>
<td>IN-13</td>
<td>11'</td>
<td>Fines (70%), Gravel (30%)</td>
<td>Desmarestia sp. - O</td>
<td>Asterias sp. - U</td>
<td>Laminaria sp. debris - O, Ulva sp. debris - U. Frequent Blue Mussel shells and infrequent Urchin tests observed.</td>
</tr>
<tr>
<td>*IN-14</td>
<td>N/A</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - C, Waved Whelk - U</td>
<td>Laminaria sp. debris - O, Ulva sp. debris - U. Chorda sp. debris - U. Wooden debris - U. Metal debris - U. Frequent Blue Mussel shells observed. Infrequent Urchin tests observed.</td>
</tr>
<tr>
<td>*IN-15</td>
<td>N/A</td>
<td>Fines (90%), Cobble (10%)*</td>
<td>Crustose Coralline Algae - C</td>
<td>Asterias sp. - U</td>
<td>Frequent Blue Mussel shells observed.</td>
</tr>
<tr>
<td>IN-16</td>
<td>7.5'</td>
<td>Fines (20%), Gravel (80%)</td>
<td>Laminaria sp. - C, Ulva sp. - U, Cystoclonium sp. - U</td>
<td>N/A</td>
<td>Ulva sp. debris - U. Occasional empty Blue Mussel shells. Gravel a mix of small stone and shell grit.</td>
</tr>
<tr>
<td>*IN-17</td>
<td>N/A</td>
<td>Fines (100%)</td>
<td>Laminaria sp. - C, Ulva sp. - U, Chorda sp. - U, Desmarestia sp. - U</td>
<td>N/A</td>
<td>Laminaria sp. debris - O, Ulva sp. debris - U. Infrequent Blue Mussel shells observed.</td>
</tr>
<tr>
<td>*IN-18</td>
<td>N/A</td>
<td>Fines (100%)*</td>
<td>Crustose Coralline Algae - U</td>
<td>Asterias sp. - C</td>
<td>*Substrate heavily littered with empty Blue Mussel shells. Ulva sp. debris - U, Chorda sp. debris - U. Wooden debris - O</td>
</tr>
<tr>
<td>IN-19</td>
<td>16'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>Asterias sp. - U</td>
<td>Laminaria sp. debris - U, Ulva sp. debris - U, Cladophora sp. debris - U. Occasional empty Blue Mussel shells and Urchin tests.</td>
</tr>
<tr>
<td>*IN-20</td>
<td>N/A</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Asterias sp. - O</td>
<td>Laminaria sp. debris - O, Ulva sp. debris - U. Frequent Blue Mussel shells observed.</td>
</tr>
<tr>
<td>*IN-21</td>
<td>N/A</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - O,</td>
<td>Laminaria sp. debris - O. Chorda sp. debris - U, Cladophora sp. debris - U. Frequent Blue Mussel shells observed.</td>
</tr>
<tr>
<td>Station ID</td>
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</tr>
<tr>
<td>IN-22</td>
<td>25'</td>
<td>Fines (80%), Cobble (10%), Gravel (10%)</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Waved Whelk - U</td>
<td>Cladophora sp. debris - U. Rope debris - U. Metal rod debris - U.</td>
</tr>
<tr>
<td>IN-24</td>
<td>28'</td>
<td>Fines (80%), Cobble (10%), Gravel (10%)</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Waved Whelk - U, Burrowing Anemone - U</td>
<td>Agarum sp. debris - U, Cladophora sp. Debris - U</td>
</tr>
<tr>
<td>*IN-25</td>
<td>N/A</td>
<td>Fines (100%)*</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - O, Waved Whelk - U</td>
<td>*Substrate heavily littered with empty Blue Mussel shells. Laminaria sp. debris - O, Cladophora sp. debris - U</td>
</tr>
<tr>
<td>*IN-26</td>
<td>N/A</td>
<td>Fines (100%)*</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - O, Waved Whelk - U</td>
<td>*Substrate heavily littered with empty Blue Mussel shells. Laminaria sp. debris - O, Cladophora sp. debris - U. Wooden debris - U.</td>
</tr>
<tr>
<td>IN-27</td>
<td>34'</td>
<td>Fines (60%), Cobble (20%), Gravel (20%)</td>
<td>Crustose Coralline Algae - O</td>
<td>Green Sea Urchin - U, Asterias sp. - O, Waved Whelk - U</td>
<td>Laminaria sp. debris - U, Cladophora sp. debris - U, Chorda sp. debris - U. Occasional empty Blue Mussel shells. Plastic garbage at this site.</td>
</tr>
<tr>
<td>*IN-28</td>
<td>N/A</td>
<td>Fines (100%)*</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - C, Waved Whelk - U</td>
<td>*Substrate heavily littered with empty Blue Mussel shells. Laminaria sp. debris - U. Cladophora sp. debris - U.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Station ID</th>
<th>Depth</th>
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<th>Observed Flora</th>
<th>Observed Fauna</th>
<th>Comments</th>
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<tbody>
<tr>
<td>IN-29</td>
<td>46'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>N/A</td>
<td>Wooden debris - U.</td>
</tr>
<tr>
<td>IN-30</td>
<td>49'</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Bamboo Worms - C</td>
<td>Wooden debris - U. Rubber tires - U. Infrequent Urchin tests observed.</td>
</tr>
<tr>
<td>O-1</td>
<td>29'</td>
<td>Fines (50%), Gravel (50%)</td>
<td>Laminaria sp. - U</td>
<td>Asterias sp. - U, Shrimp sp. - U</td>
<td>Laminaria sp. debris - U, Ulva sp. debris - U. Gravel a mix of small stone and shell grit.</td>
</tr>
<tr>
<td>O-2</td>
<td>48'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>Green Sea Urchin - O, Waved Whelk - U</td>
<td>Laminaria sp. debris - O. High degree of suspended flocculent material at this site.</td>
</tr>
<tr>
<td>O-3</td>
<td>50'</td>
<td>Fines (100%)</td>
<td>N/A</td>
<td>Green Sea Urchin - C, Asterias sp. - U, Bamboo Worms - U</td>
<td>Laminaria sp. debris - U, Ulva sp. debris - U. Plastic garbage at this site.</td>
</tr>
<tr>
<td>O-4</td>
<td>48'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>Green Sea Urchin - O, Sea Scallop - U</td>
<td>Laminaria sp. debris - O. High degree of suspended flocculent material at this site.</td>
</tr>
<tr>
<td>O-5</td>
<td>53'</td>
<td>Fines (100 %)</td>
<td>N/A</td>
<td>Green Sea Urchin - U</td>
<td>Laminaria sp. debris - U. High degree of suspended flocculent material at this site. Exposed sediment appears anoxic.</td>
</tr>
<tr>
<td>O-6</td>
<td>35'</td>
<td>Fines (50%), Cobble (25%), Gravel (25%)</td>
<td>Crustose Coralline Algae - O</td>
<td>Green Sea Urchin - O, Asterias sp. - U, Shrimp sp. - U</td>
<td>Wooden debris - U. Occasional Urchin tests observed.</td>
</tr>
<tr>
<td>O-7</td>
<td>34'</td>
<td>Fines (60%), Cobble (20%), Gravel (10%), Boulder (10%)</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Waved Whelk - U</td>
<td>Infrequent Urchin tests observed. Garbage and glass bottles at this site.</td>
</tr>
<tr>
<td>O-8</td>
<td>28'</td>
<td>Fines (60%), Cobble (20%), Gravel (10%), Boulder (10%)</td>
<td>Crustose Coralline Algae - O, Desmarestia sp. - U</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Sabellid Worms - U, Bryozoan sp. - O</td>
<td>Cladophora sp. debris - U. Infrequent Urchin test observed.</td>
</tr>
<tr>
<td>O-9</td>
<td>26'</td>
<td>Fines (60%), Cobble (35%), Boulder (5%)</td>
<td>Crustose Coralline Algae - O</td>
<td>Green Sea Urchin - U, Asterias sp. -U, Waved Whelk - U, Sabellid</td>
<td>Laminaria sp. debris - U. Cladophora sp. debris - U.</td>
</tr>
<tr>
<td>Station ID</td>
<td>Depth</td>
<td>Substrate Composition</td>
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<td>Observed Fauna</td>
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</tr>
<tr>
<td>O-12</td>
<td>25'</td>
<td>Fines (75%), Cobble (15%), Gravel (10%)</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Sea Scallop - U</td>
<td>Cladophora sp. debris - U. Wooden debris - U. Infrequent Blue Mussel shells and Urchin tests observed.</td>
</tr>
<tr>
<td>O-13</td>
<td>26'</td>
<td>Fines (50%), Apparent Bedrock (50%)</td>
<td>Crustose Coralline Algae - O</td>
<td>Green Sea Urchin - C, Asterias sp. - O, Shrimp sp. - U</td>
<td>Laminaria sp. debris - U, Ulva sp. debris - U, Cladophora sp. debris - U. Plastic garbage at this site. Possible Waved Whelk egg mass.</td>
</tr>
<tr>
<td>O-14</td>
<td>28'</td>
<td>Fines (40%), Cobble (40%), Gravel (10%), Boulder (10%)</td>
<td>Crustose Coralline Algae - O</td>
<td>Green Sea Urchin - O, Asterias sp. - O, Bryozoan sp. - U</td>
<td>Cladophora sp. debris - U. Metal debris - U, Rope debris - U. Infrequent Urchin tests observed.</td>
</tr>
<tr>
<td>O-15</td>
<td>35'</td>
<td>Fines (40%), Cobble (30%), Gravel (30%)</td>
<td>Crustose Coralline Algae - U</td>
<td>Green Sea Urchin - U, Asterias sp. - U</td>
<td>Wooden debris - U, Brick debris - U. Occasional Urchin tests observed.</td>
</tr>
<tr>
<td>O-16</td>
<td>38'</td>
<td>Fines (80%), Cobble (10%), Gravel (10%)</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Sabellid Worms - U</td>
<td>Wooden debris - U, Rope debris - U. Frequent Urchin tests observed.</td>
</tr>
<tr>
<td>O-17</td>
<td>56'</td>
<td>Fines (95%), Cobble (5%)</td>
<td>N/A</td>
<td>Green Sea Urchin - U, Asterias sp. - U, Sabellid Worms - U, Burrowing Anemone - U, Laminaria sp. debris - U, Chorda sp. debris - U. Wooden debris - U. Infrequent Urchin tests observed.</td>
<td></td>
</tr>
<tr>
<td>Station ID</td>
<td>Depth</td>
<td>Substrate Composition</td>
<td>Observed Flora</td>
<td>Observed Fauna</td>
<td>Comments</td>
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<td></td>
<td></td>
<td></td>
<td>Bamboo Worms - O</td>
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</tbody>
</table>

*Station was sampled from existing wharves or waterfront boardwalk, as such, an accurate depth measurement is not available.*
The UBHS at Water Lot D-2 in Halifax Harbour on May 6th 2015 provides relevant characterizing information regarding the benthic flora and fauna, and the substrate on which they live and grow. The substrate is for the most part a fine sediment blanketing cobbles, gravels and debris from the adjacent urbanized land, ranging from discarded litter to large piles of rope and fallen timber piles. Sea stars feeding on fallen mussels, as well as urchins, whelks and anemones are the most common macro-fauna while kelp a sea lettuce make up most of the observed macro-flora. Generally, the benthic fauna and flora are dominated by very few species, and at times in high abundances, suggesting an overall low diversity. Taken together, the habitat can be classified as nutrient rich, but stressed due to anthropogenic influences.
CHAPTER 4  CLOSURE

This report was prepared for the sole benefit of CBRE and MAERSK. This report cannot be used or relied upon by any other person or entity without the express written consent of CBCL Limited and MAERSK.

Any use that a third party makes of this report, or any reliance or decisions made based on it, are the responsibility of such third parties. CBCL Limited accepts no responsibility for damages suffered by any third party as a result of decisions made, or actions taken, based on the information presented in this report. The information presented in this report should not be considered legal or medical advice and should not be used for geotechnical purposes. The intent of the information presented is limited to the presentation of scientific information pertaining to the completion of a Benthic Habitat Survey.

We trust the information presented is in line with your current expectations and requirements. Please contact the undersigned at your convenience should you have any questions.

Respectfully Submitted,

CBCL Limited

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This document was prepared for the party indicated herein. The material and information in the document reflects CBCL Limited’s opinion and best judgment based on the information available at the time of preparation. Any use of this document or reliance on its content by third parties is the responsibility of the third party. CBCL Limited accepts no responsibility for any damages suffered as a result of third party use of this document.
CHAPTER 5  REFERENCES


Photograph 1: Blue Mussels (Mytilus edulis) and Rough Barnacles (Balanus balanus) growing on a wharf timber and pile near site DC-04.

Photograph 2: Kelp (Laminaria sp.), Smooth Cord Weed (Chorda filum), Sea Lettuce (Ulva lactuca) and Sour Weed (Desmarestia sp.) growing on a shallow wharf pile.
Photograph 3: Sea Colander (*Agarum cribrosum*) and kelp (*Laminaria sp.*) heavily encrusted with epiphytic invertebrates and a potential Hook Weed (*Bonnemaisonia*) species. Note the fine sediment, blue mussel shells and algal wrack present on the benthos.

Photograph 4: A Frilled Anemone (*Metridium senile*), Rock Weed (*Fucus vesiculosus*) and an encrusting sponge species growing on a wharf pile.
Photograph 6: Sea lettuce (*Ulva lactuca*), Crustose Coralline Algae, a *Spongomorpha* species and an egg mass of the Waved Whelk (*Buccinum undatum*) growing on the marginal concrete wharf located near site DC-20.

Photograph 5: Coral Weed (*Corallina officinalis*) growing on a wharf pile.
Photograph 7: Numerous Sea stars (*Asterias sp.*) feeding on fallen *Mytilus edulis*. Areas directly below wharf timbers and piles are littered with fallen *Mytilus edulis*. Also note the presence of Green Sea Urchins (*Strongylocentrotus droebachiensis*) and a small piece of sponge debris.

Photograph 8: Sea stars (*Asterias sp.*), Green Sea Urchins (*Strongylocentrotus droebachiensis*) and a Waved Whelk (*Buccinum undatum*) with potential egg mass. Note the apparent small outcropping of bedrock on which most specimens are located versus the fine sediment and small cobble nearby.
Photograph 9: Sea stars (Asterias sp.), a retracted burrowing anemone (Edwardsia sp.) and the test of a dead Green Sea Urchin (Strongylocentrotus droebachiensis). Note the fine sediment and occasional cobble of the benthos.

Photograph 10: Green Sea Urchins (Strongylocentrotus droebachiensis) grazing and Crustose Coralline Algae growing on a small boulder. Note the presence of a small tuft of Cladophora species wrack, Urchin tests and a mix of fine...
Photograph 11: A Rock Crab (*Cancer irroratus*) with *Mytilus edulis* shells scattered about below the floating wharf located near site DC-34. Note the Waved Whelk (*Buccinum undatum*) trail in the soft sediment.

Photograph 12: A burrowing anemone (*Edwardsia sp.*) with oral disk and feeding tentacles extended, and a probable Sabellid fan worm with feeding tentacles extended in a fine sediment substrate. Also note the presence of *Mytilus edulis* shells and Green Sea Urchin tests.
Photograph 13: A solitary Sea Scallop (*Placopecten magellanicus*) with mantle and feeding tentacles extended. The benthos is composed of fine sediment mixed with large and small cobble.

Photograph 14: An unidentified shrimp specimen observed swimming over fine sediment.
APPENDIX O – Locate Survey
(To Be Followed By Addendum)
APPENDIX P – Hazardous Materials Removals Report
(To Be Followed By Addendum)
APPENDIX Q – Archaeological Screening and Reconnaisance Report
(To Be Followed By Addendum)
APPENDIX R – Coastal Engineering Study
(To Be Followed By Addendum)
APPENDIX S – Floating Infrastructure Proposed Designs and Parameters
Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 01 33 00 – Submittal Procedures
.2 Section 01 35 43 - Environmental Procedure
.3 Section 01 74 11 – Cleaning

1.2 REFERENCE STANDARDS

.1 ASTM International
  .2 ASTM D792-13, Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
  .3 ASTM D638-14, Standard Test Method for Tensile Properties of Plastics
  .4 ASTM D2240-15, Standard Test Method for Rubber Property—Durometer Hardness
  .5 ASTM D2842 – 12, Standard Test Method for Water Absorption of Rigid Cellular Plastics

.2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  .1 Safety Data Sheets (SDS).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:
  .1 Submit manufacturer's instructions, printed product literature and data sheets for materials and include product characteristics, performance criteria, physical size, finish and limitations.
  .2 Submit two copies of WHMIS SDS in accordance with Section 01 35 43 - Environmental Procedure. Indicate VOC's for adhesives in g/L.

.3 Certifications: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.

.4 Sustainable Design Submittals:
  .1 Construction Waste Management:
    .1 Submit project Waste Management Plan and Waste Reduction Workplan highlighting recycling and salvage requirements.

1.4 QUALITY ASSURANCE

.1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:
   .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
   .2 Store and protect core materials from nicks, scratches, and blemishes.
   .3 Replace defective or damaged materials with new.

.4 Develop Construction Waste Management Plan and Waste Reduction Workplan related to Work of this Section.

Part 2 Products

2.1 MATERIALS

.1 Ultra High Molecular Weight Polyethylene (UHMWPE) to meet the following requirements:
   .1 UHMWPE to ASTM D6712
   .2 Specific Gravity: 0.92 to 0.95 g/cm³ according to ASTM D792
   .3 Tensile Strength: Min 40 MPa according to ASTM D638
   .4 Hardness Shore D: Min. 65 according to ASTM D2240

.2 Buoyancy Billet to meet the following requirements:
   .1 Specific Gravity: Maximum 0.025
   .2 Water Absorption Rate: Max 2% to ASTM D2842
   .3 Buoyancy capacity must be retained if damaged
   .4 Marine Salt Water Environment
   .5 Extruded Polystyrene Foam

2.2 FABRICATION

.1 Contractor to obtain all governing and as-built dimensions before fabricating items which are to accommodate or abut equipment and other materials.

.2 Ensure all required tolerances are applied prior to fabrication.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify conditions of substrates previously installed under
other Sections or Contracts are acceptable for installation in accordance with manufacturer's written instructions.

1. Visually inspect material in presence of DNS Representative.
2. Inform DNS Representative of unacceptable conditions immediately upon discovery.
3. Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from DNS Representative.

### 3.2 MANUFACTURER'S INSTRUCTIONS

1. Compliance: comply with manufacturer's written recommendations, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

### 3.3 CLEANING

1. Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
   1. Leave Work area clean at end of each day.

2. Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3. Waste Management: separate waste materials for reuse and recycling.
   1. Remove recycling containers and bins from site and dispose of materials at appropriate facility.

### 3.4 PROTECTION

1. Protect installed surfaces in accordance with manufacturer's written recommendations.

2. Protect installed products and components from damage during construction.

3. Repair damage to adjacent materials during construction.

END OF SECTION
APPENDIX T – Boardwalk Area Abutment Drawings
(Existing Boardwalk Between Salter Block and Svitzer Pier)
Design Loads:
- Typical Wharf LL: 100 PSF
- Maximum Single Axle Load: 9,000 kg
- Maximum Tandem Axle Load: 18,000 kg
- Gross Vehicle Weight: 22,500 kg
- Minimum Axle Spacing: 1.5 m
NOTE: PROVIDE A SMOOTH TRANSITION BETWEEN ALL EXISTING AND NEW SURFACES

DETAIL 1 ON 1712-1-B

CONSTRUCT NEW EXPOSED AGGREGATE CONCRETE SLAB-ON-GRADE TO MATCH ADJACENT AREAS

REMOVE EXISTING SUSPENDED SLAB AND REPLACE WITH NEW TIMBER DECK, STRINGERS, PILE CAP AND PILES

DETAIL 2 ON 1712-1-B

TAPER NEW CONCRETE SLAB-ON-GRADE TO PROVIDE SMOOTH TRANSITION WITH NEW TIMBER DECK

APPROXIMATE LOCATION OF EXISTING MANHOLE, ADJUST AS REQUIRED

PROVIDE DRAIN HOLES AS REQUIRED, LOCATIONS TO BE DETERMINED ON SITE

REMOVE EXISTING SLAB-ON-GRADE AND REPLACE WITH SIMILAR EXPOSED AGGREGATE FINISH CONCRETE SLAB-ON-GRADE TO MATCH EXISTING

NOTE: CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE

0 Issued for Review and Comment NOV. 2011

REV.

DESCRIPTION

DATE

1712-1-4

SCALE 1:200

NOTE: CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING UTILITIES/SERVICES AND SIMILAR.
SECTION

1712-1-2

DESIGN LOADS:
TYPICAL WHARF LL: 100 PSF
MAXIMUM SINGLE AXLE LOAD: 9,000kg
MAXIMUM TANDEM AXLE LOAD: 18,000kg
GROSS VEHICLE WEIGHT: 22,500kg
MINIMUM AXLE SPACING: 1.5m

EDGE DETAIL

1:5

PILE SHOE DETAIL

1:5

10. THE CONTRACTOR SHALL GUARANTEE THE WORK AND ALL ASSOCIATED ITEMS FOR A PERIOD OF 12 MONTHS AFTER COMPLETION AGAINST ALL DEFECTS TO EITHER EFFECTIVE WORKMANSHIP AND/OR MATERIALS.

11. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND ELEVATIONS ON SITE AND HE SHALL LAY THE WORK OUT TO ENSURE THAT THERE ARE NO CONFLICTS PRIOR TO COMMENCING WITH CONSTRUCTION.

12. AT COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL:
   a. CLEAN UP AND MAKE GOOD ALL SURFACES
   b. SUBMIT TWO COPIES OF ALL RECORD DRAWINGS TO THE OWNER FOR HIS RECORDS.

CONCRETE NOTES:

1. CONCRETE WORK AND METHODS OF CONSTRUCTION TO CONFORM TO CSA-A23.1—09.

2. ALL CONCRETE SHALL CONFORM TO CSA-A23.1—09 AND BE READY MIX.

3. ALL CONCRETE ADDITIVES SHALL BE APPROVED BY THE ENGINEER.

4. NO CONCRETE SHALL BE Poured WITHOUT PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE.

5. ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CSA-A23.2—09.

6. ALL MIX DESIGNS SHALL CONFORM TO CSA-A23.1—09.

7. VIBRATION EQUIPMENT SHALL BE USED DURING ALL CONCRETE PLACEMENT.

8. CONCRETE WORK AND METHODS OF CONSTRUCTION TO CONFORM TO CSA-A23.1—09.

9. CONCRETE FOR SLAB SHALL BE 35 MPA (28 DAY STRENGTH) WITH 6% ± 1% AIR CONTENT AND A MAXIMUM W/C RATIO OF 0.40.

REINFORCEMENT NOTES:

1. ALL REINFORCING STEEL SHALL CONFORM TO CSA-G30.18—09, WITH A MINIMUM YIELD STRENGTH OF 400 MPA.

2. ALL REINFORCING SHALL BE PLACED WITH CLASS B LAP SPLICES.


4. ALL ANCHOR BOLTS, REINFORCING ETC. TO BE SECURED IN POSITION AND INSPECTED BY THE ENGINEER PRIOR TO PLACING CONCRETE.

5. ALL ANCHOR BOLTS TO BE PLACED AS REQUIRED, ANCHOR BOLTS, NUTS, AND WASHERS TO CONFORM TO CSA-G40.21-04 GRADE 300W.

6. UNLESS NOTED OTHERWISE COVER TO ALL REINFORCING STEEL TO BE 60mm.

7. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
CONSTRUCT NEW CONCRETE RETAINING WALL AGAINST EXISTING NORTH AND WEST ABUTMENTS BELOW, DIMENSIONS TO BE DETERMINED ON SITE. SEE DRAWING 1712-1-3 AND DRAWING 1712-1-1 FOR GUIDANCE.

EXISTING CONC/TIMBER ABUTMENT, CONDITIONS UNKNOWN

EDGE OF SLAB ON GRADE

3765±

6000±

4000±

EDGE OF SLAB ON GRADE

5980±
APPENDIX U – Existing Electrical Distribution Report
(To Be Followed By Addendum)