1. Documents Required .1 Maintain at job site, one copy each of following:
   .1 Contract drawings
   .2 Specifications
   .3 Addenda
   .4 Reviewed shop drawings/submissions
   .5 Change orders
   .6 Other modifications to Contract
   .7 Field test reports
   .8 Copy of approved work schedule
   .9 Manufacturer's installation and application instructions

2. Site Conditions .1 Records of existing structures and geotechnical reports may be available for inspection at the offices of Public Services and Procurement Canada, 1713 Bedford Row, Halifax, N.S. This material is not necessarily up to date and is for information purposes only. It should be complemented by site visits and consultation with appropriate expertise.

3. Work Schedule And Completion Dates .1 Prepare and submit to the Departmental Representative within 5 days of notification of Contract award, one copy of the construction schedule in the form of a bar chart showing the dates for commencement and completion of each major activity of the work, including the work of subcontractors; dates for submissions, review and return of shop drawings, etc.; the dates of Substantial and Final Completion; and intended man hours of labour and equipment for each major item of work. If the schedule as submitted is unacceptable in any way, submit without delay a revised schedule satisfactory to the Departmental Representative.

.2 The Departmental Representative is to notify the Contractor in writing of acceptance of the Construction Schedule. Comply with the Construction Schedule at all times. If, for

any reason, the Construction Schedule is not followed, immediately notify the Departmental Representative of the change and submit a revised schedule for acceptance. Upon written acceptance by the Departmental Representative, this schedule will become the Construction Schedule.

.3 Whenever required, give further written particulars concerning this schedule. The submission to and acceptance by the Departmental Representative of the Contractor's Construction Schedule or the furnishing of details and particulars thereto will not relieve the Contractor of any duties and responsibilities under the Contract.

4. Measurement Responsibilities

.1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment purposes.

5. Contractor's Use of Site

.1 Co-operate with users of existing facilities.

.2 Should interference's occur, take directions from Departmental Representative.

.3 Do not unreasonably encumber site with materials or equipment.

.4 Move stored products or equipment which interfere with operations of Departmental Representative or other Contractors.

.5 Obtain and pay for use of additional storage or work areas needed for operations.

.6 Comply with all regulations and authorities having jurisdiction over the work, whether on land or on water.

.7 Ensure no damage occurs to existing structures as a result of operations. Any said damage will be repaired at Contractor's expense.

.8 Provide temporary barriers and warning signs in location where work is adjacent to areas used by public.

6. Codes and Standards

.1 Perform work in accordance with National Building Code of Canada (NBC) and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements will apply.

.2 Meet or exceed requirements of specified standards, codes and referenced documents. When a standard or code is outdated, the latest edition will supersede the referenced date.

.3 Observe and enforce construction safety measures by Canadian Construction Safety Code and Construction Safety Code of Nova Scotia. In the event of conflict between any provisions of above authorities the most stringent provision will apply.

7. Project Meetings

.1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.

8. Setting Out of Work

.1 Do all detail surveys necessary for the work, including locating and maintaining working points, and establishing lines and elevations. Perform all layout work, and carefully preserve benchmarks, reference points and stakes.

.2 Provide such masts, scaffolds, batter boards, lines, straight edges, templates and other devices as may be necessary to facilitate layout, construction and inspection of the work. Whenever necessary, suspend work for such reasonable time as may be necessary to permit the Departmental Representative to check or inspect any portion of the Work. The Contractor will not be allowed any extra compensation or time for completion because of this suspension of work.

.3 Elevations for the various grades and features of the specified works to be referenced and properly related to a benchmark, which will be approved by the Departmental Representative.

.4 Verify all grades, lines, levels, and dimensions shown on the drawings and report any errors or inconsistencies to the Departmental Representative before commencing work. If required, provide and maintain well built batterboards at all points to facilitate the progress of the work. Establish all other grades, lines, levels required to facilitate the work.

9. Existing Services

.1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to pedestrian and vehicular traffic.

.2 Before commencing work, establish location and extent of service lines in area of work

and notify Departmental Representative of findings.

.3 Submit schedule to and obtain acceptance from Departmental Representative for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.

.4 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

10. Contract Documents .1 Contract Drawings:

.1 The drawings for the Work consist of all drawings listed in these "Plans And Specifications" and any additional drawings issued at a later date by the Departmental Representative.

.2 Departmental Representative may furnish additional drawings to assist in proper execution of work. These drawings will be issued for clarification only. Such drawings will have same meaning and intent as if they were included with plans referred to in Contract Documents.

.3 The drawings indicate the extent and general dimensions of the work. Make all necessary measurements to ensure that the result of the work is in accordance with the intent.

.4 Verify all existing conditions in field prior to proceeding with work.

.2 Contract Specifications:

.1 The general requirements and technical specifications are written solely for the General Contractor. They are

organized into the NMS format of separate divisions and sections.

.2 Specification language is of the 'Short Form type' for example, where the word "provide" occurs, interpret it to mean "the Contractor shall furnish all labour, material and equipment necessary to complete the work".

.3 This Specification and accompanying drawings are intended to describe and provide for a finished project. They are intended to be complementary, and what is called for by either will be as binding as if called for by both. The Contractor shall understand that the work herein described will be complete in every detail, notwithstanding that every item necessarily involved is not particularly mentioned, and Contractor will be held to provide all labour, materials and equipment necessary for the entire completion of the work and will not avail himself of any errors or omissions.

11. Permits and Regulations

.1 Apply for, obtain and pay for all necessary permits, approvals and other authorizations required for the work.

.2 Comply with all by-laws, ordinances and regulations of all authorities having jurisdiction.

.3 Pay for any Municipal permits, per General Conditions as stated in the contract.

12. Cutting, Fitting and Patching

.1 Execute cutting (including excavation), fitting and patching required to make work fit properly.

.2 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

.3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

.4 Obtain Departmental Representative's approval before cutting, boring or sleeving, or excavating adjacent to load-bearing members.

13. Record of Construction

.1 As work progresses, maintain accurate records to show all deviations from the contract drawings, with particular reference to work which will be concealed. Prior to the inspection of the work for the issuance of the Final Certificate of Completion, provide the Departmental Representative with one set of white prints of the drawings with all deviations shown neatly thereon.

.2 Provide "as built" cross sections of any excavation, dredging or fill work.

14. Payment

.1 Payment for all work under this contract to be according to the Contract.

.2 No separate payment will be made for work specified under any sections of Specification under Division 01. The cost of this work is to be considered as overhead and to be included in the lump sum of the Contract.

.3 Dimensional changes as directed by the Departmental Representative to suit existing conditions, but not resulting in additional work or materials, will not be considered as extra to the Contract.

15. Site Examination

.1 All parties tendering should visit the site of the work prior to submission of tenders

and make themselves thoroughly acquainted with site conditions, conditions of existing objects to be removed, tides, degree of exposure and all information necessary for the proper carrying out of the work covered by the drawings and this Specification. Submission of Tender will be deemed that Contractor is conversant with site conditions.

.2 The Departmental Representative will give no consideration whatsoever to any claim by the Contractor resulting from failure to have made all the necessary investigations prior to tendering.

16. Maintenance of Shipping

.1 Liaise with the local port officials to coordinate activities such that any interference is minimized.

17. Cooperation & Assistance to Departmental Representative

.1 Co-operate with Departmental Representative on inspection of work.

.2 Provide assistance when requested.

.3 Provide small motor boat with operator and sounding chain for Departmental Representative's use when requested.

18. Datum

.1 The datum referred to in this Specification is Chart Datum. Chart Datum is, by International Agreement a plane below which the tide will seldom fall. The Canadian Hydrographic Service has adopted the plane of the lowest normal tide (L.N.T.) as Chart Datum. As the rise, fall, and range of tides varies daily, the Canadian Tide and Current Tables, as issued by the Canadian Hydrographic Service, should be consulted for tidal predictions and other tidal information relating to the work.

19. Contractor's Representative

.1 Continuously maintain on the site an authorized representative to whom communication may be addressed and who will be competent to speak for the Contractor in discussing work methods.

20. Workers Compensation

.1 Contractor and all sub-contractors must be registered under the Workers Compensation Act and provide evidence of good standing.

.2 At completion of Contract and before final payment is made, the Contractor will present to the Departmental Representative a Letter of Certification from the Workers Compensation Board, showing that all required assessments are paid in connection with all trades.

21. Laws, Standards Taxes and Fees

.1 Comply with all laws and standards governing all or any part of the work, pay all applicable taxes and pay for all permits and certificates required in respect of the execution of the work. Where variances exist between the requirements of agencies governing all or any part of the work, the most restrictive will govern, but in no instance will the standards established by the drawings and this Specification, which exceed such requirements, be reduced.

22. Protection and Repair

.1 Repair any damage resulting from operations under this contract.

23. Location of Equipment and Fixtures

.1 Location of equipment, fixtures or any appurtenances indicated are to be considered approximate.

24. Inspection and Testing

.1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms with contract.

25. Disposal of Debris

.1 Debris, including construction materials not incorporated in the work, oil products and containers, and other materials of this nature will be disposed of in suitable locations off the site. This includes costs of disposing of contaminated materials such as creosote treated timber. Disposal is the responsibility of the Contractor.

.2 Material from the work will not be permitted to go adrift or otherwise become a menace to navigation.

26. Existing Soils Conditions

.1 Any information pertaining to soils and all boreholes logs are furnished by the Departmental Representative as a matter of general information only and borehole descriptions or logs are not to be interpreted as descriptive of conditions at locations other than those described by the boreholes themselves.

27. Relics And Antiquities

.1 Protect relics, antiquities, items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.

.2 Give immediate notice to Departmental Representative and await written instructions before proceeding with work in this area.

.3 Relics, antiquities and items of historical or scientific interest remain her Majesty's property.

28. Temporary Navigational Buoys

.1 The Contractor is to maintain temporary buoy's to mark the position of the outer end of the structure as construction proceeds. All buoy's are to meet the requirements of Canadian Coast Guard Standard TP968 and be equipped with radar reflectors.

http://www.ccg-gcc.gc.ca/folios/00020/docs/CanadianAidsNavigationSystem2011-eng.pdf

.2 The Contractor shall coordinate the buoy installation with the local harbour authority.

.3 The Contractor is responsible for all costs associated with the supply, installation and removal of all temporary navigational buoy's.

PROJECT PARTICULARS

1.0 Work Covered by Contract Documents

.1 Work of this Contract comprises of Class 'B' dredging located at the DFO-SCH Bailey's Brook Harbour Facility, Lismore, Pictou County, NS.

1.1 Scope of Work

.1 Scope of Work under this contract includes but shall not be limited to the provisions of all labour, material and equipment necessary to complete the work in accordance with the plans, specifications and general conditions.

1.2 Description of Work

.1 The work is to include but not to be limited to the following:

.1 Phase 1 - Removal of dredge spoils from on-site containment cell and disposal at the off-site designated disposal site.

.2 Phase 2 - Class 'B' dredging of basin.

.3 Phase 3 - Class 'B' dredging of channel.

PROJECT MEASUREMENT

2.0 General

.1 This section details the measurement method to be used for payment purposes. Incidental items covered in the various sections of the Specification are to be allowed for in the pricing of each pay item.

2.1 Measurement For Payment

.1 LUMP SUM ITEMS: The following items are to be measured separately for costing purposes, then combined and submitted as one item under Lump Sum items in the tender Documents:

Division 1

Departmental Representative's Site Office: All work associated with the supply, maintenance, and removal from site of the Departmental Representative's site office per Section 01 51 00 of the Specification will constitute a lump sum for measurement purposes.

Division 35

Mobilization and Demobilization will be measured for payment by lump sum.

.2 **UNIT PRICE ITEMS: The following items outline the unit of measurement for unit price items as indicated in the tender documents:**

Division 35

Phase 1 - On-site Containment Cell Removals will be measured for payment by the cubic metre truck measurement (CMTM) of material removed from the on-site containment cell and disposed at the off-site designated disposal site. Work is to include removal of existing dredge spoils within the containment cell footprint down to an elevation of +1.70m above chart datum with disposal of material at the off-site designated disposal site. Upon acceptance of the completed removal work by the Departmental Representative, the contractor may proceed to rework the remaining material

within the cell to accommodate the disposal of dredge material from the basin and channel dredging. Disposal of material from the Phase 2 - Class "B" Dredging at Basin is not to be placed at the on-site containment cell until removal of the existing dredge spoils are completed.

Phase 2 - Class "B" Dredging at Basin will be measured for payment by the cubic metre place measurement (CMPM) of material removed from the dredge area and disposed at the on-site containment cell. The unit price is to include all associated costs to gain access to the dredge area, including but not limited to, the supply, installation and removal of access roads, as required, to perform the dredging operation and transport dredge material to the on-site containment cell for disposal. Dredging of the basin is not to commence until the removal work outlined in Phase 1 at the on-site containment cell is completed and accepted by the Departmental Representative. Phase 2 - Class "B" Dredging at Basin is to be completed by April 2, 2022 for operation requirements.

Phase 3 - Class "B" Dredging at Channel will be measured for payment by the cubic metre truck measurement (CMTM) of material removed from the dredge area and disposed at the on-site containment cell. Dredging at the channel is not to commence until Phase 2 - Class "B" Dredging at Basin has been completed and accepted by the Departmental Representative. Phase 3 - Class "B" Dredging at Channel Area 'A' is to completed and accepted prior to starting work at Area 'B'. Area 'B' dredging to be completed by April 21, 2022 for operational requirements.

1. General

.1 Submit to Departmental Representative, for review, shop drawings, product data, samples and other information specified.

.2 Until submission is reviewed, work involving relevant product may not proceed.

2. Shop Drawings

.1 Drawings to be originals prepared by Contractor, Subcontractor, Supplier or Distributor, which illustrate appropriate portion of work; showing fabrication, layout, setting or erection details as specified in appropriate Sections.

.2 Identify details by reference to sheet and detail numbers shown on Contract Drawings.

.3 Maximum sheet size 860 X 1120 mm.

.4 Reproductions for submissions: opaque diazo prints.

3. Product Data

.1 Certain Specification Sections specify that manufacturer's standard schematic drawings, catalogue sheets, diagrams schedules, performance charts, illustrations and other standard descriptive data will be accepted in lieu of shop drawings.

4. Samples

.1 Submit samples in sizes and quantities specified.

.2 Construct field samples and mock-ups at locations acceptable to Departmental Representative.

.3 Accepted samples will become standards of workmanship and material against which, installed work will be checked on project.

5. Miscellaneous Data

.1 Provide certificates, methodologies, designs and test results as required.

6. Coordination of Submissions

.1 Review shop drawings, product data, samples and miscellaneous data prior to submission.

.2 Verify:
.1 Field Measurements.
.2 Field Construction Criteria.
.3 Catalogue numbers and similar data.

.3 Coordinate each submission with requirements of work and Contract documents. Individual submissions will not be reviewed until all related information is available.

.4 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submissions.

.5 Contractor's responsibility for deviations in submission from requirements in Contract documents is not relieved by Departmental Representative's review of submission, unless Departmental Representative gives written acceptance of specified deviations.

.6 Notify Departmental Representative, in writing at time of submission, of deviations from requirements of Contract documents stating reasons for deviations.

.7 After Departmental Representative's review, distribute copies.

7. Submission Requirements

.1 Schedule submissions at least 14 days before dates reviewed submissions will be needed.

.2 Submit number of copies of shop drawings, product data which Contractor requires for distribution, plus 2 copies which will be retained by Departmental Representative.

.3 Accompany submissions with transmittal letter, in duplicate, containing:

.1 Date
.2 Project title and number.
.3 Contractor's name and address.
.4 Identification and quantity of each shop drawing, product data and sample submitted.
.5 Other pertinent data.

.4 Submissions shall include:
.1 Date and revision dates.
.2 Project title and number.
.3 Name and address of:
.1 Contractor
.2 Sub-Contractor
.3 Supplier
.4 Manufacturer
.5 Separate detailer when pertinent
.4 Identification of product or material.
.5 Relation to adjacent structure or materials.
.6 Field dimensions, clearly identified as such.
.7 Specification Section Number.
.8 Applicable standards, such as CSA or CGSB numbers.
.9 Contractor's stamp, initialled or signed, certifying review of submission, verification of field measurements and compliance with Contract documents.

8. Shop Drawings Review

.1 The review of shop drawings by Public Works and Government Services Canada or its authorized consultant is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that Public Works and Government Services Canada approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents. Without restricting the

generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all sub-trades.

9. Other Reviews .1 As for shop drawings above, other reviews are for the sole purpose of ascertaining conformance with the general concept.

1.1 SECTION INCLUDES

.1 Fire Safety Requirements.

.2 Hot Work Permit.

.3 Existing Fire Protection and Alarm Systems.

1.2 RELATED SECTIONS

.1 Section [01 35 29]: Health and Safety Requirements.

1.3 REFERENCES

.1 National Fire Code 2015

.2 National Building Code 2015

.3 CAN/CSA-W117.2, "Safety in Welding, Cutting and Allied Processes."

.4 Applicable OHS legislation

1.4 DEFINITIONS

.1 Hot Work - applies to hot works involving open flames or producing heat or sparks, including, without being limited to, cutting, welding, soldering, brazing, grinding, adhesive bonding, thermal spraying and thawing pipes.

1.5 SUBMITTALS

.1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within [14] calendar days of acceptance of bid.

.2 Submit in accordance with section [01 33 00].

1.6 FIRE SAFETY REQUIREMENTS

.1 Implement and follow fire safety measures during Work. Comply with following:

.1 National Fire Code 2015.

.2 National Building Code 2015.

.3 Provincial OHS Acts and Regulations.

.4 CAN/CSA-W117.2, "Safety in Welding, Cutting and Allied Processes."

.2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

1.7 HOT WORK AUTHORIZATION

.1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.

.2 To obtain authorization submit to Departmental Representative:

.1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.

.2 Description of the type and frequency of Hot Work required.

.3 Sample Hot Work Permit to be used.

.3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:

.1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;

.2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written

authorization to proceed.

.4 Requirement for individual authorization will be based on:

.1 Nature or phasing of work;

.2 Risk to Facility operations;

.3 Quantity of various trades needing to perform hot work on project or;

.4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.

.5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.

.6 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed, perform Hot Work only during non-operative hours of the Facility. Follow Departmental Representative's directives in this regard.

.7 Hot works shall be performed only by personnel trained in the safe use of equipment in conformance with this Section.

1.8 Hot Work Equipment

.1 Maintenance

.1 Hot work equipment shall be maintained in good operating condition.

.2 Inspection

.1 Hot work equipment shall be examined for leakage or defects prior to each use.

.2 Leaks or defects found in hot work equipment shall be repaired prior to use.

.3 Equipment Not in Use

.1 All valves shall be closed and gas lines bled when Class 2 gas hot work equipment is not in use.

.2 Electric hot work equipment shall be de-energized when not in use.

.4 Compressed Gas Equipment

.1 The design and installation of oxygen-fuel gas equipment shall conform to NFPA 51, "Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes."

.2 Unalloyed copper piping shall not be used for Acetylene gas.

1.9 Prevention of Fires

.1 Location of Operations

.1 Except as provided in Sentence (2), hot work shall be carried out in an area free of combustible and flammable contents, with walls, ceilings and floors of *noncombustible construction* or lined with noncombustible materials.

.2 When it is not practicable to undertake hot work in an area described in Sentence (1),

.1 combustible and flammable materials within a 15m distance from the hot work shall be protected against ignition in conformance with Article 4 below

.2 a fire watch shall be provided during the hot work and for a period of not less than 60 min after its completion.

.3 a final inspection of the hot work area shall be conducted 4 h after completion of work.

.3 When there is a possibility of sparks leaking onto combustible materials in areas adjacent to the area where hot work is carried out,

a. openings in walls, floors or ceilings shall be covered or closed to prevent the passage of sparks to such adjacent areas, or

b. Sentence (2) shall apply to such adjacent areas.

.4 Protection of Combustible and Flammable Materials

1) Any combustible and flammable material, dust or residue shall be:

a. removed from the area where hot work is carried out, or

b. protected against ignition by the use of noncombustible materials.

2) Combustible materials or *building* surfaces that cannot be removed or protected against ignition as required in Sentence (1) shall be thoroughly wetted where hot work is carried out. Any process or activity that produces flammable gases or vapours, *combustible dusts* or *combustible fibres* in quantities sufficient to create a fire or explosion hazard shall be interrupted and the hazardous conditions shall be removed before any hot work is carried out.

1.10 HOT WORK PROCEDURES

.1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.

.2 Hot Work Procedures to include:

.1 Requirement to perform hazard assessment of site and Immediate work area beforehand for each hot work event in accordance with Safety Plan specified in section[01 35 29].

.2 Use of a Hot Work Permit system with individually Issued Permit by Contractor's Superintendent to worker Or Subcontractor granting permission to proceed with Hot Work.

.3 Permit required for each Hot Work event.

.4 Designation of a competent person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of [-60] minutes immediately following the completion of the Hot Work.

.5 Compliance with fire safety codes, standards and occupational health and safety regulations specified.

.6 Site specific rules and procedures in force at the site as provided by the Facility Manager.

.3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.

.4 Procedures shall clearly establish responsibilities of:
.1 Worker performing hot work,
.2 Person issuing the Hot Work Permit,
.3 Fire Safety Watcher,
.4 Subcontractor(s) and Contractor.

.5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.

1.11 HOT WORK PERMIT

.1 Hot Work Permit to include the following:
.1 Project name and project number;
.2 Building name and specific room or area where hot work will be performed;
.3 Date of issue;
.4 Description of hot work type needed;
.5 Special precautions to be followed, including type of fire extinguisher needed;
.6 Name and signature of permit issuer.

.7 Name of worker to which the permit is issued.
.8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
.9 Worker's signature with time/date of hot work completion.
.10 60 minute – minimum time period of fire watch.
.11 Fire Safety Watcher's signature with time/date.

.2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.

.3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.

1.12 FIRE PROTECTION AND ALARM SYSTEMS

.1 Fire protection and alarm systems shall not be:
.1 Obstructed.
.2 Shut-off, unless approved by Departmental Representative.
.3 Left inactive at the end of a working day or shift.

.2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting

.3 Costs incurred, from the fire department, Facility owner [and tenants], resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

1.13 DOCUMENTS ON SITE

.1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.

.2 Upon request, make available to Departmental Representative or to authorized safety Representative for inspection.

END OF SECTION

1.1 SECTION INCLUDES

.1 Procedures to isolate and lockout electrical facility and other equipment from energy sources.

1.2 RELATED SECTIONS

.1 Section [01 35 29]: Health and Safety

1.3 REFERENCES

.1 CSA C22.1- 15, Canadian Electrical Code,

.2 CAN/CSA-C22.3 No.1-06, Overhead Systems.

.3 CSA C22.3 No.7-06, Underground Systems.

.4 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.

1.4 DEFINITIONS

.1 Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.

.2 Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment has been isolated.

.3 De-energize: in the electrical sense, that a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).

.4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any

person who might touch or go near such item.

.5 Isolate: means that an electrical facility, mechanical equipment or machinery is separated or disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.

.6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.

1.5 COMPLIANCE REQUIREMENTS

.1 Comply with the following in regards to isolation and lockout of electrical facilities and equipment:
- .1 Canadian Electrical Code 2015.
- .2 Federal and Provincial Occupational Health and Safety Acts and Regulations.
- .3 Regulations and code of practice as applicable to mechanical equipment or other machinery being de-energized.
- .4 Procedures specified herein.
- .5 CSA Z 460-13 (R2018) Control of Hazardous Energy – Lock out and other methods
- .6 CSA Z 462-18 Workplace Electrical Safety

.2 In event of conflict between any provisions noted above, the most stringent provision will apply.

1.6 SUBMITTALS

.1 Submit copy of lockout procedures, sample of lockout permit and lockout tags proposed for use in accordance with Section [01 33 00]. Submit within [14] calendar days of acceptance of bid.

1.7 ISOLATION OF EXISTING SERVICES

.1 Obtain Departmental Representative's written authorization prior to working on existing live or active electrical facilities and equipment and before proceeding with isolation of such item.

.2 To obtain authorization, submit to Departmental Representative the following documentation:
- .1 Written request to isolate the particular service or facility and;
- .2 Copy of Contractor's Lockout Procedures.

.3 Make a Request for Isolation for each event, unless directed otherwise by Departmental Representative, as follows:
- .1 Fill-out standard form in current use at the Facility as provided by Departmental Representative or;
- .2 Where no form exist, make written request indicating:
  - .1 The equipment, system or service to be isolated and its location;
  - .2 Duration of isolation period (ie: start time & date and completion time & date).
  - .3 Voltage of service feed to system or equipment being isolated.
  - .4 Name of person making the request.

.4 Do not proceed with isolation until receipt of written notification from Departmental Representative granting the Isolation Request and authorizing to proceed with the work.
- .1 Note that Departmental Representative may designate another person at the Facility being authorized to grant the Isolation Request.

.5 Conduct safe, orderly shutdown of equipment or facility. De-energize, isolate and lockout power and other sources of energy feeding the equipment or facility.

.6 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require isolation of existing services.

.7 Plan and schedule shut down of existing services in consultation with the Departmental Representative and the Facility Manager. Minimize impact and downtime of Facility operations. Follow Departmental Representative's directives in this regard. Provide

temporary power to other equipment that needs to be remain operational if a shutdown is not possible.

.8 Conduct hazard assessment as part of the process in accordance with health and safety requirements specified Section [01 35 29].

.9 When entire sections of the facility need to be locked-out to do full demolition a separate temporary construction power distribution is to be provided for this purpose.

1.8 LOCKOUTS

.1 De-energize, isolate and lockout electrical facility, mechanical equipment and machinery from all potential sources of energy prior to working on such items.

.2 Develop and implement clear and specific lockout procedures to be followed as part of the Work.

.3 Prepare typed written Lockout Procedures describing safe work practices, procedures, worker responsibilities and sequence of activities to be followed on site by workforce to safely isolate an active piece of equipment or electrical facility and effectively lockout and tagout it's sources of energy.

.4 Include as part of the Lockout Procedures a system of lockout permits managed by Contractor's Superintendent or other qualified person designated by him/her as being "in-charge" at the site.

.1 A lockout permit shall be issued to specific worker providing a Guarantee of Isolation before each event when work must be performed on a live equipment or electrical facility.

.2 Duties of person managing the permit system to include:
.1 Issuance of permits and lockout tags to workers.
.2 Determining permit duration.
.3 Maintaining record of permits and tags issued.
.4 Making a Request for Isolation to Departmental Representative when required as specified above.

.5 Designating a Safety Watcher, when one is required based on type of work.
.6 Ensuring equipment or facility has been properly isolated.
.7 Collecting and safekeeping lockout tags returned by workers as a record of the event.

.5 Clearly establish, describe and allocate responsibilities of:
.1 Workers.
.2 Person managing the lockout permit system.
.3 Safety Watcher.
.4 Subcontractor(s) and General Contractor.

.6 Generic procedures, if used, must be edited and supplemented with pertinent information to reflect specific project requirements.
.1 Incorporate site specific rules and procedures in force at site as provided by Facility Manager through the Departmental Representative.
.2 Clearly label the document as being the Lockout procedures applicable to work of this contract.

.7 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.

.8 Use industry standard lockout tags.

.9 Provide appropriate safety grounding and guards as required.

1.9 CONFORMANCE

.1 Brief all workers and subcontractors on requirements of this section. Stringently enforce use and compliance.

1.10 DOCUMENTS ON SITE

.1 Post Lockout Procedures on site in common location for viewing by workers.

.2 Keep copies of Request for Isolation forms and lockout permits and tags issued to workers on site for full duration of Work.

.3 Upon request, make available to Departmental Representative or to authorized safety representative for inspection.

END OF SECTION

1.1 RELATED SECTIONS

.1 Section 01 35 24: Special Procedures on Fire Safety Requirements.

.2 Section 01 35 25: Special Procedures on Lockout Requirements.

1.2 DEFINITIONS

.1 Competent Person: means a person who is:
.1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
.2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
.3 Knowledgeable about potential or actual danger to health or safety associated with the Work.

.2 Medical Aid Injury: any injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.

.3 PPE: personal protective equipment.

.4 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.

.5 Incident - occurrence, condition, or situation arising in the course of work that resulted in or could have resulted in injury, illness, property damage, environmental issues or fatality.

1.3 SUBMITTALS

.1 Make submittals in accordance with Section 01 33 00.

.2 Submit Site-Specific Health and Safety Plan prior to commencement of Work.

.1 Submit within 5 work days of notification of Bid Acceptance. Allow for 5-10 days for Department review and recommendations prior to the commencement of work. Provide 3 copies.
.2 Departmental Representative will review Health and Safety Plan and provide comments.
.3 Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.
.4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
.5 Submit revisions and updates made to the Plan during the course of Work.

.3 Submit name of designated Health and Safety Site Representative and support documentation specified in the Safety Plan.

.4 Submit building permit, compliance certificates and other permits obtained.

.5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other Department of Labour organization.
.1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.

.6 Submit copies of reports or directions issued by Federal or Provincial authorities within 24 hours after the visit to the Departmental Representative.

.7 Submit copies of incident reports (incident, accident, injury, near-miss, fire, explosion, chemical spill or damage to property occurring at the work site) 24 hours after the event to the Departmental Representative.

.8 Submit documented plans as prescribed through Public Health requirements, directions, orders and declarations. Include industry best practices when preparing the plan and revise/update accordingly and in a timely manner as per Public Health requirements and recommended industry best practices.

1.4 COMPLIANCE REQUIREMENTS

.1 Comply with Occupational Health and Safety Act for Province of **Nova Scotia**, and Regulations made pursuant to the Act.

.2 Comply with Provincial/Federal Public Health requirements, directions, and declarations. Prepare documented plans as prescribed by Public Health and/or industry best practices in consultation with the Departmental Representative.

.3 Canadian Standards Association (CSA):
.1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.

.4 Observe construction safety measures of:
.1 NBC 2015, Division B, Part 8.
.2 NFC 2015,
.3 Municipal by-laws and ordinances.

.5 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.

.6 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.

.7 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

1.5 RESPONSIBILITY

.1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.

.2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.6 SITE CONTROL AND ACCESS

.1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.

.1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.

.2 Isolate Work Site from other areas of the premises by use of appropriate means.

.1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment. [See Section 01 50 00 for minimum acceptable requirements].

.2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.

.3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.

.3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site. Maintain records of such orientation on site for review and audit by the Departmental Representative or their authorized inspector.

.4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct Tests or perform inspections.

.5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. [Provide security guard where adequate protection cannot be achieved by other means].

1.7 PROTECTION

.1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.

.2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

1.8 FILING OF NOTICE

.1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work. Departmental Representative will assist in locating address if needed.

1.9 PERMITS

.1 Is responsible to pay all fees to obtain all permits required to conduct the work.

.2 Is responsible to provide authorities with plans and information for acceptance certificates and the costs arising from same.

.3 Is responsible to provide inspections certificates as evidence that work conforms to requirements of Authorities Having Jurisdiction (AHJ).

.4 Post permits, licenses and compliance certificates, specified in Section 01 10 10, at Work Site.

.5 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.

1.10 HAZARD ASSESSMENTS

.1 Perform a documented Site Specific Project Hazard Assessment for the Work. Include any site issues / hazards / concerns identified arising from the site visit that must be considered.

.2 Carryout initial assessment prior to commencement of Work with further assessments completed and documented as needed during progress of work, including when new trades and subcontractors arrive on site.

.3 Record results and address in Health and Safety Plan.

.4 Share information and controls identified from original and updated Project Hazard Assessments with project workers. Record this information sharing complete with names and dates. Keep documentation on site for entire duration of the Work.

1.11 PROJECT/SITE CONDITIONS

.1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:

.1 There are no known hazardous and controlled products stored onsite.

.2 There are no known hazardous substances or contaminated materials.

.3 The following are known or potential project related safety hazards and environmental conditions at site:

.1 The work under this contract involves machinery / equipment used to perform work adjacent to a marine environment in potentially adverse weather conditions such as wind, wave agitation, ice, etc.

.2 Overhead and underground electrical lines at the site.

.4 Facility on-going operations:

.1 Fishing activities / operations of various capacities throughout the year.

.2 Above items shall not be construed as being complete and inclusive of potential health and safety hazard encountered during Work.

.3 Include above items in the hazard assessment of the Work.

.4 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

1.12 MEETINGS

.1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
.1 Superintendent of Work.
.2 Designated Health & Safety Site Representative.
.3 Subcontractors.

.2 Conduct pre-shift tool box talks with the crew and conduct regularly scheduled (minimum bi-weekly) safety meetings during the Work.

.3 Keep documents on site for review by Departmental Representative or their authorized representative.

1.13 HEALTH AND SAFETY PLAN

.1 Prior to commencement of Work, develop a written Site Specific Safety Plan for the Project. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.

Items to include in the Site Specific Safety Plan;

a) Name of the designated Site Safety Rep showing proof of his/her competence and reporting relationship in Contractor's company. This person is expected to be on site during all work execution.

b) A copy of a current WCB Letter of Good Standing

c) Details as to how WHMIS 2015 / GHS will be managed on site.

d) Details as to how the Project work areas will be delineated /protected from other areas of the premises (fences, signs). Must be project specific.

e) Details as to how Safety orientations will be managed. Include a summary of what topics are covered in the safety orientation described in this section.

f) A copy of a Notice of Project that was sent to the Provincial OHS regulator.

g) Project site specific hazard assessment.

h) Details as to how tool box and safety meetings will be held and recorded.

i) An organizational chart illustrating supervision and subs (if available) that are assigned to this Project.

j) On-site Emergency Response Plans that cover all potential emergency situations that could arise. This should harmonize with the facility if possible. Emergency Contacts: name and telephone number of officials from:

.1 General Contractor and subcontractors. (key personnel)
.2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
.3 Local emergency resource organizations.

k) List of critical work activities which have a risk of endangering health and safety of Facility users and/or others.

l) Details as to how the subcontractors documented safety program will be reviewed and managed prior to allowing them to work on site.

m) Details as to how the site safety inspection program will be managed. Include frequency, assignment of responsibility as well as standard inspection form to be used.

n) Basic PPE requirements as well as specialized PPE requirements; minimum being hard hat, safety footwear, safety glasses and high vis vest.

o) General safety rules as well as the disciplinary protocols to be taken for noncompliance.

p) Details as to how Incident investigations will be managed. Include procedure and incident form.

.2 Post copy of the Plan, and updates, prominently on Work Site.

1.14 SAFETY SUPERVISION

.1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.

.2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
- .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work.
- .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
- .3 Conduct site safety orientation session to persons granted access to Work Site.
- .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
- .5 Stop the Work as deemed necessary for reasons of health and safety.

.3 Health & Safety Site Representative must:
- .1 Be qualified and competent person in occupational health and safety.
- .2 Have site-related working experience specific to activities of the Work.
- .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
  - .1 Conduct regularly scheduled safety inspections of the Work on a minimum [weekly] basis. Record deficiencies and remedial action taken.
  - .2 Follow-up and ensure corrective measures are taken.
  - .3 Share inspection reports with crews / subs

.6 Cooperate with the Facility's and / or the PSPC Occupational Health and Safety representative.

.7 Keep inspection reports and supervision related documentation on site.

1.15 TRAINING

.1 Use only skilled workers on Work Site who are deemed competent and are trained in occupational health and safety procedures and practices pertinent to their assigned task.

.2 Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licensed workers. Determine permitted activities and tasks by apprentices, based on level of training attended and demonstration of ability to perform specific duties.

.3 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.

.4 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

1.16 MINIMUM SITE SAFETY RULES

.1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; the company shall establish rules to govern the conduct and actions of their employees. These rules should leave no room for discretion and argument. The rules must be enforced and action should be taken every time a rule is violated.

.2 Brief persons of the documented disciplinary protocols to be taken for noncompliance. [Post rules on site].

1.17 CORRECTION OF NON-COMPLIANCE

.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.

.2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.

.3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

1.18 INCIDENT REPORTING

.1 Investigate and report all incidents to Departmental Representative.

.2 Notify the Departmental Representative as soon as reasonably practicable following the incident.

.3 Ensure the Authority having Jurisdiction is notified as prescribed by applicable legislation.

.4 Submit report in writing.

1.19 HAZARDOUS PRODUCTS

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).

.2 Keep MSDS data sheets for all products delivered to site.
.1 Post on site.
.2 Submit copy to Departmental Representative.

1.20 BLASTING

.1 Blasting or other use of explosives is not permitted on site.

1.21 POWDER ACTUATED DEVICES

.1 Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.

1.22 CONFINED SPACES

.1 Abide by occupational health and safety regulations regarding work in confined spaces.

1.23 SITE RECORDS

.1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.

.2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

1.24 POSTING OF DOCUMENTS

.1 Ensure applicable items, articles, notices and orders are posted in a conspicuous location on the Work Site in accordance with Acts and Regulations of Province. See local legislation for specifics.

.2 Post other documents as specified herein, including:
.1 Site specific Health and Safety Plan.
.2 WHMIS data sheets.

END OF SECTION

1 GENERAL

1.01 RELATED REQUIREMENTS

.1 Section [01 33 00 – Submittal Procedures].

.2 Section [35 20 23 - Dredging].

1.02 GENERAL

.1 Work under this contract will be monitored regularly and mitigation measures adjusted as required to meet the applicable federal, provincial and municipal acts, regulations, codes, standards and guidelines as required.

.2 Ensure applicable permits, articles, notices and orders are maintained and posted on site in a conspicuous location in accordance with all applicable acts and regulations.

1.03 SUBMITTAL REQUIREMENTS

.1 Develop written **IN-WATER ENVIRONMENTAL PROTECTION PLAN** based on project-specific requirements prior to beginning Work and continue to implement, maintain, and enforce plan until demobilization from work site.

.3 Develop written **EROSION AND SEDIMENT CONTROL PLAN** based on the project-specific requirements under this contract.

.3 Develop written **EMERGENCY RESPONSE PLAN** to be implemented immediately in the event of a sediment release or spill of a deleterious substance. Plan must include provincial environmental emergency contact information and *Departmental Representative's* contact information.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

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

.2 Submit site-specific plans to *Departmental Representative* within [7] days after date of award of contract and prior to commencement of work.

.3 *Departmental Representative* will review Contractor's submittals and may provide comments to Contractor within [7] days after receipt of plan. Revise plan as appropriate and resubmit plan to *Departmental Representative* within [7] days after receipt of comments from *Departmental Representative.*

.4 *Departmental Representative's* review of Contractor's plans should not be construed as approval and does not eliminate or reduce the Contractor's overall responsibility for regulatory compliance over the duration of this contract.

.5 *Departmental Representative* may request an updated document at any time during the construction period under this contract if measures on site do not meet acts,

regulations, codes, standards or guidelines specified under this contract.

.6 Advise the Canadian Coast Guard, Marine Communication and Traffic Services (MCTS) at (902) 564-7751 or toll free at 1-800-686-8676 sufficiently in advance of commencement of work or when deploying or removing site markings in order to allow for appropriate Notices to Shipping/Mariners action(s).

.7 Provide a minimum of 48-hour notice to the *Departmental Representative* before commencing dredging activities.

1.05 WORK SITE CONDITIONS

.1 Work at site will involve:
.1 [Possibility of high winds].
.2 [Adverse weather conditions]
.3 [Uneven work areas]
.4 [Access restrictions]
.5 [Working with continuous traffic, in water and on land]

1.06 WORK STOPPAGE

.1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for work.

.2 Comply with work stoppage directives and orders given by federal and provincial regulators as well as other authorities having jurisdiction.

1.07 REFERENCES

.1 Canada Shipping Act, 2001, amended 2013-12-01; Transport Canada

.2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada

.3 Canadian Environmental Protection Act, 1999, amended 2014-03-28; Environment and Climate Change Canada

.4 Canadian Navigable Waters Act, 2019-08-28; Transport Canada

.5 Explosives Act, 2015-02-26; Natural Resources Canada

.6 Fisheries Act, 1985, amended 2019-06-21; Fisheries and Oceans Canada

.7 Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters, 1998; Fisheries and Oceans Canada

.8 Impact Assessment Act, 2019-08-28; Environment and Climate Change Canada

.9 Migratory Birds Convention Act, 1994, amended 2010-12-10; Environment and Climate Change Canada

.10 Species at Risk Act, 2002, amended 2013-03-08; Environment and Climate Change Canada and Fisheries and Oceans Canada

.11 The Federal Policy on Wetland Conservation, 1991; Environment and Climate Change Canada

.12 Transportation of Dangerous Goods Act, 1992, amended 2009-06-16; Transport Canada

.13 Workplace Hazardous Materials Information System; Health Canada.

.14 Nova Scotia – Environment Act.

1.08 DEFINITIONS

.1 Archaeological Resources: all tangible evidence of human activity that is of historical, cultural or scientific interest. Examples include features, structures, archaeological objects (artifacts) or remains at or from an archaeological site, or an object recorded as an isolated archaeological find. An "artifact" is any object manufactured, used, moved or otherwise modified by human beings, including all waste materials and by-products of these processes.

.2 Buffer zone: a vegetated land that protects watercourses from adjacent land uses.

.3 Deleterious substance:

(a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water,

or

(b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.

.4 Fish habitat: spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes.

.5 Hazardous material: product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.

.6 Invasive or alien species: refers to a species or subspecies introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.

.7 Navigable water: a canal and any other body of water created or altered as a result of the construction of any work.

.8 Surface watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.

.9 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands", and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.

1.09 TRANSPORTATION

.1 Transport hazardous materials and hazardous waste in compliance with the *Transportation of Dangerous Goods Act*.

.2 All vessels, floating plant equipment and scows used in the work must comply with all *Canada Shipping Act* requirements for inspection, which includes certification of the vessel and adequate training and appropriate certificate of competency for the operators, codes and standards of practice for shipping.

.3 All materials and equipment used in the work must be marked in accordance with the *Collision Regulations* of the *Canada Shipping Act* when located on the waterway.

.4 All vessels using the harbour are to be permitted safe access through the work site at all times, and assisted as necessary.

.5 Maintain trucks clean and free of excessive mud, dirt, [dredged material] and other foreign matter.

.6 All trucks to have watertight seals in their boxes to prevent leakage during loading and transporting dredge material.

.7 Secure contents against free board spillage when excavating, loading and hauling material, [including dredged material]. Do not overload trucks when hauling material and avoid potential release of contents, [including dredged material], and of any foreign matter onto highways, roads and access routes used for the work. Immediately clean any ground spills and soils to extent as directed by authority having jurisdiction.

1.10 WORK SITE ACCESS

.1 It will be the Contractor's responsibility to gain access to all areas of the work site, including dredge areas.

.2 Contractor to use public roadways and established access routes whenever possible

and must provide appropriate signage and traffic control personnel as required.

.3 Contractor must ensure that public and private road surfaces remain free from dredge spoils, clay, mud, etc. throughout the hauling activities.

.4 Prior to commencement of work, submit a site plan for any new terrestrial access roads on the work site to the *Departmental Representative* for approval. Construction of new access roads will only commence after approval is received from the *Departmental Representative*.

.5 Limit impacts on riparian vegetation to those approved for the work:
.1 Limit access to banks or areas adjacent to waterbodies;
.2 Prune or top the vegetation instead of grubbing/uprooting;
.3 Limit grubbing on watercourse banks to the area required for the footprint of work;
.4 Construct access points and approaches perpendicular to the watercourse or waterbody;
.5 Remove vegetation or species selectively and in phases;
.6 Re-vegetate the disturbed areas with native species suitable for the site.

.6 Vegetation clearing required for access roads should be scheduled to avoid the regional migratory bird nesting period. In the Maritime Provinces, the regional nesting period is from mid-April to late August, with the exception of Southwest Nova Scotia where it extends from early April to late August.

.7 The construction and removal of temporary causeways and access roads will be at the Contactor's expense and will be removed immediately after clearance of the dredge area.

.8 The construction of temporary in-water access roads and causeways below the mean high water mark will only be placed within the footprint of the approved dredge boundaries.

.9 The construction of temporary in-water access roads and causeways, that are not pre-approved in the contract, may require regulatory approval under the *Canadian Navigable Waters Act*. Should the construction of in-water access roads or causeways be requested by the Contractor, the Contractor must submit to the *Departmental Representative* a plan for the construction indicating the following:
.1 Scaled drawing with layout and cross section of proposed access roads and causeways;
.2 The location, type and source of proposed material to be used;
.3 A description as to how the temporary roads and causeways will be removed;
.4 How the locations where the temporary roads and causeways are constructed will be restored to their original state/or better condition.
.5 Disposal location of temporary fill material upon completion of the project.

.10 The *Departmental Representative* will submit plan to Transport Canada for approval. Allow for sufficient time for regulatory review and response. Construction of temporary access roads and causeways will only commence after approval is received from Transport Canada by the *Departmental Representative*.

.11 All material used for construction of temporary in-water access roads and causeways must be clean and free from excessive fines, organics, debris and non-toxic (i.e., free of fuel, oil, grease and/or any other contaminants), non-ore bearing and from a provincially approved, non-water source.

.12 Material is to be screened, if required, to ensure that no fines or stones less than 0.2 kilograms are placed in the work. Material to be blended so that a homogeneous mix of smaller and larger sizes within the approved range is attained. Gradation of the material to be imported for the construction of the causeways, roads etc. shall be within the following limits:

IMPERIAL SIZE	METRIC SIZE	PERCENT PASSING
18"	450 mm	100
8"	200 mm	44-75
4"	100 mm	24-50
2"	50 mm	7-14

.13 No construction or infill material may be obtained from any coastal feature, namely a beach, dune or coastal wetland.

.14 Temporary in-water access roads and causeways shall be constructed to an elevation such that machinery and equipment are operating completely out of the water at all stages of the tide. If tidal work is being carried out, machinery and equipment shall be relocated back to a suitable elevation to prevent operating in submerged waters. Bidders are advised to consult the Canadian Tide and Current Tables issued by Fisheries and Oceans in order to make sure of the tidal conditions affecting work.

.15 Limit impacts on fish habitat components:
- .1 Salvage, reinstate or match habitat structure (e.g., large wood debris, boulders, instream aquatic vegetation/substrate) to its initial state;
- .2 Restore stream geomorphology (i.e., restore the bed and banks, gradient and contour of the waterbody) to its initial state;
- .3 Replace/restore any other disturbed habitat features and remediate any areas impacted by the work, undertaking or activity.

.16 All materials used to construct temporary in-water access roads and causeways must disposed of in a provincially approved manner. This may include transportation to and disposal at a registered environmental facility approved to accept the material or at a location predetermined under the contract. It is the Contractor's responsibility to dispose of the material at its approved location. Disposal slips must be submitted to the *Departmental Representative* before final payment is to be made under the contract.

.17 The Contractor is to maintain temporary buoys to mark the position of temporary access roads and causeways including the outer toe as construction proceeds. All buoys are to meet requirements for the applicable Canadian Coast Guard standards and be equipped with radar reflectors.

.18 Any tools, equipment, vehicles, temporary structures or parts thereof used or maintained for the purpose of building or placing a work in navigable water are

to be removed upon completion of the project.

1.11 OPERATION OF MACHINERY

.1 Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.

.2 Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of a water body.

.3 Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.

.4 Biodegradable fluids should be considered for use in place of petroleum products whenever possible, as a standard for best practices.

.5 No storage of vehicles or equipment/material is permitted on any beach, dune, wetland or other environmentally sensitive areas.

.6 Do not perform cleaning and wash down within a 30-metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.

1.12 CONTAINMENT AND SPILL MANAGEMENT

.1 Comply with federal (CEPA - *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*) and provincial regulations, codes, standards and guidelines for the storage of fuel and allied petroleum products on the site.

.2 In the event of a petroleum spill and release into the environment, stop work and immediately notify the *Departmental Representative* and the Canadian Coast Guard 24-Hour Environment Emergencies Report System (1-800-565-1633). Contain spill and perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

.3 Do not dump petroleum products or any other deleterious substances on ground or in the water.

.4 Be diligent and take all necessary precautions to avoid spills and contamination of the soil and water (both surface and subsurface) when handling petroleum products on the site and during fuelling and servicing of vehicles and equipment.

.5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and clean-up of spills.

.6 Maintain vehicles and equipment in good working order to prevent leaks on site. Hoses, couplings and tanks are to be inspected on a regular basis to prevent fractures and breaks.

.7 All equipment to be used in or over the marine environment is to be free from leaks or coatings of hydrocarbon-based fluids and/or lubricants harmful to the environment.

.8 Materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals are not to enter the watercourse.

.9 Develop and submit to the *Departmental Representative* an **Emergency Response Plan** that is to be implemented immediately in the event of a sediment or spill release of a deleterious substance. Include federal and provincial environmental emergency contact information and *Departmental Representative's* contact information.

.10 Ensure that building material used in a watercourse has been handled and treated in a manner to prevent the release or leaching of substances into the water that may be deleterious to fish.

.11 If an oiled seabird is encountered, methodology for the handling and release of marine and migratory birds outlined in Environment and Climate Change Canada (ECCC) – Canada Wildlife Service (CWS)'s Oiled Birds Protocol will be implemented. A permit application must be obtained from ECCC-CWS prior to implementation of this protocol.

.12 Ensure that all [floating plant equipment], [barges], [vessels] will have procedures in place to ensure safeguards against marine pollution: awareness training of all employees, means of retention of waste oil on board and discharge to shore-based reception facilities, capacity of responding to and clean-up of accidental spill caused by equipment involved in any particular part of the project.

.13 If heavy machinery is being operated from a barge, on-site crews must have emergency spill clean-up equipment, adequate for the activity involved, on the barge. Spill equipment will include, as a minimum, at least one 250 L (i.e. 55 gallon) overpak spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. Take appropriate measures to contain and clean up any spills and all releases into the marine environment must be promptly reported to the 24-Hour Environment Emergencies Report System (1-800-565-1633).

1.13 HAZARDOUS MATERIAL HANDLING

.1 Store and handle hazardous materials in accordance with applicable federal and provincial regulations, codes, standards and guidelines. Store in location that will prevent spillage into the environment.

.2 Label containers to Workplace Hazardous Materials Information System (WHMIS) requirements and keep MSDS data sheets on site for all hazardous materials.

.3 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when stored.

.4 Store and handle flammable and combustible materials in accordance with National Fire Code.

.5 Workers in contact with hazardous materials must be provided with, and use regulated Personal Protective Equipment (PPE) and must have the necessary training to know how to handle the different hazardous materials in accordance with applicable health and safety and environmental regulations.

1.14 DISPOSAL OF WASTES

.1 Do not bury construction and demolition-related debris (e.g., concrete, creosote timbers, steel, impacted soil, etc.) and waste materials on site.

.2 Dispose and recycle construction and demolition-related debris and waste materials in accordance with provincial waste management regulations and the project waste management requirements specified in Section 02 41 23 – Demolition and Removals.

.3 Do not dispose of hazardous wastes (e.g., paints, batteries, cleaners, acids ,etc.) including volatile materials (e.g., solvents, mineral spirits, aerosol cans, etc.) and petroleum products on the ground or into waterways, storm or sanitary sewers or in waste landfill sites. Dispose of hazardous wastes in accordance with applicable federal and provincial, regulations, codes, standards and guidelines.

.4 Chipped vegetation may be used as mulch but must not be spread into a water body or wetland.

.5 All salvageable stockpiles of creosote timbers must be situated a minimum of [500] meters from any dwelling or potable water well and a minimum of [100] meters from any watercourse/wetland or other environmentally sensitive area. All stockpiles must be must be contained on federal land, unless approved by *Departmental Representative*. Prior to completion of the work, all salvagable/disposal material must be removed from the site as directed by the *Departmental Representative.*

.6 Construction material and debris is not to become waterborne. Retrieve any debris entering the marine environment without delay, when it is safe to do so.

1.15 WATER QUALITY

.1 Contractor is responsible to develop and implement an **Erosion and Sediment Control Plan** for the work site that will minimize the risk of entry or re-suspension of sediment in a water body during all phases of the work. Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the water body or settling basin and runoff water is clear.

.2 The Plan is to be submitted as per section [01 33 00],for review by the *Departmental Representative* and should, where applicable, include:

.1 Effective sediment control measures (e.g. silt curtain, silt fencing, check dams, etc.) as an initial step in the construction sequence.
.2 Measures for managing water flowing onto the site, as well as water being pumped / diverted from the site such that sediment is filtered out prior to entering a water body (e.g., pumping / diversion of water to a vegetated area, construction of a settling pond or other filtration system). The water can be pumped into a settling pond or filter bag to ensure that the concentration of sediment is below regulated discharged criteria before it reaches a water body.
.3 Measures for containing and stabilizing waste material (e.g., dredged material, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris, etc.) above the high water mark of nearby water bodies to prevent re-entry.
.4 Regular inspection and reporting details for sediment control measures to ensure they are functioning properly.
.5 Repair methodology for erosion and sediment control measures and structures if damage occurs.
.6 Removal methodology of non-biodegradable erosion and sediment control materials once site has been stabilized. Upon completion of use, these control measures must be removed in a way so as to prevent the escape of settled sediments.
.7 Methodology for monitoring weather, specifically rainfall and storms and altering work plans and contingency measures as a result of inclement weather.

.3 Where work may affect water quality, schedule work in cooperation with the Harbour Authority as directed by *Departmental Representative* to minimize interference and impact on harbour users.

.4 Where work may affect the water quality adjacent to water intake lines used by lobster holding facilities, fish processing facilities or other harbour users, schedule work in cooperation with the Harbour Authority, facility owners and as directed by *Departmental Representative* to minimize interference and impact to harbour users.

.5 Silt Curtain must be installed and effective for all in-water work. It must isolate the work such that any silt is contained within the immediate work area.

.6 Conduct work in such a manner to limit turbidity and minimize sediment resuspension in the water to an absolute minimum at all times:
.1 Maintain appropriate production speed and momentum of the excavation equipment. Make adjustments as required and as approved by *Departmental Representative*.
.2 Strategically position excavation equipment and [haul vehicles] [scows] to minimize over the water swings of dredged material whenever possible.
.3 Avoid overfilling of the dredge bucket.
.4 Minimize wash downs of equipment and wharf deck.

.5 Restrict the volume of material dredged to the areas and depths in the contract, unless otherwise directed by the *Departmental Representative*.

.1 No bottom stockpiling, dragging or side casting of material on the ocean floor outside of the wharf footprint during dredging operations.

.7 The total volume of dredge material must not exceed the approved volume unless otherwise approved in writing by the appropriate authorities or as directed by the *Departmental Representative.*

.8 Contractor is responsible to visually monitor the water turbidity in the vicinity of the project to ensure that turbidity is limited. If excessive change occurs in the turbidity that differs from the existing conditions of the surrounding water body (i.e., distinct change in water clarity) as a result of the project activities, the work will stop, the contractor will notify the *Departmental Representative* and implement contingency measures as required.

.1 Turbidity levels outside the silt curtain shall not exceed 8 Nephelometric Turbidity Units (NTUs) above the background levels (when background levels are between 8 and 80 NTUs OR exceed 10% above background levels when background is greater than 80 NTUs).

1.16 AIR QUALITY

.1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.

.2 Dust suppression by the application of water must be employed, when required. Apply dust control measures to roads, parking lots and work areas. The *Departmental Representative* shall determine locations where water is to be applied, the amount of water to be applied, and the times at which it shall be applied. Waste oil or any other petroleum products must not to be used for dust control under any circumstances.

.3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.

.4 Fires and burning of rubbish on site is not permitted.

.5 To reduce emissions of air contaminants and greenhouse gas, implement an idling policy that includes:
.1 Diesel construction equipment will be turned off when not in active use.
.2 Vehicles idling more than 5 minutes will be turned off.
.3 Morning vehicle warm-ups will be restricted to 3-5 minutes.

.4 A staging zone will be established for trucks that are waiting to load/unload to minimize public exposure to emissions.

.5 Idling restrictions will not apply when:

.1 The engine is required to power auxiliary equipment (e.g., hoist, lift, computers, safety lights, etc.);

.2 Extreme weather conditions (-10˚ Celsius or below / +30˚Celsius or above) or any other circumstance where heating or air conditioning is required for worker's health and safety;

.3 The original equipment manufacturer specifically recommends a longer idling period for normal and efficient operation of the motor vehicle in which case such recommended period shall not be exceeded;

.4 Vehicle/equipment maintenance and diagnostic purposes;

.5 Where the unit is not expected to restart due to mechanical issues.

1.17 BIRD AND BIRD HABITAT

.1 Become knowledgeable with and abide by the *Migratory Birds Convention Act* regarding the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.

.2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the work.

.3 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.

.4 Ensure that no litter (including food wastes) is left in and around the site.

.5 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.

.6 Do not use beaches, dunes, coastal wetlands and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the *Departmental Representative*.

.7 All machinery must be well muffled. If necessary, trucks may be required to avoid the use of engine brakes along specific sections of the route.

.8 To avoid the risk of nest destruction, the proponent shall avoid vegetation clearing during the most critical period of the migratory bird breeding season, which is April 1st through August 31st.

.9 Maintain a minimum distance of 300 m from all areas occupied by concentration of seabirds and waterbirds. Travel at steady speeds when close to seabird and waterbird colonies, moving parallel to the shore, rather than approaching the colony directly. Avoid any sharp or loud noises, do not blow horns or whistles, and maintain constant engine noise levels. Do not pursue seabirds or waterbirds swimming on the water surface and avoid concentration of these birds on the water.

.10 Should nests or chicks of migratory birds or raptors be encountered during work, immediately stop work in that area and notify *Departmental Representative* for directives to be followed.

.1 Do not disturb nest site and neighbouring vegetation until nesting is completed.

.2 Minimize work immediately adjacent to such areas until nesting is completed.

.3 Protect these areas by following recommendations of Canadian Wildlife Service (CWS).

.4 Vessel movement in the vicinity of nesting islands for seabirds and waterbirds should take place at steady speeds, moving parallel to the shore, rather than approaching the island directly.

.5 Dredge disposal sites may provide habitat suitable for ground-nesting and burrowing birds, including species of conservation concern such as the Common Nighthawk and Bank Swallow. During the breeding season, it is important that nests not be disturbed by erosion prevention and control measures or by excavation and construction activities. If stockpiles are on site or will be on site, any disturbance to such dredge stockpiles is not to be undertaken during the regional nesting period for migratory birds. Nest searches must be undertaken by an experienced observer prior to construction activities, and any nests that are discovered must be protected with an appropriate buffer for the species.

.6 Intrusive work conducted in potential migratory bird nesting habitat should be scheduled to avoid the regional migratory bird nesting period. In the Maritime Provinces, the regional nesting period is from mid-April to late August, with the exception of southwest Nova Scotia where it extends from early April to late August.

1.18 FISH AND FISH HABITAT PROTECTION

.1 Monitor and assess weather forecast on a daily basis to determine the risk of extreme weather. Avoid work during periods for which ECCC has issued rainfall or wave warnings for the work area.

.2 For water-based operations, avoid placing vertical spuds or other anchors into sensitive fish habitat areas outside the footprint of the dredge area (e.g. eelgrass or kelp beds, saltmarshes, shellfish harvesting areas and known spawning areas.

.3 Ensure that all in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.

.4 Screen any water intakes or outlet pipes to prevent entrainment or impingement of fish. Entrainment occurs when a fish is drawn into a water intake and cannot escape. Impingement occurs when an entrapped fish is held in contact with the intake screen and is unable to free itself.

.5 The release of deleterious substances into the watercourse is strictly prohibited. In the event of a release of a deleterious substance, stop work, contain sediment-laden water or other deleterious substances and prevent their further

migration into the watercourse. Immediately report any spills or releases of sewage, oil, fuel or other deleterious material, whether near or directly into a water body.

.6 Work must comply with all conditions of the *Fisheries Act* Letter of Advice issued by Fisheries and Oceans Canada. A copy of the *Fisheries Act* Letter of Advice must be kept on site at all times.

.7 Time in-water work between Mid-February and the end of May and early September to early December so as to avoid sensitive time periods as noted below:

.1 Striped Bass may transect the dredge area during their spawning period in early June in estuaries and freshwater rivers and fry move downstream in July and August to estuaries. In water works will avoid this time period (June 1st to August 31st).
.2 Atlantic Tomcod spawn in December to February and as such in-water works are to be avoided between December 1st and February 13th.
.3 Sediment control measures (i.e. silt curtains) must be placed in a way to permit passage for fish traversing between Bailey's Brook and the Northumberland Strait.

1.19 INVASIVE SPECIES

.1 Be aware of the risk for contamination of the fish habitat at the site as a result of invasive (or alien species) being introduced into the marine environment.

.2 To minimize the possibility of fish habitat contamination and the spread of aquatic invasive species, all construction equipment that will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and invasive species prior to mobilization to the site.
.1 Equipment shall include boats, barges, scows, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.

.3 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the water body.

.4 Conduct cleaning and washing operations as follows:
.1 Scrape and remove heavy accumulation of mud and dispose appropriately.
.2 Wash all surfaces of equipment by use of a pressurized fresh water supply.
.3 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
.4 Check and remove all plant, animal and sediment matter from all bilges and filters.
.5 Drain standing water from equipment and let fully dry before use.
.6 Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.

.5 Record of Assurance Logbook:
.1 Maintain an on-going log of past and present usage and washdowns of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
.2 Write data in a hard cover bound logbook to include the following:
.1 Date and location where equipment was previously used in a watercourse or wetland;
.2 Type of work performed.
.3 Dates of wash down for each piece of equipment;
.4 Cleaning method and cleaning agent(s) used.
.3 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to *Departmental Representative* for review.
.4 The *Departmental Representative* has the right to request a video inspection of the equipment, including hulls, to ensure that they are free of marine growth and invasive species prior to mobilization to the site.

1.20 SPECIES AT RISK AND MARINE MAMMALS

.1 A safety zone for leatherback sea turtles and marine mammals must be established at the work site. The safety zone shall consist of a circle with a radius of at least 500 meters as measured from the center of the work site.

.2 Maintain periodic visual surveys for leatherback sea turtles and marine mammals within the safety zone.

.3 If leatherback sea turtles or marine mammals are observed within the safety zone while in-water activities are underway, all in-water activities must cease until the animals leave the safety zone and are not observed within the safety zone for a minimum period of 30 minutes.

.4 Work may start or restart if marine mammals are not observed within the safety zone within the 30-minute period.

1.21 SOCIOECONOMIC RESTRICTIONS

.1 Abide by provincial and municipal regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.

.2 Work equipment and machinery must be equipped with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

.3 Place flood lights in opposite direction of adjacent residential and business areas. Use LED lights instead of other types of lights, where possible. LED light fixtures are less prone to light trespass (i.e., are better at directing light where it needs to be, and do not bleed light into the surrounding area).

.4 Sounds such as whistle blasts and horns will be limited or replaced, to the extent possible, with radio communications.

.5 Contractor to coordinate with the local Harbour Authority prior to commencement of the work such that the schedule with the least possible conflicts will be implemented.

1.22 ARCHAELOGICAL

.1 All construction personnel are responsible for reporting any cultural materials, which may be archaeological resources, unearthed during construction to the Construction Supervisor. If the find is believed to be an archaeological resource, the Construction Supervisor will immediately stop work in the vicinity of the find and notify the *Departmental Representative*.

.2 If an archaeological and/or historically significant item (an archaeological resource) is discovered, Work in the area will be stopped immediately and the *Departmental Representative* will be contacted as well as the provincial Archaeological Services unit.

.2 Nova Scotia Special Places Program contact, Sean Weseloh-McKeane, can be reached at (902) 424-6475. Alternatively, Nova Scotia Museum contact, Stephen Powell, can be reached at (902) 424-6468.

.3 Work can only resume in the vicinity of the archaeological find when authorized by the *Departmental Representative*, after approval has been granted by the [provincial authority].

.4 In the event of the discovery of possible human remains or possible evidence of human burials, the work will immediately cease. If the discovery is potential, but not positively human remains, contact the *Departmental Representative* as well as the provincial Archaeological Services unit. If the materials discovered are undoubtedly human remains, the nearest law enforcement agency will be contacted immediately by the *Departmental Representative* and/or the Construction Supervisor. Until determined otherwise, the possible human remains should be treated as evidence in a criminal investigation. If the possible human remains are found in the bucket of heavy equipment, the bucket should not be emptied as physical evidence may be destroyed by that action. The area should immediately be designated as "Out of Bounds" to all personnel and the public. Depending on the weather and other conditions, the potential human remains should be provided with non-intrusive protection, such as covering with a cloth or canvas tarp (non-plastic preferred). Curiosity seekers should be kept off the site.

1.26 DISPOSAL OF DREDGE MATERIAL ON LAND

.1 Dredged material originating from the harbour basin and channel is to be disposed of at the designated containment cell located on site at Baileys Brook Small Craft

Harbour. Material currently stored within the onsite containment cell to be removed prior to dredging will be brought to the designated containment site located on Shore Road (Hwy 245), across from the harbour in Lismore, Nova Scotia (PID #01040492).

.2 Water that decants from the disposed dredge material shall not directly enter any waterways.

.3 Site should allow for diffuse, dispersion or diversion onto a field or woodland, but not into drainage ditches that would carry water to a waterway.

.4 Items such as rubber tires, bottles, cans and other debris or litter must be removed from the disposal site following regrading. Failure to remove such debris may constitute a littering offence under applicable regulations.

.5 Control runoff of water containing suspended materials or other harmful substances in accordance with requirements of all federal, provincial and municipal authorities having jurisdiction.

.6 Dredged materials shall be stored in a manner to ensure they do not enter or re-enter any water body or wetland.

.7 Dredge disposal sites may provide habitat suitable for ground-nesting and burrowing birds, including species of conservation concern such as the Common Nighthawk and Bank Swallow. During the breeding season, it is important that nests not be disturbed by erosion prevention and control measures or by excavation and construction activities. If stockpiles are on site or will be on site any disturbance to such dredge stockpiles (including deposition of new material) is to be undertaken during the regional nesting period for migratory birds, nest searches must be undertaken by an experienced observer prior to construction activities, and any nests that are discovered must be protected with an appropriate buffer for the species. As a general guideline, for small landbirds, an appropriate buffer for clearing activities may be 10 - 50 m, or even more depending on the level of activity and on the species.

.16 Place and spread dredge material at the disposal site in a uniform and well graded manner. Minimize height and slopes of the disposed material. Match slopes and contours of the existing surrounding terrain as much as possible.

1. Related Requirements

.1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.

2. Appointment and Payment

.1 Departmental Representative will appoint and pay for services of testing laboratory except for the following:

.1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
.2 Inspection and testing performed exclusively for Contractor's convenience.
.3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
.4 Mill tests and certificates of compliance.
.5 Tests specified to be carried out by Contractor under the supervision of Departmental Representative.

.2 Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as Departmental Representative may require to verify acceptability of corrected work.

3. Contractor's Responsibilities

.1 Furnish labour and facilities to:

.1 Provide access to work to be inspected and tested.
.2 Facilitate inspections and tests.
.3 Make good work disturbed by inspection and test.
.4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.

.2 Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personal and scheduling of test.

.3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.

.4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Departmental Representative.

1. Access

.1 Provide and maintain adequate access to project site.

.2 If authorized to use existing roads or structures for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractor's use of roads.

.3 The contractor is to maintain full access to the work site. Should a court injunction be required ordering a person or group to refrain from impeding access to the site, such as a demonstration, picketing or union action, then obtaining the injunction and any associated costs will be considered incidental to this contract. Any delays associated with such activity will be considered incidental to this contract.

2. Contractor's Site Office

.1 Establish on the site of the work and keep open at all times during the execution of the work an office where all letters, orders, notices and other communications may be received or acknowledged either by the Contractor or his authorized agent or representative. Provide a telephone in the office.

.2 Keep one up-to-date copy of contract documents, bulletins and other materials as specified under Section 01 10 10.

3. Departmental Representative's Site Office

.1 Not required for this contract.

4. Storage Sheds

.1 Provide adequate weather tight sheds with raised floors, for storage of materials, tools and equipment which are subject to damage by weather.

.2 Contractor to make his own arrangements for on-site storage areas.

5. Sanitary Facilities

.1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.

.2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.

6. Parking

.1 Contractor to make own arrangements to provide parking space for work force.

7. Power

.1 Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.

.2 Install temporary facilities for power such as pole lines and cables to approval of local power supply authority.

8. Water Supply

.1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.

9. Barricades

.1 Provide and maintain sufficient barricades, fencing, notices, warning signs, light signals, etc. for the protection of adjoining property and to warn others and workmen engaged on the job of the dangers caused by the work.

.2 Types and location of barricades, etc. to be in accordance with local regulations and to the satisfaction of Departmental Representative.

.3 The presence of such barricades, lights, etc. shall not relieve the Contractor of the responsibility for any damages.

10. Security

.1 Contractor to make his own arrangements for security of his equipment, materials, damages resulting from fire and theft.

11. Site Signs and Notices

.1 Only Project Identification and Consultant/ Contractor signboards and notices for safety or instruction are permitted on site.

.2 Format, location and quantity of site signs and notices to be accepted by Departmental Representative.

.3 Signs and notices for safety or instruction to be in English and French languages, or commonly understood graphic symbols.

12. Removal of Temporary Facilities

.1 Remove temporary facilities from site when directed by Departmental Representative.

.2 When project is closed down for a period of time, keep temporary facilities operational until no longer required by Departmental Representative.

1. General

.1 Use new material and equipment unless otherwise specified.

.2 Submit following information for any or all materials and products proposed for supply within 7 days of request by Departmental Representative:
- .1 name and address of manufacturer
- .2 trade name, model and catalogue number
- .3 performance, descriptive and test data
- .4 manufacturer's installation or application instructions
- .5 evidence of arrangements to procure.

.3 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.

.4 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.

2. Manufacturers Instructions

.1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.

.2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturer's instructions. Departmental Representative will designate which document is to be followed.

3. Fastenings-General

.1 All fastenings are to be the sizes indicated on the contract plans and are to be hot dipped galvanized to CSA-G164 Latest Edition unless otherwise noted.

4. Delivery and Storage

.1 Deliver, store and maintain packaged material and equipment with manufacturer's seal and labels intact.

.2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.

.3 Store material and equipment in accordance with supplier's instructions.

5. Conformance

.1 When material or equipment is specified by standard or performance specifications, upon request of Departmental Representative, obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.

6. Substitution

.1 Proposals for substitution may be submitted only after award of Contract. Such requests must include statements of respective costs of items originally specified and proposed substitutions.

.2 Proposals will be considered by Departmental Representative if:

.1 Products selected by tenderer from those specified, are not available, or
.2 Delivery date of products from those specified would unduly delay completion of Contract, or
.3 Alternative products to those specified, which are brought to attention of, and considered by Departmental Representative as equivalent to those specified and will result in a credit to Contract amount.

.3 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.

.4 Amounts of all credits arising from approval of substitutions will be determined by

Departmental Representative and Contract price will be reduced accordingly. No substitutions will be permitted without prior written approval of Departmental Representative.

.5 Owner reserves the right for acceptance or rejection of substitution of materials.

7. Construction Equipment and Plant

.1 On request, prove to the satisfaction of Departmental Representative that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.

.2 Maintain construction equipment and plant in good operating order.

8. Damaged and Rejected Materials

.1 Immediately replace, repair or otherwise make good any material damaged, broken or defaced during construction to the satisfaction of Departmental Representative.

.2 Remove rejected materials from site.

1. Record Drawings

.1 Departmental Representative will provide two sets of white prints for record drawing purposes.

.2 Maintain project record drawings and accurately record deviations from contract documents caused by site conditions and changes ordered by Departmental Representative.

.3 Mark changes in red coloured ink.

.4 Record following information:

.1 Elevations of various elements in relation to Chart Datum.
.2 Field changes in dimensions and details.
.3 Changes made by Change Order.

.5 At completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to Departmental Representative.

1. General

.1 Conduct cleaning and disposal operations to comply with ordinances and antipollution laws.

.2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

.3 Prevent accumulation of waste which create hazardous conditions.

2. Cleaning During Construction

.1 Maintain the work, at least on a daily basis free from accumulations of waste material and debris.

.2 Provide on-site containers for collection of waste materials, and debris.

.3 Remove waste materials, and debris from site.

.4 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet concrete or newly painted surfaces.

3. Final Cleaning

.1 In preparation for acceptance of the project on an interim or final certificate of completion perform final cleaning.

.2 Remove grease, dust, dirt, stains, and other foreign materials from finished surfaces.