

- 1.1 Documents Required
- .1 Maintain at job site, one copy each of the 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.
- 1.2 Site Conditions
- .1 Records of existing structures and geotechnical reports may be available for inspection at the offices of Public Works and Government Services Canada, 1713 Bedford Row, Halifax, NS. This material is not necessarily up-to-date and is for information purposes only. It should be complemented with site visits and consultation with appropriate expertise.
- 1.3 Work Schedule and Completion Dates
- .1 Prepare and submit to the Departmental Representative within five (5) days of notification of Contract award, one (1) 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 of submissions, review and return of all drawings, etc.; the dates of Substantial Completion; and intended man hours of labour and equipment for each major items 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 Dates of the Construction Schedule at all times. If, for any reason the Construction Schedule is not followed, immediately notify the Departmental Representative of the changes and submit a revised schedule for acceptance. Upon written acceptance by the Departmental Representative, this schedule will become the Construction Schedule.
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.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.

1.4 Measurement Responsibilities

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

1.5 Contractor's Use of Site

.1 Co-operate with users of existing facilities.

.2 Some dates may vary to some degree depending on openings and closings.

.3 Should interferences occur, take directions from Departmental Representative.

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

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

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

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

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

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

- 1.6 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.
- 1.7 Project Meeting
- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.
- 1.8 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 features of the specified works to be referenced and properly related to a benchmark, which will be approved by the Departmental Representative.
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- .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. Establish all grades, lines, levels required to facilitate the work.
- 1.9 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 Department 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 the Departmental Representative and confirm findings in writing.
- 1.10 Contract Documents
- .1 Contract Drawings:
 - .1 The drawings listed in these "Plans and Specifications" marked "A" 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.
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- .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 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 These Specifications 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.
- 1.11 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 "C".
- 1.12 Cutting, Fitting & 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.
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- .3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.
 - .4 Obtain the Departmental Representative's approval before cutting, boring or sleeving, or excavating adjacent to load-bearing members.
 - 1.13 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.
 - 1.14 Payment
 - .1 Payment for all work under this contract to be according to the "Articles of Agreement".
 - .2 No separate payment will be made for work specified under General Conditions, Supplementary Conditions or any sections of Specification under Division 01. The cost of this work is to be considered as overhead and to be included in the unit prices of the Contract.
 - .3 Dimensional changes 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.
 - 1.15 Site Examination
 - .1 All parties tendering must 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
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- 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.
- 1.16 Maintenance of Shipping
- .1 Liaise with the local port officials to coordinate activities such that any interference is minimized.
- 1.17 Cooperation and 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.
- 1.18 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 work.
- 1.19 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.
- 1.20 Workers' Compensation
- .1 Contractor and all sub-contractors must be registered under the Workers Compensation Act and provide evidence of good standing.
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- .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.
- 1.21 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.
- 1.22 Protection and Repair
- .1 Repair any damage resulting from operations under this contract.
- 1.23 Location of Equipment Fixtures
- .1 Location of equipment, fixtures or any and appurtenances indicated are to be considered approximate.
- 1.24 Inspection and Testing
- .1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms with contracts.
- 1.25 Disposal of Debris
- .1 Dispose of debris, including construction materials not incorporated in the work, oil products and containers and other materials of this nature in suitable locations off the site.
- .2 Material from the work will not be permitted to go adrift or otherwise become a menace to navigation.
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- 1.26 Existing Soils Conditions
- .1 Any information pertaining to soils and all borehole 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.
- 1.27 Relics and Antiquities
- .1 Protect relics, antiquities, items of historical or scientific 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 Departmental Representative's property.
- 1.28 Temporary Navigational Buoys
- .1 Maintain temporary navigation light to mark the position of the outer end of the structure as construction proceeds. Navigation light is to meet the requirements of Canadian Coast Guard Standard TP968 and be equipped with radar reflectors.
- .2 Contractor is to maintain temporary floating bouys at 30m intervals along the seaward face (maximum 10m offset) of the work area as construction proceeds. Navigation light shall be Go Deep International Inc GDI-0.25 bouy with internal radar reflector and M502 lantern, or approved equivalent. Place the yellow cautionary buoy farthest from the shoreward end of the wharf and 20m from ongoing construction. It must carry the following:
- .1 Radar reflector.
- .2 2nm amber light displaying characteristic (Fl) 4S from dusk to dawn and during periods of reduced visibility.

- .3 Coordinate the navigation light installation with the local Harbour Authority.
 - .4 Contractor is responsible for all costs associated with the supply, installation and removal of all temporary navigation light.
- 1.29 Operations and Maintenance Data
- .1 Submit Operations and Maintenance data in accordance with the requirements set forth in Section 01 33 00 – Submissions/Shop Drawing; Section 23 05 00 – Mechanical General Requirements; 26 05 00 – Common Work Results for Electrical and for any Section in these Specifications that require operation and maintenance data to be submitted.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Submittals
- .1 Upon award of contract and prior to commencement of work, submit to Departmental Representative the following work management documents:
- .1 Work Schedule as specified herein;
 - .2 Shop Drawing Submittal Schedule specified in Section 01 33 00;
 - .3 Waste Management Plan specified in Section 01 74 21;
 - .4 Health and Safety Plan specified in Section 01 35 29;
 - .5 Hot Work Procedures specified in Section 01 35 24;
 - .6 Lockout Procedures specified in Section 01 35 25.
- 1.2 Work Schedule
- .1 Upon acceptance of bid, submit:
- .1 Detailed Work Schedule submitted within seven (7) calendar days of contract award.
 - .2 Schedule to indicate all calendar dates from commencement to completion of all work within the time stated in the accepted bid.
 - .3 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
 - .4 Work Schedule content to include as a minimum, the following:
 - .1 Bar (GANTT) Charts, indicating all work activities, tasks and other project elements, their anticipated durations, planned dates for achieving key activities and major project milestones supported with;
 - .2 Written narrative on key elements of work illustrated in bar chart, providing sufficient details to demonstrate a reasonable implementation plan for completion of project
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within designated time;

.3 Generally, bar charts derived from commercially available computerized project management systems are preferred, but not mandatory.

.5 Work Schedule must take into consideration and reflect the work phasing, and operational restrictions as indicated on drawings.

.6 Schedule work in cooperation with the Departmental Representative. Incorporate within Work Schedule, items identified by Departmental Representative during review of schedule.

.7 Completed schedule shall be approved by Departmental Representative. When approved, take necessary measures to complete work within scheduled time. Do not change schedule without Departmental Representative's approval.

.8 Ensure that all sub-trades and sub-contractors are made aware of the work restraints and operational restrictions specified.

.9 Schedule Update:

.1 Submit when requested by Departmental Representative.

.2 Provide information and pertinent details explaining reasons for necessary changes to implementation plan.

.3 Identify problem areas, anticipated delays, impact on schedule, and proposed corrective measures to be taken.

.10 Departmental Representative will make interim reviews and evaluate progress of work based on approved schedule. Frequency of such reviews will be as decided by Departmental Representative. Address and take corrective measures on items identified by reviews and as directed by Departmental Representative. Update schedule accordingly.

.11 In every instance, change or deviation from the Work Schedule, no matter how minimal the risk or impact on safety or inconvenience to tenant or public might appear, will be subject to prior review and approval by the Departmental Representative.

- 1.3 Operational Restrictions
- .1 The Contractor must recognize that Harbour activities and occupants will be affected by implementation of this contract. The Contractor must perform the work with utmost regard to the safety and convenience of all harbour users. All work activities must be planned and scheduled with this in mind. The Contractor will not be permitted to disturb any portion of the harbour without providing temporary facilities as necessary to ensure safe and direct passage through disturbed or otherwise affected areas.
 - .2 Facility circulation maintained:
 - .1 Ensure that entrances, roadways, loading zones and other circulation routes are maintained free and clear, providing safe and uninterrupted passage for facility users and public at all times during the entire work.
 - .2 Maintain those areas clean and free of construction materials and equipment.
- 1.4 Project Meetings
- .1 Schedule and administer project meetings, held on a minimum bi-weekly basis, for entire duration of work and more often when directed by Departmental Representative as deemed necessary due to progress of work or particular situation.
 - .2 Prepare agenda for meetings.
 - .3 Notify participants in writing four (4) working days in advance of meeting date.
 - .1 Ensure attendance of all sub-contractors.
 - .2 Departmental Representative will provide list of other attendees to be notified.
 - .4 Hold meetings at project site or where approved by Departmental Representative.
 - .5 Preside at meetings and record minutes.
 - .1 Indicate significant proceedings and decisions. Identify action items by parties.
 - .2 Distribute to participants by mail or by facsimile within three (3) calendar days after each meeting.
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.3 Make revisions as advised by Departmental Representative.

.4 Departmental Representative will advise whether submission of minutes by email is acceptable. Decision will be based on compatibility of software among participants.

1.5 Work
Coordination

.1 The General Contractor is responsible for coordinating the work of the various trades and predetermining where the work of such trades interfaces with each other.

.1 Designate one person from own employ having overall responsibility to review contract documents and shop drawings, plan and manage such coordination.

.2 Submission of shop drawings and ordering of prefabricated equipment or prebuilt components shall only occur once a coordination meeting for such items has taken place between trades and all conditions affecting the work of the interfacing trades has been made known and accounted for.

.3 Work Cooperation:

.1 Ensure cooperation between trades in order to facilitate the general progress of the work and avoid situations of spatial interference.

.2 Ensure that each trade provides all other trades reasonable opportunity for the completion of the work and in such a way as to prevent unnecessary delays and the need to remove and replace completed work.

.4 No extra costs to the Contract will be considered by the Departmental Representative as a result of Contractor's failure to effectively coordinate all portions of the Work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor to be resolved at his own cost.

- 1.6 Other Contacts
- .1 Further contracts may be let during the period that this Contract is in progress.
 - .2 Cooperate with other Contractors in carrying out their respective work and carry out all instructions from the Departmental Representative in this regard.
 - .3 Connect properly and coordinate work with that of other Contractors.

-- END OF SECTION --

PROJECT PARTICULARS

- 1.1 Description of Work
- .1 The work includes, but is not limited to:
- .1 Demolition and removals.
 - .2 Construction of new timber pile wharf with a reinforced concrete deck.
 - .3 Construction of a timber pile fender system.
 - .4 Supply and installation of mooring cleats, bollards, ladders and other miscellaneous hardware.
 - .5 Remove existing electrical services and replace with new, as per Division 26.

PRODUCT MEASUREMENT

- 1.2 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.
- 1.3 Measurement for Payment
- .1 **Lump Sum Items: the following items (1 and 2) are to be measured separately for costing purposes, then combined and submitted in as one item under the Lump Sum items in the tender documents:**
- .1 Site Office: This item includes all provisions for the Contractor's site office with all amenities as specified by the Contract Documents. This item also includes the disassembly and removal of the site office at the time of completion of the Works.
 - .2 Site work, Demolition and Removals: This item includes all work required to demolish and remove the existing wharf structures, and electrical services, as indicated on the drawings. The work shall include salvaging existing steel derricks, fuel tank and floating wharf steel bracket assembly. Provide a temporary benchmark based on the existing benchmark located on site. This item shall also include all items associated with demolishing existing water services and

associated manhole, as well as supply and install of new water manhole and supply and install of all items associated with new water distribution system. This item shall include relocation of the steel derrick on the new section of deck using anchor bolts similar to the existing installation. This item shall include relocation of existing fuel tank on the new fuel tank slab. This item shall include relocation of the floating wharf steel bracket assembly on the new wharf.

- .3 **Mobilization/Demobilization:** This item includes all Work required to get the Contractor's equipment and forces on-site. This item also includes all Work required for the Contractor's forces and equipment to leave the site, including the final cleanup of the site to the Departmental Representative's satisfaction.

Division 26

- .1 **Electrical:** Electrical work will be measured for payment as a lump sum. This item includes revisions to the existing electrical installation required to accommodate the new work; power poles; lighting fixtures and accessories; electrical equipment and devices at the service mounts; conduits, electrical building equipment, ductbanks, ducts and wiring interconnecting the lighting, service mounts; permits and inspection fees; testing, commissioning and placing into service of the electrical systems; site supervision and rentals. Hardware, consumables and connections will not be measured separately, but considered incidental to the work.
- .2 **Unit Price Items:** the following outlines the unit of measurement of the unit price items as indicated in the tender documents:

Division 03

- .1 **Reinforced Concrete Pile Caps:** Cast-in-place reinforced concrete pile caps, including concrete edge beam, will be measured by the cubic metre based on the dimensions indicated on the drawings. Concrete pile caps placed beyond the dimensions shown will not be measured. Concrete formwork, reinforcement and all supplementary materials will be considered incidental to the work.
- .2 **Reinforced Concrete Deck:** Cast-in-place reinforced concrete deck, including wheel guards, will be measured by the square metre based on the deck dimensions indicated on the drawings. Concrete placed beyond the dimension shown will not be measured for payment. Concrete formwork, steel deck, reinforcement and all supplementary materials will be considered incidental to the work. Connection to existing concrete deck to be incidental to the work.
- .3 **Reinforced Concrete Curtain Wall:** Cast-in-place reinforced concrete curtain wall will be measured by the cubic metre based on the dimensions indicated on the drawings. Concrete placed beyond the dimensions shown will not be measured for payment. Concrete formwork, reinforcement and all supplementary materials will be considered incidental to the work.

Division 06

- .1 **Dimension Timber:** Dimension timber will be measured for payment by the cubic metre. Calculations will be based on the timber dimensions indicated on the drawings. This Work shall include timber fenders and extended fenders, longitudinal and transverse wales, timber bracing and timber ramp. Installation of bolts, hardware and timber splice blocks for wales will not

be measured, but considered incidental to the work.

Division 31:

- .1 Supply of Timber Piles: Supply of timber piles will be measured for payment per lineal meter.
- .2 Installation of Timber Piles: The installation of Timber piles will be measured for payment per each. All pile shoes hardware, fasteners, or bolts used will be considered incidental to the Work.
- .3 Core Stone: Measurement of supply and installation of corestone in tonnes determined by weigh scale tickets signed by Departmental Representative. There shall be no payment for extra thickness of materials placed outside of limits. Whenever, in the opinion of the Departmental Representative, there is extra thickness, the appropriate weight will be deducted.
- .4 Rip Rap: Measurement of supply and installation of rip rap in tonnes determined by weigh scale tickets signed by Departmental Representative. There shall be no payment for extra thickness of materials placed outside of limits. Whenever, in the opinion of the Departmental Representative, there is extra thickness, the appropriate weight will be deducted.
- .5 Geotextiles: Measure geotextiles in square metres of surface covered by material. No allowance will be made for seams and overlaps.

Division 32:

- .1 Granular Sub-base: Measurement of supply and installation of granular sub-base, including compaction, in tonnes as indicated on drawings. Rough grading, levelling, finish grading shall be considered incidental to the work.
- .2 Type 1 Granular Base: Measurement of supply and installation of Type 1 granular base, including grading and compaction, to be in tonne.
- .3 Hot Mix Asphaltic Concrete Paving: Hot Mix Asphaltic Concrete Paving will be measured in square metres placed. This item includes supply, placement and compaction of the asphaltic concrete.

Division 33:

- .1 Catchbasins: Supply and installation of precast concrete catchbasins, including granular base materials required for installation, levelling rings, grates and covers, will be measured for payment per each. Supply and installation of storm sewer, including excavation and supply and install of backfill material, will be considered incidental to the installation of the precast catchbasin.

Division 35:

- .1 Ladders: treated timber ladders, including holdfasts, rungs and fastenings, will be measured for payment per each. Bolts and hardware will not be measured, but considered incidental to the work.
- .2 Mooring Cleats: mooring cleats will be measured for payment per each. Bolts, paint and hardware will not be measured, but considered incidental to the work.

- 1.1 Related Requirements .1 Particular requirements for inspection and testing to be carried out by testing laboratory are specified under various sections.
- 1.2 Appointment and Payment .1 The Departmental Representative will appoint and pay for the 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 Tests specified to be carried out by Contractor under the supervision of Departmental Representative.
.4 Tests requested by Departmental Representative to confirm material specifications when the applicable manufacturer's documentation or test results are unavailable.
.5 Additional tests specified in paragraph 1.2.2.
- .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 may be required to verify acceptability of corrected work.
- 1.3 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.
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- .2 Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of tests.
- .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 accepted by Departmental Representative.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 35 24 - Special Procedures on Fire Safety Requirements
 - .2 Section 01 35 29 - Health and Safety Requirements
 - .3 Section 01 78 00 - Closeout Submittals
 - .4 Section 03 10 00 - Concrete Forming and Accessories
 - .5 Section 03 20 00 - Concrete Reinforcing
 - .5 Section 03 30 00 - Cast-in-Place Concrete
 - .6 Section 05 50 00 - Metal Fabrications
 - .7 Section 06 05 73 - Dimension Timber
 - .8 Section 31 62 19 - Wood Piles
- 1.2 Administrative
- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
 - .2 Do not proceed with Work affected by submittal until review is complete.
 - .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .4 Where items or information is not produced in SI Metric units converted values are acceptable.
 - .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or
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will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

- .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are co-ordinated.
- .8 Contractor's responsibility for errors, deviations or omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Submittal format: paper originals, or alternatively clear and fully legible photocopies of originals. Facsimiles are not acceptable, except in special circumstances pre-approved by Departmental Representative. Poorly printed non-legible photocopies or facsimiles will not be accepted and be returned for resubmission.
- .10 Make changes or revision to submissions which Departmental Representative may require, consistent with Contract Documents and resubmit as directed by Departmental Representative. When resubmitting, identify in writing of any revisions other than those requested.
- .11 Keep one reviewed copy of each submission on site.

1.3 Shop Drawings
and Product Data

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in the Province of Nova Scotia, Canada.

- .3 Shop Drawing Submittal Schedule:
 - .1 Submit, within 10 working days of contract award, in format acceptable to Departmental Representative, a submittal schedule listing all shop drawings to be submitted for project as specified in various sections of the specifications.
 - .2 Schedule to indicate proposed submission date for each item, status of review and anticipated product delivery date to site. Track all submissions for entire project.
 - .3 As work progresses, revise schedule identifying items which have been reviewed and finalized and indicating those outstanding.
 - .4 Update schedule at stipulated dates or project time intervals predetermined and agreed upon with Departmental Representative at commencement of work.
 - .4 Shop Drawing Quantities: submit sufficient copies required by the General Contractor and sub-contractors, plus 3 copies which will be retained by Departmental Representative.
 - .5 Shop Drawings Format:
 - .1 Opaque white prints or photocopies of original drawings or standard drawings modified to clearly illustrate work specific to project requirements. Maximum sheet size to be 1000 x 707 mm.
 - .2 Product data from manufacturer's standard catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products, to be original full colour brochures, clearly marked indicating applicable data and deleting information not applicable to project.
 - .3 Non or poorly legible drawings, photocopies or facsimiles will not be accepted and returned not reviewed.
 - .6 Shop Drawings Content:
 - .1 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where items or equipment attach or connect to other items or
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equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.

- .7 Allow 14 days for Departmental Representative's review of each submission.
 - .8 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
 - .9 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
 - .10 Be advised that costs and expenses incurred by Departmental Representative to conduct more than one review of incorrectly prepared shop drawing submittal for a particular material, equipment or component of work may be assessed against the Contractor in the form of a financial holdback to the Contract.
 - .11 Accompany submissions with transmittal letter 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.
 - .5 Other pertinent data.
 - .12 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
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- .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
- .5 Details of appropriate portions of Work as applicable:
- .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .13 After Departmental Representative's review, distribute copies.
- .14 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .15 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
- .1 This review shall not mean that PWGSC approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
 - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be
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confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

1.4 Samples

- .1 Submit for review samples as specified in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples Departmental Representative's office or to other address as directed. Do not drop off samples at construction site, except for pre-approved circumstances previously approved by Departmental Representative.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .5 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .6 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Work .1 Section 01 35 29 - Health and Safety Requirements.
- 1.2 References .1 Fire Protection Standards issued by Fire Protection Services of Human Resources Development Canada as follows:
.1 FCC No. 301-June 1982 Standard for Construction Operations (or latest edition).
.2 FCC No. 302-June 1982 Standard for Welding and Cutting (or latest edition).
.3 FCC Standards may be viewed at the Regional Fire Protection Services' office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8th Floor, Dartmouth, NS, Tel: (902) 426-6053.
- 1.3 Definitions .1 Hot Work defined as:
.1 Welding work;
.2 Cutting of materials by use of torch or other open flame devices;
.3 Grinding with equipment which produces sparks;
.4 Use of open flame torches.
- 1.4 Submittals .1 Submit copy of Hot Work Procedures and samples of Hot Work permit to Departmental Representative for review, within 14 calendar days after contract award.
.2 Submit in accordance with Section 01 33 00.
- 1.5 Fire Safety Requirements .1 Implement and follow fire safety measures during Work. Comply with the following:
.1 National Fire Code;
.2 Fire Protection Standards FCC 301 and FCC 302;
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- .3 Federal and Provincial Occupational Health and Safety Acts and Regulations.
 - .2 In the 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.
 - 1.6 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.
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- .5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
- 1.7 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 written permit issued by Contractor's Superintendent to specific worker or subcontractor granting permission to proceed with Hot Work.
- .3 Permit required for each Hot Work event.
- .4 Designation of a 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.
- .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.
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- .6 Failure to comply with fire safety procedures may result in the issue of a Non-Compliance notification as specified in Section 01 35 29.
- 1.8 Hot Work Permit
- .1 Hot Work Permit to include the following:
- .1 Project name and project number;
 - .2 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, and date;
 - .9 Worker's signature with time/date of hot work completion;
 - .10 Stipulated time period of safety watch;
 - .11 Fire Safety Watcher's signature with time/date.
- .2 Permit to be type written 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.
- 1.9 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 fire fighting.
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- .3 Costs incurred from the fire department and facility owner, 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.
- 1.10 Documents
On Site
- .1 Upon request, make available to Departmental Representative or to authorized safety representative for inspection.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Work Included .1 Procedures to isolate and lockout electrical facility or other equipment from Energy source.
- 1.2 Related Work .1 Section 01 35 29: Health and Safety
- .2 Section 01 35 24: Special Procedures in Fire Safety Requirements
- 1.3 References .1 CSA C22.1-15, Canadian electrical code, part I (22nd edition), safety standard for electrical installations.
- .2 CAN/CSA-C22.3 NO. 1-15, Overhead systems.
- .3 CAN/CSA-C22.3 NO. 7-15, 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 is 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 Perform lockouts in compliance with:
.1 Canadian Electrical Code
.2 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 30.
.3 Regulations and code of practise as applicable to mechanical equipment or other machinery being de-energized.
.4 Procedures specified herein.

.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.

.3 Coordination with electric power utility.

1.6 Submittals

.1 Submit copy of proposed Lockout Procedures and sample form of lockout permit and lockout tags for review.

.2 Submit documentation within 14 calendar days of contract award. Do not proceed with work until submittal has been reviewed by Departmental Representative.

- .3 Submit above documents in accordance with the submittal - general requirements specified in section 01 33 00.
 - .4 Resubmit Lockout Procedures with noted revisions as may result from Departmental Representative's review.
- 1.7 Isolation of Existing Services
- .1 Obtain Departmental Representative's written authorization prior to conducting work on an existing active, energized service or facility required as part of the work and before proceeding with lockout of such services or facility.
 - .2 To obtain authorization, submit to Departmental Representative following documentation:
 - .1 Written Request for Isolation of the 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, and as follows:
 - .1 Fill-out standard forms in current use at the Facility when so directed by Departmental Representative or;
 - .2 Where no form exist at Facility, make request in writing identifying:
 - .1 Identification of system or equipment to be isolated, including it's location;
 - .2 Time duration, indicating Start time & date and Completion time & date when isolation will be in effect.
 - .3 Voltage of service feed to system or equipment being isolated.
 - .4 Name of person making the request.
 - .4 Document to be in typewritten format.
 - .5 Do not proceed until receipt of written notification from Departmental Representative granting the Isolation Request and authorizing to proceed with the isolation of designated equipment or facility.
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Departmental Representative may designate other individual at the Facility as the person authorized to grant the Isolation Request.

- .6 Conduct safe, orderly shut down of equipment or facilities, de-energize and isolate power and other sources of energy and lockout items in accordance with requirement of clause 1.8 below.
- .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.
- .8 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require a Request for Isolation. Follow Departmental Representative's directives in this regard.
- .9 Conduct hazard assessment as part of the planning process of isolating existing equipment and facilities. Hazard Assessments to conform to requirements of Health and Safety Section 01 35 29.

1.8 Lockouts

- .1 Isolate and lockout electrical facilities, mechanical equipment and machinery from all potential energy sources prior to starting work on such items.
 - .2 Develop and implement lockout procedures to be followed on site as an integral part of the Work.
 - .3 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.
 - .4 Use industry standard lockout tags.
 - .5 Provide appropriate safety grounding and guards as required.
 - .6 Prepare Lockout Procedures in writing. Describe safe work practices, work functions and sequence of activities to be followed on site to safely isolate all
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potential energy sources and lockout/tagout facilities and equipment.

- .7 Include within procedures a system of worker request and issuance of individual lockout permit by a person, employed by Contractor, designated to be "in-charge" and being responsible for:
 - .1 Controlling issuance of permits or tags to workers.
 - .2 Determining permit duration.
 - .3 Maintaining record of permits and tags issued.
 - .4 Submitting a Request for Isolation to Departmental Representative when required in accordance with Clause 1.7 above.
 - .5 Designating a Safety Watcher, when one is required based on type of work.
 - .6 Confirming equipment or facility has been properly isolated, providing a Guarantee of Isolation to worker(s) prior to proceeding with work.
 - .7 Collecting and safekeeping lockout tags, returned by workers, as a record of the event.
 - .8 Clearly establish, describe and allocate, within procedures, the responsibilities of:
 - .1 Workers.
 - .2 Designated person controlling issuance of lockout tags/permits.
 - .3 Safety Watcher.
 - .4 Subcontractors and General Contractor.
 - .9 Procedures must meet the requirements of Codes and Regulations specified in clause 1.5 above.
 - .10 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the procedures applicable to this contract.
 - .1 Incorporate site specific rules and procedures established by Facility Manager and in force at site. Obtain such procedures through Departmental Representative.
 - .11 Provide procedures in typewritten format.

- .12 Submit a copy of Lockout Procedures to Departmental Representative, in accordance with submittal requirements of clause 1.6 herein, prior to commencement of work.
- 1.9 Conformance
- .1 Ensure that lockout procedures, as established for project on site, are stringently followed. Enforce use and compliance by all workers.
 - .2 Brief all persons working on electrical facilities, mechanical and other equipment fed by an energy source on requirements of this section.
 - .3 Failure to perform lockouts in accordance with regulatory requirements or follow procedures specified herein may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in section 01 35 29.
- 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 submitted to Departmental Representative and lockout permits or tags issued to workers during the course of work for full project duration.
 - .3 Upon request, make such data available to Departmental Representative or to authorized safety representative for inspection.

PART 2 – PRODUCTS

Not applicable

PART 3 – EXECUTION

Not applicable

-- END OF SECTION --

PART 1 - GENERAL

- 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 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
 - .2 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.
 - .3 Medical Aid Injury: any minor 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.
 - .4 PPE: personal protective equipment.
 - .5 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.
- 1.3 Submittals
- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit site-specific Health and Safety Plan prior to
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commencement of Work.

.1 Submit within 15 work days of notification of Bid Acceptance. Allow for 5-10 days for Department to review and recommendations prior to the commencement of the work. Provide three (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 & 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, Provincial and Territorial health and safety inspectors.

.7 Submit copies of incident reports.

.8 Submit WHMIS MSDS - Material Safety Data Sheets.

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 Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH), as well as any other regulations made pursuant to the Act.
 - .1 The Canada Labour Code can be viewed at: [www.http://laws-lois.justice.gc.ca/eng/acts/L_2_fulltest.html](http://laws-lois.justice.gc.ca/eng/acts/L_2_fulltest.html).
 - .2 Canadian Occupational Health and Safety Regulations can be viewed at: <http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/index.html>
 - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada, Ottawa, Ontario, K1A 0S9 Tel: (819)956-4800 (1-800-635-7943) Publication No. L31-85/2000 (E or F).
 - .3 Treasury Board of Canada Secretariat (TBS):
 - .1 Treasury Board, Fire Protection Standard April 1, 2010 - www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316§ion=text.
 - .4 Observe construction safety measures of:
 - .1 NBC 2010, Division B, Part 8.
 - .2 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.
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- 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 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.
 - .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.
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- .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.
 - .1 Departmental Representative will assist in locating address if needed.
 - 1.9 Permits
 - .1 Post permits, licenses and compliance certificates, specified in section 01 10 10 - General Instructions, at Work Site.
 - .2 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 Assessment
 - .1 Perform site specific health and safety hazard assessment of the work and its site.
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- .2 Carry out initial assessment prior to commencement of work with further assessments as needed during progress of work, including when new trades and sub-contractors arrive on site.
 - .3 Record results and address in Health and Safety Plan.
 - .4 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 Facility ongoing operations:
 - .1 Commercial fishing and related activities
 - .2 Marine environment
 - .3 Overhead power lines
 - .4 Temperate working environment
 - .5 Working in close proximity to water
 - .6 Slip and tripping hazards due to uneven surfaces
 - .7 Stability of existing wharf and walkway structures
 - .8 Tide fluctuations
 - .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards 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:
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- .1 Superintendent of Work
 - .2 Designated Health & Safety Site Representative
 - .3 Subcontractors
 - .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety Regulations.
 - .3 Keep documents on site.

 - 1.13 Health and Safety Plan
 - .1 Prior to commencement of work, develop written Health and Safety Plan specific to the work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
 - .2 Health and Safety Plan shall include the following components:
 - .1 List of health risks and safety hazards identified by hazard assessment.
 - .2 Control measures used to mitigate risks and hazards identified.
 - .3 On-site Contingency and Emergency Response Plan as specified below.
 - .4 On-Site Communication Plan as specified below.
 - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
 - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
 - .3 On-Site Contingency and Emergency Response Plan shall include:
 - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
 - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshalling areas. Details on alarm notification methods, fire drills, locations of fire
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fighting equipment and other related data.

.3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.

.4 Emergency Contacts: name and telephone number of officials from:

.1 General Contractor and sub-contractors.

.2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.

.3 Local emergency resource organizations.

.5 Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of PWGSC and Facility Management contacts.

.4 On-site Communication Plan:

.1 Procedures for sharing of work related safety information to workers and sub-contractors, including emergency and evacuation measures.

.2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.

.5 Address all activities of the work including those of sub-contractors.

.6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or sub-contractor arrive at work site.

.7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.

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

1.14 Safety
Supervision

.1 Employ Health and 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 bi-weekly basis. Record deficiencies and remedial action taken.
 - .6 Cooperate with Facility's Occupational Health and Safety Representative should be one designated by Departmental Representative.
 - .7 Keep inspection reports and supervision related documentation on site.
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- 1.15 Training
- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.
 - .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
 - .3 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; ensure the following minimum safety rules are obeyed by persons granted access to Work Site:
 - .1 Wear appropriate PPE pertinent to the Work or assigned footwear, safety glasses and hearing protection.
 - .2 Immediately report unsafe condition at site, near-miss accident, injury and damage.
 - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
 - .4 Obey warning signs and safety tags.
 - .2 Brief persons of disciplinary protocols to be taken for non-compliance. 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.
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- .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 the following incidents to Departmental Representative:
- .1 Incidents requiring notification to Provincial Department of Occupational Safety and Health, Workers Compensation Board or to other regulatory Agency.
 - .2 Medical aid injuries.
 - .3 Property damage in excess of \$10,000.00.
 - .4 Interruptions to Facility operations resulting in an operational loss to a Federal department in excess of \$5,000.00.
- .2 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 the 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 Power Actuated Devices
- .1 Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.
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- 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 conspicuous location on Work Site in accordance with Acts and Regulations of Province having jurisdiction.
- .2 Post other documents as specified herein, including:
.1 Site specific Health and Safety Plan.
.2 WHMIS data sheets.

-- END OF SECTION --

1.1 References

- .1 Canada Shipping Act, Transport Canada, 2001, amended 2013-12-01.
- .2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada.
- .3 Canadian Environmental Assessment Act, 2012, amended 2013-11-25.
- .4 Canadian Environmental Protection Act, 1999, amended on 2014-03-28.
- .5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended 2013-11-25.
- .6 Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters, 1998.
- .7 Migratory Birds Convention Act, 1994, Environment Canada, amended 2010-12-10.
- .8 Navigation Protection Act, 1985. Transport Canada, amended 2014-04-01.
- .9 Nova Scotia – Environment Act.
- .10 Species at Risk Act, 2002, amended 2013-03-08.
- .11 The Federal Policy on Wetland Conservation, 1991, Environment Canada.
- .12 Transportation of Dangerous Goods Act, 1992, Transport Canada, amended 2009-06-16.
- .13 Workplace Hazardous Materials Information System, Health Canada.

1.2 Definitions

- .1 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.
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- .2 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.
 - .3 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.
 - .4 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.
 - .5 Buffer zone: a vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.
- 1.3 Transportation
- .1 Transport hazardous materials and hazardous waste in compliance with Federal Transportation of Dangerous Goods Act.
 - .2 Do not overload trucks when hauling material. Secure contents against spillage.
 - .3 Maintain trucks clean and free of mud, dirt and other foreign matter.
 - .4 Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the Work. Take extra care when hauling material and other hazardous materials. Immediately clean any spillage and soils.
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- .5 Before commencement of work, advise the Departmental Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material to and from the site.
- .6 Vessels must be permitted safe access through the worksite at all times, and shall be assisted as necessary.
- .7 All materials and equipment used in construction must be marked in accordance with the Collision Regulations of the Canadian Shipping Act, 2001 when located on the waterway.
- 1.4 Temporary Causeway and Access Roads
- .1 It will be the Contractor's responsibility to gain access to the work area. Construct temporary causeways and access roads and remove immediately after work is deemed complete by the Departmental Representative.
- .2 Identify a location for the disposal of material imported by the Contractor for the construction of temporary causeways and access roads.
- .3 All material used for construction of temporary causeways and access roads 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.
- .4 Screen material, if required, to ensure that no fines or stones less than 0.2 kilograms are placed in the work. Gradation of the material to be imported for the construction of the causeways, roads etc. must be within the following limits:

| SIZE | PERCENT PASSING |
|-------|-----------------|
| 450mm | 100 |
| 200mm | 44-75 |
| 100mm | 24-50 |
| 50mm | 7-14 |

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- .5 Heavy machinery and equipment must be operated from a dry platform only. Construct temporary causeways and access roads at an elevation such that machinery and equipment is operating completely out of the water at all stages of the tide. If tidal work is being carried out, relocate machinery and equipment back to a suitable elevation to prevent operating in submerged waters.
- .6 Maintain temporary buoys to mark the position of the access road including the outer toe as construction proceeds. All buoys must meet requirements of the applicable Canadian Coast Guard standard and be equipped with radar reflectors.
- 1.5 Operation of Machinery
- .1 Confirm 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 the 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.
- 1.6 Containment and Spill Management
- .1 Comply with Federal and Provincial laws, regulations, codes, standards and guidelines for the storage of fuel and petroleum products on site.
- .2 Do not place fuel storage tanks and store fuel or other petroleum products within a 30 metre buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.
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- .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 contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
 - .5 Maintain vehicles and equipment in good working order to prevent leaks on site.
 - .6 In the event of a petroleum spill, immediately notify the Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.
- 1.7 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 WHMIS requirements and keep MSDS data sheets on site for all hazardous materials.
 - .3 Maintain written inventory of all hazardous materials kept on site. List product name, quantity and storage date.
 - .4 Store and handle flammable and combustible materials in accordance with National Fire Code.
- 1.8 Disposal of Wastes
- .1 Do not bury rubbish, demolition debris and waste materials on site.
 - .2 Dispose and recycle demolition debris and waste materials in accordance with Provincial Waste Management requirements.
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- .3 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners etc.) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.
 - .4 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
 - .5 Concrete waste:
 - .1 Do not discharge residual or rejected concrete on site.
 - .2 Immediately clean any accidental release of concrete on site prior to solidification.
 - .3 Do not wash and clean concrete vehicles on site.
 - .4 Perform dumping of residual material and truck cleaning operations only at the concrete plant. Follow environmental regulations and good practices as approved by the Provincial Department of the Environment and other authorities having jurisdiction.
- 1.9 Water Quality
- .1 Conduct visual monitoring for suspended solids daily during periods of in-water works, and other related works. If any changes occur in the turbidity of the water in the vicinity of the work area as a result of construction activities, the work should immediately stop and the Department of Fisheries and Oceans – Fisheries Protection Program contacted at (902) 426-3909 to determine if additional mitigation measures are required.
 - .2 Where work may affect the water quality adjacent to water intake lines used by lobster holding facilities, fish processing facilities and other harbor users, schedule work in cooperation with the Harbour Authority as directed by the Departmental Representative to minimize interference and impact to harbour users.
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- .3 Do not wash down equipment within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
 - .4 Develop and implement an Erosion and Sediment Control Plan for the site that minimizes risk of sedimentation of the 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. The plan should, where applicable, include:
 - .1 Installation of effective erosion and sediment control measures before starting work to prevent sediment from entering the water body.
 - .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 the water entering a water body. For example, pumping/diversion of water to a vegetated area, construction of a settling basin or other filtration system.
 - .3 Site isolation measure (e.g., silt boom or silt curtain) for containing suspended sediment where in-water work is required (e.g., excavation, dredging, underwater cable installation).
 - .4 Measures for containing and stabilizing waste material (e.g., excavated material, dredging spoils, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the high water mark of nearby water bodies to prevent re-entry.
 - .5 Regular inspection and maintenance of erosion and sediment control measures and structures during the course of the work.
 - .6 Repairs to erosion and sediment control measures and structures if damage occurs.
 - .7 Removal of non-biodegradable erosion and sediment control materials once site is stabilized.
 - .5 Water contamination by preservative treated wood:
 - .1 Preservative treated lumber and timber, whether plant or site treated, shall be cured for a
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minimum of 30 days from date of the treatment application before their installation in areas which will be in contact with the water.

.2 Do not cut treated wood lumber over the surface of a watercourse or wetland.

.3 Do not use liquid applied preservative products over the surface of a watercourse or wetland.

.4 Wood treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA or American Wood Preserver Association (AWPA) approved.

.5 Do not use timber and lumber treated with creosote, petroleum and pentachlorophenol for any part of the work.

1.10 Socioeconomic
Restrictions

- .1 Abide by municipal and provincial regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.
- .2 Place flood lights in opposite direction of adjacent residential and business areas.
- .3 Use work equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

1.11 Bird And
Bird Habitat

- .1 Become knowledgeable with and abide by the Migratory Birds Convention Act (MBCA) in regards to 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 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.

- .4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
- .5 Do not use beaches, dunes and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the Departmental Representative.
- .6 Should nests of migratory birds in wetlands be encountered during work, immediately 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.

1.12 Fish and
Fish Habitat

- .1 Avoid wet, windy and rainy periods that may increase erosion and sedimentation.
- .2 Confirm in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.
- .3 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.
- .4 Be aware of the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.
- .5 To minimize the possibility of fish habitat contamination, all construction equipment which 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 alien species.

- .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.
- .6 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- .7 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 the 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.
- .8 Do not perform cleaning and washdown within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .9 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,
 - .3 Include the following:

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- .1 Date and location where equipment was previously used in a watercourse or wetland;
 - .2 Type of work performed.
 - .3 Dates of washdown for each piece of equipment;
 - .4 Cleaning method and cleaning agent(s) used.
-
- .10 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Departmental Representative for review.
 - .11 Abide by requirements and recommendations of Environment Canada and the Department of Fisheries and Oceans – Oceans and Habitat Branch in cleaning and wash down of equipment.
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- 1.13 Air Quality
- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
 - .2 Employ dust suppression by the application of water when required. Apply dust control measures to roads, parking lots and work areas. The Departmental Representative will determine locations where water is to be applied and the times at which is to be applied. Waste oil must not 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 Do not use oil or any other petroleum products for dust control.
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- 1.14 Fires
- .1 Fires and burning of rubbish on site is not permitted.
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- 1.15 Archaeological
- .1 All construction personnel are responsible for reporting any unusual materials 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 his/her immediate supervisor.
 - .2 If an archaeological and/or historically significant item is discovered during excavation, work in the area will be stopped immediately and the Departmental Representative will be contacted as well as the provincial Archaeological Services unit:
 - .1 Nova Scotia – NS Department of Communities, Culture and Heritage, Special Places Program – Nova Scotia Museum telephone: (92) 424-6461.
 - .3 Work can only resume in the vicinity of the find when authorized by the PWGSC Project Manager and Construction Supervisor, after approval has been granted by the Nova Scotia Department of Communities, Culture and Heritage.
 - .4 In the event of the discovery of human remains or evidence of burials, the excavation work will immediately cease and nearest law enforcement agency will be contacted immediately by the PWGSC Project Manager and/or the Construction Supervisor.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 03 20 00 - Concrete Reinforcing
 - .2 Section 03 30 00 - Cast-in-Place Concrete
 - .3 Section 31 62 19 - Wood Piles
 - .4 Section 31 23 10 - Excavation, Trenching & Backfilling.
- 1.2 Inspection
- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
 - .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
 - .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
 - .4 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.
- 1.3 Independent Inspection Agencies
- .1 Independent Inspection/Testing Agencies may be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.
 - .2 Provide equipment required for executing inspection and testing by appointed agencies.
-

- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
 - .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and reinspection.
 - 1.4 Access to Work
 - .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
 - .2 Co-operate to provide reasonable facilities for such access.
 - 1.5 Procedures
 - .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
 - .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
 - .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.
 - 1.6 Rejected Work
 - .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
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- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- 1.7 Reports
- .1 Submit 3 copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to manufacturer or fabricator of material being inspected or tested.
- 1.8 Mill Tests
- .1 Submit mill test certificates as required of specification Sections.

PART 2 - PRODUCTS

- 2.1 Not Used .1 Not Used.

PART 3 - EXECUTION

- 3.1 Not Used .1 Not Used.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 02 41 16.01 - Structure Demolition and Sitework
- 1.2 Site Access and Parking .1 Parking facilities at site are limited. Arrange for parking and storage with Departmental Representative and Harbour Authority Representative.
- .2 Maintain new and existing roads and parking areas at site, where used by Contractor, for duration of contract.
- .1 Keep clean and free of mud and dirt by washing on a regular basis.
- .2 Provide snow removal in areas located within construction site or enclosed by work.
- .3 Make good and repair damage resulting from Contractor's use of existing roads, asphalted areas and lawns on site.
- 1.3 Contractor's Site Office .1 Be responsible for and provide own site office, if required, including electricity, heat, lights and telephone. Locate site office as directed by Departmental Representative and Harbour Authority Representative.
- .2 Provide all required facilities and shelter by legislation or code for use of workers and Departmental Representative and/or their identified field staff.
- 1.4 Departmental Representative's Site Office .1 Provide temporary office for sole use of Departmental Representative, complete with heat and lights. Insulated office required during October to May. Locate on or adjacent to site.
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- .2 Inside dimensions minimum 5 m long x 3 m wide x 2.4 m high, with floor 0.3 m above grade, complete with 4-50% opening windows and one lockable door.
 - .3 Arrange and pay for telephone and fax machine installation and service in Departmental Representative's office for the Departmental Representative's exclusive use. Long distance calls placed on this phone by the Departmental Representative will be paid for by Departmental Representative.
 - .4 Washroom facilities not required in the office. Provide outside sanitary facilities to approval.
 - .5 Equip office with six chairs, flat 1200 x 2400 x 25 table with writing surface and 4 drawer lockable filing cabinet.
 - .6 Maintain in clean condition.
- 1.5 Material Storage
- .1 Arrange for and locate site storage trailers in location of least interference with existing facility operations. Discuss with Departmental Representative and Harbour Authority Representative.
 - .2 Material storage space on site is limited.
- 1.6 Sanitary Facilities
- .1 Provide sanitary facilities for workforce 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.
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- 1.7 Power
- .1 Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.
 - .2 Supply and install all temporary facilities for power such as pole lines, meter socket, underground cables, etc., as required and to approval of local power supply authority.
- 1.8 Water Supply
- .1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.
- 1.9 Removal of Temporary Facilities
- .1 Remove temporary facilities from site when directed by Departmental Representative.

-- END OF SECTION --

PART 1 – GENERAL

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|-----|--|----|---|
| 1.1 | <u>Installation and Removal</u> | .1 | Provide temporary controls in order to execute Work expeditiously. |
| | | .2 | Remove from site all such work after use. |
| | | | |
| 1.2 | <u>Guard Rails and Barricades</u> | .1 | Provide secure, rigid guard rails and barricades around deep excavations. |
| | | .2 | Provide concrete jersey barriers as required to provide a secure and safe workplace. |
| | | | |
| 1.3 | <u>Access to Site</u> | .1 | Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work. |
| | | | |
| 1.4 | <u>Public Traffic Flow</u> | .1 | Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect public and harbour users. |
| | | | |
| 1.5 | <u>Fire Routes</u> | .1 | Maintain access to property including overhead clearances for use by emergency response vehicles. |
| | | | |
| 1.6 | <u>Protection for Off-Site and Public Property</u> | .1 | Protect surrounding private and public property from damage during performance of Work. |
| | | .2 | Be responsible for damage incurred. |
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- 1.7 Waste Management and Disposal .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

PART 2 - PRODUCTS

- 2.1 Materials .1 Barricades and Buoys:
.1 All pedestrian or vehicular or vessel traffic control devices required by Municipal Regulations, as interpreted by the Municipal Authority, or other Authority having jurisdiction, to safely direct and/or control all traffic in the areas of construction.
.2 All pedestrian, vehicular or vessel traffic control devices as required to safely direct and/or control all traffic in the areas of construction on the wharf and as directed by the Departmental Representative.

PART 3 - EXECUTION

- 3.1 Installation .1 Erect temporary barricades and buoys as directed and where required before any construction work takes place.
.2 Barricades and buoys to remain in place and be maintained by Contractor during entire construction period, except as noted in Par. 3.2.1 below.
- 3.2 Removal .1 Barricades and buoys may be removed in areas of work where all site work restitution is completed and the area has been accepted by the Owner and by the Departmental Representative.
.2 Upon total completion of work, neatly stockpile all existing concrete jersey barriers on site as directed by the Departmental Representative.

-- END OF SECTION --

- 1.1 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 seven (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.
- 1.2 Manufacturer's Instructions
- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
 - .2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturers' instructions. Departmental Representative will designate which document is to be followed.
- 1.3 Fastenings - General
- .1 All fastenings are to be the sizes indicated on the contract plans and are to be hot dipped galvanized to ASTM 123 unless otherwise noted.
- 1.4 Delivery and Storage
- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seal and labels intact.
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- .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 and Storage with supplier's instructions.
 - 1.5 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.
 - 1.6 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
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without prior written approval of Departmental Representative.

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

1.7 Construction Equipment and Plant

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

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

1.8 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.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 01 77 00 - Closeout Procedures
- 1.2 General .1 Conduct cleaning and disposal operations to comply with local ordinances, Harbour Authority and anti-pollution laws.
- .2 Sort volatile waste in covered metal containers, and remove from premises at end of each working day.
- 1.3 Project Cleanliness .1 Maintain Work in tidy condition, free from accumulation of waste products and debris.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .3 Provide on-site containers for collection of waste materials and debris.
- .4 Provide and use marked separate bins for recycling. Refer to Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .5 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .6 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .7 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
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- .8 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.
- 1.4 Final Cleaning
- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .5 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .6 Remove dirt and other disfiguration from exterior surfaces.
- .7 Sweep and wash clean paved areas.
- .8 Reinstate any areas damaged by work.
- 1.5 Waste Management and Disposal
- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Work
- .1 Section 01 35 44 - Environmental Protection Procedures for Marine Work
 - .2 Section 01 56 00 - Temporary Barriers and Enclosures
 - .3 Section 01 74 11 - Cleaning
 - .4 Section 01 77 00 - Closeout Procedures
 - .5 Section 02 41 16.01 - Structure Demolition
 - .6 Section 03 10 00 - Concrete Forming and Accessories
 - .7 Section 03 20 00 - Concrete Reinforcing
 - .8 Section 03 30 00 - Cast-in-Place Concrete
 - .9 Section 05 50 00 - Metal Fabrications
 - .10 Section 06 05 73 - Dimension Timber
 - .11 Section 31 61 13 - Pile Foundations, General Requirements
 - .12 Section 31 62 19 - Wood Piles
 - .13 Section 31 23 10 - Excavation, Trenching & Backfilling
- 1.2 General
- .1 Carry out work placing maximum emphasis on the areas of:
 - .1 Waste reduction;
 - .2 Diversion of waste from landfill, and;
 - .3 Material recycling.
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- 1.3 Waste Management Plan
- .1 Prior to commencement of work, prepare Waste Management Workplan.
 - .2 Workplan to include:
 - .1 Waste reduction practices;
 - .2 Material source separation process;
 - .3 Procedures for sending recyclables to recycling facility;
 - .4 Procedures for sending non-salvageable items and waste to approved waste processing facility or landfill site.
 - .5 Training and supervising workforce on waste management at site.
 - .3 Workplan to incorporate waste management requirements specified herein and in other sections of the specifications.
 - .4 Develop Workplan in collaboration with all subcontractors to ensure all waste management issues and opportunities are addressed.
 - .5 Submit copy of Workplan to Departmental Representative for review.
 - .1 Make revisions to Plan as directed by Departmental Representatives.
 - .6 Implement and manage all aspects of Waste Management Workplan for duration of work.
 - .7 Revise Plan as work progresses addressing new opportunities for diversion of waste from landfill.
- 1.4 Waste Reduction
- .1 Develop waste reduction program.
 - .2 Structure program to prioritize actions, with waste reduction as first priority, followed by salvage and recycling effort, then disposal as solid waste.
 - .3 Identify materials and equipment to be:
 - .1 Salvaged for resale by Contractor;
 - .2 Sent to recycling facility;
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- .3 Sent to waste processing/landfill site for their recycling effort;
 - .4 Disposed of in approved landfill site.
 - .4 Reduce construction waste during installation work. Undertake practices which will minimize waste and optimize full use of new materials on site, such as:
 - .1 Use of a central cutting area to allow for each access to off-cuts;
 - .2 Use of off-cuts for blocking and bridging elsewhere.
 - .3 Use of effective and strategically placed facilities on site for storage and staging of leftover or partially cut materials (such as plywood, dimension timber, etc.) to allow for easy incorporation into work whenever possible, avoiding unnecessary waste.
 - .5 Develop other strategies and innovative procedures to reduce waste.
 - 1.5 Material Source Separation Process
 - .1 Develop and implement material source separation process at commencement of work as part of mobilization and waste management at site.
 - .2 Provide on-site facilities to collect, handle and storage anticipated quantities of reuseable, salvageable and recyclable materials.
 - .1 Use suitable containers for individual collection of items based on intended purpose.
 - .2 Locate to facilitate deposit but without hindering daily operations.
 - .3 Clearly mark containers and stockpiles as to purpose and use.
 - .3 Establish methods whereby hazardous and toxic waste materials, and their containers, encountered or used in the course work are properly isolated, stored on site and disposed in accordance with applicable laws and regulations from authorities having jurisdiction.
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- 1.6 Worker Training and Supervision
- .1 Provide adequate training to workforce, through meetings and demonstrations, to emphasize purpose and worker responsibilities in carrying out the Waste Management Plan.
 - .2 Waste Management Coordinator: designate one full-time person on site, experience in waste management and having knowledge of the purpose and content of Waste Management Plan to:
 - .1 Oversee and supervise waste management during work.
 - .2 Provide instructions and directions to all workers and subcontractors on waste reduction, source separation and disposal practices.
 - .3 Post a copy of Plan in a prominent location on site for review by workers.
- 1.7 Disposal Requirements
- .1 Burying or burning of rubbish and waste materials is prohibited.
 - .2 Disposal of waste, volatile materials, mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers is prohibited.
 - .3 Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction.
 - .4 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, construction waste materials have been banned from disposal in landfills. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.
 - .5 Collect, bundle and transport salvaged materials to be recycled in separated categories and condition as directed by recycling facility. Ship materials only to approved recycling facilities.
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- .6 Sale of salvaged items by Contractor to other parties not permitted on site.
- .7 Dispose or store creosote and asphalt materials in provincially approved manner.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 01 78 00 - Closeout Submittals.
- 1.2 Inspection and Declaration .1 Contractor's Inspection: Coordinate and perform, in concert with subcontractors, an inspection and check of all Work. Identify and correct deficiencies, defects, repairs and perform outstanding items as required to complete work in conformance with Contract Documents.
.1 Notify Departmental Representative in writing when deficiencies from Contractor's inspection have been rectified and that Work is deemed to be complete and ready for Departmental Representative's inspection of the completed work.
.2 Departmental Representative's Inspection: Accompany Departmental Representative during all interim and final inspections of the Work.
.1 Address defects, faults and outstanding items of work identified by such inspections.
.2 Advise Departmental Representative when all deficiencies identified have been rectified.
.3 Note that Departmental Representative will not issue a Certificate of Substantial Performance of the work until such time that Contractor performs following work and turns over the specified documents:
.1 Project record as-built documents.
.4 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.
- 1.3 Cleaning .1 In accordance with Section 01 74 11 - Cleaning.
.2 Remove waste and surplus materials, rubbish and construction facilities from the site in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
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PART 2 - PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 - EXECUTION

3.1 Not Used .1 Not Used.

-- END OF SECTION --

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 33 00 - Submittal Procedures
 - .2 Section 01 77 00 - Closeout Procedures
- 1.2 Project Record Drawings
- .1 Departmental Representative will provide 2 white print sets of contract drawings and 2 copies of specifications manual specifically for "as-built" purposes.
 - .2 Maintain at site one set of the contract drawings and specifications to record actual as-built site conditions.
 - .3 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative upon request.
 - .4 As-Built Drawings:
 - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of work, neatly transfer notations to second set (also by use of red ink).
 - .2 Submit both sets to Departmental Representative prior to application for Certificate of Substantial Performance.
 - .3 Stamp all drawings with "As-Built Drawings." Label and place Contractor's signature and date.
 - .4 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
 - .5 Record the following information:
 - .1 Depths of various elements, to include pile tip depths, in relation to survey datum;
 - .2 Horizontal and vertical location of various elements in relation to Geodetic Datum;
 - .3 Field changes of dimension and detail;
 - .4 Location of all capped or terminated services and utilities;
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- .5 All design elevations, sections and details dimensioned and marked up to consistently report finished installation conditions;
 - .6 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings;
 - .7 All change orders issued over the course of the contract must be documented on the finished as-built documents, accurately and consistently depicting the changed condition as it applies to all affected drawing details.
- .5 Maintain As-Built document current as the contract progresses. Departmental Representative will conduct reviews and inspections of the documents on a regular basis. Failure to maintain as-builts current and complete to satisfaction of the Departmental Representative shall be subject to financial penalties in the form of progress payment reductions and holdback assessments.

-- END OF SECTION --
