

### 1.1 DESCRIPTION OF WORK

- .1 In general, work under this contract consists of:
  - .1 Supply of all plant, labour and materials and equipment necessary to complete the tender package as identified on the invitation to tender and as per the drawings and specifications.
  - .2 Excavating, milling and pulverizing of asphalt, backfilling, shaping, grading and compacting all as required to produce required finished grades, ditches and paved surfaces as indicated on the drawings.
  - .3 Replacement of existing catchbasin structures as indicated on the drawings.
  - .4 Adjusting existing catchbasin frame, manhole frame and water valve cover structures to match proposed finished grades.
  - .5 Resurfacing of existing asphalt.
  - .6 Replacement of existing concrete curbs as indicated on the drawings.
  - .7 Installation of new catchbasin structures as indicated on the drawings.
  - .8 Replacement of existing culverts as indicated on the drawings.
  - .9 Landscaping works including supply and placement of topsoil and sod in disturbed areas around the above work.
  - .10 The foregoing will not be construed as limiting, restricting, or modifying any general or specific requirements as set forth in any part of the Contract documents. The work includes all work subsidiary and incidental thereto required for a complete and functional installation.
  
- .2 Site of Work is at: Dorchester Federal Correctional Facility in Dorchester, NB.

### 1.2 FAMILIARIZATION WITH SITE

- .1 Before submitting a bid, it is recommended that bidders visit the site to review and verify the form, nature and extent of the work, materials needed, the means of access and the temporary facilities required to perform the Work.
- .2 Obtain prior permission from the Departmental Representative before carrying out such site inspection.

### 1.3 CODES AND STANDARDS

- .1 Perform work in accordance with the New Brunswick Department of Transportation and Infrastructure Standard Specifications for Highway Construction 2015, National Building Code of Canada (NBC) 2010 and National Fire Code of Canada (NFC) 2010, and any other code of provincial or local application, including all amendments up to bid closing date, provided that in any case of conflict or discrepancy, the more stringent requirement shall apply.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

### 1.4 INTERPRETATION OF DOCUMENTS

- .1 For Federal Government projects, Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

### 1.5 TERM ENGINEER

- .1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Departmental Representative as defined in the General Conditions of the Contract.

### 1.6 SETTING OUT WORK

- .1 Departmental Representative will provide only those survey control points and set such stakes as necessary to define general location, alignment and elevations of work. Give Departmental Representative reasonable notice of requirements for such control points and stakes.
- .2 Set grades and lay out work in detail from control points and grades established by Departmental Representative.
- .3 Provide devices needed to lay out and construct work.
- .4 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.

- .5 Supply stakes and other survey markers required for laying out work.

#### 1.8 MEASUREMENT PROCEDURES

- .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurement procedures.

#### 1.9 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each of the following:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda and amendments.
  - .4 Reviewed Shop Drawings.
  - .5 List of outstanding shop drawings.
  - .6 Change Orders.
  - .7 Other modifications to Contract.
  - .8 Field Test Reports.
  - .9 Copy of Approved Work Schedule.
  - .10 Health and Safety Plan and other safety related documents.
  - .11 Other documents as stipulated elsewhere in the Contract Documents.

#### 1.10 PERMITS

- .1 In accordance with the General Conditions, obtain and pay for building permit, certificates, licenses and other permits as required by municipal, provincial and federal authorities.
- .2 A Highway Usage Permit (HUP) application has been submitted to New Brunswick Department of Transportation and Infrastructure (NBDTI) for approval to complete the work proposed within the provincial Highway 106 right-of-way.
- .3 Provide appropriate notifications of project to municipal and provincial inspection authorities.
- .4 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.
- .5 Submit to Departmental Representative, copy of application forms and approval documents received from above referenced

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authorities.

#### 1.11 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

- .1 Execute work with least possible interference or disturbance to building operations, occupants, and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.
- .2 The working area shall be kept secure by the Contractor throughout the course of the work.
- .3 Where security has been reduced by work of Contract, provide temporary means to maintain security.
- .4 It is the Contractor's responsibility to examine the site and determine any other restrictions which may affect the work, as no claim will be entertained for any additional costs caused by site conditions or restrictions.
- .5 Provide temporary dust screens, barriers, warning signs in locations where renovation and alteration work is adjacent to areas which will be operative during such work.
- .6 All structures, roadways, ditching, trees, piping systems, etc. which are to remain shall be protected through the course of the work, and the Contractor shall be responsible for the acceptable and timely repair of any damages. This includes existing driveway culverts, cross culverts, headwalls, manholes, valves, catch basins, etc., which will be required to be protected during the course of the work. The contractor will be responsible for repairing or replacing damaged during construction, incidental to the work.

#### 1.13 CUTTING, FITTING AND PATCHING

- .1 Ensure that cutting and patching required by all trades is included in total bid amount submitted for the work.
- .2 Execute cutting (including excavation), fitting and patching required to make work fit properly.
- .3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work. This includes patching of openings in existing work resulting from removal of existing services.

- .4 Do not cut, bore, or sleeve load-bearing members, except where specifically approved by Departmental Representative.
- .5 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.
- .6 Fit work airtight, weatherproof and also as detailed and as directed and/or described by Departmental Representative to pipes, sleeves ducts and conduits and any other penetrations through surfaces.
- .7 Cut rigid materials using power saw or core drill. Pneumatic or impact tools not allowed.

#### 1.15 LOCATION OF FIXTURES

- .1 Location of equipment, fixtures and outlets, shown or specified shall be considered as approximate. Actual location shall be as required to suit conditions at time of installation and as is reasonable.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative when impending installation conflicts with other new or existing components. Follow directives for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

#### 1.16 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, vehicular traffic and institution operations.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit schedule to and obtain approval from Departmental

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Representative for any shut-down or closure of active service or facility. This includes disconnection of electrical power and communication services to tenant's operational areas. Adhere to approved schedule and provide notice to affected parties.

- .4 Provide temporary services when directed by Departmental Representative to maintain critical building and tenant systems.
- .5 Provide adequate bridging over trenches which cross walkways or roads to permit normal traffic.
- .6 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .7 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

#### 1.18 BUILDING SMOKING ENVIRONMENT

- .1 There is no smoking permitted on Institution property.

#### 1.19 ASBESTOS DISCOVERY

- .1 Demolition of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of work, stop work and notify Departmental Representative immediately. Do not proceed with relevant work until written instructions have been received from Departmental Representative.

#### 1.20 FIELD ENGINEERING

- .1 Qualifications of Surveyor
  - .1 Qualified registered land surveyor, acceptable to Engineer.
  - .2 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .2 Survey Requirements

- .1 Establish permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2 Establish lines and levels, locate and layout, by instrumentation.
- .3 Records
  - .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .4 Subsurface Conditions
  - .1 Promptly notify Engineer in writing if subsurface conditions at Place of the Work differ materially from those indicated in Contract Documents, or reasonable assumption of probable conditions based thereon.
  - .2 After prompt investigation, should Departmental Representative determine that conditions do differ materially; instructions will be issued for changes in the Work as provided in the Crown Construction Act - Changes in the Work.

#### 1.21 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

- .1 Site Office
  - .1 Site office for Departmental Representative not required.
- .2 Temporary Facilities
  - .1 The Contractor shall provide temporary enclosures for the protection of materials subject to damage by weather exposure. He shall provide temporary toilet facilities and proper sanitation facilities for employees.
- .3 Dewatering
  - .1 The Contractor shall treat all storm water and subsurface water to prevent contamination of waterways and adjacent properties.

#### 1.22 ESTIMATED QUANTITIES

- .1 The quantities shown on the tender form are approximate and are subject to change. Any change in quantities will be done in accordance with the General Conditions.

1.23 EXCESS AND/OR UNSUITABLE MATERIALS

- .1 Unless a disposal site is designated, all excess materials found upon or excavated from the site shall become the property of the Contractor and shall be disposed of in accordance with all federal, provincial and municipal regulations and requirements, including acquisitions of permits, etc. The excess and/or unsuitable materials shall remain in the custody of the Contractor until delivery at the designated place.
- .2 All related costs shall be incidental to the work. The Contractor must indicate by letter, prior to start of contract, where excess materials will be disposed of and provide written documentation showing that the Owner of the disposal site has granted approval, and that all environmental approvals, and any other required permits as may be necessary from regulatory agencies within the Province have been obtained.
- .3 When insufficient space is available to allow placing of excavated materials on site, the Contractor shall load, haul and stockpile such excavated materials at an off-site location arranged for by, and at the sole expense of the Contractor. When all excavation work is complete, the Contractor shall, at his own expense, bring back as much acceptable material as may be required to properly refill all excavations or trenches, or for general backfilling purposes.

1.24 INCLEMENT WEATHER

- .1 During unsuitable weather when in the opinion of the Engineer the conditions are unfavourable for good work, construction shall cease. All work must be protected by the Contractor at his expense. Allowances for workdays missed due to inclement weather will be as per Section 01 14 10 - Scheduling and Management of Work.

1.25 PROTECTION OF EXISTING PROPERTY MARKERS AND MONUMENTS

- .1 The Contractor is responsible to retain a Land Surveyor, acceptable to the Owner, currently licensed to practice in the Province of New Brunswick, to replace any known property marker or monument that is disturbed by the Contractor. Failure to do so within two (2) weeks of receiving notice from the Owner shall result in the Owner having the work done with costs deducted from any holdback monies owed to the Contractor.

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1.26 UTILITIES

- .1 Certain underground and above ground utilities are located in the working area. This includes, but may not be limited to: underground gravity sewer pipelines and structures, underground pressure sewer pipelines and structures, utility tunnels, water, gas, overhead and/or underground electric power and telecommunication systems, access roads, fencing, drainage structures, etc. It will be the responsibility of the Contractor to ensure that there is no damage to these facilities, including ensuring that all hydro poles are supported during the work.
- .2 The Contractor is responsible for coordinating with the utilities to locate these lines prior to the start of the work and if necessary, for "daylighting" any lines to verify their location. It is also the responsibility of the Contractor to arrange for and pay any costs associated with the locating of buried electrical and gas mains, incidental to the work. Further, the Contractor will be fully responsible for the costs of repairs required to any of these utilities, including incidental damages resulting from the work, and at no cost to the Owner.
- .3 If main power supply is to be supplied to the site, this will be done by NB Power. All components of this supply shall be protected by the Contractor as he shall be responsible for any damages thereto. The coordination of NB Power will be included in this contract.
- .4 No claim will be entertained for any damage or any slowdown of work due to the location and protection of the aforementioned utilities. Further, the Contractor will be fully responsible for the costs of repairs required to any of these utilities, including incidental damages resulting from the work.
- .5 Excavation and Construction near Natural Gas Pipelines
  - .1 Prior to start of any of the following construction activities anywhere within the area, the Contractor shall contact Enbridge Gas New Brunswick and Maritime and Northeast Pipelines and obtain field gas pipelines locates. This will be in the form of a completed Line Locate Request Form from the gas pipeline company, signed by both the Contractor and the gas pipeline company. A copy of the signed Line Locate Request Form must be given to the Engineer by the Contractor prior to start of any construction activities. The Contractor's copy of the signed Line Locate Request Form must be available for review at the construction site for the duration of the project.
  - .2 Construction activities near Enbridge Gas New Brunswick pipelines are governed by NB Board of Commissioners of Public Utilities. Construction activities near the Maritimes and

Northeast Pipelines system are governed by the National Energy Board (NEB) under the DPR - Damage Prevention Regulation. The Contractor shall adhere to the regulations of the appropriate authority when carrying out construction activities near gas pipelines.

.6 Enbridge Gas New Brunswick

- .1 All construction activities near the Enbridge Gas pipelines shall be carried out in strict accordance with the latest edition of the NB Board of Commissioners of Public Utilities - Guidelines for Excavation in the Vicinity of Gas Lines and Enbridge Gas New Brunswick - Support of Gas Pipelines in the Vicinity of Excavations documents. A copy of these documents can be obtained from Enbridge Gas New Brunswick.

1.27 DATUM

- .1 All elevations shown on the drawings or mentioned in the Specification are referenced to the Bench Mark as shown on the drawings.

1.28 ITEMS TO BE SUPPLIED BY THE OWNER

- .1 The Owner shall supply only the site as it exists at time of tendering and as may be reconstructed by others under separate Contracts.

1.29 ITEMS TO BE SUPPLIED BY THE CONTRACTOR

- .1 The Contractor shall supply everything necessary to complete the work shown on the drawings and detailed in these specifications. This includes minor details, work, equipment, labour or services not specifically mentioned on the drawings or in the specifications but obviously necessary for the proper completion and performance of the work.

1.30 ARCHAEOLOGICAL REQUIREMENTS

- .1 If, at any time during construction, objects of potential historical or archaeological value are uncovered by the Contractor, or if any suspected endangered plant or animal species or any contaminated soils are identified during the work, all work shall cease and shall not continue until the site has been reviewed by representatives of the appropriate agencies and the Engineer has approved resumption of the work.

1.31 COOPERATION

- .1 It is to be noted that other work may be in progress under various contracts within the working area of this contract. The Contractor will, to the satisfaction of the Engineer, allow the other Contractors reasonable access to the work and will co-operate with them in the carrying out of their duties and obligations. This Contractor's work shall be carried out so as not to impede the work of other contractors.
- .2 No claim will be entertained for any inconveniences or any slowdown in work due to the work being done under these other Contracts.

1.32 NON-USE OF OWNER'S HYDRANTS AND VALVES

- .1 The use of Owner's hydrants to obtain water and operation of or tampering with or use of Owner's water main valves is strictly prohibited.

END OF SECTION

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**Part 1      General**

**1.1          MEASUREMENT**

- .1      The quantities to be measured under the various items in the Tender and Schedule of Quantities and Unit Prices will be those quantities of Work completed in accordance with the drawings and specifications. The methods of measurement will be as stated hereinafter for the individual items.
- .2      All measurement shall be along the horizontal plane unless otherwise indicated.
- .3      In the case of quantities measured on a linear basis, unless otherwise provided for the length to be paid for shall be measured along the centerline of installation.
- .4      In the case of quantities paid for on an area basis, unless otherwise provided for the area to be paid for shall be the horizontal area, that is, the projection of area upon a horizontal plane.
- .5      All volume measurements refer to in-place measures unless specified otherwise.
- .6      The method of measurement of Work shall be determined by the Departmental Representative.
- .7      Measurements will be jointly made, and agreed to at the time by the Departmental Representative and the Contractor.
- .8      It is to be noted that the quantities shown in the Schedule of Prices are approximate and the Owner reserves the right to increase or decrease these quantities at the same unit price tendered.
- .9      Where work is called for in these Specifications and is not specifically designated for payment under a pay item, the Contractor shall deem such work as incidental to the most closely associated pay items and make appropriate allowances in his bid price. The Contractor will not be allowed an additional amount for any items not included in the tender bid, but which are required to make the Work complete.
- .10     It is the Contractors responsibility to coordinate the scope of Work and payment of their Subcontractors and to

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ensure that their Subcontractors have included pricing for all items contained in their specific components of the scope of Work.

**1.2 PRICES**

- .1 Unit or lump sum prices for all items in the Form of Tender are full compensation for the work necessary to complete each item in the Contract and in combination for all work necessary to complete the Work as a whole and shall include the cost of furnishing all materials, labour, tools and equipment necessary to complete the work in accordance with the Contract, the drawings and specifications and all incidentals.
- .2 Unit or lump sum prices include supply and transportation of all labour, equipment and material necessary to complete each item in the Contract and in combination for all work necessary to complete the Work as a whole.
- .3 For culverts and storm drainage systems include all of the following as required where individual quantities are not provided in the Tender Form: environmental protection, protection of existing trees, common excavation, shoring, dewatering, bedding, backfilling, compaction, disposal of surplus material, testing, video inspection, marker stakes, reinstatement and all incidentals.
- .4 For materials measured by mass, provide from each truck at time of delivery, a slip showing the weight, type of material being delivered, and identifying the truck and driver. Include only one load on each slip. Any slips not received and signed by the Departmental Representative at the time of delivery will not be included in the weight for payment. Scales shall be certified and approved by Departmental Representative.
- .5 Separate measurement for payment shall not be made for any of the following items:
  - .1 All mobilization and demobilization to the site, temporary utilities, construction facilities and temporary barriers and enclosures.
  - .2 Protection of all cultural resources.
  - .3 All environmental protection, including erosion controls, sedimentation controls, de-watering and dust control. Dust prevention and erosion control measures shall be in effect until such works are restored to

- original condition or upon issuance of the "Certificate of Final Completion".
- .4 Field surveys for layout of the construction work items and for collection of as-built condition information.
  - .5 Cleaning of work site, including removal of waste, debris, and recyclable materials.
  - .6 Testing, inspections and permits from all regulatory agencies and groups required to complete the work.
  - .7 Traffic control devices and measures, including flag persons, signs, mobile traffic signals, detour signs, lights, barriers, and pavement markings.
  - .8 Removal and replacement of the existing handrail in Area 2 with similar galvanized steel handrail anchored to existing concrete retaining wall and meeting all applicable building codes.
  - .9 Design, construction, and maintenance of all temporary structures (water diversions, temporary bridges, temporary bridge abutments, temporary travel lanes, shoring, bracing, underpinning, working platforms, scaffolding, stability bracing, supports, etc.) required to complete the work.
  - .10 Removal of all surplus materials from the site at completion of work.
  - .11 Preparation and submission of all close-out submittals, maintenance manuals, and as-built drawings.
- .6 The items described below correspond to the bid items in the Tender Form.

### 1.3 UNIT PRICE BID ITEMS

- .1 Common Excavation - Section 31 00 00.01 - Earthwork
  - .1 Unit of measurement: cubic metres, measured before the start of work. Measure common excavation as a unit for material excavated, stock-piled, and re-used for grades shown on the drawings for corresponding pavement structures as specified.
  - .2 This item includes: If material is suitable (as determined by the Departmental Representative), stock-piling, material re-used or disposal of stock-piled material will be included in the measured volume. All material including rock shall be classed as common excavation, except for pipe trenching.

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- .3 Payment will be made at the contract unit price for common excavation.
  - .4 There shall be no additional payment for material re-used or for disposal of unsuitable material or excess excavation material.
  - .5 Excavation for structures or pipe will not be measured for separate payment but shall be included in the contract unit price for structures or pipe.
- .2 Ditching - Section 31 00 00.01 - Earthwork
- .1 Unit of measurement: linear metre
  - .2 Method of measurement: Measure ditching and re-ditching in lineal metres for a single ditch/swale acceptably constructed.
  - .3 This item includes: supply and transportation of all equipment, labour and materials, excavation to lines and grades shown on the drawings, topsoil, sodding, cleanup and all work incidental thereto.
- .3 Sub-base Material - Section 32 11 16.01 - Granular Base and Sub-base
- .1 Unit of measurement: tonnes
  - .2 Method of measurement: Measure granular base in tonnes of material incorporated into Work and accepted by Departmental Representative. Granular sub-base materials placed in excess of 110% of the theoretical quantity, based on the measurements specified on the Drawings, or as determined by "Final Measure" of the area of this work, shall not be included for payment. Provide slip showing the weight, type of material being delivered, and identifying the truck and driver. Include only one load on each slip. Any slips not received and signed by the Departmental Representative at the time of delivery will not be included in the weight for payment.
  - .3 This item includes: Payment shall be at the Contract unit price for Granular Sub Base Material. This includes supply, sourcing, testing, loading, weighing, placing, spreading, shaping, compaction, adjustment of moisture content, traffic control, dust control, proof rolling, clean up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Departmental Representative.

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- .4 Base Material - Section 32 11 16.01 - Granular Base and Sub-base
- .1 Unit of measurement: tonnes
  - .2 Method of measurement: Measure granular base in tonnes of material incorporated into Work and accepted by Departmental Representative. Granular base materials placed in excess of 110% of the theoretical quantity, based on the measurements specified on the Drawings, or as determined by "Final Measure" of the area of this work, shall not be included for payment. Provide slip showing the weight, type of material being delivered, and identifying the truck and driver. Include only one load on each slip. Any slips not received and signed by the Departmental Representative at the time of delivery will not be included in the weight for payment.
  - .3 This item includes: Payment shall be at the Contract unit price for Granular Base Material. This includes supply, sourcing, testing, loading, weighing, placing, spreading, shaping, compaction, adjustment of moisture content, traffic control, dust control, proof rolling, clean up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Departmental Representative.
- .5 Asphalt Base - Type "B" - Section 32 12 16.01 - Asphalt Concrete Paving
- .1 Unit of measurement: tonnes
  - .2 Method of measurement: This work shall be measured in tonnes of asphalt concrete of the appropriate type, acceptably placed. Provide slips showing the weight, type of material being delivered, and identifying the truck and driver. Include only one load on each slip. Any slips not received and signed by the Departmental Representative at the time of delivery will not be included in the weight for payment.
  - .3 This item includes: supply and transportation of all equipment, labour and materials, signage and traffic control, fine grading, testing, tack coat, placement, compaction, construction joints, temporary striping, protection of structures, water for asphalt cooling when required, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative.

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- .6 Asphalt Seal - Type "D" - Section 32 12 16.01 - Asphalt Concrete Paving
- .1 Unit of measurement: tonnes
  - .2 Method of measurement: This work shall be measured in tonnes of asphalt concrete of the appropriate type, acceptably placed. Provide slips showing the weight, type of material being delivered, and identifying the truck and driver. Include only one load on each slip. Any slips not received and signed by the Departmental Representative at the time of delivery will not be included in the weight for payment.
  - .3 This item includes: supply and transportation of all equipment, labour and materials, signage and traffic control, fine grading, testing, tack coat, placement, compaction, construction joints, temporary striping, protection of structures, water for asphalt cooling when required, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative.
- .7 Asphalt Milling - Section 32 12 16.01 - Asphalt Paving
- .1 Unit of measurement: square metre
  - .2 This item includes: supply and transportation of all labour, material and equipment, milling, removal and disposal of oversized or unsuitable material, protection of existing structures, signage, traffic control, dust control, safety, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Departmental Representative.
- .8 Pulverize Existing Parking Lot Surface & Grading of Pulverized Materials - Section 32 01 16.13 - Reshaping Asphalt Pavement
- .1 Unit of measurement: square metre
  - .2 This item includes: supply and transportation of all labour, material and equipment, pulverization, mixing and blending, removal and disposal of oversized or unsuitable material, shaping, grading, compaction, protection of existing structures, signage, traffic control, dust control, safety, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Departmental Representative.

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- .9 Line Marking for Pavement - Section 32 17 23 - Pavement Markings
- .1 Unit of Measurement: linear metre
  - .2 This item includes: All paint markings indicated on the Drawings and as specified. Paint markings are shown on the drawings.
- .10 Manhole and Catchbasin Adjustments - Section 33 05 16 - Manhole and Catchbasin Structures
- .1 Unit of Measurement: Measure adjusting manholes and catchbasins in count of units adjusted.
  - .2 This item includes: Supply and transportation of all labour, materials and equipment, excavation, dewatering, protection of structures, adjusting the finish elevation of the structure, reuse of existing components and materials where approved by the Departmental Representative, replacement of damaged or unsuitable materials, backfilling, base materials, compaction, disposal of surplus and unsuitable material, traffic control, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Departmental Representative.
- .11 Water Valve Adjustments - Section 33 05 16 - Manhole and Catchbasin Structures
- .1 Unit of Measurement: Measure adjusting tops of existing valves in count of units adjusted.
  - .2 This Item includes: Supply and transportation of all labour, materials and equipment, excavation, dewatering, protection of structures, adjusting the finish elevation of the structure, reuse of existing components and materials where approved by the Departmental Representative, replacement of damaged or unsuitable materials, backfilling, base materials, compaction, disposal of surplus and unsuitable material, traffic control, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Departmental Representative.

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- .12 1050 mm Diameter Catchbasin-Manhole, complete - Section 33 05 16 - Manhole and Catchbasin Structures
- .1 Unit of Measurement: Each
  - .2 This item includes: Payment for manholes and catchbasins includes supply and transportation of all labour, equipment and material, excavation, installation, manhole, catch basin, cast-in-place base where specified, chamber, flat-top section, frame and cover, PVC inlet/outlet pipe, cutting of pipes, gaskets, transition couplings, fittings including plugs and caps, grout, connections, dewatering, bedding, compaction, backfilling, leakage testing, adjustments, benching, concrete benching, supports, adjustments, chamber insulation (when required, as shown on the drawings), trench restoration and maintenance, environmental protection, clean-up and all work incidental thereto, all as specified or as shown on the drawings, or as laid out by the Departmental Representative. For manholes and catch basins installed on the existing system, this shall also include by-passing of flows, stand-by equipment and personnel, and all other related work and services.
  - .3 Unit price payment for manholes and catchbasins will include abandonment or removal of existing catchbasin and manhole structures. This includes supply and transportation of all labour, equipment and material, excavation, removal of manhole or catchbasin sections, fill concrete, plugging or capping of adjacent pipes if they are to be abandoned, backfilling, surface reinstatement, disposal of surplus and waste material, maintenance, clean-up and all work incidental thereto, all as specified or as shown on the drawings, or as laid out by the Engineer.
- .13 750 mm Diameter Catchbasin - Section 33 05 16 - Manhole and Catchbasin Structures
- .1 Unit of Measurement: Each
  - .2 This Item includes: Payment for manholes and catchbasins includes supply and transportation of all labour, equipment and material, excavation, installation, manhole, catch basin, cast-in-place base where specified, chamber, flat-top section, frame and cover, PVC inlet/outlet pipe, cutting of pipes, gaskets, PVC-Concrete transition couplings, fittings

including plugs and caps, grout, connections, dewatering, bedding, compaction, backfilling, leakage testing, adjustments, benching, inside drop (including drop bowl assembly with pipe), concrete benching, supports, adjustments, chamber insulation (when required, as shown on the drawings), trench restoration and maintenance, environmental protection, clean-up and all work incidental thereto, all as specified or as shown on the drawings, or as laid out by the Engineer. For manholes and catch basins installed on the existing system, this shall also include by-passing of flows, stand-by equipment and personnel, and all other related work and services.

- .3 Unit price payment for manholes and catchbasins will include abandonment or removal of existing catchbasin and manhole structures. This includes supply and transportation of all labour, equipment and material, excavation, removal of manhole or catchbasin sections, fill concrete, plugging or capping of adjacent pipes if they are to be abandoned, backfilling, surface reinstatement, disposal of surplus and waste material, maintenance, clean-up and all work incidental thereto, all as specified or as shown on the drawings, or as laid out by the Engineer.

.14 450 mm Diameter Storm Pipe - Section 33 41 00 - Storm Utility Drains

- .1 Unit of measurement: linear metre along centreline of pipe, diameter as indicated.
- .2 This item includes: Payment shall include the supply and transportation of all labour, material and equipment, excavation, dewatering, bedding, supply and installation, jointing of pipe and fittings, couplings, connection to catchbasins, insulation, backfilling, compaction, flushing and testing of the pipe, removal and disposal of unsuitable materials, maintenance of trenches, clean-up and all work incidental thereto, all as specified or as shown on the Drawings.

.15 600 mm Class III Concrete Culvert - Section 33 42 13 - Pipe Culverts

- .1 Unit of measurement: linear metre along centreline of pipe, diameter as indicated.

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- .2 This item includes: all labour, materials and equipment required to properly supply and install pipe, excavation, supply and installation of pipe, joining of pipe and fittings, couplings, connection to existing pipe, backfilling, compaction, flushing of pipe, removal and disposal of existing pipe, removal and disposal of unsuitable materials, maintenance of trenches, excavation of ditches at outlet as shown on the drawings, dewatering, bedding, installation, and rip rap.
- .16 Concrete Curb - Section 32 16 00 - Concrete Walks, Curbs and Gutters
- .1 Unit of measurement: linear metre.
- .2 Payment for this work shall be at the contract unit prices for concrete curb in place. This includes supply and transportation of all labour, materials and equipment, traffic control and safety, where required, excavation, stockpiling and reuse of suitable excavated material or disposal of unsuitable material, base materials, compaction, fine grading, forming or slip-forming, depressed sections, transitions to driveway section, concrete including finishing, expansion joints and fibreboard, control joints, protection and curing, cold-weather protection when required, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative.
- .3 Removal of existing curb shall be considered incidental to the work.
- .17 Concrete Sidewalk - Section 32 16 00 - Concrete Walks, Curbs and Gutters
- .1 Unit of measurement: square metres
- .2 Payment for this work shall be at the contract unit prices for concrete sidewalk in place. This includes supply and transportation of all labour, materials and equipment, traffic control and safety, where required, excavation, stockpiling and reuse of suitable excavated material or disposal of unsuitable material, base materials, compaction, fine grading, forming or slip-forming, depressed sections, transitions to driveway section, concrete including finishing, expansion joints and fibreboard, control joints, protection and curing, cold-

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weather protection when required, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative.

.3 Removal of existing concrete sidewalk shall be considered incidental to the work.

.18 Concrete Pad, 125 mm thick, complete - Section 32 16 00 -  
Concrete Walks, Curbs and Gutters

.1 Unit of measurement: square metres

.2 Payment for this work shall be at the contract unit prices for concrete pad in place. This includes supply and transportation of all labour, materials and equipment, traffic control and safety, where required, excavation, stockpiling and reuse of suitable excavated material or disposal of unsuitable material, base materials, compaction, fine grading, forming or slip-forming, depressed sections, transitions to driveway section, concrete including finishing, expansion joints and fibreboard, control joints, protection and curing, cold-weather protection when required, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative.

.3 Removal of existing concrete pad shall be considered incidental to the work.

.19 Placement of Topsoil - Section 32 91 19.13 - Topsoil and  
Finish Grading

.1 Unit of measurement: square metres, depth as indicated.

.2 Method of Measurement: Placing and spreading of topsoil will be measured for payment in square metres from actual surface measurements as determined by Departmental Representative.

.3 Payment shall include the supply and transportation of all labour, equipment, and materials, preparation, soil amendments, mixing, grading, imported topsoil, distributing, fertilizer, rolling, maintenance including cutting and watering, re-seeding as directed, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative.

.4 If double handling of topsoil is directed by Departmental Representative (stockpiling and later

- 
- placing), then quantities will be measured twice; on excavation from original location and on excavation from stockpile.
- .5 Preparation of sub-grade for placing of topsoil will not be measured for payment.
  - .6 Reuse of existing topsoil from other areas of the work site, including screening, stockpiling, disposal of unsuitable or excess material, loading, transportation and spreading and clean-up of storage sites shall not be measured for separate payment but shall be considered as incidental to the work to strip and excavate this material.
- .20 Sodding - Section 32 92 23 - Sodding
- .1 Unit of measurement: Commercial Grade Turf Grass Nursery Sod per square metre.
  - .2 This item includes: Supply and transportation of all labour, equipment, and materials, preparation, soil amendments, mixing, distributing, rolling, maintenance including cutting and watering, re-sodding as directed, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as laid out by the Departmental Representative. There shall be no separate payment for repairs to seeded or sodded areas during the maintenance period whether the cause is due to lack of growth or as a result of erosion.
- .21 R-5 Riprap c/w Geotextile - Section 31 37 00 - RipRap
- .1 Unit of Measurement: tonnes of material placed.
  - .2 Unit Price Payment will be made for the appropriate size of rip-rap including geotextile filter fabric.
    - .1 Payment includes the supply and transportation of all labour, equipment and material, site preparation, transportation, supply and placement of geotextile, placement of Rip-Rap, the removal and disposal of excess or unsuitable materials, environmental protection, clean-up and all work incidental thereto, all as specified or as shown on the Drawings or as directed by the Engineer.
  - .3 Excavation required to achieve the grades and dimension required is considered incidental to the tendered price for Rip-Rap material and not measured for separate payment.

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- .4 Provide from each truck at time of delivery, a slip showing the weight, type of Rip-Rap being delivered, and identifying the truck and driver. Include only one load on each slip. Any slips not received and signed by the Engineer or his representative at the time of delivery will not be included in the weight for payment.
  
  - .22 Guide Rail - Section 34 71 13.25 - Steel W-Beam Guide Rail
    - .1 Unit of Measurement: linear metre
    - .2 This item includes: Supply, transportation of treated posts, blocks, metal rails, channels, washers, bolts, and all necessary appurtenances, augering of post holes, setting posts, offset blocks, installing reflectors, backfilling, compaction, removal and disposal of existing guide drain, surplus material and reinstatement of disturbed surfaces as measured from Contract Drawings.
  
  - .23 Signs - Section 10 14 53 - Signage
    - .1 Unit of Measurement: Each
    - .2 This item includes: Supply, transportation of posts, footings, washers, bolts, sign and all necessary appurtenances, augering of post holes, setting posts, concrete, backfilling, compaction, removal and disposal of surplus material and reinstatement of disturbed surfaces as measured from Contract Drawings.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used

END OF SECTION

### 1.1 SUBMITTALS

- .1 Upon acceptance of bid 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 22.
  - .4 Environmental Plan specified in section 01 35 43.
  - .5 Health and Safety Plan specified in section 01 35 29.
  - .6 Dust Control Plan specified in section 01 50 00.
  - .7 List of workers requiring security clearance and those to be placed on Site Security Control list as specified in section 01 35 59.

### 1.2 WORK SCHEDULE

- .1 Upon acceptance of bid submit detailed work schedule within 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 within designated time.
  - .3 Generally Bar Charts derived from commercially available computerized project management system are preferred but not mandatory.

- .5 Work schedule must take into consideration and reflect the work phasing, required sequence of work, special conditions and operational restrictions as specified below and 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 subtrades and subcontractors are made aware of the work restraints and operational restrictions specified.
- .9 Schedule Updates:
  - .1 Submit on a weekly basis or 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 PROJECT PHASING

- .1 Be aware that Facility must be kept operational for the full duration of work of this contract. Building services to areas under use by tenants must also be maintained at all times during the Facility's operational hours and as specifically defined in operational restrictions specified in this section.
- .2 Perform Work of this contract in individual phases as indicated

on the phasing drawings and in the following sequence of activities:

- .1 Phase 1 - Area 2 & 3
  - .2 Phase 2 - Area 4, 5 and 6
  - .3 Phase 3 - Area 1, Area 7A, 7B, and 7C
- .3 Work may occur in more than one Area concurrently, however building access must be provided and maintained at all times and coordinated with the Departmental Representative.
- .4 Unless indicated or approved otherwise, complete all work of a particular phase prior to commencement of another phase. Obtain Departmental Representative's permission prior to moving between phases.

#### 1.4 OPERATIONAL RESTRICTIONS

- .1 The Contractor must recognize that the institution will be affected by implementation of this Contract. The Contractor must perform the work with utmost regard to the safety and convenience of institution staff and 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 institution, building entrances or driveways without providing temporary facilities as necessary to ensure safe and direct passage through disturbed or otherwise affected areas.
- .2 Contractor to meet with the Departmental Representative on a weekly basis to identify intended work areas, activities and scheduling for the coming week.
- .3 Working Hours and Working Days:
  - .1 In working areas located within the penitentiary walls, the work day shall not commence before 8:00am or end after 16:00 unless otherwise approved by the Departmental Representative. This includes backfilling and cleanup of the site prior to the deadline of 16:00. Re-entry to working areas inside the penitentiary walls shall not be permitted any time after 16:00.
  - .2 In working areas located outside the penitentiary walls, the work day shall not commence before 7:00am or end after 19:00 unless otherwise approved by the Departmental Representative. This includes backfilling and cleanup of the site prior to the deadline of 19:00.
  - .3 Working Days shall typically be Monday to Friday, unless there is a statutory holiday.
- .4 Night, Saturday, Sunday And Holiday Work:

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- .1 The Departmental Representative may order or the Contractor may request work to proceed in whole or in part at night, on Saturdays, Sundays or holidays if it is deemed necessary or expedient in order to preserve and maintain traffic over or on any road or to complete any works that are of an urgent nature.
  - .5 No Sunday work will be permitted, except in the case of emergency and then only with the written permission of the Engineer and to such extent as may be necessary.
  - .6 The Contractor shall, as far as possible, refrain from work on Saturdays and statutory holidays in the Province of New Brunswick. If work must be carried out on such a Saturday or holiday, written notification must be submitted to the Engineer at least five (5) days in advance stating those places where work will be conducted and what Engineering or security assistance may be required.
  - .7 Departmental Representative reserves the right to stop certain daytime work activities, if the nature of that activity generates excessive noise or dust and have Contractor re-schedule that particular work to be performed during the Off-Hour period.
  - .8 See section 01 35 59 in regards to:
    - .1 Special security requirements which must be observed in the course of work.
    - .2 Provision of security personnel by Contractor as part of the Work.
  - .9 Facility circulation maintained:
    - .1 Ensure that entrances, corridors, stairwells, fire exits 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. Provide temporary dust barriers and other suitable enclosures to ensure users are not exposed to construction activities and are protected from exposure to dust, noise and hazardous conditions.
    - .3 Provide temporary corridors, walkways, passageways, access to offices, etc. when required due to nature of work. Such circulation routes must be constructed to barrier free requirements unless approved otherwise by Departmental Representative.
    - .4 Maintain fire escape routes accessible and firefighting access open all times for the duration of the project.

.5 Do not under any circumstances block fire exit doors. Do not leave construction materials or debris in corridors, stairwells building entrances and exits.

.10 Safety Signage:

.1 Provide on site, and erect as required during progress of work, proper bilingual signage, mounted on self-supporting stands, warning the institution staff and building occupants of construction activities in progress and alerting need to exercise caution in proceeding through disturbed areas of the facility, and directing building occupants through any detours which may be required.

.2 Signage to be professionally printed and mounted on wooden backing, coloured and to express messages as directed by the Departmental Representative.

.3 Generally maximum size of sign should be in the order of 1.0 square meters. Number of signs required will be dependent on number of areas in facility under renovation at any one time.

.4 Include costs for the supply and installation of these signs in the bid amount.

1.5 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 4 days in advance of meeting date.

.1 Ensure attendance of all subcontractors.

.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 3 calendar days after each meeting.

.3 Make revisions as directed 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.

#### 1.6 WORK COORDINATION

- .1 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 General Contractor shall convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required.
  - .1 Provide each trade with the plans and specs of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
  - .2 Develop coordination drawings when deemed required illustrating potential interference between work of various trades and distribute to all affected parties including structural trade.
    - .1 Pay particularly close attention to overhead work above ceilings and within or near to building structural elements.
    - .2 Coordination drawings to identify all building elements, services lines, rough-in points and indicate from where various services are coming.
    - .3 Review coordination drawings at purposely called meetings. Have subcontractors sign-off on drawings and publish minutes of each meeting.
    - .4 Plan and coordinate work in such a way to minimize quantity of service line offsets.
    - .5 Submit copy of coordination drawings and meeting minutes to Departmental Representative for information purposes.
- .3 Submission of shop drawings and ordering of prefabricated equipment or prebuilt components shall only occur once 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.
- .4 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, cutting, patching and the need to remove and replace completed work.

- .5 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 own cost.

### 1.7 OTHER CONTRACTS

- .1 Another contract will be in progress at the site during the course of this work.
- .2 The project title and subject matter of these contracts are:
  - .1 West Wall Perimeter Repairs.
- .3 Further contracts may be let during the period that this contract is in progress.
- .4 Cooperate with other Contractors in carrying out their respective works and carry out all instructions from the Departmental Representative in this regard.
- .5 Connect properly and coordinate work with that of other Contractors. If any part of the work under this Contract depends for its proper execution or result upon the work of another Contractor, report promptly to the Departmental Representative, in writing, any defects in the work of such other Contractors as may interfere with the proper execution of this work.

END OF SECTION

### 1.1 RELATED SECTIONS

- .1 Section 01 45 00: Testing and Quality Control
- .2 Section 01 78 00: Closeout Submittals.

### 1.2 SUBMITTAL GENERAL REQUIREMENTS

- .1 Submit to Departmental Representative for review requested submittals specified in various sections of the specifications including shop drawings, samples, permits, compliance certificates, test reports, work management plans and other data required as part of the work.
- .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with work affected by submittal until relevant submissions have been reviewed.
- .4 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .5 Where items or information is not produced in SI Metric units, provide soft converted values.
- .6 Review submittals prior to submission to Departmental Representative. Ensure that necessary requirements have been determined and verified and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents.
  - .1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of

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Contract Documents stating reasons for deviations.

- .9 Contractor's responsibility for errors, omissions or deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .10 Submittal format:
  - .1 Submit 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.
  - .2 Submit in electronic format as pdf files. Forward pdf and in the native program format on USB compatible with PWGSC encryption requirements or through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.
- .11 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.
- .12 Keep one reviewed copy of each submittal document on site for duration of Work.

### 1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means fabrication drawings, erection drawings, diagrams, illustrations, schedules, performance charts, technical product data, brochures, specifications, test reports installation instructions and other data which are to be provided by Contractor to illustrate compliance with specified materials and details of a portion of work.
- .2 Shop Drawing Quantities: submit sufficient copies required by the General Contractor and sub-contractors plus 3 copies which will be retained by Departmental Representative.
  - .1 Ensure sufficient copies are submitted to enable one complete set to be included in each of the maintenance manuals specified in 01 78 00.
- .3 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.
- .4 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 equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.
  - .2 Supplement manufacturer's standard drawings and literature with additional information to provide details applicable to project.
  - .3 Delete information not applicable to project on all submittals.
- .5 Allow 5 calendar days for Departmental Representative's review of each submission.
- .6 Adjustments or corrections made on shop drawings by Departmental Representative are not intended to change Contract Amount. If adjustments affect value of Work, advise Departmental Representative in writing prior to proceeding with Work.
- .7 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections and comments are made, fabrication and installation may proceed upon receipt of shop drawings. If shop drawings are rejected and noted to be Resubmitted, do not proceed with that portion of work until resubmission and review of corrected shop drawings, through same submission procedures indicated above.
- .8 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.
- .9 Accompany each submissions with transmittal letter containing:

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- .1 Date.
  - .2 Project title and project number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .10 Submissions shall include:
- .1 Date and revision dates.
  - .2 Project title and project number.
  - .3 Name and address of:
    - .1 Subcontractor.
    - .2 Supplier.
    - .3 Manufacturer.
  - .4 Contractor's stamp, signed by Contractor's authorized Representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - .5 Cross references to particular details of contract drawings and specifications section number for which shop drawing submission addresses.
  - .6 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.
- .11 After Departmental Representative's review, distribute copies.
- .12 The review of shop drawings by the Departmental Representative or by an authorized Consultant or designate is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Canada approves the detail design inherent in the 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 all requirements of the construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation

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and for co-ordination of Work of all 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 to 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 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Departmental Representative are not intended to change Contract Amount. If adjustments will result in a cost increase to the Contract notify Departmental Representative in writing prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

END OF SECTION

### 1.1 SECTION INCLUDES

- .1 Fire Safety Requirements.
- .2 Hot Work Permit.
- .3 Existing Fire Protection and Alarm Systems.

### 1.2 RELATED SECTIONS

- .1 Section 01 35 29: Health and Safety Requirements.

### 1.3 REFERENCES

- .1 National Fire Code 2010
- .2 National Building Code 2010

### 1.4 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 such as for roofing work.

### 1.5 SUBMITTALS

- .1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within 14 calendar days of acceptance of bid.
- .2 Submit in accordance with section 01 33 00.

### 1.6 FIRE SAFETY REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
  - .1 National Fire Code 2010.
  - .2 National Building Code 2010.
  - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations.

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

#### 1.7 HOT WORK AUTHORIZATION

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.
- .2 To obtain authorization submit to Departmental Representative:
  - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
  - .2 Description of the type and frequency of Hot Work required.
  - .3 Sample Hot Work Permit to be used.
- .3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:
  - .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
  - .2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.
- .4 Requirement for individual authorization will be based on:
  - .1 Nature or phasing of work;
  - .2 Risk to Facility operations;
  - .3 Quantity of various trades needing to perform hot work on project or;
  - .4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.
- .5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
- .6 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed, perform Hot Work only during non-operative hours of the Facility. Follow Departmental Representative's directives in this regard.

### 1.8 HOT WORK PROCEDURES

- .1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.
- .2 Hot Work Procedures to include:
  - .1 Requirement to perform hazard assessment of site and immediate work area beforehand for each hot work event in accordance with Safety Plan specified in section 01 35 29.
  - .2 Use of a Hot Work Permit system with individually issued permit by Contractor's Superintendent to worker or subcontractor granting permission to proceed with Hot Work.
  - .3 Permit required for each Hot Work event.
  - .4 Designation of a person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of 30 minutes immediately following the completion of the Hot Work.
  - .5 Compliance with fire safety codes, standards and occupational health and safety regulations specified.
  - .6 Site specific rules and procedures in force at the site as provided by the Facility Manager.
- .3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.
- .4 Procedures shall clearly establish responsibilities of:
  - .1 Worker performing hot work,
  - .2 Person issuing the Hot Work Permit,
  - .3 Fire Safety Watcher,
  - .4 Subcontractor(s) and Contractor.
- .5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.

### 1.9 HOT WORK PERMIT

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

- .7 Name of worker to which the permit is issued.
  - .8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
  - .9 Worker's signature with time/date of hot work completion.
  - .10 Stipulated time period of safety watch.
  - .11 Fire Safety Watcher's signature with time/date.
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- .2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.
  - .3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.

#### 1.10 FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm systems shall not be:
  - .1 Obstructed.
  - .2 Shut-off, unless approved by Departmental Representative.
  - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting
  - .
- .3 Costs incurred, from the fire department, Facility owner and tenants, resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

#### 1.11 DOCUMENTS ON SITE

- .1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.
- .2 Upon request, make available to Departmental Representative or to authorized safety Representative for inspection.

END OF SECTION

### 1.1 RELATED SECTIONS

- .1 Section 01 35 24: Special Procedures on Fire Safety 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.
- .2 Submit site-specific Health and Safety Plan prior to commencement of Work.
  - .1 Submit within 7 days of notification of Bid Acceptance. Allow for 5-10 days for Department review and recommendations prior to the commencement of work. Provide 3 copies.
  - .2 Departmental Representative will review Health and Safety Plan and provide comments.
  - .3 Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.

- .4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
- .5 Submit revisions and updates made to the Plan during the course of Work.
- .3 Submit name of designated Health and Safety Site Representative and support documentation specified in the Safety Plan.
- .4 Submit building permit, compliance certificates and other permits obtained.
- .5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other Department of Labour organization.
- .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
- .6 Submit copies of reports or directions issued by Federal, 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 New Brunswick, and General 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 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/fulltext.html](http://laws-lois.justice.gc.ca/eng/acts/L-2/fulltext.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 or 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&section=text](http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316&section=text).
- .4 Canadian Standards Association (CSA):
  - .1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .8 Observe construction safety measures of:
  - .1 NBC 2010, Division B, Part 8.
  - .2 Municipal by-laws and ordinances.
- .9 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .10 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .11 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

#### 1.5 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

#### 1.6 SITE CONTROL AND ACCESS

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
  - .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however,

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Contractor remains responsible for the health and safety of authorized persons while at the Work Site.

- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
  - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment. See Section 01 50 00 for minimum acceptable requirements.
  - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
  - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
- .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.

#### 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.

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1.9 PERMITS

- .1 Post permits, licenses and compliance certificates, specified in section 01 10 10, 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 ASSESSMENTS

- .1 Perform site specific health and safety hazard assessment of the Work and its site.
- .2 Carryout initial assessment prior to commencement of Work with further assessments as needed during progress of work, [including when new trades and subcontractors arrive on site].
- .3 Record results and address in Health and Safety Plan.
- .4 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 on-going operations:
    - .1 Movement of inmates throughout both secured and un-secured areas of the site.
    - .2 Vehicular traffic.
- .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.

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1.12 MEETINGS

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

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

#### 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 task; minimum being hard hat, safety 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 noncompliance. Post rules on site.

#### 1.17 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

#### 1.18 INCIDENT REPORTING

- .1 Investigate and report 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 \$5,000.00,
  - .4 Interruptions to Facility operations resulting in an operational lost 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 site.
  - .1 Post on site.
  - .2 Submit copy to Departmental Representative.

#### 1.20 BLASTING

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

#### 1.21 POWDER ACTUATED DEVICES

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

#### 1.22 CONFINED SPACES

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

#### 1.23 SITE RECORDS

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

#### 1.24 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in 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 RELATED SECTIONS

- .1 Waste Management and Disposal: Section 01 74 22.
- .2 Excavating, Trenching and Backfilling: Section 31 23 33.01

### 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.
- .2 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
- .3 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

### 1.3 ENVIRONMENTAL PERFORMANCE

- .1 A meeting will be held with the successful contractor at least one week prior to the commencement of construction activities. All Contractor staff and Departmental Representative's staff assigned to project are required to attend. Environmental protection requirements for the project will be reviewed, including, but not limited to water quality management, soils disposal, dewatering management, related permit requirements and on-site reporting and monitoring procedures.
- .2 The Contractor is held responsible to ensure that all necessary permits related to Environmental Protection have been obtained and that necessary documentation is available on-site.
- .3 The Contractor shall meet all requirements as detailed in **Table 2.1-2.6 Potential Project/Valued Ecosystem Interactions and Mitigation Measures** included in Appendix B. Where stipulations in Appendix B differ from those in the rest of the specification herein, the more stringent requirements shall apply.
- .4 Contractor to prepare and submit the following documents as specified elsewhere in this section for review by the

Departmental Representative:

- .1 Construction Methodology.
- .2 Erosion and Sedimentation Control Plan.
- .4 Environmental/Spill Response Plan.
- .5 Under the Canadian Environmental Protection Act, Federal Fisheries Act and Nova Scotia Environment Act, no sediment shall be released into any waterbody.

1.4 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.5 HAZARDOUS MATERIAL HANDLING

- .1 Store and handle hazardous materials in accordance with applicable federal and provincial laws, regulations, codes 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 inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when storage began.
- .4 Store and handle flammable and combustible materials in accordance with National Fire Code.
- .5 Transport hazardous materials in accordance with federal Transportation of Dangerous Goods Regulations and applicable Provincial regulations.

1.6 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site. Dispose in accordance with Provincial requirements and project waste management requirements specified in section 01 74 22 - Construction/Demolition Waste Management & Disposal.
- .2 Do not dispose of hazardous waste or volatile materials, such as mineral spirits, paints, thinners, oil or fuel into waterways, storm or sanitary sewers or waste landfill sites.
- .3 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.

#### 1.7 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing regulations and requirements.
- .4 Provide control devices such as filter fabrics, sediment traps and settling ponds to control drainage and prevent erosion of adjacent lands. Maintain in good order for duration of work.

#### 1.8 SITE AND PLANT PROTECTION

- .1 Protect trees and plants on site and adjacent properties where indicated.
- .2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
- .3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .4 Minimize stripping of topsoil and vegetation.
- .5 Restrict tree removal to areas indicated or designated by Departmental Representative.

#### 1.9 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways.

- .4 At borrow sites, design and construct temporary crossings to minimize erosion to waterways in strict conformance with provincial environmental regulations.
- .5 Do not skid logs or construction materials across waterways.
- .6 Avoid indicated spawning beds when constructing temporary crossings of waterways.
- .7 Do not blast under water or 100 m of spawning beds.
- .8 Do not refuel any type of equipment within 100 meters of a water body. Maintain equipment in good working condition with no fluid leaks, loose hoses or fittings.

#### 1.10 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and around entire construction site.
- .5 Have appropriate emergency spill response equipment and rapid clean-up kit on site located adjacent to hazardous materials storage area. Provide personal protective equipment required for clean-up.
- .6 Report, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment to Federal and Provincial Department of the Environment.
  - .1 Notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.

END OF SECTION



- .7 CPIC Security Clearance: means a personal background check made through the RCMP Canadian Police Information Centre.
- .8 Construction employee: means any person working for the General Contractor or subcontractor(s), commercial vehicle or equipment operator, material supplier and personnel from testing, inspection or regulatory agencies who needs to circulate on the Institution's property as part of the Work.
- .9 Departmental Representative: means the person as defined in the General Conditions of the Contract for projects managed by Public Works and Government Services Canada (PWGSC) or the Project Manager for projects managed by Correctional Service Canada (CSC).
- .10 Perimeter: means the fenced or walled area of the Institution that restrains the movement of the inmates.
- .11 Construction zone: means the area as shown on the contract drawings and as described below where the Contractor will be allowed to work. This area may or may not be isolated from the security area of the Institution.
  - .1 In general, Contractor's work activities and movement is limited to areas as shown on the contract drawings.

### 1.3 PRELIMINARY PROCEEDINGS

- .1 Prior to commencement of work, the Contractor shall meet with the Director to:
  - .1 Discuss the nature and extent of all activities involved in the work of this contract.
  - .2 Obtain security rules, regulations and procedures in force at the Institution and directives to be followed by Contractor and all construction employees during the entire course of the work.
- .2 The Departmental Representative will coordinate a pre-construction meeting between Contractor, the Director and Facility security personnel who will provide details on site security requirements.
- .3 The Contractor shall:
  - .1 Ensure that all construction employees are aware of the CSC security requirements.
  - .2 Ensure that a copy of the CSC security requirements is prominently displayed at the work site at all times.
  - .3 Co-operate with Institutional staff in ensuring that security requirements and procedures are stringently followed

by all construction employees.

- .4 Any infraction of site security requirements by the Contractor or by a construction employee could result in the immediate removal of the offending party or person from the site.

#### 1.4 WORKER SECURITY CLEARANCE

- .1 CPIC security clearance must be obtained for all construction employees who needs to circulate on the Institution's property during the course of the Work.
  - .1 Application forms are contained in **Appendix C**.
  - .2 Have forms filled out by each worker.
- .2 Submit to the Departmental Representative:
  - .1 A list of the names with date of birth of all construction employees;
  - .2 Completed security clearance form for each person.
  - .3 Clear, legible, copy of picture identification, such as provincial driver's license, for each person.
- .3 No person will be admitted inside the Institution without a valid CPIC Security Clearance pertinent to the Institution of the Work and a recent picture identification, such as a provincial driver's permit, to show proof of identity.
  - .1 Security clearance obtained for other Institutions or other CSC properties are not valid for Work of this contract.
- .4 Allow two (2) weeks for processing of security clearances.
- .5 Be aware that facial photographs of security cleared construction employees may be taken as deemed required by the Director.
  - .1 These photographs may be posted for display at appropriate locations in the Institution or placed into an electronic database for identification purposes.
  - .2 Photo ID cards may also be issued to each construction employee to be donned while on site. ID cards will be left at the designated security entrance to be picked by each person upon arrival at the Institution and must be prominently displayed on the person's clothing at all times.
- .6 CSC Security Clearance will be denied and entry into the Institution will be refused to any person which the Director has reason to believe may be a security risk to the Facility's operations.
  - .1 Also, a person will be subject to the immediate removal





within the secure perimeter of the Institution unless prior approval is obtained from the Director.

.1 Should wireless cellular telephones be permitted, the owner/user of such device shall not permit its use by any Inmate.

.4 The Director may approve but limit the use of two way radios.

#### 1.9 WORK HOURS

.1 Be aware that for security reasons the days and hours which Contractor will be permitted to perform work within the secured perimeter wall at the site are limited to:

.1 Weekdays only from Monday to Friday and between the hours of 08:00 and 16:00.

.2 Working hours outside the secured perimeter area may be 7:00 to 19:00 upon approval of Departmental Representative.

.2 No work will be permitted during evenings, nighttime, weekends and on statutory holidays. These are considered off-hour periods at the Institution.

.3 The work day and hour restrictions specified above will only be waved for special situations and certain aspects of the Work deemed necessary and where off-hour work is determined to be the least disruptive approach to the operations of the Institution as determined by the Director.

.1 A minimum of 7 days advance notice is required to obtain permission for off-hour work.

.2 In case of an emergency, the advanced notification may be waved by the Director.

#### 1.10 OVERTIME WORK

.1 No overtime work will be allowed at the end of a work shift.

.2 Where overtime work is deemed necessary at the end of a work shift to complete a critical component of the work, it shall be planned and requested a minimum of 48 hours beforehand for approval by the Director.

.3 Should unplanned overtime work occur due to an emergency situation, such as to complete a concrete pour or to make the work site safe and secure, the Contractor shall immediately advise the Director of this pending situation and stringently follow all directions given by the Director.

.4 Extra Costs: Note that when overtime work or off-hour work on

weekends and statutory holidays is approved by the Director, be aware that extra CSC security staff or commissionaires may need to be posted at the Institution to maintain security surveillance. The costs for such service will be charged to the Contractor in the form of a financial assessment to the Contract.

#### 1.11 TOOLS AND EQUIPMENT

- .1 Make a complete list of all tools and equipment brought on site for use in the work. Provide copy of the list to the Director and to Departmental Representative.
- .2 Maintain and update list during the entire course of the Work.
- .3 Keep all tools and equipment under constant supervision. This is of particular importance for power-driven and cartridge-driven tools, cartridges, files, saw blades, rod saws, wire, rope, ladders as well as all types of jacking devices.
- .4 Store all tools and equipment in lockable tool boxes and place in approved and secure locations.
- .5 Lock tool boxes when not in use. Keys shall remain in the possession of employees designated by Contractor.
- .6 Immediately report to the Director any missing tools and equipment.
- .7 Tool Check: Be aware that CSC security personnel will conduct tool/equipment checks during the course of the Work against the list provided by Contractor. Frequency of checks to be as follows:
  - .1 At commencement and completion of the project.
  - .2 Weekly basis when the construction period is greater than 1 week.
- .8 Controlled items: entry and use of certain tools and equipment, such as cartridges and hacksaw blades, are highly controlled at the Institution. The Director will determine and advise which items are to be controlled.
  - .1 Controlled items will be given to the Contractor at the beginning of each workday in quantities as required for 1 day's work.
  - .2 All controlled items must be returned to CSC security personnel at the end of each day including used blades, cartridges etc.
- .9 When propane or natural gas is used as fuel for construction





jeopardizes the security of the Institution.

- .8 Private vehicles of construction employees will NOT be allowed inside the secure perimeter area of the Institution, except for a special situation as may be authorized by the Director.
- .9 Subject to prior approval from the Director, certain construction equipment may be permitted to remain in the work areas during nighttime or weekend provided such equipment is securely locked and has it's battery removed. The Director may also require that the equipment be tied by chain and padlocked to a solid unmovable object.

#### 1.18 - MOVEMENT OF PERSONS AT THE INSTITUTION

- .1 Subject to the requirements of good security, the Director will permit the contractor and construction employees as much freedom of action and movement in the work area of the site as is possible.
- .2 Notwithstanding the above clause, the Director will:
  - .1 Prohibit or restrict access to certain parts of the Institution.
  - .2 Require that access to certain areas of the Institution, either for the entire duration of the work or for certain specific time periods be only allowed under escort by a member of CSC security staff or a commissionaire.
  - .3 During lunch and coffee breaks, all construction employees shall remain within the construction work areas of the site. No person shall be permitted to eat in the Officer's lounge or the dining room of the Institution.

#### 1.19 SURVEILLANCE AND INSPECTION

- .1 Construction activities and related movement of personnel and vehicles will be under surveillance and subject to inspection by the Institution security staff to ensure that established site security requirements are stringently followed.
- .2 CSC staff will ensure that an understanding of the need to carry out surveillance and inspections, as specified above, is established among construction employees and maintained throughout the duration of the entire Work.

#### 1.20 STOPPAGE OF WORK

- .1 The Director may, at any given time during the course of the Work, stop Contractor and construction employees from entering the Institution, order their immediate departure or instruct them to

remain in a designated location due to an emergency security situation occurring at the Institution.

.1 Should this occur, Contractor's Superintendent shall obtain the name of the CSC staff member issuing the order, note the date and time when the notification was received and immediately obey the order as quickly as possible.

.2 Advise the Departmental Representative within 24 hours of receipt of such notification from the Institution.

#### 1.21 CONTACT WITH INMATES

.1 Unless specifically authorized, it is forbidden to come into contact with inmates, to talk with them, to receive objects from them or to give them objects. Any construction employee doing any of the above will be removed from the site and his security clearance revoked.

.2 Note that cameras are not allowed on CSC property.

.3 Notwithstanding the above, should Director approve the use of cameras for work purposes, it is strictly forbidden to take pictures of Inmates, CSC staff members or of any part of the Institution other than those areas under renovation as part of the Work.

#### 1.22 KEYS

.1 Security Hardware Keys:

.1 Arrange and ensure that keys for security door hardware are delivered directly by the hardware Supplier/Installer to the Institution's designated Security Maintenance Officer (SMO).

.2 The SMO will provide written receipt to Contractor for security keys received.

.3 Provide a copy of such receipt to the Departmental Representative.

.2 Construction Keys:

.1 Supply and install construction cylinders on all new doors and keep such doors locked during the entire construction period.

.2 Instruct construction employees on the care and safekeeping of keys assigned to them to ensure safe custody of construction keys.

.3 Construction cylinders shall only be removed and be replaced with operational cylinders at such time as deemed appropriate by the Director. The SMO will, in conjunction with the lockset manufacturer:

.1 Prepare an operational keying schedule.

.2 Accept the operational keys and cylinders directly from the lockset manufacturer.

.3 Arrange for removal and return of the construction



### 1.1 RELATED SECTIONS

- .1 Section 01 33 00 - SUBMITTAL PROCEDURES.

### 1.2 INSPECTION

- .1 Give timely notice requesting inspection of Work designated for special tests, inspections or approvals by Departmental Representative or by inspection authorities having jurisdiction.
- .2 In accordance with the General Conditions, Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.
- .3 If Contractor covers or permits to be covered Work designated for special tests, inspections or approvals before such is made, uncover Work until particular inspections or tests have been fully and satisfactorily completed and until such time as Departmental Representative gives permission to proceed.
- .4 Pay costs to uncover and make good work disturbed by inspections and tests.

### 1.3 INDEPENDENT INSPECTION AGENCIES

- .1 Departmental Representative will engage and pay for service of Independent Inspection and Testing Agencies for purpose of inspecting and testing portions of Work except for the following which remain part of Contractor's responsibilities:
  - .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.
  - .4 Performance verification tests before building commissioning procedures commences.
  - .5 Mill tests and certificates of compliance.
  - .6 Tests as specified within various sections designated to be carried out by Contractor under the supervision of Departmental Representative.
- .2 Provide sufficient advance notice to Departmental Representative of time when the Work will be ready for testing by designated Testing Agency in order for Departmental





### 1.1 SITE ACCESS AND PARKING

- .1 The Departmental Representative will designate Contractor's access to project site as well as parking facilities for equipment and workers.
- .2 The Contractor is advised that while parking facilities for his workers and subcontractors will be on property, such parking facilities may be remote from the actual site of the work. In any case, follow all instructions from the Departmental Representative in regards to parking facilities.
- .3 Maintain 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.

### 1.2 BUILDING ACCESS

- .1 Use only access doors, and circulation routes and elevators within building as designated by Departmental Representative to access interior work.

### 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.

### 1.4 MATERIAL STORAGE

- .1 Locate site storage where indicated on Drawings and where directed by Departmental Representative. Place in location of least interference with existing Facility operations.
- .2 Material storage space on site is limited. Coordinate delivery to minimize storage period on site before being needed for incorporation into work.

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### 1.5 SITE ENCLOSURES

- .1 Provide temporary fence to enclose various construction areas of work site and to isolate pedestrian traffic/inmates from the active construction site.
- .2 Erect wood fence to 1200 mm height if intent is to guide pedestrian traffic through the construction zone, isolated from construction activities. Erect wood fence to 2400 mm height if intent is to provide a secure area for hoarding, constructed as follows:
  - .1 Use 38 x 89 mm construction grade framing spaced at maximum 600 mm oc covered with 13 mm thick exterior grade fir plywood on public side and adequately braced.
  - .2 Apply plywood panels vertically with flush and butted joints.
  - .3 Provide one truck gate and at least one pedestrian door as directed by Departmental Representative.
  - .4 Paint public side of site enclosure in selected colours with one coat primer to CGSB 1-GP-55e and one coat exterior paint to CGSB 1-GP-59M.
  - .5 Maintain public side of enclosure in clean condition.
- .3 Make all gates lockable and provide keyed padlocks.
- .4 Obtain Departmental Representative's approval beforehand of location and layout of all temporary fence enclosures.
- .5 Provide warning signs affixed to all fenced areas, identifying those enclosed areas as "Construction Zones" with access restricted to only those persons so authorized by General Contractor.
- .6 Do not construe fencing as an acceptable replacement for pedestrian walkway and hoarding requirements specified below.

### 1.6 PEDESTRIAN WALKWAYS AND HOARDING

- .1 Ensure maximum safety and security to facility users during the course of work.
- .2 Be responsible for and provide temporary 1.2 metre high plywood construction hoarding when work is adjacent to exterior sidewalks and circulation routes used by facility employees and inmates.

- .3 Maintain access and egress to building entrances and fire exits designated by Departmental Representative to remain in use. Provide enclosed walkways when work is adjacent to such doors as follows:
  - .1 Erect wooden pedestrian walkway complete with roof and side covers.
  - .2 Install walkways as soon as work is in the vicinity of entrance and exit doors and poses a potential danger to facility users.
  - .3 Construct to approximate size of 2.0 metre wide x 2.1 metre high x length as required to fully clear danger zone.
  - .4 Provide signage and lighting.
  - .5 Submit details of walkway size, location, layout and construction to Departmental Representative beforehand and obtain approval.
- .4 Adequately frame and brace hoarding and walkways to resist wind, and other weather or site conditions.
- .5 Erect such protective devices during Facility's non-operational off hour periods.
- .6 Obtain Departmental Representative's concurrence prior to removal of hoarding and walkways.

#### 1.9 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 Sanitary facilities are available at the site and may be used by Contractor's work force. Make arrangements for the use of such facilities through the Departmental Representative.

#### 1.10 POWER

- .1 Power supply is not available on site for use by the Contractor within the secured perimeter area.
- .2 Contractor shall supply any temporary power that he requires outside the secured perimeter area. Provide and pay all costs to supply and install temporary cabling, panelboards, switching devices and other equipment as required to connect into power

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source, provide adequate ground fault protection and extend power supply from existing source to work areas. Perform work and make all connections in accordance with the CSA C22.1-12 Canadian Electrical Code, in compliance with the federal and provincial Occupational Health and Safety Regulations as specified in section 01 35 29.

- .3 Electrical power and lighting systems installed under this Contract can be used for construction requirements provided that guarantees are not affected thereby. Make good damage. Replace lamps which have been used over period of 3 months.

#### 1.11 WATER SUPPLY

- .1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances. Do not operate existing hydrants on site.

#### 1.12 REMOVAL OF TEMPORARY FACILITIES

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

END OF SECTION

### 1.1 GENERAL

- .1 Use new material and equipment unless otherwise specified.
- .2 Within 7 days of written request by Departmental Representative, submit following information for any materials and products proposed for supply:
  - .1 Name and address of manufacturer.
  - .2 Trade name, model and catalogue number.
  - .3 Performance, descriptive and test data.
  - .4 Compliance to specified standards.
  - .5 Manufacturer's installation or application instructions.
  - .6 Evidence of arrangements to procure.
  - .7 Evidence of manufacturer delivery problems or unforeseen delays.
- .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.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

### 1.2 PRODUCT QUALITY

- .1 Contractor shall be solely responsible for submitting relevant technical data and independent test reports to confirm whether a product or system proposed for use meets contract requirements and specified standards.
- .2 Final decision as to whether a product or system meets contract requirements rest solely with the Departmental Representative in accordance with the General Conditions of the Contract.

### 1.3 ACCEPTABLE MATERIALS AND ALTERNATIVES

- .1 Acceptable Materials: When materials specified include trade

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names or trade marks or manufacturer's or supplier's name as part of the material description, select and only use one of the names listed for incorporation into the Work.

- .2 Alternative Materials: Submission of alternative materials to trade names or manufacturer's names specified must be done during the bidding period following procedures indicated in the Instructions to Bidders.
- .3 Substitutions: After contract award, substitution of a specified material will be dealt with as a change to the Work in accordance with the General Conditions of the Contract.

#### 1.4 MANUFACTURERS INSTRUCTIONS

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods to be used. Do not rely on labels or enclosure provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturers instructions, so that Departmental Representative will designate which document is to be followed.

#### 1.5 AVAILABILITY

- .1 Immediately notify Departmental Representative in writing of unforeseen or unanticipated material delivery problems by manufacturer. Provide support documentation as per clause [1.1.2] above.

#### 1.6 WORKMANSHIP

- .1 Ensure quality of work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed.
- .2 Remove unsuitable or incompetent workers from site as stipulated in the General Conditions of the Contract.
- .3 Ensure cooperation of workers in laying out work. Maintain

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efficient and continuous supervision on site at all times.

- .4 Coordinate work between trades and subcontractors. See section 01 14 10 in this regard.
- .5 Coordinate placement of openings, sleeves and accessories.

#### 1.7 FASTENINGS - GENERAL

- .1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work and in humid areas.
- .2 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Wood or organic material plugs not acceptable.
- .3 Keep exposed fastenings to minimum, space evenly and lay out neatly.
- .4 Fastenings which cause spalling or cracking of material to which anchorage is made, are not acceptable.
- .5 Do not use explosive actuated fastening devices unless approved by Departmental Representative. See section on Health and Safety Requirements in this regard.

#### 1.8 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur and, use resilient washers with stainless steel.

### 1.9 STORAGE, HANDLING AND PROTECTION

- .1 Deliver, handle and store materials in manner to prevent deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled materials in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work. Provide additional cover where manufacturer's packaging is insufficient to provide adequate protection.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Immediately remove damaged or rejected materials from site.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

### 1.10 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.

END OF SECTION

### 1.1 GENERAL

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .3 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

### 1.2 MATERIALS

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

### 1.3 CLEANING DURING CONSTRUCTION

- .1 Maintain work areas in a tidy condition, free from accumulations of waste material and debris. Clean areas on a daily basis.
- .2 Keep building entrances, corridors, stairwells and tenant occupied areas of building in a clean dust free condition at all times. Conduct thorough cleaning of these areas when used by workers or affected by the Work.
- .3 Provide on-site containers for collection of waste materials and debris.
- .4 Use separate collection bins, clearly marked as to purpose, for source separation and recycling of waste and debris in accordance with waste management requirements specified.
- .5 Remove waste materials, and debris from site on a daily basis.
- .6 Remove snow and ice from access doors used by workforce.

1.4 FINAL CLEANING

- .1 In preparation for acceptance of the completed work perform final cleaning.
- .2 Broom clean and wash exterior paved surfaces and walks; rake clean other surfaces of grounds.
- .3 Remove debris and surplus materials from parking lot areas, driveway areas, paved areas and other accessible concealed spaces.

END OF SECTION

## 1.1 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.

## 1.2 WASTE MANAGEMENT

- .1 Incorporate environmental and sustainable practices in managing waste resulting from work.
- .2 Divert as much waste as possible from landfill.
- .3 Coordinate work of subtrades and subcontractors to ensure all possible waste reduction and recycling opportunities are taken. Follow waste management requirements specified in trade sections of the Specifications.
- .4 Reduce waste during installation of new materials. Undertake practices which will optimize full use of materials and minimize waste.
- .5 Develop innovative procedures to reduce quantity of waste generated by construction such as by delivering materials to site with minimal packaging etc.
- .6 Provide on-site facilities to collect, handle and store anticipated quantities of reusable, salvageable and recyclable materials.
- .7 During demolition and removal work separate materials and equipment at source, carefully dismantling, labelling and stockpiling alike items for the following purposes:
  - .1 Reinstallation into the work where indicated.
  - .2 Salvaging reusable items not needed in project which Contractor may sell to other parties.
  - .3 Sending as many items as possible to locally available recycling facility.
  - .4 Segregating remaining waste and debris into various individual waste categories for disposal in a "non-mixed state" as recommended by waste processing/landfill sites.
- .8 Isolate product packaging and delivery containers from general

waste stream. Send to recycling facility or return to supplier/manufacturer.

- .9 Send leftover material resulting from installation work for recycling whenever possible.
- .10 Establish methods whereby hazardous and toxic materials, and their containers used on site are properly handled, stored and disposed in accordance with applicable federal, provincial and municipal laws and regulations.

### 1.3 DISPOSAL REQUIREMENTS

- .1 Burying or burning of rubbish and waste materials is prohibited.
- .2 Disposal of volatile materials, mineral spirits, oil, paint, and other hazardous materials 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, demolition and construction waste materials have been banned from disposal in landfills and at transfer stations. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.
- .5 Transport and dispose of waste intended for waste processing plant or landfill facility in separated condition and to Operator's rules and recommendations in support of their effort to recycle, reduce and divert certain waste stream from general landfill.
- .6 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.
- .7 Sale of salvaged items by Contractor to other parties not permitted on site.

END OF SECTION

### 1.1 SECTION INCLUDES

- .1 Administrative procedures preceding inspection and acceptance of Work by Departmental Representative.

### 1.2 RELATED SECTIONS

- .1 Section 01 78 00: Closeout Submittals.

### 1.3 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 substantial 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;
  - .2 Final Operations and Maintenance manuals;
  - .3 Maintenance materials, parts and tools;
  - .4 Compliance certificates from applicable authorities;
  - .5 Reports resulting from designated tests;
  - .6 Demonstration and training complete with user manuals;
  - .7 Manufacturer's Guarantee certificates.
  - .8 Testing, adjusting and balancing of equipment and systems complete with submission of test reports.
  - .9 Commissioning of equipment and systems specified.
- .4 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.

END OF SECTION

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1.1 SECTION INCLUDES

- .1 Project Record Documents.
- .2 Operations and Maintenance data.

1.2 RELATED SECTIONS

- .1 Section 01 77 00: Closeout Procedures.

1.3 PROJECT RECORD DOCUMENTS

- .1 Departmental Representative will provide 2 white print sets of contract drawings 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". Label and place Contractor's signature and date.
  - .4 Show all modifications, substitutions and deviations from what is shown on the contract drawings.
- .5 Record following information:
  - .1 Depths of various elements of foundation in relation to Geodetic Datum.
  - .2 Horizontal and vertical location of exterior underground utilities and appurtenances referenced to permanent surface improvements.
  - .3 Horizontal and vertical location of various elements in relation to Geodetic Datum;
  - .4 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure;
  - .5 Field changes of dimension and detail;
  - .6 Location of all capped or terminated services and

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- utilities.
- .7 Chases for mechanical, electrical and other services;
  - .8 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings;
  - .9 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 As-Built Specifications: legibly mark in red each item to record actual construction, including:
- .1 Changes made by Addenda and Change Orders.
  - .2 Mark up both copies of specifications; stamp "As-Built", sign and date similarly to drawings as per above clause.
- .6 Maintain As-Built documents 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.
- .7 Submit on paper and in electronic format as pdf files. Forward pdf and in the native program format, MS Word, and Autocad dwg and photograph jpg files on USB compatible with PWGSC encryption requirements or through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.

#### 1.4 REVIEWED SHOP DRAWINGS

- .1 Provide a complete set of all shop drawings reviewed for project to incorporate into each copy of the Operations and Maintenance Manuals.
- .2 Submit full sets at same time and as part of the contents of the Operation and Maintenance Manuals specified.

#### 1.6 OPERATIONS & MAINTENANCE MANUAL

- .1 O&M Manual - Definition: an organized compilation of operating

and maintenance data including detailed technical information, documents and records describing operation and maintenance of individual products or systems as specified in individual sections of the specifications.

- .2 Manual Language: final manuals to be in both English and French languages.
  - .1 Upon review and acceptance by Departmental Representative, submit 3 final copies. Interim copies are not to be considered as part of the final copies unless they have been fully revised and are identical to the final approved version.
- .2 Submission Date: submit complete operation and maintenance manual to Departmental Representative 3 weeks prior to application for Certificate of Substantial Performance of the work.
- .3 Binding:
  - .1 Assemble, coordinate, bind and index required data into Operation and Maintenance Manual.
  - .2 Use vinyl, hard covered, 3 "D" ring binders, loose leaf, sized for 215 x 280 mm paper, with spine pocket.
  - .3 Where multiple binders are needed, correlate data into related consistent groupings.
  - .4 Identify contents of each binder on spine.
  - .5 Organize and divide data following same numerical system as the section numbers of the Specification Manual.
  - .6 Dividers: separate each section by use of cardboard dividers and labels. Provide tabbed fly leaf for each individual product and system and give description of product or component.
  - .7 Type lists and notes. Do not hand write.
  - .8 Drawings, diagrams and manufacturers' literature must be legible. Provide with reinforced, punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .4 Manual Contents:
  - .1 Cover sheet containing:
    - .1 Date submitted.
    - .2 Project title, location and project number.
    - .3 Names and addresses of Contractor, and all Sub-Contractors.
  - .2 Table of Contents: provide full table of contents in each binder(s), clearly indicate which contents are in each binder.
  - .3 List of maintenance materials.
  - .4 List of spare parts.
  - .5 List of special tools.
  - .6 Original or certified copy of warranties and product

guarantees.

.7 Copy of approval documents and certificates issued by Inspection Authorities.

.8 Copy of reports and test results performed by Contractor as specified.

.9 Product Information (PI Data) on materials, equipment and systems as specified in various sections of the specifications.

Data to include:

.1 List of equipment including manufacturer's name, supplier, local source of supplies and service depot(s). Provide full addresses and telephone numbers.

.2 Nameplate information including equipment number, make, size, capacity, model number and serial number.

.3 Parts list.

.4 Installation details.

.5 Operating instructions.

.6 Maintenance instructions for equipment.

.7 Maintenance instructions for finishes.

.5 Shop drawings:

.1 Include complete set of reviewed shop drawings into each copy of the operations and maintenance manual.

.2 Fold and bind material professionally in a manner that corresponds with the specification section numbering system.

.3 When large quantity of data is submitted, place into separate binders of same size as O&M binders.

.4 Maintenance Requirements: include routine procedures and guide for repair.

.5 Manufacturer's printed operation and maintenance instructions.

.6 Additional requirements as specified in individual specification sections.

#### 1.7 SPARE PARTS, TOOLS AND MAINTENANCE MATERIALS

.1 Provide spare parts, special tools and extra materials for maintenance purposes in quantities specified in individual specification sections.

.2 Tag all items with associated function or equipment.

.3 Provide items of same manufacture and quality as items in Work.

.4 Deliver to site in well packaged condition. Store in location as directed by Departmental Representative.

.5 Clearly mark as to contents indicating:

.1 Part number.

- .2 Identification of equipment or system for which parts are applicable.
- .3 Installation instructions or intended use as applicable.
- .4 Name, address and telephone number of nearest supplier.
  
- .6 Prepare and submit complete inventory list of items supplied. Include list within Maintenance Manual.

END OF SECTION