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PART 1 - GENERAL

- 1.1 Description of Work .1 Work under this contract consists of the furnishing of all plant, labour, equipment, and materials for the repair of the Dickson Brook Culvert, in Fundy National Park, Albert County, NB. The work is to be completed in strict compliance with the plans and specifications as prepared for this project.
2. In general, work under this Contract shall consist of, but not be limited to, the following:
- .1 Patching and repairs to all interior surfaces of cast-in-place concrete culvert.
  - .2 Supply and installation of protective coating to all interior surfaces of cast-in-place concrete culvert.
  - .3 Repairs to loose, broken, cracked and other damaged stone masonry walls and end posts.
  - .4 Repointing of all joints in stone masonry.
  - .5 Cleaning of all exposed surfaces of stone masonry.
  - .6 Cleaning, repair and preparation of stone masonry joints and installation of new joint filler, backer rod and sealant as indicated herein or on plans.
  - .7 Reinforced concrete encasement and underpinning of North and South culvert footings.
  - .8 Cleaning surface removal, patching, repair, preparation and installation of new topping to all exposed surfaces of cast-in-place concrete curb.
  - .9 Alterations to guide rail supports at end posts of bridge.
  - .10 All temporary diversions and redirection of water in brook as required to carry out work of this contract, in accordance with the Environmental Protection Plan.
  - .11 All traffic control and traffic maintenance as described herein and as required to complete the work.
  - .12 Removal and reinstatement of all in-situ fill materials, as required to install work under this contract.
  - .13 Fish rescue as required for work on and above the brook.
  - .14 Removal and off-site disposal of all excess materials.
  - .15 Provision of all temporary barriers and signage for roadway closures.
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.16 All other labour, materials and work necessary to complete the project to the Departmental Representative's full satisfaction.

- .3 All work to be carried out in accordance with applicable federal and provincial regulations for those agencies having jurisdiction for the work. The work is subject to the National Park Act and Regulations, Canadian Environmental Protection Act, Canada Labour Code and the New Brunswick Occupational Health and Safety Act and Regulations.

1.2 Traffic Maintenance

- .1 It is a requirement that a minimum of one travel lane be maintained and be completely serviceable for the entire duration of the project.
- .2 The travel lane can vary in location on the bridge to suit the construction requirements.
- .3 This travel lane must be maintained and provide uninterrupted access from 11:00 am to 7:00 pm, 7 days a week.

1.3 Fish Rescue

- .1 It will be a requirement for the contractor to arrange with, and pay for, Fort Folly First Nations to carry out fish rescue for the project to enable work to be carried out in and over the brook.

1.4 Water Control

- .1 Design and construction of water control, diversion structures, dewatering, etc. for installation of concrete encasement of culvert foundations and related work, to be based on a 50 year flow rate.
- .2 Contractor to design and install all necessary temporary works to complete the work of the contract. Proposed methods to be submitted to the Departmental Representative for review and approval and to be in accordance with all permitting requirements.
- .3 Only one third of the channel shall be blocked at a time for the construction of the concrete encasement and water control.

1.5 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.

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|  | .2 | Obtain prior permission from the Parks Canada Asset Manager before carrying out such site inspection.   |
|  | .3 | Contractors, bidders or those they invite to site are to review specification Section 01 35 29 - Health and Safety Requirements before visiting site. Take all appropriate safety measures for any visit to site, either before or after acceptance of bid. |
| <u>1.6 Interpretation of Documents</u> | .1 | Supplementary to the Order of Precedence article of the General Conditions of the Contract, the Division 01 sections take precedence over the technical specification sections in other Divisions of the Specification Manual.                              |
| <u>1.7 Term Engineer</u>               | .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.   |
| <u>1.8 Setting Out Work</u>            | .1 | Contractor to carry out all layout.   |
|  | .2 | Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.  |
|  | .3 | Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.  |
|  | .4 | Provide coordinates, elevations and dimensions in the field, as required by the Departmental Representative.  |
| <u>1.9 Codes and Standards</u>         | .1 | Perform work in accordance with National Parks Act, and any other code of federal, provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.                                       |
|  | .2 | Materials and workmanship must conform to or exceed applicable standards of Canadian General Standards Board (CGSB), Canadian Standards Association (CSA), American Society for Testing and Materials (ASTM) and other standards organizations.             |
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- .3 Conform to latest revision of any referenced standard as re-affirmed or revised to date of specification. Standards or codes not dated shall be deemed editions in force on date of tender advertisement.
- 1.10 Work within Park Boundaries .1 The project is within a national park and it is essential that lands remain as undisturbed as possible. The Contractor will be expected to use standards and methods beyond those for normal construction in order to protect the environment and ensure the aesthetics of the work. Contract limits shall be strictly adhered to and every precaution shall be taken to minimize environmental damage and disruption to vegetation, wildlife habitat, and structures or existing services, both on construction and storage sites.
- .1 If any damage occurs during construction, the Contractor is responsible to bear the expense to immediately restore such damaged areas to the satisfaction of the Departmental Representative.
- .2 If Contractor fails to repair damage to the satisfaction of the Departmental Representative, the Departmental Representative may have repairs completed by others at the Contractor's expense.
- .3 The Contractor shall ensure that contracted work meets the standards outlined in the contract specification and drawings.
- .4 All sources of aggregate and asphalt cement must be submitted to the Departmental Representative for approval at least two weeks prior to the start of any work.
- .5 The Contractor is responsible to follow the Provincial requirements regarding the following:
- .1 Pit and Quarry Guidelines
- .2 Environmental Construction Practice specifications
- .6 The Contractor will make arrangements with authorities or owners of private properties for quarrying and transporting materials and machinery over their properties and be responsible for obtaining and paying of fees.
- 1.11 Documents Required .1 Maintain at job site, one copy each of following:
- .1 Contract drawings.
- .2 Specifications.
- .3 Addenda.
- .4 Reviewed drawings.

- .5 Change orders.
  - .6 Other modifications to Contract.
  - .7 Copy of approved work schedule.
  - .8 Field test reports.
  - .9 Manufacturer's installation and application instructions.
  - .10 Site specific Health and Safety Plan and other safety related documents.
  - .11 Other documents as stipulated elsewhere in the Contract Documents.
- 1.12 Site Conditions .1 The Contractor will be responsible to visit the Dickson Brook Culvert and review existing site conditions.
- 1.13 Departmental Representative .1 Departmental Representative will be assigned after contract award.
- 1.14 Work Schedule .1 Provide to the Departmental Representative in writing and within 5 working days after Contract award, a detailed construction schedule and traffic control plan. The schedule shall show proposed work to be undertaken and anticipated completion dates for each category of work.
- 1.15 Sanitary Services .1 The Contractor shall provide and maintain sanitary facilities for the use of workers at locations specified by the Departmental Representative. Provision of sanitary facilities shall meet requirements of provincial government and municipal statutes and authorities.
- 1.16 Contractor's Use of Site .1 Use of site: for execution of work within roadway right of way and those areas specified by the Departmental Representative.
- .2 The Departmental Representative will specify the areas for work and storage.
- .3 The Contractor is advised that another Contractor will be working in the area during the construction period.
- 1.17 Project Meetings .1 Meetings shall be called by Contractor and shall be every two (2) weeks after construction commences.

- .2 After receiving the Contractor's schedule, traffic control plan, health and safety hazard assessment, and environmental protection plan, and prior to start of construction, a meeting involving Contractor, Departmental Representative and Parks Canada will be held at a place and time to be determined by the Departmental Representative. This meeting will review implications of the contract, design, schedule of work health and safety, methods of construction, environment protection methods and traffic control.
- .3 Interim reviews of work progress based on work schedule will be conducted as decided by Departmental Representative and schedule updated by Contractor in conjunction with and to approval of Departmental Representative.
- .4 No work will begin until the pre-construction meeting is held, and all submittals have been approved.
- .5 Following the pre-construction meeting and approval of submittals, the work will be carried out to meet the time restraints and have the project completed on time.

1.18 Cutting & Patching

- .1 Cut and patch as required to make work fit.
- .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

1.19 Existing Services

- .1 Carry out work at times directed by authorities having jurisdiction, with minimum of disturbance to park activities.
- .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 Representative for any shut down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .4 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

- .5 Record locations of maintained, re-routed and abandoned service lines.
- .6 Verify locations of any underground utilities.
- 1.20 Additional Drawings .1 Departmental Representative may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.
- 1.21 National Park Act .1 For projects within boundaries of National Park, perform work in accordance with National Parks Act.
- 1.22 Permits/Authorities .1 The Contractor shall obtain, and pay for, permits from authorities as required for all operations and construction. He shall also comply with all pertinent regulations of all authorities having jurisdiction over the work. The Contractor shall provide copies of all permits to the Departmental Representative prior to starting the work. The Contractor shall be responsible for obtaining all applicable permits, inspections and approvals required and shall pay all changes in connection therewith.
- 1.23 Protection .1 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .2 Repair and replace all materials or equipment damaged in transit or storage to the satisfaction of the Departmental Representative and at no cost to Crown.
- .3 Contractor will take adequate precautions to protect existing structures when operating tracked equipment.
- .4 Exercise care so as not to obstruct or damage public or private property in the area.
- .5 At completion of work, restore area to its original condition. Damage to ground and property will be repaired by Contractor. Remove all construction materials, residue, excess, etc., and leave site in a condition acceptable to Departmental Representative.

**END OF SECTION**

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- 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 Health and Safety Plan as specified in Section 01 35 29 - Health and Safety Requirements.
    - .3 Environmental Protection Plan as specified in Section 01 35 43 - Environmental Procedures.
- 1.2 Work Schedule
- .1 Upon acceptance of bid submit:
    - .1 Preliminary work schedule within 5 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;
      - .1 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.
      - .2 Generally Bar Charts derived from commercially available computerized project management system are preferred but not mandatory.
  - .5 Schedule work in cooperation with the Departmental Representative.
  - .6 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.

- .7 Ensure that all subtrades and subcontractors are made aware of the work restraints and operational restrictions specified.
- .8 Schedule Updates:
  - .1 Submit when requested by Departmental Representative.
  - .2 Provide information and pertinent details explaining reasons for necessary changes to implementation plan.
  - .3 Identify problem areas, anticipated delays, impact on schedule and proposed corrective measures to be taken.
- .9 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.
- .10 In every instance, any 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 Meetings

- .1 Schedule and administer project meetings every two (2) weeks for entire duration of work.
- .2 Prepare agenda for meetings.
- .3 Notify participants by e-mail 4 days in advance of an unscheduled 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

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Scheduling and  
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decisions. Identify action items by parties.  
.2 Distribute to participants by e-mail or by  
facsimile within 3 calendar days after each meeting.  
.3 Make revisions as directed by Departmental  
Representative.

END OF SECTION

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PART 1 - GENERAL

1.1 General  
Requirements

- .1 The Form of Tender includes one lump sum priced item and several unit priced items.
- .2 The total tendered price shall be the sum of the lump sum item plus the amounts calculated from the unit priced items based on the approximate quantities identified for each of the unit priced items.
- .3 The Contractor in submitting their Tender for the project understand that they will only be entitled to payment under the unit priced items when prior written authorization has been received from the Departmental Representative for utilization and then only to the extent of the work authorized by the Departmental Representative.
- .4 Additional instructions for measurement and/or payment for items of the work may be contained in specific sections of the Technical Specifications. In the case of a conflict between the instructions for measurement and payment contained in this section with that of any other section, the requirement of this section shall apply.
- .5 The submitted tender price will be inclusive of all costs for the complete supply and installation of all materials, labour and equipment required to complete the work. No separate payment will be made for any testing, inspections and approvals required by Contractor.
- .6 All measurement shall be along a horizontal plane unless otherwise indicated.
- .7 There will be no adjustments for fuel costs in any of the pay items on this project.

1.2 Lump Sum Item

- .1 The work of the lump sum item shall include, but not necessarily limited to, the following:
  - .1 All mobilization and demobilization to the site, temporary utilities, construction facilities and temporary barriers/railings and enclosures.
  - .2 Protection of all cultural resources.

- .3 All environmental protection, including erosion controls, sedimentation controls, containment enclosure, de-watering and diversion of watercourse 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". Dust control on any street or site where work have been or is being carried out.
  - .4 Cleaning of work site, including removal of waste, debris, and recyclable materials.
  - .5 Testing, inspections and permits from all regulatory agencies and groups required to complete the work.
  - .6 Traffic control devices and measures, including signs and barriers.
  - .7 All traffic control and traffic maintenance measures as specified and as required to complete the work.
  - .8 Design, construction, and maintenance of all temporary structures (shoring, bracing, underpinning, working platforms, scaffolding, stability bracing, supports, etc.) required to complete the work.
  - .9 Preparation and submission of all close-out submittals, maintenance manuals, and as-built drawings.
  - .10 The removal, storage and reinstallation of the guide rails at the 4 bridge end posts as indicated on drawings.
  - .11 All necessary excavation and backfill.
  - .12 Temporary removal, storage or stockpiling of all items and fill materials to be reinstated in the work.
  - .13 Disposal of all surplus materials from the site at completion of work.
  - .14 All other work within the Limits of Contract shown on the drawings and described in the specifications which are required for the completion of the culvert repairs exclusive of those covered by the unit priced items.
  - .15 Fish rescue as required in preparation for work in and around the brook.
- .2 All and any items not specifically included in the unit price items are considered incidental to the work and are to be included in the lump sum portion of the work.

1.3 Unit Price Items

- .1 Concrete Encasement: Encasement and underpinning of culvert base/footings
  - .1 Unit of Measurement: square metres (m<sup>2</sup>)
  - .2 Method of Measurement: Area of new concrete as measured in vertical plane of outer surface of consolidated concrete installed in completed structures, based on the neat lines called for in the plans. Waste materials are not included.
  - .3 This item includes: furnishing of all materials, aggregates, cement, supplementary cementing materials, concrete mixes, admixtures, reinforcing bars, dowels, tools, equipment, falsework, forms, bracing, chairs, bolsters, ties, labour, curing, surface finishing, concrete sealer, and all other items required to complete the work. Supply, installation and securing of reinforcing bars is incidental to this work and is included in this item.
- .2 Concrete Patching - Culvert:
  - .1 Unit of Measurement: square metres (m<sup>2</sup>)
  - .2 Method of Measurement: Patched surfaces of cast-in-place concrete culvert as measured by area of underside/interior of culvert surface. Includes all labour, materials, saw-cutting, removals to sound concrete, preparation and patching as specified herein and as detailed on drawings. Waste materials are not included.
- .3 Concrete Patching - Curbs:
  - .1 Unit of Measurement: square metres (m<sup>2</sup>)
  - .2 Method of Measurement: Patched surfaces of concrete curbs as measured by surface area of repaired curb surfaces. Includes all labour, materials, saw-cutting, removals to sound concrete, preparation and patching as specified herein and as detailed on drawings. Waste materials are not included.
- .4 Stone Repointing and Repair:
  - .1 Unit of Measurement: square metres (m<sup>2</sup>)
  - .2 Method of Measurement: Surface area of exposed stone measured in vertical at the surface of the face stone of repaired and repointed stone masonry as specified herein and as shown on the drawings. To include repair of all broken stone, resetting of all cap stone and loose stone, repointing of all joints, cleaning and repair of all cap stone joints.

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- .5 Cementitious Coating:
  - .1 Unit of Measurement: square metres (m<sup>2</sup>)
  - .2 Method of Measurement: Surface area of cementitious coating installed in place and shall include supply, transportation, all labour, materials and equipment in accordance with the project requirements.

**END OF SECTION**

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| <u>1.1 Related Sections</u> | .1 | Section 01 35 29 - Health and Safety Requirements.  |
|                             | .2 | Section 01 35 43 - Environmental Procedures.  |
| <u>1.2 Administrative</u>   | .1 | Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.  |
|                             | .2 | Do not proceed with Work affected by submittal until review is complete.  |
|                             | .3 | Present shop drawings, product data, samples and mock-ups in SI Metric units.   |
|                             | .4 | Where items or information is not produced in SI Metric units converted values are acceptable.  |
|                             | .5 | Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected. |
|                             | .6 | Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.  |
|                             | .7 | Verify that field measurements and affected adjacent Work are coordinated.  |
|                             | .8 | Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.   |
|                             | .9 | Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.   |

1.3 Shop Drawings  
and Product Data

- .10 Keep one reviewed copy of each submission on site.
- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in Province of New Brunswick, Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 5 days for Departmental Representative to review each submission.
- .5 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, in duplicate, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.



- .8 Submissions include:
  - .1 Date and revision dates.
  - .2 Project title and 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 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.
- .9 After Departmental Representative's review, distribute copies.
- .10 Submit one (1) electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .11 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accordance with specified requirements.

- .2 Testing must have been within 3 years of date of contract award for project.
  - .13 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
    - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
    - .2 Certificates must be dated after award of project contract complete with project name.
  - .14 Submit electronic copies of manufacturer's instructions for requirements requested in specification Sections and as requested by Departmental Representative.
    - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
  - .15 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
    - .1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
  - .16 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
  - .17 Delete information not applicable to project.
  - .18 Supplement standard information to provide details applicable to project.
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- .19 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, transparency copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .20 The review of shop drawings by the Departmental Representative is for sole purpose of ascertaining conformance with general concept.
  - .1 This review shall not mean that Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
  - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

#### 1.4 Samples

- .1 Submit for review samples in triplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative business address.
- .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 Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.

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- .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**

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| <u>1.1 Description</u>                  | .1 | This section is to provide traffic control pursuant to the New Brunswick Work Area Traffic Control Manual (WATCM).   |
| <u>1.2 Related Work</u>                 | .1 | Section 01 11 00 - General Instructions  |
|   | .2 | Section 01 35 29 - Health and Safety Requirements  |
| <u>1.3 Reference Standard</u>           | .1 | Regulate traffic in accordance with the requirements of the WATCM, distributed by the New Brunswick Department of Transportation & Infrastructure and Parks Canada regulations.  |
|   | .2 | The Departmental Representative reserves the right to direct the contractor to reduce either the number or length of traffic control work areas during peak traffic volumes or when cumulative delays exceed the specified maximum.  |
| <u>1.4 Measurement for Payment</u>      | .1 | See Section 01 29 00 - Project Particulars and Measurement.  |
| <u>1.5 Protection of Public Traffic</u> | .1 | Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out work or haul materials or equipment.   |
|   | .2 | When working on travelled way: <ul style="list-style-type: none"><li>.1 Place equipment in position to present minimum of interference and hazard to traveling public.</li><li>.2 Keep equipment units as close together as working conditions will permit and preferably on same side of traveled way.</li><li>.3 Do not leave equipment on traveled way overnight.</li></ul> |
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- .3 Do not close any lanes of roadway without approval of Departmental Representative. Before re-routing traffic, erect suitable signs and devices in accordance with instructions contained in the WATCM. Provide sufficient crushed gravel to ensure a smooth riding surface during work.
  - .4 Keep traveled way a minimum of 5m wide throughout the day and a minimum of 7m wide the rest of the day.
  - .5 Provide and maintain signs and lights and maintain roadway.
- 1.6 Informational and Warning Devices
- .1 Provide and maintain signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from project work which may require road user response.
  - .2 All traffic signs are to be bilingual or symbolic and shall be Level 1 reflectivity.
  - .3 Supply and erect signs, declinators, barricades and miscellaneous warning devices as specified in NBDTI WATCM.
  - .4 Place signs and other devices in locations recommended in the NBDTI WATCM.
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- .5 The Contractor shall provide a Traffic Control Agent, who has successfully completed the WATCM Training Course, to be on site at all times when active construction is taking place. The Traffic Control Agent will be responsible to supervise the placement and dismantling of all temporary condition signs and devices that indicate to the road user that highway construction activity exist and also to ensure that proper traffic control procedures are carried out in accordance with the WATCM. The Traffic Control Agent is considered part of the contractor's supervision and administration staff and compensation for the provision of this individual is considered incidental to the work.
- .6 Continually maintain traffic control devices in use by:
  - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
  - .2 Removing or covering signs which do not apply to conditions existing from day to day.

#### 1.7 Control of Public Traffic

- .1 Provide traffic control personnel who are properly trained in accordance with and properly equipped as specified in the WATCM, in following situations:
    - .1 When public traffic is required to pass working vehicles or equipment which may block all or part of traveled roadway.
    - .2 When it is necessary to institute one way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
    - .3 When workers or equipment are employed on traveled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
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- .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
  - .5 For emergency protection when other traffic control devices are not readily available.
  - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
  - .2 All traffic Control Personnel shall be equipped with portable radios of sufficient range to ensure continuous communication within the Work Area.
  - .3 All construction vehicles shall operate in accordance with and are subject to traffic control restrictions and operations in place on the project.
- 1.8 Traffic Management Plan Requirement
- .1 Contractor to submit a detailed Traffic Control Plan, prior to pre-construction meeting.
  - .2 Traffic control measures are summarized as follows:
    - .1 One 5.0 metre wide lane of the affected road will remain open to the public at all times between 11 am and 7 pm and will be a contract obligation.
    - .2 Complete road closure will not be permitted.
  - .3 The required traffic measures will be included in the construction contract. A detailed construction sequencing and Traffic Control Plan will be required prior to construction. On-going information and communications will be maintained throughout the construction period.

**END OF SECTION**

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1.1 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;
  - .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.

1.2 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 10 work days of notification of Bid Acceptance. Provide 3 copies.
    - .2 Departmental Representative will review Health and Safety Plan and provide comments.
    - .3 Revise the Plan as appropriate and resubmit within 10 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.
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.5 Submit revisions and updates made to the Plan during the course of Work.

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

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

.5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other department of labour organization.

.1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.

.6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.

.7 Submit copies of incident reports.

.8 Submit WHMIS MSDS - Material Safety Data Sheets.

### 1.3 Compliance Requirements

.1 Comply with Occupational Health and Safety Act for Province of New Brunswick, and Occupational Health & Safety Regulations made pursuant to the Act.

.2 Comply with Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.

.1 The Canada Labour Code can be viewed at:  
[www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)

.2 COSH can be viewed at:  
[www.http://laws.justice.gc.ca/eng/SOR-86-304/n e .html](http://laws.justice.gc.ca/eng/SOR-86-304/n e .html)

.3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9 Tel: (819) 956-4800 (1-800-635-7943) Publication No. L31-85/2000 E or F)

.3 Observe construction safety measures of:

.1 Part 8 of National Building Code

.2 Provincial Worker's Compensation Board.

.3 Municipal by-laws and ordinances.

- .4 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .5 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .6 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.
- .7 Comply with all works outlined in the New Brunswick Department of Transportation Infrastructure (NBDTI) Work Area Traffic Control Manual.

#### 1.4 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.

#### 1.5 Site Control and Access

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

- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
  - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment. See Section 01 56 00 - Temporary Barriers and Enclosures 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. Provide security guard where adequate protection cannot be achieved by other means.

#### 1.6 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.

#### 1.7 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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- 1.8 Permits
- .1 Post permits, licenses and compliance certificates, specified in section 01 11 00 - General Instructions, at Work Site.
  - .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.
- 1.9 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.
- 1.10 Project/Site Conditions
- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
    - .1 Known latent site and environmental conditions:
      - .1 Steep slopes and faces.
      - .2 Working over and in brook.
      - .3 Wildlife.
    - .2 Facility on-going operations:
      - .1 Park 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.
- 1.11 Meetings
- .1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
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- .1 Superintendent of Work.
    - .2 Designated Health & Safety site representative.
    - .3 Contractors.
  - .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.
- 1.12 Health and Safety Plan
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- .1 Prior to commencement of Work, develop written Health and Safety Plan and Safety Control 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.
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.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 PCA 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.

1.13 Safety  
Supervision

- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work. Representative to be trained in occupational health and safety procedures and practices.

- .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.
  - .2 Conduct Formal Inspections on a minimum monthly basis. Use standardized safety inspection forms. Distribute to subcontractors.
  - .3 Follow-up and ensure corrective measures are 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.



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| <u>1.14 Training</u>                         | .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.  |
| <br><u>1.15 Minimum Site Safety Rules</u>    | <br>.1 | <br>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:<br>.1 Wear appropriate PPE pertinent to the Work or assigned task; minimum being hard hat, safety footwear, safety glasses, hearing protection and high-visibility workwear.<br>.2 Immediately report unsafe condition at site, near-miss accident, injury and damage.<br>.3 Maintain site and storage areas in a tidy condition free of hazards causing injury.<br>.4 Obey warning signs and safety tags. |
|  | .2     | Brief persons of disciplinary protocols to be taken for non-compliance. Post rules on site.   |
| <br><u>1.16 Correction of Non-Compliance</u> | <br>.1 | <br>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.  |
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| <u>1.17 Incident Reporting</u>      | .1 | Investigate and report the following incidents to Departmental Representative:<br>.1 Incidents requiring notification to Provincial Department of Occupational Health and Safety, Workers Compensation Board or to other regulatory Agency.<br>.2 Medical aid injuries.<br>.3 Property damage in excess of \$10,000.00.<br>.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.  |
| <u>1.18 Hazardous Products</u>      | .1 | Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).  |
|                                     | .2 | Keep MSDS data sheets for all products delivered to site.<br>.1 Post on site.<br>.2 Submit copy to Departmental Representative.<br>.3 For interior work in an occupied Facility, post additional copy in one or more publically accessible locations.  |
| <u>1.19 Blasting</u>                | .1 | Blasting or other use of explosives is not permitted on site without prior receipt of written permission and instructions from Departmental Representative.  |
| <u>1.20 Powder Actuated Devices</u> | .1 | Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.   |
| <u>1.21 Confined Spaces</u>         | .1 | Abide by occupational health and safety regulations regarding work in confined spaces.   |
|                                     | .2 | Obtain an Entry Permit in accordance with Part XI of the Canada Occupational Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.<br>.1 Obtain permit from Facility Manager<br>.2 Keep copy of permit issued.   |
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- .3 Safety for Inspectors:
  - .1 Provide PPE and training to Departmental Representative and other persons who require entry into confined space to perform inspections.
  - .2 Be responsible for efficacy of equipment and safety of persons during their entry and occupancy in the confined space.

1.22 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.

1.23 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
  - .3 Incident reports
  - .4 Tool box and safety meeting minutes

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PART 1 - GENERAL

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| <u>1.1 Precedence</u>                         | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.                          |
| <u>1.2 Related Sections</u>                   | .1 | Section 01 35 45 - Environmental Protection Refueling Vehicles.  |
|   | .2 | Section 01 74 21 - Constructional Demolition Management and Disposal.  |
| <u>1.3 Fires</u>                              | .1 | Fires and burning of rubbish on site not permitted.  |
| <u>1.4 Disposal of Wastes</u>                 | .1 | Do not bury rubbish and waste materials on site unless approved by Departmental Representative.  |
|   | .2 | Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.   |
|   | .3 | Dispose of uncontaminated construction/demolition material which cannot be recycled or reused, at an approved construction and debris disposal site.                           |
| <u>1.4 Drainage</u>                           | .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 local authority requirements.                                |
| <u>1.5 Site Clearing and Plant Protection</u> | .1 | Protect trees and plants on site and adjacent properties as required. Departmental Representative to be notified prior to removal of trees and plants.                         |
|   | .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. |
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- .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 vegetation removal to areas indicated or designated by Departmental Representative.
- .6 Vegetation and topsoil should not be removed to obtain fill for road construction purposes.
- .7 Whenever possible, organic debris removed during grading operations should be stored for use during site restoration. Such stockpiles should be located well away from any stream or water body and should be covered with coarse material or tarps to minimize wind and water erosion.

1.6 Work Adjacent  
to Waterways

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material without Departmental Representative's approval.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 Design and construct temporary crossings to minimize erosion to waterways.
- .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 within 100 m of indicated spawning beds.
- .8 Temporary diversion ditches, approved by the Departmental Representative, are to be plastic lined.
- .9 Temporary storage sites for debris generated from clearing operations should be deposited away from watercourses and should be surrounded by a natural vegetative buffer.

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- .10 Do not pump or drain water containing suspended materials into waterways. Water containing suspended materials shall be pumped into vegetation a minimum of 30 m away from watercourses.
- 1.7 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. Chemicals used in dust control must have prior approval of the Departmental Representative.
- 1.8 General Requirements
- .1 Work under this contract is to be carried out in a National Park, and environmental protection must be given a high priority by all staff involved with the work. Perform work in accordance with Canada National Parks Act and Regulations.
- .2 An Environmental Briefing will be held prior to work commencing at the site, which will outline environmental factors to be considered during the work. It is mandatory that all current staff of the Contractor attend this meeting with the Departmental Representative and Environmental Protection Officer (EPO).
- .3 The Contractor shall meet all requirements for work over and around a watercourse. The Departmental Representative will advise the Contractor of any additional requirements as they arise.
- 1.9 Site Set-up and Use
- .1 All site activities related to construction are to be confined within the defined project boundaries.
- .2 Work sites will be equipped with appropriate and properly maintained sanitary facilities.
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- .3 Garbage must be collected and removed daily from the work site. All material must be removed, transported and disposed of in accordance with existing provincial - municipal and Park solid waste disposal guidelines and/or regulations.
- .4 Littering is prohibited.
- .5 Temporary storage, parking areas, and turn-a-round facilities for contractor-related equipment and vehicles will be limited to those areas agreed to and designated by the Departmental Representative.

1.10 Environmental  
Protection Plan

- .1 The Contractor is required to submit a plan showing all pollution control measures that will be used to fulfill the requirements of the Environmental Protection Section. This plan will be reviewed by the Departmental Representative and the Environmental Protection Officer prior to commencement of any work. Any deviation from this plan will require further approval by the Departmental Representative. The protection plan shall be submitted prior to the pre-construction meeting.
- .2 The Environmental Plan will outline how the Contractor will address the environmental protection requirements, including preventing any construction material, particles or demolition debris from entering stream, and ensure pollution created by the construction is controlled. It will show sufficient detail on products to be used and physical placement on site to determine effectiveness of these items. A full enclosure is required to completely encase the work area below the structure for the preparation and repair of the underside/interior surfaces of the concrete culvert. The water will have to be diverted away from the footings during the concrete encasement.
- .3 The plan must cover all activities within the limits of all construction, laydown and traffic diversion areas.

1.11 Environmental  
Performance

- .1 The Contractor is required to follow the Canadian Environmental Protection Act and Canadian National Parks Act.

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|  | .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.   |
| <u>1.12 Vehicular Movements</u>                                | .1 | Restrict movement of vehicles and equipment to existing disturbed areas.  |
| <u>1.13 Storage and Handling of Fuels and Dangerous Fluids</u> | .1 | Locate fuel storage facility a minimum of 100 m from any water body in an area approved by Departmental Representative and construct impermeable dykes so that any spillage is contained. Fueling of vehicles or equipment will not be permitted within 100 m of any water body. Maintenance of vehicles and equipment will be permitted only in designated areas as directed by the Departmental Representative. |
|  | .2 | Exercise care in handling of fuels or dangerous materials to minimize potential for spills. Report immediately any spills to Departmental Representative. Contractor is responsible for responding immediately to any spill to minimize environmental damage and for clean-up, repair or rehabilitation resulting from any spills to the satisfaction of the Departmental Representative.                         |
|  | .3 | Supply and maintain on site emergency response material to contain spills and minimize environmental damage, i.e. absorbent material, to the approval of Departmental Representative. Disposal of all contaminated material shall be off-site at an approved facility.  |
|  | .4 | Dangerous goods, whose release into the environment could cause adverse effect, should be stored and handled in a manner which gives due regard for workers and public safety, and for the protection of the environment.   |
|  | .5 | No material toxic to fish or any aquatic life shall be permitted to enter any stream, river, or lake. This shall include, but not be limited to lubricants, fuels, testing fluids, insecticides, detergents, herbicides, cement, lime or concrete.  |
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- .6 The management of fuels, lubricants and chemicals must meet with the requirements of the New Brunswick Department of Environment & Conservation and all other appropriate provincial and federal regulations.
- .7 Fuel storage containers must be accompanied by impermeable structures that would provide containment of 125% of the container capacity in the event of a leak or spill.
- .8 All refueling and lubricating operations should employ protection measures such as drip pans, to reduce the potential for escape of petroleum products to the environment.
- .9 The Departmental Representative and the Park's Environmental Protection Officer (EPO) must be immediately contacted after a spill of fuel or lubricant, and after any amount of other chemical products has escaped.
- .10 Storage of any fuel has to occur only in previously approved locations, and with Park consent. The Contractor must submit plans for fuel management and a Spill Contingency Plan seven days prior to the start of the Work. The Contractor is expected to be prepared to effect the containment and cleanup of all spills related to the Work.
- .11 Storage of hazardous material, including explosives, shall not be permitted, except for quantities which shall normally be expected to be utilized in a day of Work, and which are not permitted to stockpile.
- .12 Emulsion storage tanker and transfer of emulsion from tanker to spray vehicle are not permitted.

1.14 Erosion and Sediment Control

Appropriate preventative controls should be in place at all times during construction to prevent undue erosion and sedimentation. The Contractor is required to provide to the Departmental Representative for approval ten (10) working days before start-up an erosion and sedimentation control plan, as part of the Environmental Protection Plan. The plan shall incorporate all necessary silt fences, silt traps, plastic lined trenches and ditches as approved by the Departmental Representative.

- .2 The Contractor shall install and maintain all sedimentation and erosion control features for the duration of the project, in accordance with the approved plan. The Contractor shall remove all sedimentation and erosion control upon completion of the work and when requested by the Departmental Representative.
- .3 Sediment fences and erosion control structures shall be constructed in roadside ditches or at culvert inlets prior to any excavation as directed by Departmental Representative.
- .4 To minimize run-off, work on slopes which may affect water body will be curtailed during periods of heavy rainfall, as directed by the Departmental Representative.
- .5 Prior to carrying out work, check long range weather forecast to ensure that there is adequate time before forecast of heavy rain storms to stabilize the work. Provide details of stabilization plan to Departmental Representative for review.
- .6 Maintain a stockpile of appropriate erosion and environmental protection materials (e.g. silt fences, straw bales, wood chips, clean rock fill and aggregate base course) on site at all times.
- .7 Install additional erosion control measures as required by site conditions to prevent sediment from entering drainage courses.
- .8 Inspect erosion and sediment control measures on a daily basis and maintain as necessary.

1.15 Fisheries  
Regulations

- .1 Proper permits or authorization from Federal Department of Fisheries and Oceans will be provided by Departmental Representative. Contractor to maintain a copy of said permits on site. Regulations stipulated in the Permit will be strictly enforced.
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| <u>1.16 Relics and Antiquities</u>              | <ul style="list-style-type: none"><li>.1 Relics and antiquities and items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found on site or in structures to be demolished, shall remain property of Canada. Protect such articles and request direction from Departmental Representative.</li><li>.2 Give immediate notice to Departmental Representative if evidence of archaeological finds are encountered during construction and await his written instructions before proceeding with work in this area.</li></ul>  |
| <u>1.17 Treated Wood</u>                        | <ul style="list-style-type: none"><li>.1 Workers shall be made aware of the possible health risks associated with exposure to CCA or creosote treated timber as well as the recommended safe practices for handling such materials.</li><li>.2 Disposal of treated wood wastes including saw-dust must be outside of the site, and in accordance with all applicable Provincial and Municipal regulations. Similar attention must be given to disposal of any replaced guiderail posts which have been treated with creosote, which must also be removed from the park for disposal.</li></ul>  |
| <u>1.18 Environmental Incident or Emergency</u> | <ul style="list-style-type: none"><li>.1 In the event of an environmental incident or emergency such as:<ul style="list-style-type: none"><li>.1 Chemical spill or petroleum spill;</li><li>.2 Poisonous or caustic gas emission;</li><li>.3 Hazardous material spill;</li><li>.4 Sewage spill;</li><li>.5 Contaminated water into waterways.</li><li>.6 The Contractor or his employees shall immediately:<ul style="list-style-type: none"><li>.1 Notify the Contractor's job superintendent.</li><li>.2 Call the local emergency services and give type of emergency.</li><li>.3 Notify the Departmental Representative and the Park's Environmental Protection Officer (EPO).</li></ul></li></ul></li><li>.2 The Contractor is to submit to Departmental Representative a copy of its Environmental/Spill Response Plan for approval.</li></ul> |
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1.19 Site  
Decommissioning

- .1 Unless prior permission from the Departmental Representative is obtained, all contractor equipment, facilities and materials must be removed from the Park at the finish of each work phase, or if work is suspended due to weather or other circumstances, upon the suspension of work activities.
- .2 All work sites must be returned to a neat and tidy condition upon site abandonment.

END OF SECTION

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PART 1 - GENERAL

1.1 Refueling

- .1 Refueling of equipment to be performed in locations as directed by Departmental Representative.
- .2 Do not refuel equipment within 100 meters of any watercourse or storm water catch basin unless protection against spills is in place and location is approved by Departmental Representative.
- .3 Use petroleum containers approved for products with no spill fill spouts for dispensing fuels. The sure pour nozzle to have self-closing valve, prevent any flow of fuel until the nozzle is inserted into the receiving container. On removal from the receiving container the slide valve closes to eliminate any fuel spill. Nozzle to be equipped with its own automatic vent eliminating the need for the user to open or close air inlets on the pouring container.
- .4 Nozzle to support the weight of the pouring container. Nozzles to automatically stop the flow when the receiving container becomes full. The nozzle to be such that it reduces evaporative losses of volatile organic compounds during the fuel transfer.
- .5 All spills of hydrocarbon based products such as gasoline, kerosene, naphtha, lubricating oils, engine oils, greases and de-icing fluids or antifreeze no matter how large or small to be reported to Departmental Representative and the Park's Environmental Protection Officer (EPO).
- .6 Oil changes or equipment repairs in the field or on Parks Canada land are not permitted.
- .7 Refueling to be performed on level surfaces, PCC Portland cement concrete or HMA surfaces when approved by the Departmental Representative unless otherwise directed.
- .8 Contractor to have drip pans sized for amounts of product to be recovered and customized to fit under pieces of equipment to perform routine maintenance to equipment while maintaining equipment on property. Drip Pans to be used whenever leaving equipment on site or parking overnight when not in use.

- .9 Parking of equipment on site to be on level ground in locations away from watercourses and as approved by Departmental Representative. Equipment with leaks or poor mechanical repair to be removed from site when so ordered by Departmental Representative.

#### 1.2 Spill Control Kit

- .1 Contractor to have at the work site a spill control kit consisting of the following minimum types of equipment:
  - .1 a spaded shovel;
  - .2 a stable broom;
  - .3 a broad nosed shovel;
  - .4 a container(s) suitable, compatible to and of sufficient size to contain petroleum products being used with equipment;
  - .5 Absorbents;
  - .6 rags;
  - .7 metal container for soiled rags;
  - .8 Booms when working next to a watercourse that will traverse the width of the watercourse by two times; and
  - .9 Spill control kit to be inspected and approved by both the New Brunswick Department of Environment & Conservation and the Departmental Representative prior to Work commencing. Spill control kits to be available to Contractor employees at all areas where Work of the Contract is being performed and at all times during the course of the Contract.
  - .10 Contractor employees to be trained in the use of the spill control kit and the equipment they contain.

#### 1.3 Spills

- .1 Disposal of spilled materials to be off Parks Canada property and at approved locations for materials to be disposed of.
- .2 When parking of equipment on site, the equipment is to be secured from entry, inspected for leaks and the ground protected from leaks.
- .3 Contractor to protect all wells, catch basins, drywells, drains and watercourses from contamination in event of a spill.

- .4 All equipment to be used for the Work of the Contract to be inspected by the Departmental Representative for leaks. Equipment not in good repair to be removed/repaired when directed by Departmental Representative.
- .5 Spills to be reported immediately to Departmental Representative, the Park's Environmental Protection Officer (EPO) and the New Brunswick Department of Environment and Conservation.
- .6 Contractor to immediately remove as much or all of the contaminated soils as possible, from any spills created from Work of the Contractor.
- .7 Contaminated soils/materials to be placed in containers compatible to the contaminants.
- .8 Any remaining clean-up to be performed at no extra cost to Parks Canada. Clean-up to be to the Departmental Representative's satisfaction.

PART 1 - GENERAL

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| <u>1.1 Related Sections</u> | .1 | Section 01 33 00 - Submittal Procedures  |
| <u>1.2 Inspection</u>       | .1 | Give minimum 24 hours 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.  |
| <u>1.3 Testing</u>          | .1 | Tests on materials, as specified in various sections of the Specifications are the responsibility of the Contractor except where stipulated otherwise.   |
|                             | .2 | 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:<br>.1 Inspection and testing required bylaws, ordinances, rules, regulations or orders of public authorities.<br>.2 Inspection and testing performed exclusively for Contractor's convenience.<br>.3 Mill tests and certificates of compliance.<br>.4 Tests as specified within various sections designated to be carried out by Contractor under the supervision of Departmental Representative. |
| <u>1.5 Access to Work</u>   | .1 | Facilitate Departmental Representative's access to Work. If part of Work is being fabricated at locations other than construction site, make preparations to allow access to such Work whenever it is in progress.   |



- .2 Furnish labour and facility to provide access to the work being inspected and tested.
- .3 Co-operate to facilitate such inspections and tests.

1.6 Rejected Work

- .1 Remove and replace defective Work, whether result of poor workmanship, use of defective or damaged products and whether incorporated in Work or not, which has been identified by Departmental Representative as failing to conform to Contract Documents.
- .2 Make good damages to new construction and finishes resulting from removal or replacement of defective work.

END OF SECTION

PART 1 - GENERAL

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| <u>1.1 Section Includes</u>         | .1 | Construction aids.   |
|                                     | .2 | Office and sheds.  |
|                                     | .3 | Parking.   |
|                                     | .4 | Project identification.  |
| <u>1.2 Precedence</u>               | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.  |
| <u>1.3 Related Sections</u>         | .1 | Section 01 56 00 - Temporary Barriers and Enclosures.  |
| <u>1.4 References</u>               | .1 | Canadian General Standards Board (CGSB)<br>.1 CGSB 1-GP-189M-84, Primer, Alkyd, Wood, Exterior.<br>.2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.   |
|                                     | .2 | Canadian Standards Association (CSA International)<br>.1 CAN3-A23.1-/A23.2-94, Concrete Materials and Methods for Concrete Construction/Method of Test for Concrete.<br>.2 CSA-0121-M1978, Douglas Fir Plywood.<br>.3 CAN/CSA-Z321-96, Signs and Symbols for the Occupational Environment. |
| <u>1.5 Installation and Removal</u> | .1 | Provide construction facilities in order to execute work expeditiously.  |
|                                     | .2 | Remove from site all such work after use.  |
| <u>1.6 Scaffolding</u>              | .1 | Provide and maintain scaffolding, ladders and temporary stairs.  |
| <u>1.7 Hoisting</u>                 | .1 | Provide, operate and maintain hoists cranes as required for moving of materials and equipment. Make financial arrangements with Subcontractors for use thereof.  |
|                                     | .2 | Hoists cranes shall be operated by qualified operator. A qualified operator shall meet all requirements stated within the NB OHS Act.  |

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| <u>1.8 Site<br/>Storage/Loading</u>                       | .1 | Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.   |
|   | .2 | Do not load or permit to load any part of Work with a weight or force that will endanger the Work.   |
| <u>1.9 Construction<br/>Parking</u>                       | .1 | Parking will be limited to Contractor vehicles and equipment required to carry out work only, provided it does not disrupt performance of Work.  |
| <u>1.10 Security</u>                                      | .1 | Contractor is responsible for site security and contents of site during and after working hours and during holidays (24 hours per day, 7 days per week).                               |
| <u>1.11 Equipment,<br/>Tool and Materials<br/>Storage</u> | .1 | Provide and maintain suitable secure storage for tools, equipment and materials.   |
|   | .2 | Locate materials on site in a manner to cause least interference with work activities.   |
| <u>1.12 Sanitary<br/>Facilities</u>                       | .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.  |
| <u>1.13 Construction<br/>Signage</u>                      | .1 | No other signs or advertisements, other than warning signs, are permitted on site.   |
|   | .2 | Signs and notices for safety and instruction shall be in both official languages Graphic symbols shall conform to CAN3-Z321.   |
|   | .3 | Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative. |

**END OF SECTION**

PART 1 - GENERAL

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| <u>1.1 Precedence</u>                                  | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual. |
| <u>1.2 Related Sections</u>                            | .1 | Section 01 52 00 - Construction Facilities.   |
| <u>1.3 References</u>                                  | .1 | Canadian General Standards Board (CGSB)<br>.1 CGSB 1.189M-84, Primer, Alkyd, Wood, Exterior.<br>.2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.         |
|  | .2 | Canadian Standards Association (CSA International)<br>.1 CSA-O121-M1978, Douglas Fir Plywood.   |
|  | .3 | NBDTI, Highway Design Division.<br>.1 Traffic Control Manual (TCM), latest edition.   |
| <u>1.4 Installation and Removal</u>                    | .1 | Provide temporary controls in order to execute Work expeditiously.  |
|  | .2 | Remove from site all such work after use.   |
| <u>1.5 Guard Rails and Barricades</u>                  | .1 | Provide secure, rigid guard rails and barricades around open edges of embankments or structure.   |
|  | .2 | Provide as required by governing authorities.   |
|  | .3 | Provide Traffic Control guard rails, barricades and delineators.  |
| <u>1.6 Protection for Off-Site and Public Property</u> | .1 | Protect surrounding private and public property from damage during performance of Work.   |
|  | .2 | Be responsible for damage incurred.   |

**END OF SECTION**

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PART 1 - GENERAL

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| <u>1.1 Precedence</u>          | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.   |
| <u>1.2 Reference Standards</u> | .1 | Within text of each specifications section, reference may be made to reference standards.   |
|                                | .2 | Conform to these reference standards, in whole or in part as specifically requested in specifications.  |
|                                | .3 | If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.  |
|                                | .4 | Cost for such testing will be borne by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.  |
|                                | .5 | Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.  |
| <u>1.3 Quality</u>             | .1 | Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.               |
|                                | .2 | Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection. |
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- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .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.

#### 1.4 Availability

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

#### 1.5 Storage, Handling and Protection

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .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, lumber, fencing 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 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .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.

1.6 Transportation

- .1 Pay costs of transportation of products required in performance of Work.

1.7 Manufacturer's Instructions

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

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| <u>1.8 Quality of Work</u>     | <ul style="list-style-type: none"><li>.1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.</li><li>.2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.</li><li>.3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.</li></ul> |
| <u>1.9 Co-Ordination</u>       | <ul style="list-style-type: none"><li>.1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.</li><li>.2 Be responsible for coordination and placement of openings, sleeves and accessories.</li></ul>   |
| <u>1.10 Remedial Work</u>      | <ul style="list-style-type: none"><li>.1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.</li><li>.2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.</li></ul>  |
| <u>1.11 Existing Utilities</u> | <ul style="list-style-type: none"><li>.1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants and pedestrian and vehicular traffic.</li><li>.2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.</li></ul>   |

END OF SECTION

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PART 1 - GENERAL

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| <u>1.1 Related Sections</u>        | .1 | Section 01 78 00 - Closeout Submittals.  |
| <u>1.2 Precedence</u>              | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.  |
| <u>1.3 References</u>              | .1 | Owner's identification of existing survey control points and property limits. Contractor is responsible for surveys and layout of work.  |
| <u>1.4 Survey Reference Points</u> | .1 | Contractor is to locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.  |
|                                    | .2 | Make no changes or relocations without prior written notice to Departmental Representative.  |
|                                    | .3 | Report to Departmental Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.   |
|                                    | .4 | The contractor is responsible to hire surveyor to replace control points in accordance with original survey control, if disturbed unnecessarily during construction activities.  |
| <u>1.5 Survey Requirements</u>     | .1 | Contractor will:<br>.1 Establish permanent bench marks on site, as required, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.<br>.2 Establish lines and levels, locate and lay out, by instrumentation.<br>.3 Stake for grading, fill and topsoil placement.<br>.4 Stake slopes.<br>.5 Establish pipe invert elevations and location of any exposed pipe not being removed under this contract.<br>.6 Record elevation and location of all existing and installed end caps of abandoned underground services.<br>.7 Provide coordinates, elevations and dimensions in the field, as required by the Departmental Representative. |

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| <u>1.6 Existing Services</u> | .1 | Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.  |
| <br>                         |    |   |
| <u>1.7 Records</u>           | .1 | Contractor will: <ul style="list-style-type: none"><li>.1 Maintain a complete, accurate log of control and survey work as it progresses.</li><li>.2 On completion of site works, prepare a certified survey showing dimensions, locations, angles and elevations of Work.</li><li>.3 Record locations of maintained, re-routed and abandoned service lines.</li></ul> |

END OF SECTION

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PART 1 - GENERAL

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| <u>1.1 Precedence</u>          | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Specification          |
| <u>1.2 Related Section</u>     | .1 | Section 01 77 00 - Closeout Procedures.  |
| <u>1.3 Project Cleanliness</u> | .1 | Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Owner or other Contractors.                   |
|                                | .2 | Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site. |
|                                | .3 | Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.   |
|                                | .4 | Provide on-site containers for collection of waste materials and debris.   |
|                                | .5 | Provide and use clearly marked separate bins for recycling.  |
|                                | .6 | Remove waste material and debris from site and deposit in waste container at end of each working day.  |
|                                | .7 | Store volatile waste in covered metal containers, and remove from premises at end of each working day.   |
|                                | .8 | Dispose of waste materials, and debris off site at approved facilities.  |
| <u>1.4 Final Cleaning</u>      | .1 | When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.   |
|                                | .2 | Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.  |
|                                | .3 | Prior to final review, remove surplus products, tools, construction machinery and equipment.   |

- .4 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .6 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .7 Remove dirt and other disfiguration from exterior surfaces.
- .8 Sweep and wash clean paved areas.

**END OF SECTION**

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PART 1 - GENERAL

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| <u>1.1 Related Sections</u> | .1 | Section 01 33 00 - Submittal Procedures.  |
| <u>1.2 Precedence</u>       | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.   |
| <u>1.3 Definitions</u>      | .1 | Materials Source Separation Program (MSSP): Consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.  |
|                             | .2 | Recyclable: Ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse by others.   |
|                             | .3 | Recycle: Process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.   |
|                             | .4 | Recycling: Process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.  |
|                             | .5 | Reuse: Repeated use of product in same form but not necessarily for same purpose. Reuse includes:<br>.1 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.<br>.2 Returning reusable items including pallets or unused products to vendors. |
|                             | .6 | Salvage: Removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.   |
|                             | .7 | Separate Condition: Refers to waste sorted into individual types.   |
|                             | .8 | Source Separation: Acts of keeping different types of waste materials separate beginning from first time they became waste.   |
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| <u>1.4 Documents</u>  | .1 | Maintain at job site, one copy of following documents:<br>.1 Material Source Separation Plan.  |
| <u>1.5 Submittals</u>   | .1 | Submittals in accordance with Section 01 33 00 -<br>Submittal Procedures.  |
|   | .2 | Prepare and submit following prior to project<br>start-up:<br>.1 Submit 2 copies of Materials Source Separation<br>Program (MSSP) description.   |
| <u>1.6 Waste Reduction<br/>Workplan (WRW)</u>                 | .1 | Prepare, Waste Reduction Workplan.   |
|   | .2 | Structure WRW to prioritize actions and follow as<br>first priority Reuse, then followed by Recycle.   |
|   | .3 | Describe management of waste.  |
|   | .4 | Post workplan or summary where workers at site are<br>able to review its content.  |
| <u>1.7 Materials<br/>Source Separation<br/>Program (MSSP)</u> | .1 | Prepare MSSP and have ready for use prior to project<br>start-up. The Demolition Waste Audit (DWA), with<br>related weight bills and/or receipt must be submitted<br>on a monthly basis with the Contractor's monthly<br>Progress claim. |
|   | .2 | Implement MSSP for waste generated on project in<br>compliance with approved methods and as reviewed by<br>Departmental Representative.  |
|   | .3 | Provide on-site facilities for collection, handling,<br>and storage of anticipated quantities of reusable<br>and recyclable materials.   |
|   | .4 | Provide containers to deposit reusable and recyclable<br>materials.  |
|   | .5 | Locate containers in locations, to facilitate deposit<br>of materials without hindering daily operations.  |
|   | .6 | Locate separated materials in areas which minimize<br>material damage.   |
|   | .7 | Collect, handle, store on-site, and transport<br>off-site, salvaged materials in separated condition.<br>.1 Transport to approved and authorized recycling<br>facility.  |

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| 1.8 Storage,<br>Handling and<br>Protection | .1 | Store, materials to be reused, recycled and salvaged in locations as specified in MSSP.  |
|  | .2 | Unless specified otherwise, materials for removal become Contractor's property.  |
|  | .3 | Protect, stockpile, store and catalogue salvaged items.  |
|  | .4 | Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.                           |
|  | .5 | Protect structural components not removed for demolition from movement or damage.  |
|  | .6 | Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.                       |
|  | .7 | Protect surface drainage, mechanical and electrical from damage and blockage.  |
|  | .8 | Separate and store materials produced during dismantling of structures in designated areas.  |
|  | .9 | Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities. |
|  | .1 | On-site source separation is recommended.  |
|  | .2 | Remove co-mingled materials to off-site processing facility for separation.  |
|  | .3 | Provide waybills for separated materials.  |
| 1.9 Disposal of<br>Wastes                  | .1 | Do not bury rubbish or waste materials.  |
|  | .2 | Do not dispose of waste, volatile materials, mineral spirits, oil or paint thinner into waterways, storm, or sanitary sewers.                                |
|  | .3 | Keep records of construction waste including:  |
|  | .1 | Number and size of bins.   |
|  | .2 | Waste type of each bin.  |
|  | .3 | Total tonnage generated.   |
|  | .4 | Tonnage reused or recycled.  |
|  | .5 | Reused or recycled waste destination.  |
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- .4 Remove materials from deconstruction as deconstruction/disassembly Work progresses.
- .5 Prepare project summary to verify destination and quantities on a material-by-material basis as identified in pre-demolition material audit.
- 1.10 Use of Site and Facilities
  - .1 Execute work with least possible interference or disturbance to normal use of premises.
  - .2 Maintain security measures established by PCA.
- 1.11 Scheduling
  - .1 Coordinate Work with other activities at site to ensure timely and orderly progress of Work.
- PART 2 - PRODUCTS
  - .1 Not Applicable
- PART 3 - EXECUTION
  - 3.1 Application
    - .1 Do Work in compliance with WRW.
    - .2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.
  - 3.2 Cleaning
    - .1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.
    - .2 Clean-up work area as work progresses.
    - .3 Source separate materials to be reused/recycled into specified sort areas.

END OF SECTION



PART 1 - GENERAL

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| <u>1.1 Precedence</u>                 | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.   |
| <u>1.2 Related Sections</u>           | .1 | Section 01 78 00 - Closeout Submittals.   |
|                                       | .2 | Section 01 74 11 - Cleaning.  |
| <u>1.3 Inspection and Declaration</u> | .1 | Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.<br>.1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.<br>.2 Request Departmental Representative's Inspection.                              |
|                                       | .2 | Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.  |
|                                       | .3 | Completion: submit written certificate that following have been performed:<br>.1 Work has been completed and inspected for compliance with Contract Documents.<br>.2 Defects have been corrected and deficiencies have been completed.<br>.3 Work has been completed and in compliance with Workplace Health, Safety and Compliance Commission of New Brunswick (WHSCC).<br>.5 Work is complete and ready for Final Inspection. |
|                                       | .4 | Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative, in conjunction with Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request reinspection.  |

**END OF SECTION**

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PART 1 - GENERAL

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| <u>1.1 Precedence</u>       | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.                 |
| <u>1.2 Related Sections</u> | .1 | Section 01 33 00 - Submittal Procedures.  |
|                             | .2 | Section 01 45 00 - Testing and Quality Control.   |
|                             | .3 | Section 01 71 00 - Examination and Preparation.   |
|                             | .4 | Section 01 77 00 - Closeout Procedures.   |
| <u>1.3 Submission</u>       | .1 | Prepare data using personnel experienced in maintenance and operation of described products.  |
|                             | .2 | Copy will be returned after final inspection, with Departmental Representative's comments.  |
|                             | .3 | Revise content of documents as required prior to final submittal.   |
|                             | .4 | Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, four final copies of operating and maintenance manuals in English. |
|                             | .5 | If requested, furnish evidence as to type, source and quality of products provided.   |
| <u>1.4 Format</u>           | .1 | Organize data in the form of an instructional manual.   |
|                             | .2 | Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.  |
|                             | .3 | When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.  |
|                             | .4 | Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.                     |
|                             | .5 | Arrange content by systems, under Section numbers and sequence of Table of Contents.  |
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- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
  - .7 Text: Manufacturer's printed data, or typewritten data.
  - .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
  - .9 Provide 1:1 scaled CAD files in dxf or dwg format on diskettes or CD.
- 1.5 Contents - Each  
Volume
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- .1 Table of Contents: provide title of project;
    - .1 date of submission; names,
    - .2 addresses, and telephone numbers of Consultant and Contractor with name of responsible parties;
    - .3 schedule of products and systems, indexed to content of volume.
  - .2 For each product or system:
    - .1 list names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
  - .3 Product Data: mark each sheet to clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
  - .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
  - .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Testing and Quality Control.
- 1.6 As-Builts and  
Samples
- 
- .1 Maintain at the site for Departmental Representative one record copy of:
    - .1 Contract Drawings.
    - .2 Specifications.
    - .3 Addenda.
    - .4 Change Orders and other modifications to the Contract.
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- .5 Reviewed shop drawings, product data, and samples.
- .6 Field test records.
- .7 Inspection certificates.
- .8 Manufacturer's certificates.
- .9 Permits.

- .2 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .3 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .4 Keep record documents and samples available for inspection by Departmental Representative.

#### 1.7 Project Record Documents

- .1 Departmental Representative will provide two white print sets of contract drawings and two copies of Specifications Manual specifically for "as-built" purposes.
- .2 Maintain at site one set of the contract drawings and specifications to record actual as-built site conditions.
- .3 Maintain up-to-date, real time record drawings and specifications in good condition and make available for inspection by the Departmental Representative at any time during construction.

#### 1.8 Recording Actual Site Conditions

- .1 As-Built Record Drawings:
  - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set (also by use of red ink). Submit both sets to Departmental Representative. All drawings of both sets shall be stamped "As-Built Drawings" and be signed and dated by Contractor.
  - .2 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
  - .3 Record following information:
    - .1 Depths of various elements of foundations and culvert in relation to Geodetic Datum.

- .2 Horizontal and vertical location of various elements in relation to exposed structure components.
- .3 Field changes of dimension and detail.

- .2 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .3 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
  - .1 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - .2 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
  - .3 Field changes of dimension and detail.
  - .4 Changes made by change orders.
  - .5 Details not on original Contract Drawings.
  - .6 References to related shop drawings and modifications.
- .4 As-built Specifications: legibly mark in red each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly items substituted from that specified.
  - .2 Changes made by Addenda and Change Orders.
  - .3 Mark up both copies of specifications; stamp "as-built", sign and date similarly to drawings as per above clause.
- .5 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

#### 1.9 Photographs

- .1 Contractor shall document progress of work on weekly basis by taking photographs showing all aspects of construction. Special emphasis to be shown with respect to components which will be covered during the course of the project. Photos of such components shall include a tape measure locating the component exactly.

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|------------------------------------|----|---|
|                                    | .2 | Departmental Representative may request special and additional photographs as deemed necessary - at no additional cost to project.  |
| <u>1.10 Final Survey</u>           | .1 | Contractor is to submit final site survey certificate, certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.   |
| <u>1.11 Warranties and Bonds</u>   | .1 | Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.  |
|                                    | .2 | List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.  |
|                                    | .3 | Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.  |
|                                    | .4 | Except for items put into use with Departmental Representative's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.   |
|                                    | .5 | Verify that documents are in proper form, contain full information, and are notarized.  |
|                                    | .6 | Co-execute submittals when required.  |
|                                    | .7 | Retain warranties and bonds until time specified for submittal.   |
| <u>1.12 Materials and Finishes</u> | .1 | Building Products, Applied Materials, and Finishes: include produce data, with catalogue number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured products. |

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END OF SECTION

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