



Parks Canada Agency

## **Cabot Trail (Trunk 30) Crack Sealing**

### **Technical Specifications**

**ISSUED FOR TENDER**

August 2022

Project Number: 8102

WSP Project #: 221-08579-00

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**END OF SECTION**

Specifications  
Issued for Tender  
Parks Canada Agency  
Cape Breton  
Cabot Trail (Trunk 30) – Crack Filling & Crack Sealing  
Project No. 8102  
WSP Canada Inc.



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## **Part 1 General**

### **1.1 PROJECT DESCRIPTION**

- .1 Trunk 30 (Cabot Trail) within Cape Breton Highlands National Park is approximately 81.4km. Over the past seven (7) years there have been seven (7) pavement rehabilitation projects. At this time, Parks Canada would like to conduct crack sealing to prevent water ingress to extend the design life of its assets. Asphalt crack sealing is required at the three following sections of the Park:
  - .1 KM12.8 to KM33.2 - French Mountain to Pleasant Bay Boundary
  - .2 KM38.7 to KM50.9 - Base of North Mountain Ascent to Big Intervale Park Boundary
  - .3 KM50.9 to KM63.6 - Park Boundary at Effies Brook to South Paving Limit of Neils Brook Bridge
- .2 All work to be carried out in accordance with applicable federal, 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, and the Code of Practice of the Department of Labour.

### **1.2 CONTRACT METHOD**

- .1 Construction work under unit price contract.

### **1.3 CODES**

- .1 Perform Work in accordance with National Parks Act, Code of Practice of the Department of Labour, as it pertains to the Traffic Control Manual (Department of Transportation & Infrastructure Renewal 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.
- .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.
- .4 Vehicle weights and dimensions shall conform to Highway Traffic Act (Nova Scotia).

### **1.4 WORK WITHIN PARK BOUNDARIES**

- .1 The project is within a National Park, and it is essential that all 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, 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 complete repairs at the Contractor's expense.
- .3 Confirm that contracted Work meets the standards outlined in the contract specification and drawings.
- .4 All sources of aggregate and concrete, controlled low strength material (CLSM), and grout mix-designs must be submitted to the Departmental Representative for approval prior to the pre-construction meeting.
- .5 The Contractor is responsible to follow the Provincial requirements regarding the following:
  - .1 Pit and Quarry Guidelines;
  - .2 Environmental Construction Practice specifications
- .6 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.

## **1.5 DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy each of following:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed Shop Drawings.
  - .5 Change orders.
  - .6 Other modifications to Contract.
  - .7 Field Test Reports.
  - .8 Copy of Approved Work Schedule.
  - .9 Health and Safety Plan and Other Safety Related Documents.
  - .10 Plan Locating Underground Utilities.
  - .11 Other Documents as Specified.
  - .12 Environmental Control Plan.
  - .13 Record drawings (kept up to date on a daily basis).

## **1.6 SITE CONDITIONS**

- .1 The Contractor will be responsible to visit the project site and review existing site conditions.

## **1.7 WASTE DISPOSAL**

- .1 All waste generated from this project will be disposed of outside of Park boundaries.

## **1.8 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 in the Unit Price Table.
- .2 After receiving the Contractor's 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, or via conference call/ virtually. This meeting will review implications of the contract, design, schedule of work, methods of construction, environment protection methods and traffic control.
- .3 The project completion date is October 28, 2022.
- .4 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.
- .5 No work will begin until the pre-construction meeting is held.
- .6 Following the pre-construction meeting and approval of the schedule and traffic control plan, the work will be so scheduled to meet the time restraints and have the project completed on time.

## **1.9 PARTIAL OCCUPANCY OR USE**

- .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.

## **1.10 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. Project Limits/Construction Limits are as follows:
  - .1 Lateral: Clearing limits.
- .2 The Contractor shall maintain the site in a tidy condition free from the accumulation of waste products and debris. Upon substantial performance of the work, remove surplus products, tools, machinery and equipment from the site. Completion of clean-up is required for total performance of the work.
- .3 Contractor shall provide any and all traffic control services required for the project.
- .4 Contractor to obtain all necessary permits to perform work and to comply with all permit requirements and conditions.

## **1.11 PROJECT MEETINGS**

- .1 The Contractor will arrange project meetings at the call of the Departmental Representative and assume responsibility for setting times and recording and distributing minutes in accordance with Section 01 31 19 – Project Meetings.

**1.12 SETTING OUT OF WORK**

- .1 Departmental Representative to designate cracks to be routed, cleaned and sealed.

**1.13 EXISTING SERVICES**

- .1 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.
- .2 Carry out work at times directed by authorities having jurisdiction, with minimum of disturbance to pedestrian and vehicular traffic.
- .3 Ensure pedestrian and other traffic is not unduly impeded, interrupted or endangered by execution or existence of work.
- .4 Maintain existing signs at all times. When it is necessary to temporarily remove a sign, it shall be dismantled and re-established on a temporary post or stand set back from construction area. The work is considered to be incidental and no separate payment will be made for maintaining or moving signs.

**1.14 EXISTING ROADWAY SIGNS**

- .1 The Contractor shall note that existing warning, regulatory and information signs may exist along the roadway within the project limits.
- .2 These signs shall be protected from damage.
  - .1 If any damage occurs during construction, the Contractor shall bear the expense to immediately replace such damaged signs and/or posts to the satisfaction of the Departmental Representative.
- .3 If the Contractor needs to temporarily remove the existing signs in order to complete their work, the removal and reinstatement shall be considered incidental.

**1.15 STANDARD HOURS**

- .1 The Contractor must maintain existing site hours for the work unless otherwise authorized by Departmental Representative.
- .2 Work that involves temporary disruption of services will be scheduled through the Departmental Representative. Give Departmental Representative minimum 72 hours' notice of any disruption of services.

**1.16 RELICS, ANTIQUES & WILDLIFE HABITAT**

- .1 Protect relics, antiquities, wildlife habitat, items of historical or scientific interest such as cornerstones and contents, animal nesting sites, commemorative plaques, inscribed tablets, and similar objects found during course of work.
- .2 Give immediate notice to Departmental Representative and await Departmental Representative's written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain her Majesty's property.

**1.17 MEASUREMENT OF QUANTITIES**

- .1 Linear: Items which are measured by metre - such as Cracks to be cleaned and sealed and Cracks to be routed, cleaned, and sealed.

**1.18 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.

**1.19 WORK SEQUENCE**

- .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 section of work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**



**Part 1 General**

**1.1 ACCESS AND EGRESS**

- .1 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

**1.2 USE OF SITE AND FACILITIES**

- .1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.
- .2 Maintain existing services and provide for vehicle access at all times with the exception of the dates as stated in Section 01 11 00.
- .3 All site activities related to construction are to be confined within the defined project boundaries.
- .4 No work camps will be located within the boundaries of the Park.
- .5 Water: in accordance with Departmental Representative's approval.
- .6 Temporary storage parking areas and turn around facilities for Contractor related equipment and vehicles will be limited to those areas agreed to and designated by the Departmental Representative.

**1.3 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING**

- .1 Execute work with least possible interference or disturbance to travelling public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

**1.4 EXISTING SERVICES**

- .1 Notify Departmental Representative and utility companies of intended interruption of services and obtain required permission.

**1.5 SPECIAL REQUIREMENTS**

- .1 Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.
- .2 Keep within limits of work and avenues of ingress and egress.
- .3 Work shall be conducted in accordance with Parks Canada BIA (if provided) and BMP's.
- .4 Special Move Permits (over-weight and over-dimension) from the Province shall be submitted to Departmental Representative for review and approval prior to activity.
- .5 Maintenance work on Contractor/Sub-Contractor equipment is prohibited within the National Park.

- .6 If native topsoil is encountered during excavation, the Contractor shall salvage and stockpile such that embankments and designated areas can be dressed with the salvaged topsoil at the end of project prior to hydroseeding and dry mulch.
- .7 Maintain roadways, detours and site signage at all times during the Contract (i.e. dust control and free from potholes, bumps, etc.)
- .8 Guide rail shall be installed at the same locations from which existing guide rail was removed, unless noted otherwise on the Drawings or by the Departmental Representative.
  - .1 Where existing guide rail is to be removed and new guide rail is to be installed at the same location, the Contractor shall complete the installation within the same working day or provide full physical protection of the region with traffic barrier protection meeting the approval of the Departmental Representative.
- .9 Work outside of normal working hours will require 48 hours written notice to the Departmental Representative. There are no restrictions on working on nights, weekends or statutory holidays.

#### **1.6 SMOKING ENVIRONMENT**

- .1 Comply with smoking restrictions.

#### **Part 2 Products**

##### **2.1 NOT USED**

- .1 Not Used.

#### **Part 3 Execution**

##### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 DESCRIPTION**

- .1 Mobilization and Demobilization consists of the preparatory work and operations including, but not limited to, those necessary for the loading, transportation, unloading, and complete set-up of all plant, equipment, labour, materials, facilities and incidentals necessary to complete the work associated with the Contract, as well as, the decommissioning, loading, transportation, unloading and storage of all plant, equipment, excess materials, facilities and incidentals after the work associated with the Contract is complete.

**1.2 RELATED REQUIREMENTS**

- .1 See Section 01 11 00 – Summary of Work.

**1.3 MEASUREMENT FOR PAYMENT**

- .1 See Section 01 29 00 – Payment Procedures

**1.4 DESCRIPTION**

- .1 There shall be no change in the Lump Sum Price of this Item due to a change in Contract scope or an extension to the Contract Completion Date.
- .2 The payments from the Lump Sum Price shall be full compensation for the Work under this Item regardless of the number of times the Contractor mobilizes.
- .3 At no time shall the total of the amounts paid to the Contractor under this Item be greater than the Contractor's Lump Sum Price.
- .4 For those purposes of mobilization and demobilization, "project site" means the location.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 CONSTRUCTION**

- .1 The Contractor shall carry out the Work as indicated in the Contract Documents and/or as specifically directed by the Departmental Representative.

**END OF SECTION**

**Part 1            General**

**1.1            GENERAL REQUIREMENTS OF THE BID AND ACCEPTANCE FORM**

- .1        This section covers the measurement of Work done for payment purposes.
- .2        The quantities listed in the Bid and Acceptance Form are approximate only and are for the purpose of tendering. Payment to the Contractor will be based on actual quantities of work completed in accordance with the Drawings and Specifications.
- .3        There shall be no measurement or payment for Work carried out beyond the limits defined on the Drawings and Specifications. In cases where the Work extends beyond the defined limits, theoretical lines and grades shall be used for measurement and payment purposes.
- .4        The total of all Unit Prices and Lump Sum payments shall constitute full compensation for the entire Work of the Contract, as shown, specified, and intended.
- .5        The Contractor will only be entitled to payment 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.
- .6        The unit and lump sum prices for all items in the Unit Price Table and Lump Sum Table shall represent the full compensation for the work of the item and shall include the cost of furnishing all materials, labour, tools, and equipment necessary to complete the work in accordance with the Contract, the Drawings and Specifications, and shall cover all costs of surety. Each item shall include all necessary supervision, plant and services, and all operations and allowances customary and necessary to complete each item and the Contract as a whole, notwithstanding the fact that not every such necessary operation is mentioned or included specifically for measurement.
- .7        Unless specified otherwise, all materials necessary to complete the items listed in the Unit Price Table, Lump Sum Table and the finished Work shall be new materials supplied by the Contractor and the cost of such materials is to be included in the Contractor's prices.
- .8        Should the Contractor need to remove any existing regulatory/warning/information signs or posts in order to complete their Work, the removal and reinstatement of the signs and posts shall be considered incidental.
- .9        Should the Contractor need to remove any existing Vehicle W-Beam Guide Rail in order to complete their Work, the removal and reinstatement and/or replacement of all guide rail components shall be considered incidental to the Work.
- .10       All measurements for progress payment purposes shall be taken jointly by the Contractor and the Departmental Representative.
- .11       Items which are measured by the metre shall be measured along centreline of installation unless otherwise indicated.
- .12       Longitudinal, transverse and area measurements shall be made on the actual flat or sloped surface, depending on the item.
- .13       There will be no measurement or payment for Work carried out beyond the limits defined on site.

**1.2 MEASUREMENT AND PAYMENT**

- .1 All items in this Contract will be paid for as indicated in the bid items below:
- .2 Lump Sum Item 1 – Section 01 25 20 – Mobilization and Demobilization
  - .1 Terms of Payment: Lump Sum (LS).
  - .2 This includes the following:
    - .1 50% of Lump Sum Contract Price for Mobilization and Demobilization to be paid when mobilization to site is complete.
    - .2 The remainder of the Lump Sum Price for Mobilization and Demobilization to be paid when work is complete and all plant, equipment, excess materials, facilities and incidentals have been removed from site and site cleaned and left in condition to the satisfaction of the Departmental Representative and all other Agencies having Jurisdiction.
    - .3 Payment of only **5%** of the total price tendered will be scheduled as outlined above. If the amount bid for mobilization and demobilization is greater than **5%** of the total price tendered, payment of the remainder of the amount will be authorized when the Contract has been completed.
- .3 Unit Price Item 1 – Section 32 01 18 – Crack Sealing
  - .1 Unit of Measurement: Lineal Metre (m).
  - .2 Measurement for payment shall be by measuring wheel and undertaken by the Contractor and confirmed by the Departmental Representative.
  - .3 The item shall include for all labour, equipment, and material involved in all work related to cleaning, routing and crack sealing along the Cabot Trail from Section KM 12.8 to KM 33.2, Section KM 38.7 to KM 50.9 and Section KM 50.9 to KM 63.6.
  - .4 This item shall include all requirements for Traffic Control as per Section 01 35 00.06.
  - .5 All other items incidental to the completion of Crack Sealing shall be included as part of this Unit Price.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Section 32 01 18 – Routing and Sealing Pavement Cracks
- .2 Particular requirements for inspection and testing to be carried out by testing laboratory designated by the Departmental Representative are specified under various sections.

**1.2 APPOINTMENT AND PAYMENT**

- .1 The Departmental Representative will appoint and pay for services of testing laboratory except as follows:
  - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
  - .2 Inspection and testing performed exclusively for Contractor's convenience.
  - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
  - .4 Tests specified to be carried out by Contractor under the supervision of the Departmental Representative.
- .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by the Departmental Representative to verify acceptability of corrected work.

**1.3 CONTRACTOR'S RESPONSIBILITIES**

- .1 Provide labour, equipment and facilities to:
  - .1 Provide access to Work for inspection and testing.
  - .2 Facilitate inspections and tests.
  - .3 Make good Work disturbed by inspection and test.
  - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify the Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by the Departmental Representative.

**1.4 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

**Part 2            Products**

**2.1                NOT USED**

.1            Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE**

- .1      Schedule and administer project meetings throughout the progress of the work at the call of Departmental Representative.
- .2      Prepare agenda for meetings.
- .3      Distribute written notice of each meeting two days in advance of meeting date to Departmental Representative.
- .4      Provide physical space and make arrangements for meetings.
- .5      Preside at meetings.
- .6      Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .7      Reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants and Departmental Representative.
- .8      Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

**1.2                PRECONSTRUCTION MEETING**

- .1      Within 15 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2      Departmental Representative, Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3      Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .4      Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
  - .1      Schedule of Work: in bar (GANTT) Chart format.
  - .2      Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
  - .3      Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
  - .4      Record drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .5      Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
  - .6      Monthly progress claims, administrative procedures, photographs, hold backs.
  - .7      Appointment of inspection and testing agencies or firms.
  - .8      Insurances, transcript of policies.



**1.3 PROGRESS MEETINGS**

- .1 During course of Work and one week prior to project completion, schedule progress meetings bi-weekly.
- .2 Contractor, major Subcontractors involved in Work and Departmental Representative are to be in attendance.
- .3 Notify parties minimum two days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within three days after meeting.
- .5 Agenda to include the following:
  - .1 Review, approval of minutes of previous meeting.
  - .2 Review of Work progress since previous meeting.
  - .3 Field observations, problems, conflicts.
  - .4 Problems which impede construction schedule.
  - .5 Corrective measures and procedures to regain projected schedule.
  - .6 Revision to construction schedule.
  - .7 Progress schedule, during succeeding work period.
  - .8 Review submittal schedules: expedite as required.
  - .9 Maintenance of quality standards.
  - .10 Review proposed changes for effect on construction schedule and on completion date.
  - .11 Other business.

**1.4 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment, but will be incidental to the work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE**

- .1      Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2      Do not proceed with Work affected by submittal until review is complete.
- .3      Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4      Where items or information is not produced in SI Metric units converted values are acceptable.
- .5      Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6      Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7      Verify field measurements and affected adjacent Work are co-ordinated.
- .8      Contractor's responsibility for errors 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 review.
- .10     Keep one reviewed copy of each submission on site.
- .11     Make any changes in submissions which Departmental Representative may require to be consistent with Contract Documents and resubmit as directed by Departmental Representative.
- .12     Notify Departmental Representative, in writing, when resubmitting of any revisions other than those requested by Departmental Representative.

**1.2                SAMPLES**

- .1      Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2      Deliver samples prepaid to Departmental Representative's 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.
- .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.

### **1.3 PHOTOGRAPHIC DOCUMENTATION**

- .1 Submit electronic copy of colour digital photography in jpg format, standard resolution, monthly with progress statement as directed by Departmental Representative.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Number of viewpoints:
  - .1 Viewpoints and their location as determined by Departmental Representative.

### **1.4 WORK SCHEDULE**

- .1 Provide within 5 working days after contract award, schedule showing anticipated progress stages and final completion of work within time period required by Contract Documents.
- .2 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.

### **1.5 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

## **Part 3 Execution**

### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Section 32 01 18 – Routing and Sealing Pavement Cracks

**1.2 REFERENCES**

- .1 Nova Scotia Transportation and Infrastructure (NSTIR):
  - .1 Nova Scotia Transportation and Infrastructure Traffic Control Manual, latest edition.
  - .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.

**1.3 PROTECTION OF PUBLIC TRAFFIC**

- .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:
  - .1 Place equipment in position to minimize interference and hazard to travelling public.
  - .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
  - .3 Do not leave equipment on travelled way overnight.
- .3 Close lanes of road only after receipt of written approval from Departmental Representative.
  - .1 Before re-routing traffic erect suitable signs and devices to Nova Scotia Transportation and Infrastructure Traffic Control Manual.
- .4 Keep travelled way graded, free from potholes and of sufficient width for required number of lanes of traffic.
  - .1 Provide 7 m wide minimum temporary roadway for traffic in two-way sections through Work and on detours.
  - .2 Provide 4.5 m wide minimum temporary roadway for traffic in one-way sections through Work and on detours.
- .5 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, except where other means of road access exist that meet approval of Departmental Representative.

## **1.4 INFORMATIONAL AND WARNING DEVICES**

- .1 Provide and maintain signs, flashing warning lights, variable message signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
  - .1 Construction of temporary pads, if required for the placement of temporary traffic control devices or portable variable message signs shall be supplied by the Contractor. Temporary pad sites shall be approved by the Departmental Representative.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices to Nova Scotia Transportation and Infrastructure Traffic Control Manual.
- .3 Place signs, delineators, barricades and miscellaneous warning devices in locations recommended in Nova Scotia Transportation and Infrastructure Traffic Control Manual.
  - .1 If situation on site changes, revise to approval of Departmental Representative.
- .4 The Contractor shall provide a Temporary Workplace Signer (TWS), who has successfully completed the Temporary Workplace Traffic Control Training Course, to be on site at all times when active construction is taking place. The Temporary Workplace Signer will be responsible to assess condition, prepare, implement and review traffic control plans for construction. The Temporary Workplace Signer will be responsible for ongoing compliance with the Nova Scotia Transportation and Infrastructure Traffic Control Manual and for ensuring the safe regulation of traffic and safe passage of pedestrians at temporary workplaces. The Temporary Workplace Signer 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.
- .5 A traffic control plan and emergency response plan must be submitted for review by the Departmental Representative prior to the pre-construction meeting.
- .6 Continually maintain traffic control devices in use:
  - .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
  - .2 Remove or cover signs which do not apply to conditions existing from day to day.

## **1.5 CONTROL OF PUBLIC TRAFFIC**

- .1 Provide competent flag personnel who have a valid provincial license, trained in accordance with, and properly equipped to Nova Scotia Transportation and Infrastructure Traffic Control Manual for situations as follows:
  - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled 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 a traffic control signal system is not in use.

- .3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
- .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.
- .7 At each end of restricted sections where pilot cars are required.
- .2 All Traffic Control Personnel shall be equipped with portable radios of sufficient range to ensure continuous communication within the traffic control zone.
- .3 All construction vehicles shall operate in accordance with and are subject to traffic control restrictions and operations in place on the project.

## **1.6 OPERATIONAL REQUIREMENTS**

- .1 Existing conditions for traffic within right-of-way containing work in this Contract are indicated by following descriptions:
  - .1 Section within Park Boundaries within contract limits are asphalt concrete surfaced two lane undivided trunk roadway with posted speeds up to 60 km/h.
- .2 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified and approved by Departmental Representative to protect and control public traffic, existing conditions for traffic may be restricted as follows:
  - .1 In accordance with Nova Scotia Transportation and Infrastructure Traffic Control Manual.
  - .2 The maximum cumulative traffic delay associated with work carried out under this Contract shall not exceed 10 minutes (between 0900hrs and 1600hrs) through the Contract limits during peak season (1 July to 30 August). Outside the peak season a 20 minute maximum cumulative delay within the Contract limits will be permitted.
  - .3 Maintain existing conditions for traffic crossing right-of-way containing work except that, when required for construction under this Contract and when measures have been taken as specified herein and approved by Departmental Representative to protect and control public traffic.
- .3 At the end of each day of work, traffic must be returned to two-lane two-way traffic. Restrictions of one lane traffic overnight or outside of work hours will not be permitted, unless approved otherwise by Departmental Representative.
- .4 Temporary structures shall be constructed as indicated on approved shop drawing submitted to Departmental Representative. All existing dimensions to be verified prior to construction with any discrepancies reported to the Departmental Representative.
- .5 The Contractor shall provide for services 24 hrs per day, 7 days per week.

- .6 Major responsibilities of the traffic accommodation person:
  - .1 Maintain traffic control devices and signs during regular shutdown on weekends and at night throughout the week.
  - .2 Clean signs, flares, barricades, etc. used to control and accommodate traffic.
- .7 Contact proper authorities in the event of an emergency, i.e., Contractor's Supervisor, Park Warden, and Departmental Representative.

## **1.7 MEASUREMENT FOR PAYMENT**

- .1 See Section 01 29 00 – Payment Procedures.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

## **Part 3 Execution**

### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

## **Part 1      General**

### **1.1          SUMMARY**

- .1      This Section describes recommendations and requirements sourced from federal, provincial, and municipal public health authorities and Canadian construction associations to maintain a safer construction site.
  - .1          Prioritize the health and safety of persons at the Place of the Work from exposure to COVID-19.
- .2      Establish and enforce a Project site-specific COVID-19 Safety Plan by the Contractor.
- .3      Due to the rapidly changing nature of viral pandemics, if a conflict occurs between this Section and public health authority health measures or other government public health orders, give higher priority to public health authority recommendations and requirements.

### **1.2          REFERENCE STANDARDS**

- .1      Government of Canada
- .2      Medical Devices Regulations, SOR/98-282
  - .1          Province of Nova Scotia
- .3      Occupational Health and Safety Act, 2022
  - .1          Canada Labour Code
- .4      Canada Occupational Health and Safety and Regulations, 2022

### **1.3          DEFINITIONS**

- .1      COVID-19: Coronavirus disease 2019 is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) .2Disinfectants (hard surface): An agent capable of destroying pathogenic microorganisms or inhibiting their growth.
- .2      Hand Sanitizer: Alcohol-based hand sanitizer containing at least 60% alcohol.
- .3      Isolate: A specific series of actions as determined by the public health authority. These procedures are different from quarantine.  
<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html#self>
- .4      Physical Distancing: Maintaining 2 m physical distance between persons.
- .5      Quarantine: A specific series of actions as determined by the public health authority. These procedures are different from isolate.  
<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html#self>



- .6 Surface Sanitizer: A substance, or mixture of substances, that reduces the population of infectious agents on environmental inanimate surfaces and objects. Surface sanitizers are not as effective as hard-surface disinfectants.

#### **1.4 ABBREVIATIONS AND ACRONYMS**

- .1 PHAC: Public Health Agency of Canada  
.2 PPE: Personal Protection Equipment

#### **1.5 ACCESS TO SITE**

- .1 Before allowing access to site, perform screening of persons to confirm the following:
- .1 They have not travelled outside of Canada within the past 14 days.
  - .2 To the best of their knowledge, they have not been in contact with someone with a confirmed or probable case of COVID-19.
  - .3 They have not recently worked on a different construction site that was shut down due to COVID-19.
  - .4 They are not currently exhibiting flu-like symptoms (such as cough, fever, shortness of breath, runny nose, or sore throat).
  - .5 Check person's temperature with temperature measuring device.
- .2 Discourage persons from entering the Project site who are at an increased risk of developing a serious response to COVID-19, such as:
- .1 Older adults
  - .2 Persons with underlying medical conditions
  - .3 Persons with compromised immune systems
- .3 Responses and results of screening measures, whether a person is permitted on site or not, is considered private and sensitive medical information.
- .4 If a person arrives at the Project site but is suspected of having COVID-19, prohibit them from entering the site. Recommend they go directly back home or other location for isolation. When a person is unable to safely transport themselves, arrange a vehicle and driver.
- .5 When transporting a potentially ill person, both driver and passenger must wear masks and nitrile gloves. Seat passenger in the backseat. Driver shall open and close doors to minimize touch points.

#### **1.6 ADMINISTRATIVE REQUIREMENTS**

- .1 Comply with COVID-19 restrictions requirements from applicable federal, provincial, and local statutes, regulations, and ordinances.
- .2 Be responsible for implementing, monitoring, and enforcing daily site-specific COVID-19 Safety Plan.
- .3 Give precedence to safety and health of persons on site over cost and schedule considerations.

- .4 Personal Protective Equipment: Verify that safety equipment and protective clothing is kept clean and maintained in good condition.
- .5 Develop protective equipment usage procedures and ensure that procedures are followed by persons on site; include the following procedures at a minimum:
  - .1 Dispose of or disinfect PPE worn on site at end of each shift.
  - .2 Disinfect reusable PPE before reissuing.
  - .3 Ensure appropriate PPE is worn properly during work activities.
- .6 Verify persons understand the proper use of PPE or educate persons on their proper use:
  - .1 Proper fitting of mask straps.
  - .2 Fit check persons for PPE each time PPE is worn.
  - .3 For flat fold respirators make sure panels are fully unfolded.
  - .4 Mask nose clip moulded around the nose and cheeks to give a good seal. Using both hands, mould nose clip to the shape of the lower part of the nose to ensure a close fit and effective seal. Check for air leaks around nose and at mask edges.
  - .5 Helpful literature on effective use of masks is available from Canadian Centre for Occupational Health and Safety. English:  
<https://www.ccohs.ca/covid19/facts-on-masks/>
  - .6 Where practical, persons to work remotely.
  - .7 Maintain physical distancing measures.
  - .8 Reorganize workflow when possible.
  - .9 When minimum physical distancing cannot be maintained, wear masks, face coverings and face shields.
  - .10 Communicate Contractor's COVID-19 Safety Plan to Subcontractors and other persons on site. Post COVID-19 Safety Plan at the Place of the Work, including near site entrance(s).
  - .11 Subcontractors and other persons to comply with the following practices to reduce the risk of COVID-19 transmission as identified by the Public Health Agency of Canada (PHAC), Health Canada, and US Centers for Disease Control and Prevention:
    - .1 Avoid touching eyes, nose, and mouth with unwashed hands
    - .2 When coughing or sneezing:
      - .1 Cough or sneeze into a tissue or the bend of your arm. Do not cough or sneeze into your hand.
    - .3 Non-medical face-coverings should be worn as a potential mitigant to catching and transmitting the virus, but are not a substitute for proper handwashing, physical distancing, and other protective measures. Do not wear a mask when it will put a person at safety risk (e.g. when it may get caught in machinery). Use face-coverings in line with the PHAC guidelines.

<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/about-non-medical-masks-face-coverings.html>

- .12 Do not share personal items or supplies, such as phones, pens, notebooks, tools, and PPE.
- .13 Use and remove PPE carefully. Be mindful of which PPE surfaces may be contaminated. Wash hands after handling used PPE.
- .14 Wash hands often with soap and water for at least 20 seconds after using the washroom, before handling food, after blowing nose, after coughing, after sneezing, and before smoking. If hands are not visibly soiled and soap/water are unavailable, use hand sanitizer instead.
- .15 Travel:
  - .1 Travel to and from Project site:
    - .1 Non-essential persons are not permitted on project site.
    - .2 When possible, travel to Project site using one person per vehicle. Carpooling is discouraged. Arrange for additional temporary site parking as required.
    - .3 When possible, at the end of a person's shift, change out of work clothes before entering vehicle. Handle work clothes carefully and wash upon arriving home.
    - .4 Monitor persons entering and exiting the Project site, and control entrances to ensure physical distancing is maintained, especially when shifts begin and end.
    - .5 When practical, stagger person's shift start and end times in five-minute intervals to encourage physical distancing.

## 1.7 MEETINGS

- .1 COVID-19 Safety Meetings:
  - .1 Conduct mandatory COVID-19 safety meetings and review ongoing safety issues. Include refresher safety meetings if COVID-19 Safety Plan is revised.
- .2 Project Meetings:
  - .1 Hold meetings by teleconferencing or videoconferencing where possible.
  - .2 Avoid common physical greetings, such as handshakes.
  - .3 Arrange furniture to maintain physical distancing.
  - .4 Minimize number of in-person meetings. If required, meetings should involve only necessary individuals and include six people or fewer. When possible hold meetings in open spaces. If required, hold 'Toolbox Talks' and similar meetings in multiple sessions to maintain physical distancing

## **1.8 RESPONSE MEASURES**

- .1 Persons potentially exposed to COVID-19, or who are exhibiting flu-like symptoms, such as fever, tiredness, coughing or congestion, must:
  - .1 stay at home and isolate,
  - .2 avoid entering the Project site,
  - .3 notify their supervisor,
  - .4 contact public health authority for further directions,
  - .5 follow the directions of the public health authority and not enter Project site until recommended by the public health authority.
- .2 If flu-like symptoms first develop while on site then avoid touching anything, take extreme care to contain coughs and sneezes, immediately return home, and self-isolate.
- .3 Where Project site areas are potentially contaminated by an infected person or probably infected person, barricade areas to keep persons two metres away until the area is cleaned and disinfected.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Hand Sanitizers: Products that are authorized for sale in Canada with a minimum 60% alcohol content.
- .2 Government of Canada list of hard-surface disinfectants and hand sanitizers with evidence for use against COVID-19:
  - .1 <https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>

## **Part 3 Execution**

### **3.1 SITE QUALITY CONTROL**

- .1 Site Quality Control Procedures:
  - .1 Be responsible for ensuring appropriate health and safety measures have been implemented, and that directions of the public health authority are followed for persons returning to work after a presumed or confirmed infection of COVID-19.

### **3.2 CLEANING**

- .1 Cleaning: Establish Project site cleaning protocols.
- .2 Waste Management: Provide suitable disposal containers with liners for single-use PPE and contaminated PPE.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Province of Nova Scotia:
  - .1 Occupational Health and Safety Act, - Updated 2013.

**1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
  - .1 Results of site-specific safety hazard assessment.
  - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
- .3 Submit electronic copies of Contractor's authorized representative's work site health and safety inspection reports to authority having jurisdiction and Departmental Representative.
- .4 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS MSDS - Material Safety Data Sheets.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within seven days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within five days after receipt of comments from Departmental Representative.
- .8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.
- .10 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.
- .11 Submit other data, information and documentation upon request as stipulated elsewhere in this Section.

**1.3 FILING OF NOTICE**

- .1 File Notice of Project and any other required Notices with the Provincial Authorities prior to commencement of the work. Provide the Departmental Representative with a copy of the filed Notice(s) prior to commencement of the work.

#### **1.4 SAFETY ASSESSMENT**

- .1 Perform site specific safety hazard assessment related to project.

#### **1.5 MEETINGS**

- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work. Have Contractor's site safety supervisor in attendance. Departmental Representative will advise of time, date and location of the meeting and will be responsible for recording and distributing the minutes.
- .2 Conduct site specific occupational health and safety meetings as required by the NS Occupational Health and Safety Act, and the Regulations made pursuant to the Act for the duration of the work.
- .3 Record and post minutes of all meetings in plain view on the work site. Make copies available to Departmental Representative upon request.
- .4 Conduct an orientation meeting with all workers prior to start-up of the Work to ensure everyone is aware of the Health and Safety issues for this specific project. Each new worker to receive the same orientation briefing prior to performing any work on this project.

#### **1.6 PROJECT/SITE CONDITIONS**

- .1 Work at site will involve contact with:
  - .1 Continuous movement of public traffic through the construction site at all hours of the day and night with the exception of dates listed in Section 01 11 00.
- .2 The above list shall not be construed as being complete and inclusive of all safety and health hazards encountered as a result of Contractor's operations during the course of work. Include above items into the hazard assessment program specified herein.

#### **1.7 GENERAL REQUIREMENTS**

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Health and Safety Plan shall contain the following three (3) parts:
  - .1 Part 1: List of individual health risks and safety hazards identified by hazard assessments.
  - .2 Part 2: List of specific measures to control or mitigate each hazard and risk identified in part one of Plan. Describe the engineering controls, personnel protective equipment and safe work practices to be implemented and followed when performing work related to each identified hazard or risk.
  - .3 Part 3: Emergency Measures and Communications Procedures as follows:
    - .1 Emergency Measures: on-site operating procedures, evacuation measures and emergency response to be implemented in the occurrence of an incident. Procedures to be specific and relevant to identified hazards. Measures to complement and be integrated with the facility and tenants Emergency Response Plans in place at site. Obtain information on existing emergency and evacuation plans from Departmental Representative and incorporate appropriate data.

- .2 Communication Procedures:
  - .1 List of names and telephone numbers of designated officials, to be contacted should an incident or emergency situation occur, including the following.
    - .1 General Contractor and all Subcontractors.
    - .2 Federal and Provincial Departments and local emergency resources organizations, as resources organizations, as applicable laws and regulations.
    - .3 Officials from Parks Canada. Departmental Representative will provide list of names to be included.
  - .2 Procedures implemented at site to communicate and share information between workers, subcontractors, and General Contractor on work activities and in particular those which might endanger workers and Facility employees.
- .3 Develop Health and Safety Plan in Collaboration with all subcontractors. Address all work and activities of subcontractors as they arrive on site. Immediately update Plan and submit to Departmental Representative.
- .4 Implement, maintain and enforce compliance with requirements of the Health and Safety Plan until final completion of work and demobilization from site.
- .5 As work progresses, review and update Plan addressing additional health risks and safety hazards identified by on-going hazard assessments.
- .6 Submit revised versions of Plan to Departmental Representative.
- .7 Post a typed written copy, including all updates of the Health and Safety Plan in a common visible location at work site.
- .8 Submission of the Health and Safety Plan, and updates to the Departmental Representative is for review and information purposes only. Its submission shall not be construed to imply approval by Departmental Representative, be interpreted as a warranty of being complete, accurate and legislate compliant and shall not relieve the Contractor of his legal obligations for the provision Health and Safety of the Construction Project.
- .9 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

## **1.8 RESPONSIBILITY**

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with Occupational Health and Safety Act, Occupational Safety General Regulations.
- .3 Carry out work placing emphasis on health and safety of the public, Parks Canada employees, site personnel and protection of the environment.
- .4 The Contractor is responsible to manage safety of the work site to ensure that any persons, including but not limited to, the general public circulating adjacent to the work operations are protected against harm due to the extent that they may be affected by conduct of the work.

- .5 Prior to commencement of work, provide site safety orientation sessions for all workers and other authorized persons.
- .6 The Contractor is responsible to ensure Contractor employees and sub-contractors accessing the work site are in possession of and wear appropriate personnel protective equipment (PPE).

## **1.9 UNFORESEEN HAZARDS**

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, advise Health and Safety co-ordinator and follow procedures in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

## **1.10 HEALTH AND SAFETY CO-ORDINATOR**

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:
  - .1 Have site-related working experience specific to activities associated with pavement rehabilitation projects completed with live traffic.
  - .2 Have working knowledge of occupational safety and health regulations.
  - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
  - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
  - .5 Be on site during execution of Work and report directly to and be under direction of site supervisor.
- .2 The Health and Safety Co-ordinator shall be required to conduct regularly scheduled safety inspections of the work site as follows:
  - .1 Informal inspections on a minimum daily basis noting deficiencies and remedial actions taken in a log book or diary. Make the log book and/or diary available for the Departmental Representative's viewing as requested. The log book shall be submitted on a bi-weekly basis to the Departmental Representative.
  - .2 Formal inspections on a minimum weekly basis and shall provide a written report to the Departmental Representative for each formal inspection, document deficiencies, remedial action needed and assign responsibility for rectification to the appropriate party.

## **1.11 POSTING OF DOCUMENTS**

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.

## **1.12 CORRECTION OF NON-COMPLIANCE**

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



- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

### **1.13 WORK STOPPAGE**

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

### **1.14 SITE CONTROL AND ACCESS**

- .1 Control work site and entry points. Grant and allow entry to only workers and other persons so authorized. Immediately stop unauthorized persons from circulating within construction areas and remove from site.
- .2 Implement procedures for granting permission to enter into work site to all persons who require access. Procedures to include the provision of a site safety orientation session.
- .3 Delineate and isolate construction areas from other areas of site by use of appropriate means. Erect barricades, fences, hoarding and temporary lighting as required.
- .4 Erect signage at entry points and at other strategic locations around site, clearly identifying construction area(s) as being "off limits" to unauthorized persons. Signage must be professionally made in both official languages or by use of well-understood graphic symbols.
- .5 Secure site at nighttime or provide security guard(s) as deemed necessary to protect site against entry.
- .6 Ensure persons granted access are fitted and wear appropriate personnel protective equipment (PPE). Be responsible for the provision of such PPE to persons who require access to conduct work or perform inspections.

### **1.15 PROTECTION**

- .1 Provide temporary facilities for protection and safe passage of public pedestrians and vehicular traffic around adjacent work site during all times except during full road closure periods as specified in Section 01 11 00.
- .2 Provide safety barricades, lights and signage on work site as required to provide a safe working environment for workers.
- .3 Carry out work placing emphasis on health and safety of public, site personnel and protection of the environment.
- .4 Should unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

### **1.16 PERMITS**

- .1 Obtain permits, licenses and compliance certificates, at appropriate times and frequency as stipulated by authorities having jurisdiction.

- .2 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify Departmental Representative in writing and obtain Departmental Representative's approval to proceed prior to carrying out that portion of the Work.

#### **1.17 MINIMUM SITE SAFETY RULES**

- .1 Notwithstanding the requirement to abide by provincial health and safety regulations, the following safety rules shall be considered minimum requirements at the work site and obeyed by all persons granted access:
  - .1 Wear personal protective equipment (PPE) appropriate to function and task on site; the minimum requirements being hard hat, safety vest and safety footwear. Wear eye protection where appropriate.
  - .2 Immediately report unsafe activities, conditions, near-miss accidents, injuries and damages.
  - .3 Maintain site in tidy condition.
  - .4 Obey warning signs and safety tags.
- .1 Brief workers on site safety rules, and on the disciplinary measures to be taken for violation or non-compliance of such rules. Post such information on site.

#### **1.18 TOOLS AND EQUIPMENT SAFETY**

- .1 Implement and follow a scheduled tool and equipment inspection/maintenance program at work site. Regularly check tools, equipment and machinery for safe operation and perform maintenance at pre-established time and frequency intervals as recommended by manufacturer. Include sub-contractor's equipment as part of the inspection process.
- .2 Use standardized checklists to ensure established safety checks are stringently followed.
- .3 Immediately tag and remove items found faulty or defective off site.
- .4 Maintain written documentation on each inspection. Make available to Departmental Representative upon request.

#### **1.19 HAZARDOUS PRODUCTS**

- .1 Comply with requirements of Workplace Hazardous Materials Information Systems (WHMIS).
- .2 Keep MSDS data sheets on site. Provide copies of all data sheets to Departmental Representative upon receipt of materials on site.
- .3 Put all MSDS data sheets on site, in a common area, visible to workers.

#### **1.20 PROJECT / SITE CONDITIONS**

- .1 The following are known or potential project related safety hazards at site:
  - .1 Highway Traffic.
  - .2 Wildlife
- .2 Obtain from Departmental Representative, copy of MSDS Data sheets of existing hazardous materials stored on site or being used by Facility and Tenant personnel in the course of their operations.

- .3 Above lists shall not be construed as being complete and inclusive of safety and health hazards encountered as a result of Contractor's operations during the course of work. Include above items into the hazard assessment program specified herein.

## **1.21 ACCIDENT REPORTING**

- .1 Investigate and report incidents and accidents as outlined in Provincial Occupational Safety and Health Act and Regulations.
- .2 Investigate and immediately report to Departmental Representative incidents and accidents which results, or has the potential of resulting in:
  - .1 Injuries requiring medical aid.
  - .2 Property damage in excess of \$5,000.00.
  - .3 Required notification to Workers Compensation Board or other regulatory agencies as stipulated by applicable regulations.

## **1.22 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not used.

## **Part 3 Execution**

### **3.1 NOT USED**

- .1 Not used.

**END OF SECTION**

## **Part 1        General**

### **1.1        REFERENCES**

#### **.1        Definitions:**

- .1        Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
- .2        Erosion: A combination of processes in which materials of the earth's surface are loosened, dissolved, or worn away, and transported from one place to another by natural agents.
- .3        Sedimentation: The addition of soils to water bodies by natural and human related activities.
- .4        Storm Water Runoff: Precipitation that does not soak into the ground or evaporate but flows along the ground surface as runoff.
- .5        Erosion and Sediment Control Plan: Plan identifying the applicable stabilization and structural strategies that shall be employed to limit sediment and erosion during construction.
- .6        Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water and air; biological and cultural resources; and includes management of visual aesthetics, noise, solid, chemical, gaseous and liquid waste; radiant energy and radioactive material as well as other pollutants.
- .7        Deleterious Substance: defined by the Fisheries Act as any substance that, if added to water, makes the water deleterious to fish or fish habitat or any water containing a substance in such quantity or concentration or has been changed by heat or other means, that if added to water makes that water deleterious to fish or fish habitat.
- .8        Contaminant: means any solid, liquid, gas, micro-organism, odour, heat, sound, vibration, radiation or combination of any of them, present in the environment.
- .9        Contaminants and Deleterious substances includes, but are not limited to: sediment or sediment-laden water, petroleum products, paints, thinners, heated water, concrete wash water, salt, heavy metals, wood preservatives, cleaning supplies, pesticides, wood and food waste, and fecal matter.
- .10       Environmental incidents or emergencies include:
  - .1        Chemical or Petroleum spills;
  - .2        Poisonous or Caustic Gas Emission;
  - .3        Biological or Chemical Explosion;
  - .4        Hazardous Material Spill;
  - .5        Sewage Spill;
  - .6        Contaminated Water into Waterways;
  - .7        Explosion and Ammunition.

- .2 Reference Standards:
  - .1 Parks Canada National Best Management Practices – Roadway, Highway, Parkway and Related Infrastructure.
    - .1 Document is included in Technical Specifications as Appendix B.
  - .2 Parks Canada Basic Impact Analysis (BIA) for the project as Appendix C.

## **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prior to the pre-construction meeting, submit Environmental Protection Plan for review and approval by Departmental Representative.
- .3 Environmental Protection Plan must include comprehensive overview of known or potential environmental issues to be addressed during construction.
- .4 Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .5 Include in Environmental Protection Plan:
  - .1 Name of person responsible for ensuring adherence to Environmental Protection Plan.
  - .2 Name and qualifications of person responsible for manifesting hazardous waste to be removed from site.
  - .3 Name and qualifications of person responsible for training site personnel.
  - .4 Descriptions of environmental protection personnel training program.
  - .5 Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather.
    - .1 Plans to include measures to minimize amount of material transported onto paved public roads by vehicles or runoff.
  - .6 Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use.
    - .1 Plan to include measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.
  - .7 Spill Control Plan to include procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
  - .8 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
  - .9 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
  - .10 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
  - .11 Waste Water Management Plan identifying methods and procedures for management discharge of waste waters which are directly derived from construction activities, such as clean-up water.

- .12 Historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands.

### **1.3 SENSITIVE AREAS**

- .1 Site clearing, ground disturbance, and heavy equipment traffic shall not occur within Sensitive Areas unless absolutely required and authorized by Departmental Representative.
- .2 Contractors must make all efforts to prevent contaminants and deleterious substances arising from their work from directly or indirectly entering those areas indicated as sensitive areas on drawings (e.g. watercourses and wetlands). This may include mitigative measures such as altering; work schedules, methods of undertaking the work, materials used, and installation of mitigative structures (e.g. sediment control fence, check dams, mulching, etc.).
- .3 Failure to comply can lead to charges under various legislation, including the federal Fisheries Act, Parks Canada Act, and the Nova Scotia Environmental Protection Act.

### **1.4 FIRES**

- .1 Fires and burning of rubbish on site is not permitted.
- .2 Immediately report all fires to the Departmental Representative. The Contractor is held responsible to make all reasonable efforts to extinguish any fires on the site.
- .3 The Contractor is required to comply with the Fire Protection Regulations of the National Parks Act.
- .4 In accordance with these Regulations, the Park Superintendent may restrict activities, or access to work areas, in the interest of fire prevention.
- .5 The Contractor's equipment must be in proper working condition, and be used in such a manner as to minimize the potential for ignition of vegetation.
- .6 Vehicles and stationary equipment must be equipped with fire suppression equipment such as an operable fire extinguisher.
- .7 If storage and/or operation of in-Park equipment during a high fire hazard season is of concern to the Park, the Contractor may be required to prepare and implement a Fire Suppression Contingency Plan.

### **1.5 DISPOSAL OF WASTES**

- .1 Littering is prohibited.
- .2 Dispose of rubbish and waste materials at authorized site.
- .3 Do not dispose of waste, volatile or deleterious materials into waterways, wetlands, storm or sanitary sewers.
- .4 All refuse from routing and cleaning is the property of the Contractor and shall be removed and disposed of in a legal manner.
- .5 All Hazardous materials shall be sealed as dictated by authorities having jurisdiction, and disposed of off-site, unless otherwise instructed by the Departmental Representative.

- .6 Garbage must be collected and removed daily from the worksite to keep the site sanitary and to prevent unwanted interactions with Park fauna (e.g. bears).

## **1.6 DRAINAGE**

- .1 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

## **1.7 SITE CLEARING AND PLANT PROTECTION**

- .1 Protect trees and shrubs adjacent to construction work, storage areas and trucking lanes.

## **1.8 WORK ADJACENT TO WETLANDS AND WATERCOURSES**

- .1 Provide a buffer zone in combination with appropriate erosion and sedimentation control when working adjacent to watercourses and wetlands. Consult with regulatory agencies.

## **1.9 POLLUTION CONTROL**

- .1 Control emissions from equipment and plant in accordance with local authorities' emission requirements.
- .2 Prior to the pre-construction meeting, prepare an Environmental Protection Plan, which addresses procedures to follow in the event of a pollution incident and ensure all staff are aware of these procedures. Provide copy of contingency plan to the Departmental Representative.
- .3 Maintain temporary erosion and pollution control devices installed under this contract until the Work is completed as specified in the Project Documents.
- .4 Remove temporary erosion and pollution control measures just prior to project completion unless directed otherwise. Chemicals used in dust control must have prior approval of the Departmental Representative.
- .5 Control emissions from equipment to requirement of authority having jurisdiction.
- .6 Cover or wet down dry materials and rubbish to prevent blowing dust and debris.
- .7 Keep paved surfaces clean. Control dust by application of calcium chloride or water.

## **1.10 PETROLEUM, OIL AND LUBRICANT STORAGE**

- .1 Take precautions to avoid contamination of the site from Petroleum, Oil and Lubricants (POL's).
- .2 The management of POL's and chemicals must meet with the requirements of the Nova Scotia Dangerous Goods Transportation Act and all other appropriate provincial and federal regulations to include but not be limited to the following:
  - .1 Temporary POL storage sites are to be located a minimum 200 m from any watercourse or wetland.
  - .2 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.

- .3 The Departmental Representative must be immediately contacted after a spill of more than 10 L of fuel or lubricant, and after any amount of other chemical products has escaped.
- .4 Storage of large amounts of fuel (more than 900 L) in the Park is not permitted.
- .5 Storage of hazardous material, including explosives, shall not be permitted within the Park, except for quantities which shall normally be expected to be utilized in a day of Work, and which are not permitted to stockpile.

#### **1.11 REFUELING AND SPILL CONTAINMENT**

- .1 Take precautions to avoid contamination of the site from fuel. Keep and maintain hydrocarbon containment and cleanup materials on site for the duration of construction activities. Ensure that Contractor's personnel are trained in the proper use of such materials.
- .2 Establish suitable fueling and maintenance areas and obtain approval from the Departmental Representative.
- .3 Do not refuel or maintain equipment adjacent to or within 100 meters of any watercourse or sensitive areas.
- .4 Monitor on site vehicles for fluid leaks. Implement a preventative maintenance program to keep vehicles free from leaks.
- .5 Refueling of on-line equipment from storage facilities located outside Park boundaries is strongly preferred. Storage of any fuel has to occur only in previously approved locations, and with Departmental Representative 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 clean-up of all spills related to the Work.
- .6 Emulsion storage tanker and transfer of emulsion from tanker to spray vehicle are not permitted within National Park.

#### **1.12 EQUIPMENT MOVEMENT AND MAINTENANCE**

- .1 Maintenance work on Contractor/Sub-Contractor equipment is prohibited within National Park.
- .2 Waste oil and solvents are to be properly contained until they are removed from the site by qualified companies for recycling or disposal.
- .3 Any leaking equipment must be taken out of service until repaired.
- .4 Limit the number and length of temporary access and construction roads.

#### **1.13 AIRBORNE POLLUTION AND PARTICULATE CONTROL**

- .1 Keep dust and inconvenience to site occupants to a minimum.
- .2 Control emissions from equipment to local emission requirements.

#### **1.14 NOISE CONTROL**

- .1 Operate construction equipment to prevent excessive noise.



- .2 To reduce potential negative impacts on Park fauna, noise control measures, such as properly functioning mufflers on equipment, must be in place.

#### **1.15 SEWAGE DISPOSAL**

- .1 Provide and maintain temporary sanitary facilities for site personnel.
- .2 Obtain all approvals required for the disposal of sanitary waste from any facilities, including offices, washrooms, and temporary site trailers.
- .3 Remove sanitary facilities from site when no longer required.

#### **1.16 FISHERIES AND WILDLIFE**

- .1 Wildlife shall not be fed or harassed.
- .2 All refuse shall be disposed of at an approved facility to avoid the attraction of nuisance animals.
- .3 In case of persistent wildlife encounters, the Contractor shall inform the Departmental Representative, who will notify Parks Canada of the situation. Care shall be taken to avoid the animal.

#### **1.17 UNFORESEEN SITE STOPPAGES**

- .1 If contaminated sites, heritage sites, archeological resources, or other unforeseen site conditions are encountered in the work site area, work will immediately cease until investigations are completed and permission to continue is granted from the Departmental Representative.

#### **1.18 HISTORICAL/ARCHAEOLOGICAL CONTROL**

- .1 Provide historical, archaeological, cultural resources, biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on project site: and identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in area are discovered during construction.
- .2 Plan: include methods to assure protection of known or discovered resources and identify lines of communication between Contractor personnel and Departmental Representative.

#### **1.19 NOTIFICATION**

- .1 Departmental Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection Plan.
- .2 Contractor: after receipt of such notice, inform Departmental Representative of proposed corrective action and take such action for approval by Departmental Representative.
  - .1 Take action only after receipt of written approval by Departmental Representative.
- .3 Departmental Representative will issue stop order of work until satisfactory corrective action has been taken.

- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

**1.20 MEASUREMENT FOR PAYMENT**

- .1 See Section 01 29 00 – Payment Procedures.

**Part 2 Execution**

**2.1 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.
- .3 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 – Cleaning.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Section 32 01 18 – Routing and Sealing Pavement Cracks

**1.2 INSPECTION**

- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.

**1.3 INDEPENDENT INSPECTION AGENCIES**

- .1 Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and re-inspection

**1.4 ACCESS TO WORK**

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

**1.5 PROCEDURES**

- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.

- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

#### **1.6 REJECTED WORK**

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If, in opinion of Departmental Representative, it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Departmental Representative.

#### **1.7 REPORTS**

- .1 Submit 4 copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to subcontractor of work being inspected or tested.

#### **1.8 TESTS AND MIX DESIGNS**

- .1 Furnish test results and mix designs as requested.

#### **1.9 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

### **Part 2 Products**

#### **2.1 NOT USED**

- .1 Not Used.

### **Part 3 Execution**

#### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 ACTION AND INFORMATIONAL SUBMITTALS**

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

**1.2 INSTALLATION AND REMOVAL**

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

**1.3 HOISTING**

- .1 Provide, operate and maintain hoists required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.
- .2 Hoists to be operated by qualified operator.

**1.4 SITE STORAGE / LOADING**

- .1 Contractor's use of site storage and loading shall be limited to an area within limits of traffic diversion. Any conditional areas required shall be approved by Departmental Representative prior to use.
- .2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

**1.5 CONSTRUCTION PARKING**

- .1 Parking will be permitted in the area of the site provided it does not disrupt performance of Work and after obtaining agreement with the Departmental Representative.
- .2 Provide and maintain adequate access to project site.
- .3 Keep parking areas clean and maintained during period of Contract.

**1.6 EQUIPMENT, TOOL AND MATERIALS STORAGE**

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

**1.7 SANITARY FACILITIES**

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

**1.8 CONSTRUCTION SIGNAGE**

- .1 No other signs or advertisements, other than warning signs, are permitted on site.
- .2 Signs and notices for safety and instruction in both official languages graphic symbols to CAN/CSA-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.

**1.9 PROTECTION AND MAINTENANCE OF TRAFFIC**

- .1 Refer to Section 01 35 00.06 – Special Procedures for Traffic Control.

**1.10 CLEAN-UP**

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.
- .3 Clean dirt or mud tracked onto paved or surfaced roadways.
- .4 Store materials resulting from demolition activities that are salvageable.

**1.11 MEASUREMENT FOR PAYMENT**

- .1 See Section 01 29 00 – Payment Procedures.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 ACTION AND INFORMATIONAL SUBMITTALS**

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

**1.2 INSTALLATION AND REMOVAL**

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

**1.3 ACCESS TO SITE**

- .1 Provide and maintain access roads, ramps and construction runways as may be required for access to Work.

**1.4 PUBLIC TRAFFIC FLOW**

- .1 Provide and maintain competent Traffic Control Persons, traffic control signals, barricades and flares, lights, or lanterns as required to perform Work and protect the public.
- .2 Traffic Control Persons must be certified by Workplace NS.

**1.5 FIRE ROUTES**

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

**1.6 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY**

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

**1.7 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**



**Part 1 General**

**1.1 REFERENCES**

- .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 products or systems are 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.

**1.2 QUALITY**

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
- .3 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.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions.

**1.3 AVAILABILITY**

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for 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.

#### **1.4 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 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .5 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

#### **1.5 TRANSPORTATION**

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Departmental Representative. Unload, handle and store such products.

#### **1.6 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 will 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.

#### **1.7 QUALITY OF WORK**

- .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.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

#### **1.8 CO-ORDINATION**

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.

**1.9 REMEDIAL WORK**

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .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.

**1.10 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 PROJECT CLEANLINESS**

- .1 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .2 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .3 Provide on-site containers for collection of waste materials and debris.
- .4 Dispose of waste materials and debris off site.
- .5 Store volatile waste in covered metal containers and remove from premises at end of each working day.
- .6 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .7 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .8 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

**1.2 FINAL CLEANING**

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste products and debris other than that caused by Owner or other Contractors.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Sweep and wash clean paved areas.

**1.3 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment, but will be incidental to the work.

**Part 2 Products**

**2.1 NOT USED**

.1 Not Used.

**Part 3 Execution**

**3.1 CLEANING DURING CONSTRUCTION**

- .1 The Contractor shall ensure that adequate dust control is provided at all times during the Contract to avoid any hazardous situations and shall immediately implement any measures as directed by the Departmental Representative to control dust problems. Any damages or costs incurred as a result of excessive dust shall be paid for by the Contractor.
- .2 There is some debris to be cleaned out of the in-stream culverts at Cobblers Brook and Platters Cove as described in 01 11 00 Summary of Work. The Contractor should confirm the extents of the debris to be cleaned with the Departmental Representative.

**END OF SECTION**

**Part 1 General**

**1.1 ADMINISTRATIVE REQUIREMENTS**

- .1 Acceptance of Work Procedures:
  - .1 Contractor's Inspection: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
    - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
    - .2 Request Departmental Representative's inspection.
  - .2 Departmental Representative Inspection:
    - .1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
    - .2 Contractor to correct Work as directed.
    - .3 Completion Tasks: submit written certificates in English that tasks have been performed as follows:
      - .1 Work: completed and inspected for compliance with Contract Documents.
      - .2 Defects: corrected and deficiencies completed.
      - .3 Certificates required by jurisdictional authorities have been submitted.
      - .4 Work is complete and ready for Final Inspection.
  - .3 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

**1.2 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment but will be incidental to the work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1        General**

**1.1        ADMINISTRATIVE REQUIREMENTS**

- .1    Pre-warranty Meeting:
  - .1    Convene meeting one week prior to contract completion with Departmental Representative, in accordance with Section 01 31 19 - Project Meetings to:
    - .1    Verify Project requirements.
    - .2    Review warranty requirements.
  - .2    Departmental Representative to establish communication procedures for:
    - .1    Notifying construction warranty defects.
    - .2    Determine priorities for type of defects.
    - .3    Determine reasonable response time.
  - .3    Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
  - .4    Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

**1.2        AS -BUILT DOCUMENTS AND SAMPLES**

- .1    Maintain, in addition to requirements in General Conditions, at site for Departmental Representative, one record copy of:
  - .1    Contract Drawings.
  - .2    Specifications.
  - .3    Addenda.
  - .4    Change Orders and other modifications to Contract.
  - .5    Reviewed shop drawings, product data, and samples.
  - .6    Field test records.
  - .7    Inspection certificates.
  - .8    Manufacturer's certificates.
- .2    Store record documents and samples in field office apart from documents used for construction.
  - .1    Provide files, racks, and secure storage.
- .3    Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
  - .1    Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4    Maintain record documents in clean, dry and legible condition.
  - .1    Do not use record documents for construction purposes.
- .5    Keep record documents and samples available for inspection by Departmental Representative.

### 1.3 RECORD DRAWINGS

- .1 Departmental Representative will provide two sets of white prints for record drawing purposes.
- .2 Maintain project record drawings and record accurately deviations from Contract documents.
- .3 Record changes in red. Mark on one set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to the Departmental Representative.
- .4 Record following information:
  - .1 Field changes of dimension, detail and elevation.
  - .2 Changes made by Change Order or Field Order.
  - .3 Other significant deviations which are concealed in construction and cannot be identified by visual inspection
- .5 At completion of project and prior to final inspection, neatly transfer “as-recorded” records to second set of white prints using fine, red marker. Neatly print lettering and numbers in size to match original. Lines may be drawn free-hand but shall be neat and accurate. Add at each drawing title block note: “AS-RECORDED”. Also, circle on List of Drawings each title and number of drawing marked with “as-recorded” records.
- .6 Submit this set of “as-recorded” drawings to Departmental Representative.
- .7 At the completion of construction, the Contractor shall complete a topographic as-recorded survey of the project areas and submit the survey data in an acceptable form to the Departmental Representative.
- .8 If project is completed without significant deviations from contract drawings, declare this in writing and submit to Departmental Representative in lieu of record drawings.
- .9 The Departmental Representative will review the progress of the record drawings as part of each payment certificate authorization. Should the drawings not be properly updated, payment will be withheld for each payment certificate until the work is completed to the satisfaction of the Departmental Representative.
- .10 Provide digital photos, if requested, for site records.
- .11 Contract Drawings and shop drawings: mark each item to record actual construction, including:
  - .1 Measured depths of elements of foundation in relation to finish road elevation.
  - .2 Measured horizontal and vertical locations of underground utilities, guiderail and appurtenances, referenced to permanent surface improvements.
  - .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.



**1.4 MEASUREMENT FOR PAYMENT**

- .1 The work for this Section will not be measured for payment, but will be incidental to the work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCE STANDARDS**

- .1 ASTM International
  - .1 ASTM D244-09, Standard Test Methods for Emulsified Asphalt.
  - .2 ASTM D6690-21, Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
  - .3 ASTM D7116-16, Standard Specification for Joint Sealant, Hot Applied, Jet-Fuel-Resistant Type for Portland Cement Concrete Pavements.
  - .4 General Services Administration Federal Specifications (GSA) - Federal Specifications (FS)
  - .5 FS-SS-S-200-E(2)1993, Sealants, Joint, Two-Component, Jet-Blast-Resistant, Cold Applied, for Portland Cement Concrete Pavement.
- .2 Nova Scotia Transportation and Infrastructure Renewal Standard Specification – Highway Construction and Maintenance
  - .1 Division 4 Section 11 – Crack Filling and Crack Sealing (EPWS).

**1.3 MEASUREMENT PROCEDURES**

- .1 Crack routing, cleaning, and sealing will be measured in linear metres.

**1.4 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for pavement sealants and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Samples:
  - .1 Submit one 4 L container of sealant proposed for use at least 2 weeks prior to beginning Work.
  - .2 Random samples may also be taken from any lot of material delivered to the site.
- .4 Tests and Evaluation Reports:
  - .1 Submit manufacturer's test data and certification that sealant materials meet requirements of this Section 2 weeks prior to beginning Work:
- .5 Sustainable Design Submittals:
  - .1 Construction Waste Management:
    - .1 Submit project Waste Management Plan and Waste Reduction Workplan highlighting recycling and salvage requirements.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

- .3 Storage and Handling Requirements:
  - .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect pavement sealants from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse and return by manufacturer of pallets, crates, padding, and packaging materials as specified in Construction Waste Management Plan Waste Reduction Workplan in accordance with Section 01 74 19 - Waste Management and Disposal.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 The joint sealing compound shall be a hot-poured, rubberized, asphalt compound certified by the Manufacturer to conform to the requirements of to ASTM D6690.

### **2.2 EQUIPMENT**

- .1 Heating equipment for melting sealant:
  - .1 Insulated double shell, oil jacketed kettle.
  - .2 Motor driven agitator.
  - .3 Totally automatic temperature control system controlling both heat transfer oil temperature and sealing compound temperature.
- .2 The routing and cutting equipment shall be of a type which can expeditiously cut and form joints to the sizes specified. The equipment shall be sufficiently flexible and portable to follow random cracking in the pavement. The equipment shall have cutter tools which are capable of cutting grooves 40 mm wide by 10 mm deep leaving the sides of the joint absolutely clean, smooth and ready for sealing.
- .3 Hot compressed air equipment shall be used to clean, dry and pre-heat cracks prior to applying sealant. The air lance shall consist of a compressor propane system providing a high temperature, high velocity blast of air.
- .4 Pressurized applicator capable of applying sealant at 100 kPa by means of hose and wand fitted with size of tip suitable for cracks.
  - .1 Capable of maintaining temperature of sealant as per manufacturer's recommendation during application.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for pavement sealant application in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

- .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

### 3.2 PREPARATION

- .1 Departmental Representative to designate cracks to be routed, cleaned and sealed. All cracks that are less than 20 mm in width but greater than 3 mm in width shall be routed out to a width of no more than 20 mm. The depth of routing shall be no more than 20 mm.
- .2 Use joint plows or high pressure water to remove old sealant material from designated joints or cracks.
- .3 Rout cracks to width of 20 mm using rotary routers approved by Departmental Representative.
- .4 Centre of rout to deviate not more than plus or minus 10 mm from centreline of crack.
- .5 Dispose of material removed from cracks as directed by Departmental Representative.
- .6 Clean and dry routed cracks using a lance with oil-free hot (1100 °C) compressed air, applied at minimum pressure of 600 kPa.
- .7 Where crack extends into base or subgrade, fill crack with clean dry fine sand to within 20 mm of pavement surface.
- .8 Obtain Departmental Representative's approval of preparation of cracks before application of sealant.

### 3.3 APPLICATION OF SEALANT

- .1 Do not use sealant material that has been frozen.
- .2 Ensure cracks are clean and dry immediately before applying sealant. Crack sealing shall not take place in rain or when the pavement is wet.
- .3 Heat joint sealant slowly to application temperature in accordance with manufacturer's recommendations.
- .4 The liquid sealing compound shall be poured within two minutes after the hot compressed air lance has coursed the crack and while it is still hot.. Maintain tip of wand close to bottom of routed groove during filling.
- .5 Fill cracks only when air temperature is above 10 degrees C, daily low temperature does not fall below 5 degrees C, and no rain is forecast.
- .6 Crack sealant shall be applied so that the crack is flush filled immediately following application and a thin overband of sealant extends approximately 25mm beyond the edges of the crack. This shall be accomplished using the appropriate application wand and squeegee to place liquid sealant in a crack.
- .7 When sealing material has cooled sufficiently to form a film over its exposed surface, sprinkle sealed cracks with ordinary Portland cement or agricultural limestone before opening pavement to traffic.
- .8 Traffic shall be kept off sealed cracks until the crack sealant has cured and will not track under the action of traffic. Contractor shall prevent tracking by applying blotting agent to the crack sealant, as required.

- .9 Immediately following the application of the crack sealing material and before opening the roadway to traffic, the Departmental Representative shall inspect the Work for areas exhibiting adhesion failure, damage to the crack sealing material from construction equipment or personnel, omitted cracks, or any other issue that would indicate that the work is not acceptable.
- .10 All Work deemed unacceptable by the Departmental Representative shall be prepared and resealed at the Contractor's own expense.

### **3.5 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 00 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 00 - Cleaning.

### **3.6 DAILY OUTPUT**

- .1 All cracks routed shall be sealed on the same day as routed. The Contractor shall have the capability of routing and sealing a minimum of 2500 m/full day.

### **3.7 FINAL ACCEPTANCE**

- .1 The Departmental Representative and the Contractor will meet and inspect the crack sealing one year after the completion of the work. All areas that have failed shall be repaired at the Contractor's expense at no cost to Parks Canada Agency. If the Contractor and the Departmental Representative do not agree on what areas are failed, the Departmental Representative's decision shall be final.
- .2 The final acceptance of the original Crack Sealing by the Departmental Representative shall relieve the Contractor from all maintenance responsibility with respect to the original Crack Sealing, however, the Contractor shall be held responsible to maintain repaired areas for a period of 12 months after repairs are made.

**END OF SECTION**