

PART 1 - GENERAL

<u>1.1 Related Sections</u>	.1	Section 01 14 10 - Scheduling and Management of Work
	.2	Section 01 55 26 - Traffic Regulation
	.3	Section 01 78 00 - Closeout Submittals
<u>1.2 Description of Work</u>	.1	The work of this contract generally involves the removal of existing asphalt pavement materials from all parking, loading, and access areas and the replacement with new asphalt materials. The work also involves repairs to select areas and repainting of all parking lines, pedestrian areas and handicap areas as shown on the drawings and outlined in the specifications. Other work is outlined in the specifications and on the drawings.
	.2	The work of this contract shall be carried out as outlined in document.
	.3	The work of this contract includes the provision of supply of all materials, labour, equipment and ancillaries, all as necessary for the completion of the work as indicated on the drawings and as described in the specifications and notes. Work on this project generally consists of, but is not limited to, the following:
	.1	Milling and removal from site of existing asphalt materials;
	.2	Adjusting catchbasin frames and covers to suit;
	.3	Repairs to concrete curb and gutter at locations as shown on drawings;
	.4	Carry out a "Proof Roll" test as specified herein. As a result of the Proof Roll test, identify areas to be repaired;
	.5	Carry out repairs to identified areas as outlined and/or as directed on site;
	.6	Supply and place additional Class "A" gravel as identified to raise grade at locations where required. Class "A" gravel is required as follows:
	.1	To backfill identified areas as shown on drawings;
	.2	To backfill areas identified as a result of the Proof Roll test;
	.3	To adjust grade where existing final grade is currently below the concrete gutter grade;
	.4	To adjust grades where additional gravel is required to provide original or identified final grades while maintaining uniform asphalt thickness;
	.5	Class "A" gravel will also be required as a sub-base for concrete curbs and gutters and sidewalk;
	.6	Other locations as required.

1.2 Description of .3
Work
(Cont'd)

- (Cont'd)
- .7 Supply and place new hot mix asphaltic concrete base and seal materials along with tack coat;
 - .8 Supply and install new permanent pavement markings;
 - .9 Supply all necessary construction signs and traffic controls;
 - .10 All other labour, materials and work necessary to complete the project to the Department Representative's approval.

1.3 Familiarization .1
with Site

- All bidders, before submitting their tender, should inspect and examine the site and its surroundings and the extent of underground facilities and shall satisfy themselves as to the form and nature of the work and materials necessary for the completion of the work, the means of access to the site, the accommodation they may require, and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the conditions that will apply.
- .2 Obtain prior permission from the Departmental Representative before carrying out such site inspection.
 - .3 Contractors are required to review the list of potential site hazards provided in Section 01 35 28.
 - .4 No extra payment will be made to the Contractor, above the Contract Price, for costs resultant from failure to determine the conditions that affect the Work.
 - .5 Bidders are required to wear all appropriate personal protective equipment and take all precautionary measures necessary to ensure their safety during any pre-tender site visits.

1.4 Codes and
Standards

- .1 Perform work in accordance with the National Building Code of Canada, National Fire Code of Canada and any other code of provincial or local application, including all amendments up to project tender closing date provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

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- 1.4 Codes and Standards (Cont'd) .3 Unless otherwise indicated, the latest editions of referenced standards, codes and documents will apply.
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- 1.5 Cost Breakdown .1 Before submitting first progress claim submit breakdown of contract price in detail as directed by Departmental Representative and aggregating contract price. Departmental Representative will provide the required forms for application of progress payment.
- 1.6 Measurement for Payment .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment.
- 1.7 Maintenance of Work During Construction .1 Maintain work during construction. Undertake continuous and effective maintenance work day by day, with adequate equipment and forces so that the roadway or structures are continuously kept in a condition satisfactory to the Department Representative.
- 1.8 Work Within Tax Centre Boundaries .1 The project is within a national property and it is essential that lands remain as undisturbed as possible. The Contractor will be expected to use standards and methods beyond those for normal construction in order to protect the environment and ensure the aesthetic of the work. Contract limits shall be strictly adhered to and every precaution shall be taken to minimize environmental damage and disruption to vegetation, and structures or existing services, both on construction and storage sites.
- .1 If any damage occurs during construction, the Contractor is responsible to bear the expense to immediately restore such damaged areas to the satisfaction of the Department Representative.
- .2 If Contractor fails to repair damage to the satisfaction of the Department Representative, the Department Representative may complete repairs at the Contractor's expense.
- .3 The Contractor shall ensure that contracted work meets the standards outlined in the contract specification and drawings.
- .4 The Contractor shall ensure that no damage will be done to underground communication and electrical cables.
- .5 All sources of aggregate and asphalt cement must be submitted to the Department Representative for review at least two weeks prior to the start of any work.
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1.8 Work Within Tax .1
Centre Boundaries
(Cont'd)

- (Cont'd)
- .6 The Contractor is responsible to follow the Provincial requirements regarding the following:
- .1 Pit and Quarry Guidelines
 - .2 Environmental Construction Practice Specifications
- .7 The Contractor will make arrangements with authorities or owners of private properties for quarrying and transporting materials and machinery over their properties and be responsible for obtaining and paying of fees.

1.9 Documents
Required

- .1 Maintain at job site, one copy each of the 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 & Safety Plan
 - .10 Waste Reduction Work Plan
 - .11 Lock-Out Procedures
 - .12 Material Source Separation Plan
 - .13 Permits

1.10 Permits

- .1 The Contractor shall obtain, and pay for, permits from authorities as required for all operations and construction. The Contractor 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 Owner 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.

1.11 Existing
Buildings

- .1 Execute work with least possible interference or disturbance to adjacent building operations, occupants, public and normal use of premises, parking lot and loading area. Arrange with Departmental Representative to facilitate execution of work.
- .2 Provide temporary dust screens, barriers, warning signs in locations where renovation and alteration work is adjacent to areas which will be operative during such work.

1.12 Cutting,
Fitting and
Patching

- .1 The General Contractor shall ensure that cutting and patching for all trades is included in his tender price bid for the work.
- .2 Execute cutting, including excavation, fitting and patching, required to make work fit properly.
- .3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.
- .4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

1.13 Existing
Services

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to pedestrian, vehicular traffic, tenant operations.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Make all required connections to existing services, carry out such operations at the times directed by governing authorities, and which minimum disturbance to building tenants and vehicular traffic.
- .4 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. This includes disconnection of electrical power and communication services to tenant's operational areas. Adhere to approved schedule and provide notice to affected parties, local authority and public utilities.
- .5 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .6 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.
- .7 Record the locations of maintained, re-routed and abandoned service lines. Include on the record drawings specified in Section 01 78 00 - Closeout Submittals.
- .8 Verify locations of all underground utilities prior to any construction activities.

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- 1.14 Additional Drawings .1 Department Representative may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.
- 1.15 Relics and Antiquities .1 Protect relics and antiquities, 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 Department Representative and await Department 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.
- 1.16 Measurement of Quantities .1 Linear: Items which are measured by metre or kilometre, such as pavement markings, will be measured along centreline of installation unless otherwise shown on plans.
- .2 Area:
.1 Longitudinal and transverse measurements for areas to be measured horizontally.
.2 Longitudinal and transverse measurements for such items as topsoil and seeding to be made on actual flat or sloped surface seeded or sodded.
- .3 Volume:
.1 In computing volumes of excavation, average end area method will be used unless otherwise directed by Department Representative in writing.
.2 Term: Litre shall mean 1000 ml or L.
.3 All volume measurements refer to in place measure unless specified elsewhere in specification.
- .4 Mass:
.1 Term "tonne" shall mean 1000 kg.
.2 Materials which are specified for measurement by mass shall be weighed on scales approved by and at locations designated by Department Representative. Units used to haul material being paid for by mass shall bear legible identification numbers plainly visible to scale person as it approaches and leaves scale house.
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2015-06-17

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- 1.17 Contractor's Use of Site
- .1 Do not unreasonably encumber site with materials or equipment.
 - .2 Move stored products or equipment, which interfere with operations of Users or other Contractors.
 - .3 Obtain and pay for use of additional off-site storage or work areas needed for operations.
 - .4 Maintain all roads, streets, lanes, walks, driveways, free from mud and debris tracked from construction site, on a daily basis.
- 1.18 Security
- .1 Watch the site at all times. No compensation will be paid by Public Works and Government Services Canada (PWGSC) for materials of work stolen, lost, damaged or destroyed.
- 1.19 Setting Out the Work
- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated. Provide written report upon completion that design locations, lines and elevations have been achieved.
 - .2 Protect and maintain all survey/reference points.
 - .3 Provide devices and qualified personnel as required to layout and construct work, including PEI Land Surveyor for layout, quality control and reporting.
 - .4 Supply all stakes and markers required for laying out work.
 - .5 Reference Appendix "A" for Coordinate File for layout top of seal grades.
 - .6 Be aware that topographic surveys were carried out when frost may have been present and actual elevations may vary. Ensure final top of seal grade matches with top of concrete gutter grade, no ponding of surface water occurs and design material thickness are supplied and placed as specified.
- 1.20 Limit of Operations
- .1 At all times, driveway, loading areas and parking areas shall be left in a usable state for all employees and visitors to the Tax Centre.
 - .2 The Contractor will only be allowed to limit operations within the defined project limits.
 - .3 The Contractor shall facilitate and make safe the continued use and operation of all other areas of the site at all times.
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1.20 Limit of
Operations
(Cont'd)

- .4 No more than 140 parking stalls can be out of service at any one time. The work must be completed in sections. Each section must be completed, painted and opened for parking/traffic before starting another section.
- .5
 - .1 At all times, driveway, loading areas and parking areas shall be left in a usable state for all employees and visitors to the Tax Centre.
 - .1 Given parking limitations on site, no major work will be permitted on any area where staff and visitors park or drive their vehicle while working at the Tax Centre. See Section 01 14 10 "Scheduling and Managing the Work."
 - .2 The Contractor shall be responsible for maintaining all surfaces at all times to ensure they are operational and safe.
- .6 Provide dust control on a continuous basis throughout all times when gravel surfaces are exposed.
- .7 All work must be completed by the stipulated contract completion date. If the work is not completed by the stipulated completion date, the Contractor must provide for suitable parking greater than or equal to the number of parking spaces that are still under construction and not completed. If the walking distance between the temporary parking stalls and the main entrance door of the Joseph A. Ghiz Building is greater than 450 meters, then the Contractor must provide regular (Monday to Friday 6:30 AM - 5:00 PM) transportation for employees from the parking stalls to the main entrance door.
- .8 Areas of work are to be appropriately barricaded to keep vehicles and pedestrians from entering those areas.
- .9 Make walking routes safe for pedestrians. Install fencing or other physical installations to direct pedestrian traffic as necessary to safely move by work areas.
- .10 The roadway in front of the main building entrance must be completed on weekends. If it cannot be completed in one weekend, then it must be made (and maintained) useable for the following work week, then completed the following weekend.
- .11 All work on the access roads must be coordinated to ensure safe and efficient movement of vehicles and pedestrians on the property.
- .12 Traffic control personnel shall be used to ensure the safe and efficient movement of vehicles and pedestrians on the property.

2015-06-17

1.20 Limit of
Operations
(Cont'd)

- .13 Peak times for pedestrian and vehicle traffic is Monday to Friday, 6:30 AM - 8:00 AM and 3:00 PM - 4:30 PM. Extra care, precautions, isolation of work areas, and traffic control must be implemented at these times.
- .14 The work must be coordinated so that vehicles (and emergency vehicles) can have efficient and safe access to the main door drop off area at all times Monday to Friday 6:00 AM - 5:00 PM.
- .15 Work on the access roads and parking/service areas to the south and west of the building must be coordinated with the building facilities staff to ensure there is, at all times, safe and efficient passage and use by pedestrians, vehicles, delivery trucks, etc.
- .16 There is great concern that fumes and emissions from vehicles, equipment and from the construction materials will adversely affect the Joseph A. Ghiz building indoor air quality, by entering through the ventilation system air intake grills located at the top front and top back of the building. The Contractor is to take all measures to ensure fumes and emissions are kept to a minimum throughout the project.
- .17 There must be no unnecessary idling of vehicles and equipment.
- .18 All vehicles and equipment used onsite must be in very good condition, and very well maintained so the output low levels of fumes, odours and emissions.
- .19 if the building indoor air quality is affected by the construction, it may be necessary to shut down onsite construction on a temporary basis.

PART 1 - GENERAL

- 1.1 Description .1 The work specified in this section comprises the provisions of all plant, labour, materials and equipment and the performance of all work necessary for the mobilization/demobilization to and from the work site.
- .2 Mobilization shall include transportation to the site of the Contractor's plant, labour, material and equipment in readiness to start the work all in accordance with the approved work schedule.
- .3 Mobilization shall also include the supply, placing, maintaining and operating of all items not specifically identified as pay items for the work. Mobilization shall include, but not be limited to, the following:
- .1 Supply and set up of weigh scales;
 - .2 Project Layout, including setting of all lines and grades to carry out the work and obtaining all cross sections, determining volumes and preparing reports;
 - .3 Site Office (if determined by the Departmental Representative as required);
 - .4 Traffic Control, including supply, training, materials and payment of all traffic control personnel and equipment;
 - .5 Supply, placing and maintaining all noise, dust and odour control including barriers, water for dust, fans, coordination and all other items as specified herein;
 - .6 Placing of required project sign, including supply of all material;
 - .7 Supply, placing and maintaining of all construction signs;
 - .8 Preparation and following of a detailed project schedule;
 - .9 Attending all meetings and performing duties as specified including taking and distributing minutes;
 - .10 Determination of the location of all underground lines, protection of those lines and repairs if damaged;
 - .11 Sawcutting and planing of asphalt for blend-in areas is to be included;
 - .12 Exploration program and determining location of underground utilities and protection of underground utilities;
 - .13 All other items as necessary to complete the work to the approval of the Departmental Representative.
- .4 Demobilization shall include final site cleaning and transportation from site of the Contractor's plant, labour, material and equipment at the completion of the required work.

Public Works and Government
Services Canada
Parking Lot Repair
Joseph A. Ghiz Building
Summerside, Prince Co., PEI
Project No. R.074056.001

Mobilization and
Demobilization

Section 01 11 01
Page 2

2015-06-17

1.2 Measurement for Payment .1 Mobilization and Demobilization will not be subject to separate payment. This work will be incidental to the contract.

PART 2 - PRODUCTS

2.1 Not Used

PART 3 - EXECUTION

3.1 Not Used

1.1 Related
Sections

- .1 Section 01 10 10 - General Instructions
- .2 Section 01 33 00 - Submittal Procedures
- .3 Section 01 35 28 - Health and Safety Requirements
- .4 Section 01 74 21 - Construction/ Demolition Waste Management.

1.2 Submittals
Sections

- .1 Upon award of contract and prior to commencement of work, submit to Departmental Representative the following work management documents:
 - .1 Work Schedule as specified herein;
 - .2 Shop Drawing Submittal Schedule specified in Section 01 33 00;
 - .3 Waste Management Plan specified in Section 01 74 21;
 - .4 Health and Safety Plan specified in Section 01 35 28.

1.3 Work Schedule

- .1 Upon acceptance of bid submit:
 - .1 Detailed work schedule submitted within 7 calendar days of contract award.
- .2 Schedule to indicate all calendar dates from commencement to completion of all work within the time stated in the accepted bid.
- .3 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
- .4 Work schedule content to include as a minimum the following:
 - .1 Bar (GANTT) Charts, indicating all work activities, tasks and other project elements, their anticipated durations, planned dates for achieving key activities and major project milestones supported with;
 - .2 Generally bar charts derived from commercially available computerized project management system are preferred but not mandatory.
- .5 Schedule work in cooperation with the Department Representative. Incorporate within work schedule, items identified by Departmental Representative during review of schedule.
- .6 Completed schedule shall be approved by Departmental Representative. When approved, take necessary measures to complete work within scheduled time. Do

1.3 Work Schedule .6
(Cont'd)

- (Cont'd)
- not change schedule without Departmental Representative's approval.
- .7 Schedule updates:
- .1 Submit on a weekly basis.
 - .2 Provide information and pertinent details explaining reasons for necessary changes to implementation of plan.
 - .3 Identify problem areas, anticipate delays, impact on schedule and proposed corrective measures to be taken.
- .8 Departmental Representative will make interim reviews and evaluate progress of work based on approved schedule. Frequency of such reviews will be as decided by Departmental Representative. Address and take corrective measures on items identified by reviews and as directed by Departmental Representative. Update schedule accordingly.
- .9 In every instance, change or deviation from the work schedule, no matter how minimal the risk or impact on safety or inconvenience to tenant or public might appear, will be subject to prior review and approval by the Departmental Representative.
- .10 Be aware that the facility must be kept operational for the full duration of work of this contract. Areas used by workers and visitors must be maintained at all times.
- .11 Make allowance in the construction schedule of the following specific activities:
- .1 Preconstruction meeting
 - .2 Deficiency review
 - .3 Deficiency clean-up
 - .4 Construction close-out
 - .5 Substantial completion
 - .6 Project record drawings (as-built) submission
 - .7 Warranties submission
- .12 No work will begin until the pre-construction meeting is held.

1.4 Operational
Restrictions

- .1 Parking/Driveway Areas:
- .1 The Contractor must recognize that parking/driveway areas will be affected by implementation of this contract. The Contractor must perform the work with utmost regard to the safety and convenience of the general public and Tax Center employees. All work activities must be planned and scheduled with this in mind.
- .2 Facility circulation maintained:
- .1 Ensure that entrances, roadways, loading zones and other circulation routes are maintained free and

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- 1.4 Operational Restrictions (Cont'd)
- .2 Facility circulation maintained: (Cont'd)
- .1 (Cont'd)
clear providing safe and uninterrupted passage for facility users and public at all times during the entire work.
- .2 Maintain those areas clean and free of construction materials and equipment.
- .3 Maintain fire escape routes accessible and fire fighting access open all times for the duration of the project.
- .3 Dust and Dirt Control:
- .1 Effectively plan and implement dust control measures and cleaning activities as an integral part of all construction activities. Review all measures with the Departmental Representative before undertaking work, especially for major dust generating activities.
- .2 Do not allow debris and construction waste to accumulate on site and contribute to the propagation of dust.
- .3 As work progresses, maintain construction areas in a tidy condition at all times.
- .4 Inform workers and make them sensitive to the need for dust and dirt control. Stringently enforce rules and regulations, immediately address non-compliance.
- .4 Smoking:
- .1 At all times, comply with smoking restrictions. Smoking is not permitted in any Federal building and land surrounding it.
- 1.5 Fumes and Vapours
- .1 Solvents and asphalt based products will be heated and odours and emissions will be released. Coordinate all activities with the Summerside Tax Centre to control above items. Interior air quality is to be monitored. Coordinate with the Summerside Tax Centre for control of intake vents, wall vents, windows, doors and other openings to prevent fumes and odours from entering the building.
- 1.6 Noise Control
- .1 Monitor noise levels on site and at the wall location of the Summerside Tax Centre. Take necessary actions to limit noise including using newer equipment, temporary barriers and work activity scheduling. Adjust as required by the Departmental Representative to ensure Occupation Health and Safety requirements are met.
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1.7 Project
Meetings

- .1 Schedule and administer project meetings, held on a minimum bi-monthly basis, for entire duration of work and more often when directed by Departmental Representative as deemed necessary due to progress of work of particular situation.
- .2 Prepare agenda for meetings.
- .3 Notify participants in writing 4 working days in advance of meeting date.
 - .1 Ensure attendance of all subcontractors;
 - .2 Departmental Representative will provide list of other attendees to be notified.
- .4 Hold meetings at project site or where approved by Departmental Representative.
- .5 Preside at meetings and record minutes.
 - .1 Indicate significant proceedings and decisions. Identify action items by parties.
 - .2 Distribute to participants by mail or by facsimile within 3 calendar days after each meeting.
 - .3 Make revisions as directed by Departmental Representative.
 - .4 Departmental Representative will advise whether submission of minutes by email is acceptable. Decision will be based on compatibility of software among participants.

1.8 Work
Coordination

- .1 The general contractor is responsible for coordinating the work of the various trades and pre-determining where the work of such trades interfaces with each other.
 - .1 Designate one person from own employ having overall responsibility to review contract documents and shop drawings, plan and manage such coordination.
- .2 The general contractor shall convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required.
 - .1 Provide each trade with the plans and specs of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
- .3 Submission of shop drawings and ordering of prefabricated equipment or prebuilt components shall only occur once coordination meeting for such items has taken place between trades and all conditions affecting the work of the interfacing trades has been made known and accounted for.
- .4 Work Cooperation:
 - .1 Ensure cooperation between trades in order to facilitate the general progress of the work and avoid situations of spatial interference.

1.8 Work
Coordination
(Cont'd)

- .4 Work Cooperation: (Cont'd)
 - .2 Ensure that each trade provides all other trades reasonable opportunity for the completion of the work and in such a way as to prevent unnecessary delays and the need to remove and replace completed work.
- .5 No extra costs to the Contract will be considered by the Departmental Representative as a result of Contractor's failure to effectively coordinate all portions of the work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor to be resolved at own cost.

1.9 Other
Contracts

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

PART 1 - GENERAL

1.1 Related Sections .1 Section 01 55 26 - Traffic Regulation

1.2 Measurements .1 All measurements shall be along a horizontal plane unless otherwise stated.

1.3 Pay Items .1 Mobilize and Demobilize (Section 01 11 01):
.1 Including, but not limited to:
.1 Weigh Scales
.2 Layout, including retaining services of Registered PEI Land Surveyor
.3 Site Office
.4 Traffic Control
.5 Noise, dust, odour control
.6 Project sign
.7 Construction signs
.8 Scheduling
.9 Meetings
.10 Determination of location of existing underground lines
.11 All other items necessary to complete the work to the approval of the Departmental Representative and as specified herein and shown on drawings, except as outlined below.
.2 Unit of Measurement: Lump Sum (L.S.)
.3 Method of Payment: Measurement shall be made on a percentage completed basis.

.2 Removal of Existing Asphalt (Section 32 01 16):
.1 Unit of Measurement: square metre (m2)
.2 Method of Measurement: Plan measurement from width and length of existing asphalt surfaces.
.3 Method of Payment: Payment shall be made on a per square metre (m2) basis.
.4 All existing asphalt is to be milled and trucked from site and shall become property of the Contractor.

.3 Excavating, Trenching and Backfilling (Section 31 23 33.01):
.1 Common Excavation (existing fill materials such as fill, till, borrow materials, existing gravel, topsoil).
.2 Unit of Measurement: cubic metre (m3)
.3 Method of Measurement: Average end area method between cross sections taken before and after excavation.
.4 Method of Payment: Payment shall be made on a per cubic metre measured in place basis (m3).
.5 All excavated material is to be removed from site and shall become property of the Contractor.

1.3 Pay Items
(Cont'd)

- .4 Catchbasins (Section 35 05 14):
 - .1 Catchbasins includes adjustments of catchbasins frame, cover and curb using approved grade rings to match final grades and adjustments in height of curb sections to match concrete curb and gutter.
 - .2 Unit of Measurement: each
 - .3 Method of Measurement: number of units adjusted to match final grade.
 - .4 This item includes all excavation, removal of concrete curb and gutter, reapplication of all required premium borrow and Class "A" gravel, adjustment of frame and cover to match final grade.
 - .5 All new concrete curb and gutter and hot mix asphalt materials shall be paid for separately.
- .5 Proof Roll Test (Section 32 11 16.01):
 - .1 Includes carrying out a "Proof Roll" test using a loaded tandem truck over the entire area currently covered with asphalt materials including all driveways, parking lots and loading areas.
 - .2 Unit of Measurement: lump sum (L.S.)
 - .3 Method of Measurement: "Proof Roll" test shall be measured on a lump sum basis.
 - .4 Repairs required to the subgrade will be paid for separately.
 - .5 The Proof Roll Test shall be required on two occasions:
 - .1 Over the entire site on top of existing gravel materials following removal of existing asphalt materials. From this, it is expected that areas in addition to those shown on drawings labelled "Asphalt Sub-Base Repair" will be identified for repair. Carry out repairs to all areas identified on plans and as identified by the Proof Roll Test.
 - .2 Repairs identified above include removal of all existing gravel materials and excavation of a minimum of 300mm below bottom of gravel grade. Prior to backfilling with any materials, carry out a second "Proof Roll Test" for these areas. If excessive cracking or deflection greater than 10mm occurs, excavate deeper as instructed.
- .6 Premium Borrow - Granular Sub-base (Section 32 11 16.01):
 - .1 Unit of Measurement: tonnes (t)
 - .2 Method of Measurement: From accepted truck slips except as provided below.
 - .3 Method of Payment: Payment shall be made on a per cubic metre (m3) in place basis.
 - .4 Premium borrow shall be required for repairs to areas identified as a result of the "Proof Roll" test and beneath Class "A" gravel at other locations including beneath the new concrete curb and gutter.
- .7 Class "A" Gravel - Granular Base (Section 32 11 23):
 - .1 Unit of Measurement: metric tonne (1000 kg)

1.3 Pay Items
(Cont'd)

- .7 (Cont'd)
- .2 Method of Measurement: From accepted truck slips except as provided below.
- .3 There shall be no payment for extra thickness of gravels placed or gravels placed outside of limits.
- .4 This item includes the supply, placement, fine grading, and compaction of Class "A" gravel as indicated for parking lot/driveway/loading areas.
- .5 This item also includes the supply, placement and compaction of Class "A" gravel beneath and behind new concrete curb and gutter and sidewalk.
- .6 There shall be no separate payment for reshaping parking lot/driveway subgrade. Include all costs in the per tonne unit bid price for Class "A" gravel.
- .8 Concrete Walks, Curbs and Gutters (Section 32 16 15):
- .1 Unit of Measurement: metre (m)
- .2 Method of Measurement: Along centreline of gutter from end to end of actual curb and gutter placed and accepted by the Department Representative.
- .3 Excavation of Curb and Gutter shall be paid for under "Excavating, Trenching and Backfilling."
- .4 Backfilling of premium borrow material shall be paid for under "Premium Borrow - Granular Sub-base."
- .5 Backfill of Class "A" gravel shall be paid for under "Class "A" Gravel - Granular Base."
- .9 Asphalt Tack Coats (Section 32 12 13.16):
- .1 Unit of Measurement: square metre (m2)
- .2 Method of Measurement: Plan measurement from width and length of material supplied, placed and approved by Departmental Representative.
- .10 Pavement Markings (Section 32 17 23):
- .1 Unit of Measurement: lump sum (L.S.)
- .2 Method of Measurement: Measurement shall be made on a percentage completed basis.
- .3 Work includes in total, application of required paint on four (4) occasions as specified.
- .11 Topsoil and Finish Grading (Section 32 91 19):
- .1 Unit of Measurement: square metre (m2)
- .2 Method of Measurement: Plan measurement from width and length of topsoil and finish grading area of areas to receive sod material.
- .12 Asphalt Paving (Section 32 12 16):
- .1 Type "A" Base Coat
- .2 Type "C" Seal Coat
- .3 Unit of Measurement: metric tonne (1000 kg)
- .4 Method of Measurement: From accepted truck slips except as provided below.
- .5 There shall be no payment for extra thickness or extra width of asphalt placed.
- .6 There shall be no separate payment for sawcutting and planing at limits.

1.3 Pay Items
(Cont'd)

- .12 Asphalt Paving (Section 32 12 16):(Cont'd)
 - .7 There shall be no separate payment for the Ponding Test. Asphalt seal used during this test shall be paid for at the unit bid price.
 - .8 There shall be no separate payment for sawcutting and milling required for blend-in end Ponding Test. Include all costs in the unit bid price.
- .13 Sodding (Section 32 92 23):
 - .1 Unit of Measurement: square metre (m2)
 - .2 Method of Measurement: Plan measurement from width and length of sod supplied and placed.
- .14 Materials Testing (Section 01 29 83):
 - .1 Unit of Measurement: lump sum (L.S.)
 - .2 Method of Measurement: Measurement shall be made on a percentage completed basis.
- .15 All and any items not specifically included in the Measurement for Payment and Pay Item List are considered incidental to the work and are to be included in the tendered price for related work.

- | | | |
|-----------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>1.1 Related Sections</u> | .1 | Section 01 45 00 - Testing and Quality Control |
| | .2 | Section 32 12 16 - Asphalt Paving |
| <u>1.2 Testing Requirements Specified Elsewhere</u> | .1 | Additional and particular requirements for inspection and testing to be carried out and paid for by the Contractor are specified under various technical sections of the specifications. |
| <u>1.3 Appointment and Payment</u> | .1 | The Contractor will arrange and pay for the services of an independent testing firm to carry out the following tests:
.1 All inspection and testing in accordance with PEI Department of Transportation & Public Works Standard Specifications and frequency and as specified under various sections of the specifications, including but not limited to quality testing, compaction testing, asphalt testing, concrete testing, etc. |
| | .2 | The Contractor shall provide testing services and reports on the following:
.1 Class "A" Gravel (Granular Base)
.2 Premium Borrow (Granular Sub-base)
.3 Hot Mix Asphalt Base and Seal
.4 Concrete Curbs, Gutter and Walkways
.5 Topsoil
.6 Proof Roll Test |
| | .3 | The Contractor shall arrange for and confirm access to all material sources by the Departmental Representative and the Department's independent materials testing firm to carry out any tests in addition of those provided by the Contractor. |
| <u>1.4 Contractor's Related Responsibilities</u> | .1 | Furnish labour and facilities to:
.1 Provide access to work to be inspected and tested;
.2 Facilitate inspections and tests;
.3 Make good work disturbed by inspection and test. |
| | .2 | Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory. |
| | .3 | Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and accepted by Departmental Representative. |
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1.4 Contractor's .4 Provide Departmental Representative with three (3)
Related sets of fully documented test reports, submitted
Responsibilities immediately following the testing operations.
(Cont'd)

1.5 Miscellaneous .1 Testing of material at source, including collection
Inspection and of sample materials by testing firm to verify
Testing compliance with material specifications.
Requirements .2 Follow up testing of material delivered to sites.
.3 Monitoring placement and verifying compaction,
placement and in place quality.

PART 2 - MATERIALS
TESTING REQUIREMENTS

2.1 Sandstone and .1 Test requirements are as follows:
Select Borrow
(Premium Borrow
and Select Borrow)

Test	Procedure	Frequency
Determination of % passing 75 um Sieve	ASTM C-117	Five per material type as delivered to the job
Determination of % passing a 4.75mm sieve and the 12.5mm sieve	ASTM C-117	Five per material type as delivered to the job
Standard Proctor Density	ASTM D-698	Same as above
Optimum Moisture	ASTM D-698	Same as above
Field Density Determination	ASTM D-2922	One per 400m2/lift (min. of 4 per contract)
Thickness Determination		Same as above

.2 A Compaction Control Report for Sandstone (Premium
Borrow) and Select Borrow showing, as a minimum, the
following:
.1 Date tested
.2 Test location (chainage and offset)
.3 Material thickness
.4 Field moisture
.5 Optimum moisture

2.1 Sandstone and Select Borrow (Premium Borrow and Select Borrow) (Cont'd)	.2 (Cont'd) .6 % compaction All Sandstone (Premium Borrow) and Select Borrow shall be compacted to 100% Standard Proctor Density.
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2.2 Gravel

- .1 Provide placement control which includes the following:
- | Test | Procedure | Frequency |
|-----------------------------|---------------------|------------------------------------------------|
| Washed Sieve Analysis | ASTM C-136 | Five per material type as delivered to the job |
| Standard Proctor Density | AASHTO T-99 & T-224 | Same as above |
| Optimum Moisture | AASHTO T-99 & T-224 | Same as above |
| Field Density Determination | ASTM D-2922 | One per 400m2/lift (min. 4/contract) |
| Thickness Determination | | Same as above |
| Los Angeles Abrasion | ASTM C-131 | One per pit source |
- .2 A Compaction Control Report for gravel showing, as a minimum, the following:
- .1 Date tested
 - .2 Test location (chainage and offset)
 - .3 Material thickness
 - .4 Field moisture
 - .5 Optimum moisture
 - .6 % compaction
- All gravel shall be compacted to 100% Standard Proctor Maximum Density.

2.3 Hot Mix Asphaltic Concrete

- .1 The Contractor shall provide production and placement control which includes, but is not limited to, the following tests:
- | Test | Procedure | Frequency |
|--------------------------------------|-------------|-------------------------------------------------------|
| Bulk Density | ASTM D2726* | At a frequency of one per 200 tonnes of each mix type |
| Marshall Stability | ASTM D-1559 | Same as above |
| Marshall Flow | ASTM D-1559 | Same as above |
| Maximum Theoretical Specific Gravity | ASTM D-2041 | Same as above |
| Air Voids | MARSHALL | Same as above |
| Voids in Mineral Aggregate | MARSHALL | Same as above |

2.3 Hot Mix .1 (Cont'd)
Asphaltic Concrete
(Cont'd)

Voids Filled with Asphalt	MARSHALL	Same as above
% Asphalt Metered		Same as above
% Asphalt Extracted	ASTM D-4125 or ASTM D-2172	Same as above
Extracted Gradation (Washed)	ASTM C-136 & C-117	Same as above
Combined Aggregate Specific Gravity	MARSHALL	Same as above

* For specimens that contain moisture.

- .2 The Contractor's documentation of production control shall include, as a minimum, the following:
- .1 Contractor (paving)
 - .2 Contract
 - .3 Date
 - .4 Mix Type
 - .5 Job mix formula percentages
 - .6 Sample times
 - .7 Sample temperatures
 - .8 Sample compaction temperatures
- .3 The Contractor's documentation of placement control shall include, as a minimum, the following:
- .1 Mix temperature (minimum of two)
 - .2 Mix thickness
- .4 A Compaction Control Report showing, as a minimum, the following:
- .1 Date cored
 - .2 Core location (station & offset)
 - .3 Lift
 - .4 Bulk Relative Density
 - .5 Maximum Theoretical Relative Density
 - .6 % compaction
 - .7 Lot Average % compaction (based on a mean maximum theoretical relative density)
 - .8 Core thickness
 - .9 Average thickness
 - .10 Specified thickness
 - .11 T-test

2.4 Concrete Curb,
Gutter & Walkways

- .1 The Contractor shall provide placement control which includes:

Test	Procedure	Frequency
Air	CSA A23.1 &	CSA A23.1

2.4 Concrete Curb, .1 (Cont'd)
Gutter & Walkways
(Cont'd)

Content	CSA A23.2	
Slump	CSA A23.1 & CSA A23.2	CSA A23.1
Compressive Strength	CSA A23.1 & CSA A23.2	CSA A23.1
Thickness Determination	measure before each pour for each truck	

- .2 Control Report for concrete showing, as a minimum,
the following:
- .1 Date tested
 - .2 Test location (chainage)
 - .3 Material thickness
 - .4 % air content
 - .5 Slump
 - .6 Compressive strength

2.5 Trench
Compaction

- .1 The Contractor shall provide placement control which
includes:
- | Test | Procedures | Frequency |
|-----------------------------------|-------------|------------------------------------------------------------|
| Standard Proctor
Density | ASTM D-698 | One per
material type |
| Optimum Moisture | ASTM D-698 | Same as above |
| Field
Density
Determination | ASTM D-2922 | Three per line (*) per
lift (min. of 4 per
contract) |

* Line definition is all pipe between two catchbasins
and/or manholes and/or street lateral lines on an
individual basis. For watermains, line definition is
between hydrants. * Provide additional field density
determination as necessary to confirm specifications
have been met.

- .2 Control Report for concrete showing, as a minimum,
the following:
- .1 Date tested
 - .2 Test location (chainage)
 - .3 Field moisture
 - .4 Optimum moisture
 - .5 % compaction

Compaction for all street, curb and driveway
locations shall be 100% Standard Proctor Density.
Urban grassed areas shall be 95% Standard Proctor
Density.

2.6 Structural Fill .1 All structural fill requirements shall be designed by the materials testing firm's engineer. Frequency of testing shall be as per premium borrow requirements.

2.7 Bedding Sand .1 Test requirements are as follows:
.1 Sieve analysis prior to delivery to site
.2 Sieve analysis during the work to ensure requirements of Section 402 of Department of Transportation and Infrastructure Renewal, "General Provisions and Contract Specifications for Highway Construction."
.3 There shall be a maximum of 35% difference between the percents passing consecutive sieves.

PART 3 - EXECUTION

3.1 Submission of Test Results .1 All test results and compaction results shall be grouped by item and 3 copies forwarded to the Owner within 48 hours of completion of the item.
.2 The Contractor shall also submit upon project completion a bound report outlining all test results. Three copies of the final report shall be required.
.3 The final report, as prepared by a recognized materials testing firm, shall include an executive summary stating that all materials as tested and used on the project meet project specifications.
.4 If all materials as tested do not meet project specifications, then the following shall occur:
.1 The Contractor shall immediately remove all materials that do not meet project specifications and replace them with materials that do meet project specifications at no additional costs to the Owner; or,
.2 The Contractor shall make arrangements with the Owner so as to satisfy the Owner that no short or long-term negative consequences will occur as a result of the materials not meeting specifications. If the Contractor cannot satisfy the Owner of these requirements, then all materials that do not meet project specifications shall be removed and replaced by the Contractor at no additional costs to the Owner.
.3 All costs associated with non-compliance with specifications, including testing materials, labour and engineering, will be the Contractor's responsibility.

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|------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.2 Proof
Roll Test | <u> </u> | .1 Carry out Proof Roll Test in association with the
Department Representative. Identify areas requiring
repair by painting on site at time of test. |
| | | .2 Provide report outlining total areas identified. |

PART 1 - GENERAL

1.1 Related
Sections

- .1 Section 01 14 10 - Scheduling and Management of Work.
- .2 Section 01 45 00 - Testing and Quality Control.
- .3 Section 01 78 00 - Closeout Submittals.
- .4 Section 03 30 00 - Cast-in-Place Concrete.
- .5 Section 31 23 33.01 - Excavating, Trenching and Backfilling.
- .6 Section 32 12 13.16 - Asphalt Tack Coats.
- .7 Section 32 12 16 - Asphalt Paving.
- .8 Section 32 16 15 - Concrete Walks, Curbs and Gutters.
- .9 Section 32 17 23 - Pavement Markings.
- .10 Section 32 91 19 - Topsoiling and Finish Grading.
- .11 Section 32 92 23 - Sodding.

1.2 Administrative

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 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.

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- 1.2 Administrative (Cont'd)
- .5 Notify Departmental Representative in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .6 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .7 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .8 .1 Submittal Format:
.1 Paper originals, or alternatively clear and fully legible photocopies of originals. Facsimiles are not acceptable, except in special circumstances pre-approved by Departmental Representative. Poorly printed non-legible photocopies or facsimiles will not be accepted and be returned for re-submission.
.1 Armourstone Submission:
.1 Sample size to be 200mm x 200mm x 200mm +/- 10mm variance.
.2 Submit sample of armourstone in fully sealed plastic or wood container, wrap with "bubble wrap".
- .9 Make changes or revision to submissions which Departmental Representative may require, consistent with contract documents and resubmit.
- .10 Keep one reviewed copy of each submission on site.
- 1.3 Shop Drawings and Product Data
- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate details of a portion of work.
- .2 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in the Province of Prince Edward Island, Canada.
- .3 Shop Drawing Submittal Schedule:
.1 Submit, within 10 working days of contract award, in format acceptable to Departmental Representative, a submittal schedule listing all shop drawings to be submitted for project as specified in various sections of the specifications.
.2 Schedule to indicate proposed submission date for each item, status of review and anticipated product delivery date to site. Track all submissions for entire project.
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1.3 Shop Drawings .3
and Product Data
(Cont'd)

Shop Drawing Submittal Schedule: (Cont'd)

.3 As work progresses, revise schedule identifying items which have been reviewed and finalized and indicating those outstanding.

.4 Update schedule at stipulated dates or project time intervals predetermined and agreed upon with Departmental Representative at commencement of work.

.4 Shop Drawing Quantities: submit sufficient copies required by the General Contractor and sub-contractors, plus 3 copies which will be retained by Departmental Representative.

.5 Shop Drawings Format:

.1 Opaque white prints or photocopies of original drawings or standard drawings modified to clearly illustrate work specific to project requirements. Maximum sheet size to be 1000 x 707 mm.

.2 Product data from manufacturer's standard catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products, to be original full colour brochures, clearly marked indicating applicable data and deleting information not applicable to project.

.3 Non or poorly legible drawings, photocopies or facsimiles will not be accepted and returned not reviewed.

.6 Shop Drawings Content:

.1 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where items or equipment attach or connect to other items or equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.

.7 Allow 14 days for Departmental Representative's review of each submission.

.8 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.

.9 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.

.10 Be advised that costs and expenses incurred by Departmental Representative to conduct more than one review of incorrectly prepared shop drawing submittal for a particular material, equipment or component of

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- 1.3 Shop Drawings and Product Data (Cont'd)
- .10 (Cont'd)
work may be assessed against the Contractor in the form of a financial holdback to the Contract.
 - .11 Accompany submissions with transmittal letter containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
 - .12 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
 - .13 After Departmental Representative's review, distribute copies.
 - .14 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
 - .15 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that PWGSC approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve
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1.3 Shop Drawings .15 (Cont'd)
and Product Data
(Cont'd)

.1 (Cont'd)

Contractor of responsibility for errors or omissions
in shop drawings or of responsibility for meeting
requirements of construction and Contract Documents.

.2 Without restricting generality of foregoing,
Contractor is responsible for dimensions to be
confirmed and correlated at job site, for information
that pertains solely to fabrication processes or to
techniques of construction and installation and for
co-ordination of Work of sub-trades.

PART 1 - GENERAL

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|--------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>1.1 Measurement
Procedures</u> | .1 | There will be no separate measurement for payment under this section. All costs for work performed under this section are to be included in the lump sum quoted for Mobilization and Demobilization. |
| <u>1.2 References</u> | .1 | Manual of Uniform Traffic Control Devices for Canada. |
| | .2 | Prince Edward Island - Temporary Workplace Traffic Control Manual 2005. |
| <u>1.3 Protection of
Public Traffic</u> | .1 | Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment. |
| | .2 | When working on travelled way: <ul style="list-style-type: none"> .1 Place equipment in position to present minimum of interference and hazard to travelling public. .2 Do not leave equipment on travelled way overnight. .3 Do not close lanes without approval of Departmental Representative. .4 Provide and maintain road access and egress to adjacent parking areas. .5 Do not block any parking spaces without approval of the Departmental Representative. |
| <u>1.4 Informational
and Warning Devices</u> | .1 | Provide and maintain signs, and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response. |
| | .2 | Supply and erect signs, delineators, barricades and miscellaneous warning devices as specified in Part D, Temporary Conditions Signs and Devices, of UTCD manual and Prince Edward Island Temporary Workplace Traffic Control Manual 2005. |
| | .3 | Place signs and other devices in locations recommended in UTCD manual and Prince Edward Island Temporary Workplace Traffic Control Manual 2005. |
| | .4 | Meet with Departmental Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on |
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1.4 Informational .4
and Warning Devices
(Cont'd)

(Cont'd)
site changes, revise list to approval of Departmental Representative. At a minimum, provide the following:

- .1 Twenty (20) traffic cones
- .2 Twenty (20) plastic traffic posts
- .3 Four (4) Construction Zone signs
- .4 Four (4) Construction Ahead signs
- .5 Four (4) Work Zone signs
- .6 Four (4) Construction Ends signs

.5 Continually maintain traffic control devices in use by:

- .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
- .2 Removing or covering signs which do not apply to conditions existing from day to day.

.6 All signs to be legible in both of Canada's Official Languages.

1.5 Control of .1
Public Traffic

.1 Provide competent flag persons, trained in accordance with, and properly equipped as specified in, UTCD manual and Prince Edward Island - Temporary Workplace Traffic Control Manual 2005 in following situations:

- .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 traffic signal system is not in use.
- .3 When persons 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 When entering or exiting construction site with equipment, trucks or personnel.
- .5 Where temporary protection is required while other traffic control devices are being erected or taken down.
- .6 For emergency protection when other traffic control devices are not readily available.
- .7 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
- .8 Delays to public traffic due to contractor's operators: maximum 5 minutes.

.2 On a daily basis, sweep all paved roads for 250 meters on each side of the construction limits. Remove all mud, silt, clay and other materials to result in roadway being free from any foreign materials.

- 1.6 Operational Requirements .1 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.
- .2 Maintain existing conditions for traffic crossing right-of-way.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

<u>1.1 Related Sections</u>	.1	Section 01 10 10 - General Instructions
	.2	Section 01 14 10 - Scheduling and Management of Work
	.3	Section 01 35 35 - Special Procedures on Fire Safety Requirements
<u>1.2 Submittals</u>	.1	Submit to Departmental Representative copies of the following documents, including updates: .1 Site Specific Health and Safety Plan. .2 Building Permit, compliance certificates and other permits obtained. .3 Letter of good standing from Provincial Workers Compensation organization. .4 Reports and directives issued by Federal and Provincial Safety Officer or other authority having jurisdiction. .5 Accident and Incident Reports. .6 MSDS data sheets.
	.2	Upon request by Departmental Representative, submit other documents and reports as stipulated to be produced and maintained by Federal and Provincial Occupational Health and Safety Regulations and as specified herein.
	.3	Submit above documents in accordance with Section 01 33 00.
<u>1.3 Compliance Requirements</u>	.1	Comply with the Occupational Health and Safety Act for the Province of Prince Edward Island, and the Occupational Health and Safety Act Regulations made pursuant to the Act.
	.2	Comply with Canada Labour Code Part II, and the Canada Occupational Safety and Health Regulations made under Part II of the Canada Labour Code.
	.3	Observe and enforce construction safety measures required by: .1 National Building Code of Canada; .2 Provincial Worker's Compensation Board; .3 Municipal statutes and ordinances; .4 Canada National Parks Act.
	.4	In the event of conflict between any provisions of above authorities, the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
	.5	A copy of the Canada Labour Code, Part II may be obtained by contacting: Canadian Government Publishing Public Works & Government Services Canada

1.3 Compliance .5 (Cont'd)
Requirements
(Cont'd)

Ottawa, Ontario, K1A 0S9
Tel: (819) 956-4800 (1-800-635-7943)
Publication No. L31-85/2000 E or F)

- .6 Maintain Workers Compensation Coverage for duration of Contract.

- 1.4 Responsibility .1 Be responsible for health and safety of persons on site, of property and for protection of persons and public circulating adjacent to work operations to extent that they may be affected by conduct of the Work.
- .2 Enforce compliance by all workers, sub-contractors and other persons granted access to work site with safety requirements of Contract Documents, applicable Federal, Provincial and local statutes, regulations and ordinances, and with site-specific Health and Safety Plan.

- 1.5 Site Control and Access .1 Control work site and entry points to construction areas.
- .1 Delineate and isolate construction areas from other areas of site by use of appropriate means.
- .2 Post notices and signage at entry points and at other strategic locations identifying entrance onto site to be restricted to authorized persons only.
- .3 Signage must be professionally made, bilingual in both official languages or display internationally understood graphic symbols.
- .2 Approve and grant access to site only to workers and authorized persons.
- .1 Immediately stop non-authorized persons from circulating in construction areas and remove from site.
- .2 Provide site safety orientation to all persons before granting access. Advise of site conditions, hazards and mandatory safety rules to be observed on site.
- .3 Secure site at night time to extent required to protect against unauthorized entry. Provide security guard where protection cannot be achieved by other means.

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| <u>1.5 Site Control and Access (Cont'd)</u> | .4 | Ensure persons granted access to site wear appropriate personal protective equipment (PPE) suitable to work and site conditions.
.1 Provide such PPE to authorized persons who require access to perform inspections or other approved purposes. |
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 | | |
| <u>1.6 Protection</u> | .1 | Carry out work placing emphasis on health and safety of the public, facility personnel, construction workers and protection of the environment. |
| | .2 | Erect safety barricades, lights and signage on site to effectively delineate work areas, protect pedestrian and vehicular traffic around and adjacent to work and to create a safe working environment. |
| | .3 | 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. |
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| <u>1.7 Filing of Notice</u> | .1 | File Notice of Project and other Notices with Provincial authorities prior to commencement of work.
.1 Departmental Representative will assist in locating address for Filing Notice of Project if needed. |
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 | | |
| <u>1.8 Permits</u> | .1 | Post on site permits, licenses, and compliance certificates. |
| | .2 | Where particular permit or compliance cannot be obtained at the required stage of work, notify Departmental Representative in writing and obtain his/her approval to proceed before carrying out that portion of work. |
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 | | |
| <u>1.9 Hazard Assessments</u> | .1 | Conduct site specific health and safety hazard assessment before commencing project and during course of work. Identify risks and hazards resulting from site conditions, weather conditions and work operations.
.1 Perform ongoing assessments addressing new risks and hazards as work progresses.
.2 Also, conduct assessment when the scope of work has been changed by Change Order and when potential hazard or weakness in current health and safety practices are identified by Departmental Representative or by an authorized safety representative. |
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| 1.9 Hazard Assessments
(Cont'd) | .2 | Record results in writing and address in Health and Safety Plan. |
| | .3 | Tidal conditions are present, address issues relative to tides on site specific health and safety hazard assessment. |
| | .4 | Keep copy of all assessments on site. |
|
 | | |
| 1.10 Health and Safety Meetings | .1 | Attend pre-construction health and safety meeting conducted by Departmental Representative. Having the following persons in attendance:
.1 Site Superintendent;
.2 Person designated to perform on-site health and safety site supervision;
.3 Departmental representative will advise of date, time and location. |
| | .2 | Conduct health and safety meetings and tool box briefings on site. Hold on a regular and pre-scheduled basis during entire work in accordance with requirements and frequency as stipulated in Provincial Occupational Health and Safety Regulations.
.1 Keep workers informed of potential hazards and provide safe work practices and procedures to be followed.
.2 Take written minutes and post on site. |
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 | | |
| 1.11 Health and Safety Plan | .1 | Develop written site-specific Project Health and Safety Plan, based on hazard assessments, prior to commencement of work.
.1 Submit copy to Departmental Representative within 14 calendar days of acceptance of bid.
.2 Submit updates as work progresses. |
| | .2 | Health and Safety Plan shall contain three (3) parts with the following information:
.1 Part 1 - Hazards: List of individual health risks and safety hazards identified by hazard assessment process.
.2 Part 2 - Safety Measures: Engineering controls, personal protective equipment and safe work practices used to mitigate hazards and risks listed in Part 1 of Plan.
.3 Part 3a - Emergency Response: Standard operating procedures, evacuation measures and emergency response in the occurrence of an accident, incident or emergency.
.1 Include response to all hazards listed in Part 1 of Plan.
.2 Evacuation measures to complement the Facility's existing Emergency Response and Evacuation Plan. Obtain pertinent information from Departmental Representative. |
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1.11 Health and
Safety Plan
(Cont'd)

.2 (Cont'd)

.3 Part 3a - Emergency Response: (Cont'd)

.3 List names and telephone numbers of
officials to contact, including:

.1 General Contractor and all
Subcontractors;

.2 Federal and Provincial Departments as
stipulated by laws and regulations and
local emergency resource organizations, as
needed based on nature of emergency or
accident;

.3 Officials from PWGSC and Site
Facility Management. Departmental
Representative will provide list.

.4 Part 3b - Site Communications:

.1 Procedures used on site to share work
related safety issues between workers,
subcontractors and general contractor.

.2 List of critical tasks and work
activities, to be communicated with the Facility
Manager, which has risk of affecting tenant
operations, or endangering health and safety of
facility personnel and the general public.
Develop list in consultation with the
Departmental Representative.

.3 Prepare Health and Safety Plan in a three column
format, addressing the three parts specified above,
as follows:

Column 1	Column 2	Column 3
Part 1	Part 2	Part 3a / 3b
Identified Hazards	Safety Measures	Emergency Response & Site Communications

.4 Develop plan in collaboration with subcontractors.
Address work activities of all trades. Revise and
update plan as subcontractors arrive on site.

.5 Implement and enforce compliance with requirements
of plan for full duration of work to final completion
and demobilization from site.

.6 As work progresses, review and update plan. Address
additional health risks and safety hazards identified
by ongoing hazard assessments.

.7 Post copy of plan and updates on site.

.8 Submission of the Health and Safety Plan and updates
to the Departmental Representative is for review and
information purposes only. Departmental
Representative's receipt, review and any comments
made of the plan shall not be construed to imply
approval in part or in whole of such plan by
Departmental Representative and shall not be
interpreted as a warranty of being complete and
accurate or as a conformation that all health and
safety requirements of the Work have been addressed

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- 1.11 Health and Safety Plan (Cont'd) .8 (Cont'd)
and that it is legislative compliant. Furthermore, Departmental Representative's review of the plan shall not relieve the contractor of any of his legal obligations for Occupational Health and Safety provisions specified as part of the work and those required by provincial legislation.
- 1.12 Safety Supervision and Inspections .1 Designate one person to be present on site at all times, responsible for supervising health and safety of the work.
.1 Person to be competent in Occupational Health and Construction Safety as defined in the Provincial Occupational Health and Safety Act.
.2 Assign responsibility, obligation and authority to such designated person to stop work as deemed necessary for reasons of health and safety.
.3 Conduct regularly scheduled informal safety inspections of work site on a minimum bi-weekly basis.
.1 Note deficiencies and remedial action taken in a log book or diary.
.4 Keep inspection reports on site.
- 1.13 Training .1 Ensure that all workers and other persons granted access to site are competently trained and knowledgeable on:
.1 Safe use of tools and equipment;
.2 How to wear and use personal protective equipment (PPE);
.3 Safe work practices and procedures to be followed in carrying out the work;
.4 Site conditions and minimum safety rules to be observed on site, as given at site orientation session.
- 1.14 Minimum Site Safety Rules .1 Notwithstanding the requirement to abide by Federal and Provincial Health and Safety Regulations, the following safety rules shall be considered minimum requirements to be obeyed by all persons granted site access:
.1 Wear personal protective equipment (PPE) appropriate to function and task on site; the minimum requirements being hard hat, safety footwear and eye protection;
.2 Immediately report unsafe activity or condition at site, near-miss accident, injury and damage;
.3 Maintain site in tidy condition;
.4 Obey warning signs and safety tags.
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|--------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>1.14 Minimum Site
Safety Rules
(Cont'd)</u> | .2 | Brief workers on site safety rules and on disciplinary measures to be taken by Departmental Representative for violation or non-compliance of such rules. Post rules on site. |
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| <u>1.15 Accident
Reporting</u> | .1 | Investigate and report the following incidents and accidents:
.1 Those as required by Provincial Occupational Health and Safety Act and Regulations;
.2 Injury requiring medical aid as defined in the Canadian Directory of Safety Terms-1987, published by the Canadian Society of Safety Engineers (C.S.S.E.) as follows:
.1 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Worker's Compensation Board of the province in which the injury was incurred.
.3 Property damage in excess of \$5,000.00;
.4 Interruption to facility operations with potential loss to a federal department in excess of \$5,000.00;
.5 Those which require notification to Worker's Compensation Board or other regulatory agencies as stipulated by applicable law or regulations. |
| | .2 | Send written report to Departmental Representative for all above cases. |
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| <u>1.16 Tools and
Equipment Safety</u> | .1 | Routinely check and maintain tools, equipment and machinery for safe operation. |
| | .2 | Conduct checks as part of site safety inspections. When requested, submit proof that checks and maintenance have been carried out. |
| | .3 | Tag and immediately remove from site items found faulty or defective. |
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| <u>1.17 Hazardous
Products</u> | .1 | Comply with requirements of Workplace Hazardous Materials Information System (WHMIS). |
| | .2 | Keep MSDS data sheets for all products delivered to site. Post on site. Submit copy to Departmental Representative upon receipt. |
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| <u>1.18 Powder
Actuated Devices</u> | .1 | Use powder actuated fastening devices only after receipt of written permission from Departmental Representative. |
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- 1.19 Posting of Documents .1 Post on site safety documentation as stipulated by Authorities having jurisdiction and as specified herein. Place in a common visible location.
- 1.20 Site Records .1 Maintain on site a copy of all health and safety documentation and reports specified to be produced as part of the work and received from authorities having jurisdiction.
- .2 Upon request, make available to Departmental Representative and to other authorized safety representative for review. Provide copy when directed by Departmental Representative.

PART 1 - GENERAL

1.1 Section Includes .1 Fire Safety Requirements.

1.2 Related Work .1 Section 01 35 28 - Health and Safety Requirements.

1.3 References .1 Fire Protection Standards issued by Fire Protection Services, Labour Program Division of Service Canada:
.1 FCC No. 301- Standard for Construction Operations.
.2 FCC No. 302- Standard for Welding and Left Cutting.
.2 FCC Standards may be viewed at:
.1 <http://www.hrsdc.gc.ca/en/lp/lo/fp/standards/commissioner.shtml>
.2 Fire Protection Services - Atlantic Region office, Halifax, NS (902) 426-6053.

1.4 Fire Safety Requirements .1 Implement and follow fire safety measures during work. Comply with the following:
.1 National Fire Code;
.2 Fire Protection Standards FCC 301 and FCC 302;
.3 Federal and Provincial Occupational Health and Safety Acts and Regulations.
.2 In the event of conflict between any provisions of above authorities, the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

1.1 Related Sections.1 Section 01 74 21 - Construction/Demolition Waste Management.

.2 Section 31 23 33.01 - Excavating, Trenching and Backfilling

.3 Section 32 91 21 - Topsoil Placement and Grading

1.2 References.1 WHMS: Workplace Hazardous Materials Information System, Health Canada.

.2 Transportation of Dangerous Goods Act. Transport Canada, updated 2008-02-21.

.3 Guidelines for the Use of Explosives in or near Canadian Fisheries Waters, Department of Fisheries and Oceans Canada, 1998.

.4 MBCA: Migratory Birds Convention Act, Environment Canada, 1994.

.5 Canadian Coast Guard Regulations, Department of Fisheries and Oceans Canada.

.6 Canadian Shipping Act, Transport Canada, 2001.

.7 AWWA: American Wood Preserver Association.

1.3 Definitions.1 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.

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

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

.4 Alien Species: Refers to a species or sub-species introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.

<u>1.3 Definitions</u> (Cont'd)	.5	Buffer Zone: A vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.
<u>1.4 Transportation</u>	.1	Transport hazardous materials and hazardous waste in compliance with Federal Transportation of Dangerous Goods Act.
	.2	Do not overload trucks when hauling material. Secure contents against spillage.
	.3	Maintain trucks clean and free of mud, dirt and other foreign matter.
	.4	Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the work. Take extra care when hauling dredged material and other hazardous materials. Immediately clean any spillage and soils.
	.5	Before commencement of work, advise the Departmental Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material to and from the site, including roads to the dredged disposal field.
<u>1.5 Hazardous Material Handling</u>	.1	Handle and store hazardous materials on site in accordance with WHMIS procedures and requirements.
	.2	Store all hazardous liquids in location and manner to prevent their spillage into the environment.
	.3	Maintain written inventory of all hazardous materials and hazardous waste stored on site. List product name, quantity and storage date.
	.4	Keep MSDS data sheets on site for all items.
<u>1.6 Petroleum, Oil and Lubricants</u>	.1	Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
	.2	No fuel or petroleum products shall be stored on site. Do not fuel or lubricate equipment within this 30 meter buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.
	.3	Do not dump petroleum products or any other deleterious substances on ground or in the water.

2015-06-17

1.6 Petroleum, Oil and Lubricants
(Cont'd)

- .4 Be diligent and take all necessary precautions to avoid spills and contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
- .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-liter (55 gallon) overpack spill kit for containment and clean-up of spills.
- .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
- .7 In the event of a petroleum spill, immediately notify the Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

1.7 Disposal of Wastes

- .1 Do not bury rubbish, demolition debris and waste materials on site.
- .2 Dispose and recycle demolition debris and waste materials in accordance with project waste management requirements specified in Section 01 74 21.
- .3 Do not dispose of hazardous waste or volatile materials, such as mineral spirits, paints, thinners, oil or fuel into waterways, storm or sanitary sewers or waste landfill sites.
- .4 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
- .5 Any construction, contaminated soil or demolition debris will be disposed of in a Provincially approved manner (either a permit or receipts for tippage must be submitted to the Departmental Representative to verify that the material was disposed of in a provincially approved manner).

1.8 Vegetation

- .1 Work should be scheduled to avoid periods of heavy precipitation. Short-term erosion and sediment control measures (ie., silt fence, straw bales, temporary drainage and matting, geotextile filter fabric) must be installed to prevent runoff from entering any adjacent waterway. These structures will remain in place until natural vegetation has been established.

2015-06-17

1.8 Vegetation
(Cont'd)

- .2 Fill material used in construction must be clean and non-toxic (free from fuel, oil, grease and/or contaminants).
- .3 Any exposed soil area must be minimized by limiting the area that is exposed at one time and by limiting the time that any one area is exposed. All stockpiled material must be covered and/or dyked to prevent erosion or silty runoff from leaving the site. Exposed soil should be replanted or sodded to ensure soil stabilization.
- .4 Avoid disturbance of vegetation and natural features where possible. All work is to be confined to the site limits delineated and/or directed by the Departmental Representative.
- .5 Restore disturbed areas as close as possible to natural conditions. Backfill, excavate, grade and contour soil, replace topsoil, fertilize and reseed with approved seed mixture.
- .6 No cutting of vegetation will take place between May 15th and August 31st.
- .7 No staging of materials/equipment will take place on any environmentally sensitive areas, beaches or dunes. All staging area sites, if required, will be determined by the Departmental Representative.
- .8 If materials of potential historical or cultural interest are encountered, work will cease at that location and the Departmental Representative will be notified.

1.9 Site and Plant
Protection

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

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- 1.10 Work Adjacent to Waterways
- .1 Do not operate construction equipment in waterways.
 - .2 Do not use waterway beds for borrow material.
 - .3 Do not dump excavated fill, waste material or debris in waterways.
 - .4 At borrow sites, design and construct temporary crossings to minimize erosion to waterways in strict conformance with federal environmental regulations.
 - .5 Do not skid logs or construction materials across waterways.
 - .6 Avoid indicated spawning beds when constructing temporary crossings of waterways.
 - .7 Do not blast under water or 100 m of spawning beds.
 - .8 Do not refuel any type of equipment within 100 meters of a water body. Maintain equipment in good working condition with no fluid leaks, loose hoses or fittings.
- 1.11 Pollution Control
- .1 Maintain temporary erosion and pollution control features installed under this contract.
 - .2 Control emissions from equipment and plant to local authorities emission requirements.
 - .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
 - .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and around entire construction site.
 - .5 Have appropriate emergency spill response equipment and rapid clean-up kit on site located adjacent to hazardous materials storage area. Provide personal protective equipment required for clean-up.
 - .6 Report, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment to Federal and Provincial Department of the Environment.
 - .1 Notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.
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- 1.12 Wildlife Protection .1 Should nests of migratory birds in wetlands be encountered during work, immediately notify Departmental Representative for directives to be followed.
- .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.
- .2 Minimize work immediately adjacent to such areas until nesting is completed.
- .3 Protect these areas by following recommendations of Canadian Wildlife Service.
- 1.13 Fires .1 Fires and burning of rubbish on site is not permitted.
- 1.14 Air Quality .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Apply dust control measures to roads, parking lots and work areas.
- .3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.
- .4 Do not use oil or any other petroleum products for dust control.
- .5 All construction equipment must be fitting with standard and well-maintained noise suppression devices. Construction activities must respect appropriate time restriction and use smaller, less disturbing equipment where possible.

PART 1 - GENERAL

1.1 Related Sections.1 Section 01 33 00 - Submitted Procedures

.2 Section 03 30 00 - Cast-in-Place Concrete

.3 Section 32 12 16 - Asphalt Paving

.4 Section 32 16 15 - Concrete Walks, Curbs & Gutter

.5 Section 01 29 83 - Payment Procedures for Testing Laboratories

1.2 Inspection

.1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.

.2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.

.3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.

.4 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.

1.3 Testing

.1 Tests on materials, as specified in various sections of the Specifications is the responsibility of the Contractor except where stipulated otherwise.

.1 Provide all necessary instruments, equipment and qualified personnel to perform tests.

.2 At completion of tests, turn over 2 sets of fully documented tests reports to Departmental Representative. Submit in accordance with Section 01 33 00.

.1 Obtain additional copies for inclusion of a complete set in each of the maintenance manuals specified in Section 01 78 00.

1.3 Testing
(Cont'd)

- .3 Unspecified tests may also be made by Departmental Representative, at the discretion of the Departmental Representative. The costs of these tests will be paid for by the Departmental Representative.
- .4 Where tests or inspections reveal work not in accordance with contract requirements, Contractor to repair at its own costs.

1.4 Independent
Inspection Agencies

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

1.5 Access to Work

- .1 Allow inspection/testing agencies access to Work.
- .2 Co-operate to provide reasonable facilities for such access.

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.

PART 1 - GENERAL

<u>1.1 Site Access and Parking</u>	.1	Parking facilities at site are limited and cannot be used by Contractor unless approved by the Departmental Representative. Make arrangements elsewhere for Contractor's vehicles including those of subcontractors and workers.
<u>1.2 Contractor's Site Office</u>	.1	Be responsible for and provide own site office (if required), including electricity, heat, lights and telephone. Locate site office as directed by Departmental Representative. Provide table and chair for use by Departmental Representative.
<u>1.3 Material Storage</u>	.1	Locate site storage trailers in location of least interference with existing facility operations.
	.2	Material storage space on site is limited.
<u>1.4 Sanitary Facilities</u>	.1	Provide sanitary facilities for workforce in accordance with governing regulations and ordinances.
	.2	Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
<u>1.5 Power</u>	.1	Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.
	.2	Supply and install all temporary facilities for power such as pole lines, meter socket, underground cables, etc., as required and to approval of local power supply authority.
<u>1.6 Water Supply</u>	.1	Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.
<u>1.7 Construction Sign and Notices</u>	.1	Erect a self-supporting project sign in location provided by Departmental Representative.
	.2	Departmental Representative will provide a vinyl sign facing for installation by Contractor on sign framework. Sign frame to be plywood face of

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| <u>1.7 Construction
Sign and Notices
(Cont'd)</u> | <p>.2 (Cont'd)
approximately 1200x2400mm in size, complete with
required wood framing at 400 mm o.c. and support
posts. All materials, other than vinyl sign facing,
to be supplied and installed by Contractor.</p> <p>.3 Install sign plumb and level in neat wood framework
and securely anchor in ground by posts to withstand
wind pressure of 160 km/h.</p> <p>.4 Contractor or subcontractor advertisement sign
boards are not permitted on site.</p> <p>.5 Safety and Instruction Signs and Notices:
.1 Signs and notices for safety and instruction
shall be in both official languages or commonly
understood graphic symbols conforming to CAN3-Z321.</p> <p>.6 Maintenance and Disposal of Site Signs:
.1 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.</p> |
| <u>1.8 Removal of
Temporary
Facilities</u> | <p>.1 Remove temporary facilities from site when directed
by Departmental Representative.</p> |

PART 1 - GENERAL

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| <u>1.1 Description</u> | .1 | This section is to provide traffic control pursuant to Section 6 of the Provincial Roads Act as stipulated in the PEI Temporary Workplace Traffic Control Manual (TWTCM). |
| <u>1.2 Related Work</u> | .1 | Section 01 10 10 - General Instructions |
| | .2 | Section 01 35 38 - Health and Safety Requirements |
| <u>1.3 Reference Standards</u> | .1 | Regulate traffic in accordance with the Roads Act (Prince Edward Island) as stipulated in the TWTCM distributed by the Prince Edward Island Department of Transportation and Infrastructure Renewal and Parks Canada regulations. |
| | .2 | The Departmental Representative reserves the right to direct the contractor to reduce either the number or length of traffic control work areas during peak traffic volumes or when cumulative delays exceed the specified maximum. |
| <u>1.4 Measurement for Payment</u> | .1 | See Section 01 29 00 - Project Particulars and Measurement. |
| <u>1.5 Protection of Public Traffic</u> | .1 | Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out work or haul materials or equipment. |
| | .2 | When working on travelled way: <ul style="list-style-type: none"> .1 Place equipment in position to present minimum of interference and hazard to travelling public. .2 Keep equipment units as close together as working conditions will permit and preferably on same side of travelled way. .3 Do not leave equipment on travelled way overnight. |
| | .3 | Do not close any lanes of driveway/parking lots without approval of Departmental Representative. Before re-routing traffic, erect suitable signs and devices in accordance with instructions contained in the TWTCM. Provide sufficient crushed gravel to ensure a smooth riding surface during work. |
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- 1.5 Protection of Public Traffic
(Cont'd)
- .4 Keep travelled way well graded, free of pot holes and of sufficient width that required number of lanes of traffic may pass.
- .5 Limit construction to maintain at least one lane of traffic at all times.
- .6 When directed by Departmental Representative, provide well graded, detours or temporary roads to facilitate passage of traffic around restricted construction area. Provide and maintain signs and lights and maintain roadway.
- .7 Provide and maintain reasonable road access and egress to property fronting along or in vicinity of work under contract unless approved otherwise by Departmental Representative.
- 1.6 Informational & Warning Devices
- .1 Provide and maintain signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from project work which may require road user response.
- .2 All traffic signs are to be bilingual or symbolic and shall be Level 1 reflectivity.
- .3 Supply and erect signs, declinators, barricades and miscellaneous warning devices as specified in TWTCM.
- .4 Place signs and other devices in locations recommended in the TWTCM.
- .5 The Contractor shall provide an Accredited Sign Supervisor, 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 Accredited Traffic Control Sign Supervisor will be responsible to supervise the placement and dismantling of all temporary condition signs and devices that indicate to the road user that highway construction activity exist and also to ensure that proper traffic control procedures are carried out in accordance with the TWTCM. The Accredited Sign Supervisor is considered part of the Contractor's supervision and administration staff and compensation the provision this individual is considered incidental to the work.
- .6 A traffic control plan must be approved by the Departmental Representative prior to commencing any work.
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1.6 Informational & Warning Devices (Cont'd)	.7	Continually maintain traffic control devices in use by: .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance. .2 Removing or covering signs which do not apply to conditions existing from day to day.
1.7 Control of Public Traffic	.1	Provide traffic control personnel who have a valid provincial license and trained in accordance with and properly equipped as specified in the TWTCM, in the following situations: .1 When public traffic is required to pass working vehicles or equipment which may 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 traffic signal system is not in use. .3 When workers 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.
	.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.
1.8 Traffic Management Plan Requirement	.1	Contractor to provide a detailed traffic management plan, prior to construction.
	.2	Traffic control measures are summarized as follows: .1 Single lane traffic will be maintained at all times and will be a contract obligation. .2 Complete driveway/parking lot closures will not be permitted, unless some exceptional circumstances arise. .3 Escort vehicles will be used through construction during the summer season. Radio communications and one-way traffic controls will be used during the shoulder seasons.

1.8 Traffic Management Plan Requirement <u>(Cont'd)</u>	.3	The required traffic measures will be included in the construction contract. A detailed construction sequencing and Traffic Management Plan will be required prior to construction. Ongoing information and communications will be maintained throughout the construction period.
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PART 1 - GENERAL

<u>1.1 Related Sections</u>	.1	Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
<u>1.2 Installation and Removal</u>	.1	Provide temporary controls in order to execute Work expeditiously.
	.2	Remove from site all such work after use.
<u>1.3 Guardrails and Barricades</u>	.1	Provide secure, rigid guardrails and barricades around infill area.
<u>1.4 Access to Site</u>	.1	Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.
<u>1.5 Public Traffic Flow</u>	.1	Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect public.
<u>1.6 Fire Routes</u>	.1	Maintain access to property including overhead clearances for use by emergency response vehicles.
<u>1.7 Protection for Off-Site and Public Property</u>	.1	Protect surrounding private and public property from damage during performance of Work.
	.2	Be responsible for damage incurred.
<u>1.8 Waste Management and Disposal</u>	.1	Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

PART 2 - PRODUCTS

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

PART 3 - EXECUTION

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

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- 1.1 General .1 Use new material and equipment unless otherwise specified.
- .2 Within 7 days of written request by Departmental Representative, submit the following information for materials and products proposed for supply:
- .1 Name and address of manufacturer;
 - .2 Trade name, model and catalogue number;
 - .3 Performance, descriptive and test data;
 - .4 Manufacturer's installation or application instructions;
 - .5 Evidence of arrangement to procure.
- .3 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.
- .4 All materials are to be supplied by the Contractor.
- 1.2 Manufacturer's Instructions .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturer's instructions. Departmental Representative will designate which document is to be followed.
- 1.3 Delivery and Storage .1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
- .3 Store material and equipment in accordance with supplier's instructions.
- .4 Touch up damaged factory finished surfaces to Departmental Representative's satisfaction. Use primer or enamel to match original. Do not paint over nameplates.
- 1.4 Conformance .1 When material or equipment is specified by standard or performance specifications, upon request of Departmental Representative obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.
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- 1.5 Substitution of Material
- .1 Proposals for substitution may be submitted only after award of contract. Such requests must include statements of respective costs of items originally specified and proposed substitutions.
- .2 Proposals will be considered by Departmental Representative if:
- .1 Products selected by tenderer from those specified, are not available, or;
- .2 Delivery date of products selected from those specified would unduly delay completion of Contract, or;
- .3 Alternative products to those specified, which are brought to attention of, and considered by Departmental Representative as equivalent to those specified and will result in credit to Contract amount;
- .4 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as a result of substitution.
- .5 Amounts of all credits arising from approval of substitutions will be determined by Departmental Representative and contract price will be reduced accordingly. No substitutions will be permitted without prior written approval of Departmental Representative.
- 1.6 Construction Equipment and Plant
- .1 On request, prove to the satisfaction of Departmental Representative, that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.
- .2 Maintain construction equipment and plant in good operating order.

PART 1 - GENERAL

1.1 Related Sections.1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.2 General

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Sort volatile waste in covered metal containers, and remove from premises at end of each working day.

1.3 Project Cleanliness

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative.
- .3 Provide on-site containers for collection of waste materials and debris.
- .4 Provide and use marked separate bins for recycling. Refer to Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .5 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .6 Provide adequate ventilation during use of volatile or noxious substances.

1.4 Final Cleaning

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .3 Remove dirt and other disfiguration from exterior surfaces.
- .4 Sweep and wash clean paved areas affected by work.

PART 1 - GENERAL

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| <u>1.1 Related Sections</u> | .1 | Section 01 14 10 - Scheduling and Management of Work. |
| | .2 | Section 01 35 43 - Environment Procedures. |
| | .3 | Section 01 56 00 - Temporary Barriers and Enclosures. |
| | .4 | Section 01 74 11 - Cleaning. |
| | .5 | Section 31 23 33.01 - Excavating, Trenching and Backfilling. |
| | .6 | Section 32 11 16.01 - Granular Sub-Base. |
| | .7 | Section 32 12 13.16 - Asphalt Tack Coats. |
| | .8 | Section 32 12 16 - Asphalt Paving. |
| | .9 | Section 32 16 15 - Concrete Walks, Curbs and Gutters. |
| | .10 | Appendix "A" - Environmental Protection Plan. |
| <u>1.2 General</u> | .1 | Carry out work placing maximum emphasis on the areas of: <ul style="list-style-type: none"> .1 Waste reduction; .2 Diversion of waste from landfill, and; .3 Material recycling. |
| <u>1.3 Waste Management Plan</u> | .1 | Prior to commencement of work, prepare Waste Management Workplan. |
| | .2 | Workplan to include: <ul style="list-style-type: none"> .1 Waste reduction practices; .2 Material source separation process; .3 Procedures for sending recyclables to recycling facility; .4 Procedures for sending non-salvageable items and waste to approved waste processing facility or landfill site. .5 Training and supervising workforce on waste management at site. |
| | .3 | Workplan to incorporate waste management requirements specified herein and in other sections of the specifications. |
| | .4 | Develop Workplan in collaboration with all subcontractors to ensure all waste management issues and opportunities are addressed. |

1.3 Waste
Management Plan
(Cont'd)

- .5 Submit copy of Workplan to Departmental Representative for review.
 - .1 Make revisions to Plan as directed by Departmental Representatives.
- .6 Implement and manage all aspects of Waste Management Workplan for duration of work.
- .7 Revise Plan as work progresses addressing new opportunities for diversion of waste from landfill.

1.4 Waste Reduction

- .1 Develop waste reduction program.
- .2 Structure program to prioritize actions, with waste reduction as first priority, followed by salvage and recycling effort, then disposal as solid waste.
- .3 Identify materials and equipment to be:
 - .1 Salvaged for resale by Contractor;
 - .2 Sent to recycling facility;
 - .3 Sent to waste processing/landfill site for their recycling effort;
 - .4 Disposed of in approved landfill site.
- .4 Reduce construction waste during installation work. Undertake practices which will minimize waste and optimize full use of new materials on site, such as:
 - .1 Use of a central cutting area to allow for easy access to off-cuts;
 - .2 Use of off-cuts for blocking and bridging elsewhere.
 - .3 Use of effective and strategically placed facilities on site for storage and staging of leftover or partially cut materials (such as plywood, dimension timber, etc.) to allow for easy incorporation into work whenever possible, avoiding unnecessary waste.
- .5 Develop other strategies and innovative procedures to reduce waste.

1.5 Material
Source Separation
Process

- .1 Develop and implement material source separation process at commencement of work as part of mobilization and waste management at site.
- .2 Provide on-site facilities to collect, handle and storage anticipated quantities of reuseable, salvageable and recyclable materials.
 - .1 Use suitable containers for individual collection of items based on intended purpose.
 - .2 Locate to facilitate deposit but without hindering daily operations.
 - .3 Clearly mark containers and stockpiles as to purpose and use.

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| 1.5 Material
Source Separation
Process
<u>(Cont'd)</u> | .3 | Establish methods whereby hazardous and toxic waste materials, and their containers, encountered or used in the course work are properly isolated, stored on site and disposed in accordance with applicable laws and regulations from authorities having jurisdiction. |
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| 1.6 Worker
Training and
Supervision
<u></u> | .1 | Provide adequate training to workforce, through meetings and demonstrations, to emphasize purpose and worker responsibilities in carrying out the Waste Management Plan. |
| | .2 | Waste Management Coordinator: designate one full-time person on site, experience in waste management and having knowledge of the purpose and content of Waste Management Plan to:
.1 Oversee and supervise waste management during work.
.2 Provide instructions and directions to all workers and subcontractors on waste reduction, source separation and disposal practices. |
| | .3 | Post a copy of Plan in a prominent location on site for review by workers. |
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| 1.7 Disposal
Requirements
<u></u> | .1 | Burying or burning of rubbish and waste materials is prohibited. |
| | .2 | Disposal of waste, volatile materials, mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers is prohibited. |
| | .3 | Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction. |
| | .4 | Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, construction waste materials have been banned from disposal in landfills. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations. |
| | .5 | Collect, bundle and transport salvaged materials to be recycled in separated categories and condition as directed by recycling facility. Ship materials only to approved recycling facilities. |
| | .6 | Sale of salvaged items by Contractor to other parties not permitted on site. |
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Public Works and Government	Construction/	Section 01 74 21
Services Canada	Demolition	Page 4
Parking Lot Repair	Waste Management	
Joseph A. Ghiz Building		
Summerside, Prince Co., PEI		
Project No. R.074056.001		2015-06-17

PART 1 - GENERAL

1.1 Related Sections .1 Section 01 78 00 - Closeout Submittals.

1.2 Inspection and Declaration .1 Contractor's Inspection: Coordinate and perform, in concert with subcontractors, an inspection and check of all Work. Identify and correct deficiencies, defects, repairs and perform outstanding items as required to complete work in conformance with Contract Documents.
.1 Notify Departmental Representative in writing when deficiencies from Contractor's inspection have been rectified and that Work is deemed to be complete and ready for Departmental Representative's inspection of the completed work.
.2 Departmental Representative's Inspection: Accompany Departmental Representative during all interim and final inspections of the Work.
.1 Address defects, faults and outstanding items of work identified by such inspections.
.2 Advise Departmental Representative when all deficiencies identified have been rectified.
.3 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.

PART 1 - GENERAL

1.1 Related
Sections

- .1 Section 01 10 10 - General Instructions.
- .2 Section 01 33 00 - Submittal Procedures.
- .3 Section 01 77 00 - Closeout Procedures.

1.2 Project Record
Drawings

- .1 Departmental Representative will provide 2 white print sets of contract drawings and 2 copies of specifications manual specifically for "as-built" purposes.
- .2 Maintain at site one set of the contract drawings and specifications to record actual as-built site conditions.
- .3 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative upon request.
- .4 As-Built Drawings:
 - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of work, neatly transfer notations to second set (also by use of red ink).
 - .2 Submit both sets to Departmental Representative prior to application for Certificate of Substantial Performance.
 - .3 Stamp all drawings with "As-Built Drawings." Label and place Contractor's signature and date.
 - .4 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
 - .5 Record the following information:
 - .1 Depths of various elements in relation to survey datum;
 - .2 Horizontal and vertical location of various elements in relation to Geodetic Datum;
 - .3 Field changes of dimension and detail;
 - .4 Location of all capped or terminated services and utilities;
 - .5 All design elevations, sections and details dimensioned and marked up to consistently report finished installation conditions;
 - .6 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings;
 - .7 All change orders issued over the course of the contract must be documented on the finished as-built documents, accurately and

1.2 Project Record .4
Drawings
(Cont'd)

As-Built Drawings: (Cont'd)

.5 (Cont'd)

.7 (Cont'd)

consistently depicting the changed condition as it applies to all affected drawing details.

- .5 As-Built Specifications: Legibly mark in red each item to record actual construction, including:
- .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly items substituted from that specified;
 - .2 Changes made by Addenda and Change Orders;
 - .3 Mark up both copies of specifications, stamp "as-built", sign and date similarly to drawings as per above clause.
- .6 Maintain As-Built document current as the contract progresses. Departmental Representative will conduct reviews and inspections of the documents on a regular basis. Failure to maintain as-builts current and complete to satisfaction of the Departmental Representative shall be subject to financial penalties in the form of progress payment reductions and holdback assessments.