

## **1 GENERAL**

### **1.01 RELATED REQUIREMENTS**

- .1 Section 02 41 16 - Structure Demolition.
- .2 Section 02 41 10 - Site Work Demolitions and Removal.

### **1.02 REFERENCE STANDARDS**

- .1 CSA International
  - .1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .2 Federal Legislation
  - .1 Canadian Environmental Assessment Act (CEAA), S.C. 2012, c. 19, s. 52.
  - .2 Canadian Environmental Protection Act (CEPA), S.C. 1999, c. 33.
  - .3 Transportation of Dangerous Goods Act (TDGA), S.C. 1992, c. 34.
  - .4 Motor Vehicle Safety Act(MVSA), S.C. 1993, c. 16.

### **1.03 DEFINITIONS**

- .1 Alternate Disposal: reuse and recycling of materials by designated facility, user or receiving organization which has valid Certificate of Approval to operate. Alternative to landfill disposal.
- .2 Deconstruction: systematic dismantling of structure in a manner that achieves safe removal/disposal of materials and maximum salvage/recycling of materials.
  - .1 Ultimate objective is to recover potentially valuable resources while diverting from landfill what has traditionally been significant portion of waste system.
- .3 Demolition: rapid destruction of structure with or without prior removal of hazardous materials.
- .4 Disassemble / Dismantle: careful and systematic physical detachment of materials from structure using such methods as prying, pulling, cutting, or unscrewing, executed in a manner that does not damage materials to remain or the materials removed.
- .5 Existing to Remain: Existing items that are not to be removed or dismantled, except to the degree necessary for performing required Work.

- .6 Hauler: company (possessing appropriate and valid Certificate of Approval) contracted to transport waste, reusable or recyclable materials off site to designated facility, user or receiving organization.
- .7 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, including but not limited to: corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health, well being or environment if handled improperly.
- .8 Processing: tasks which are subsequent to disassembly and may include: moving materials, denailing, cleaning, separating and stacking.
- .9 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse by others.
- .10 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .11 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form.
  - .1 Recycling does not include burning, incinerating, or thermally destroying waste.
- .12 Remove: To take down or detach a non-historic item located within a historic space, area, or room, using methods and equipment to prevent damage to historic items and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- .13 Retain: To keep existing items that are not to be removed or dismantled.
- .14 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
  - .1 Salvaging reusable materials from remodelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
  - .2 Returning reusable items including pallets or unused products to vendors.

- .15 Salvage: to protect removed or dismantled items for purpose of reuse or recycling, or delivery to Departmental Representative ready for reuse, as indicated or directed by Departmental Representative.
- .16 Source Separation: acts of keeping different types of waste materials separate, beginning from first time they became waste.
- .17 Used Building Material Receipt: receipt issued at end destination for materials designated for alternate disposal.
- .18 Waste Audit (WA): detailed inventory of materials in building. Involves quantifying (by volume or weight) amounts of materials and wastes generated during deconstruction. Indicates quantities of reuse, recycling and landfill.
- .19 Waste Management Coordinator (WMC): contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements.
- .20 Waste Reduction Workplan (WRW): written report which outlines actions to be taken to reduce, reuse and recycle materials during course of deconstruction. Actions based on finding of the Demolition Waste Audit (DWA).
- .21 Weigh Bill: receipt received from recycling facility indicating weight and content of each load/bin of material.

#### **1.04 SCOPE DESCRIPTION**

- .1 The Work of this Section pertains to the existing Barn structure and immediately adjacent grounds to prepare the Barn for a new addition and exterior and interior renovations, including but not limited to demolition of Demonstration / Crafts Area, etc., as indicated.
- .2 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Departmental Representative that may be encountered during building demolition remain Departmental Representative's property. If item(s) of this nature are encountered, stop work at location, notify Departmental Representative immediately, and await instructions.

#### **1.05 ADMINISTRATIVE REQUIREMENTS**

- .1 Convene pre-demolition meeting two weeks prior to beginning selective demolition Work at barn structure, with primary trades and Departmental Representative in accordance with Section 01 31 19 - Project Meetings to:
  - .1 Verify project requirements.
  - .2 Review building and substrate conditions.
  - .3 Coordination with other building subtrades.
  - .4 Review requirements of Contract and intended outcomes.
  - .5 Extent of photographic recording, to Section 01 33 00 - Submittal Requirements, item 1.05 Photographic Documentation.
  - .6 Review items to be salvaged.
  - .7 Review methods and procedures of removal and dismantling.
  - .8 Review fire protection and fire watch procedures, and requirements of Section 01 35 13.10 - Special Procedures for National Historic Sites.

#### **1.06 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Removal and Dismantling Program: Prepare and submit a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of removal and dismantling work, including protection of surrounding and substrate materials and Project site.
- .3 Inventory of Salvaged Items - Pre-Demolition: Submit list of items to be salvaged for review and confirmation 15 working days prior to commencement of selective demolition work at site.
- .4 Inventory of Salvaged Items - Post Demolition: After removal or dismantling work is complete, submit a list of items that have been salvaged.
- .5 Pre-Demolition Documentation: Show pre-existing conditions of buildings interiors and exteriors, adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by Contractor's removal and dismantling operations.
  - .1 Refer to Section 01 33 00 - Submittal Requirements, item 1.05 Photographic Documentation.

- .6 Manage and dispose of demolition waste, including record keeping and supervision, in accordance with the requirements of Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

#### **1.07 DECONSTRUCTION DRAWINGS**

- .1 Submit for approval drawings, diagrams and details showing sequence of deconstruction work, materials designated for salvage and support of structures and underpinning.
- .2 When structural elements may be compromised by the Work, submit drawings stamped and signed by qualified professional engineer (P.Eng.) registered or licensed in Province of Prince Edward Island, Canada.

#### **1.08 QUALITY ASSURANCE**

- .1 Engage a professional engineer (P.Eng.) registered in the Province of Prince Edward Island to review structural aspects of the Work of this Section and Work that may adversely effect structural integrity of elements to remain.
- .2 Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
- .3 Qualifications: provide adequate workforce training through meetings and demonstrations. Have someone on site with deconstruction experience throughout project for consultation and supervision purposes.
- .4 Regulatory Requirements:
  - .1 Regulatory Requirements: Comply with notification regulations of authorities having jurisdiction before beginning removal and dismantling work. Comply with hauling and disposal regulations of authorities having jurisdiction.
  - .2 Ensure Work is performed in compliance with CEPA, CEAA, TDGA, MVSA, and applicable Provincial regulations.
- .5 Site Meetings: conduct project meetings every month or as otherwise instructed by Departmental Representative.
  - .1 Arrange for site visit with Departmental Representative to examine existing site conditions adjacent to demolition work, prior to start of Work.
  - .2 Ensure key personnel, site supervisor, project manager, subcontractor representatives and WMC attend.

## 1.09 SITE CONDITIONS

- .1 Do Work in accordance with Section 01 35 43 - Environmental Procedures, Section 01 14 00 - Work Restrictions, and Section 01 35 13.10 - Special Procedures for National Historic Sites.
- .2 Existing Conditions:
  - .1 Should materials resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in course of deconstruction, stop work, take preventative measures, and notify Departmental Representative immediately. Do not proceed until written instructions have been received.
  - .2 Label and package component parts of mechanical and electrical material specified for salvage in accordance with Departmental Representative's instructions to prevent damage or loss.
- .3 Structures to be demolished to be based on their condition at time of examination prior to tendering.
  - .1 Remove, protect and store salvaged items as directed by Departmental Representative. Salvage items as identified by Departmental Representative. Deliver to Departmental Representative as directed.
- .4 Storage and Protection:
  - .1 Store materials salvaged for reuse and recycling, designated for alternate disposal in locations as outlined in Waste Reduction Workplan.
  - .2 Maximum permitted duration of material storage on site shall be as determined in consultation with Departmental Representative, but shall be kept to the minimum possible given public attendance at this national historic site.
  - .3 Prevent movement, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, adjacent grades. Provide bracing, shoring, underpinning as required. Repair damage caused by deconstruction under direction of Departmental Representative.
  - .4 Support affected structures and, if safety of structure being deconstructed or adjacent structures or services appears to be endangered, take preventative measures. Cease operations and immediately notify Departmental Representative.
  - .5 Prevent debris from blocking surface drainage systems, and mechanical and electrical systems.

## **2 PRODUCTS**

### **2.01 EQUIPMENT**

- .1 Leave equipment and machinery running only while in use, except where extreme temperatures prohibit shutting down.
- .2 Where possible, use water efficient wetting equipment/trucks/attachments when minimizing dust.
- .3 Demonstrate that tools are being used in manner which allows for salvage of materials in best condition possible.

## **3 EXECUTION**

### **3.01 EXAMINATION AND PRE-DEMOLITION PROCEDURES**

- .1 Preparation for Removal and Dismantling: Examine construction to be removed or dismantled to determine best methods to safely and effectively perform removal and dismantling work.
  - .1 Verify that affected utilities are disconnected and capped.
  - .2 Inventory and record the condition of items to be removed and dismantled for reinstallation or salvage. Enter this information on the submittal of inventory of salvaged items.
  - .3 Engineering Survey: Engage a professional engineer (P.Eng.) registered in the Province of Prince Edward Island to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures as a result of removal and dismantling work.
- .2 Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs. Comply with requirements specified in Section 01 33 00 - Submittal Requirements, item 1.05 Photographic Documentation.
- .3 Perform surveys as the Work progresses to detect hazards resulting from removal and dismantling procedures.

### **3.02 SITE VERIFICATION OF CONDITIONS**

- .1 Employ necessary means to assess site conditions and structures to determine presence, quantity and locations of hazardous materials, if any.

- .2 Investigate site and structures to determine dismantling, processing and storage logistics required prior to beginning of Work.
- .3 Develop strategy for deconstruction to facilitate optimum salvage of reusable and recyclable materials.

### **3.03 PREPARATION**

- .1 Obtain necessary permits and approvals, including Fire Marshall and for demolition.
  - .1 Provide copies to Departmental Representative prior to start of Work on site.
- .2 Disconnect and re-route electrical, telephone and communication service lines entering structures to be deconstructed. Post warning signs on electrical lines and equipment which must remain energized to serve other products during period of demolition.
- .3 Locate and protect utility lines. Do not disrupt active or energized utilities traversing premises designated to remain undisturbed.
- .4 Disconnect and cap mechanical services as required, leaving services in place required to maintain and service existing facilities to remain.
  - .1 Natural gas supply lines: remove in accordance with utility company requirements.
  - .2 Sewer and water lines: remove in accordance with requirements of authority having jurisdiction.
  - .3 Other underground services: remove and dispose of in accordance with requirements of authority having jurisdiction.
  - .4 Post signs in visible locations and appropriate languages which indicates to workers, subcontractors, haulers, and public, location of processing and stockpiling of each material, bin location and use; e.g. ("CLEAN WOOD ONLY").

### **3.04 REMOVAL OF HAZARDOUS WASTES**

- .1 Prior to start of deconstruction work remove contaminated or hazardous materials if discovered as defined by authorities having jurisdiction from site and dispose in safe manner in accordance with TDGA and other applicable regulatory requirements.

### 3.05 REMOVAL AND DISMANTLING

- .1 General: Have removal and dismantling work performed by personnel familiar and experienced in selective demolition operations at national historic sites and period structures. Drawings show extent of selective demolition Work at Barn structure.
- .2 Perform Work according to the 'Removal and Dismantling Program'.
- .3 Materials removed from designated structure are property of Departmental Representative unless otherwise determined and identified by Departmental Representative.
- .4 Throughout course of deconstruction pay close attention to connections and material assemblies. Employ workmanship procedures that minimize damage to materials and equipment.
- .5 Ensure workers and subcontractors are briefed and trained to carry out work in accordance with appropriate deconstruction techniques.
- .6 Project supervisor with previous deconstruction experience at national historic sites shall be present on site throughout Work of this Section.
- .7 Deconstruct in accordance with CSA S350 and other applicable safety standards.
- .8 Workers shall utilize adequate fall protection and certified harness and belay systems where required by governing legislation and in keeping with worker safety best practices in accordance with Construction Safety Association of Prince Edward Island guidelines.
- .9 Maintain structural integrity of structure.
- .10 Systematically remove finishes, furnishings, and mechanical and electrical equipment.
- .11 Carefully remove doors, and exterior door and adjacent wall assemble from structure.
- .12 Disassemble non-loadbearing interior partitions and remove materials from structure.
- .13 Disassemble in sequence: roof, interior loadbearing partitions, exterior walls, floors, and foundation.

- .14 Wherever possible, transfer material assemblies from heights to ground level for easier disassembly. Take appropriate measures to ensure safety.
- .15 Separate from waste stream, material in condition suitable for reuse and/or recycling.
- .16 Remove and store materials to be salvaged, in manner to prevent damage.
  - .1 Store and protect in accordance with requirements for maximum preservation of material.
  - .2 Handle salvaged materials as new materials.
- .17 Source separate for recycling materials that cannot be salvaged for reuse including wood, metal, concrete and asphalt.
- .18 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.
- .19 Where existing materials are to be re-used in Work, use special care in removal, handling, storage and re-installation to assure proper function in completed work.

### **3.06 PROCESSING**

- .1 Designate location for processing of materials which eliminates double handling and provides adequate space to maintain efficient material flow.
- .2 Denail, Strip, and Separate materials to ensure best possible condition of salvaged materials.
- .3 Keep processing area clean and free of excess debris.
- .4 Supply separate, marked disposal bins for categories of waste material.
- .5 Separate processed materials into organized piles for stockpiling. Provide collection area for materials processed for alternate disposal. Pile materials on pallets to facilitate transport off-site.

### **3.07 STOCKPILING**

- .1 Label stockpiles, indicating material type and quantity.
- .2 Designate appropriate security resources/measures to prevent vandalism, damage and theft.
- .3 Locate stockpiled materials convenient for use in new construction. Eliminate double handling wherever possible.
- .4 Stockpile materials designated for alternate disposal in location that facilitates removal from site and examination by potential end markets, and that does not impede disassembly, processing, or hauling procedures.
- .5 Market material designated for alternate disposal to authorized, licensed haulers, facilities and receiving organizations as required to maximize waste diversion from landfill.

### **3.08 REMOVAL FROM SITE**

- .1 Transport material designated for alternate disposal by authorized, licensed haulers, facilities and receiving organizations in accordance with applicable regulations.
- .2 Dispose of materials not designated for alternate disposal in accordance with applicable regulations. Disposal facilities must be authorized and licensed under appropriate regulations to the satisfaction of authorities having jurisdiction.

### **3.09 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning. Leave Work area clean at end of each day. Keep site clean and organized throughout Work of this Section.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

- .3 Waste Management: separate waste materials for reuse and recycling in accordance with the requirements of Section 01 74 21 - Construction/Demolition Waste Management and Disposal. Remove recycling containers and bins from site weekly or as otherwise directed by Departmental Representative, and dispose of materials at appropriate facility.
- .4 Upon completion of project, reinstate work areas, parking surfaces, walkways, adjacent grounds affected by Work to condition which existed prior to beginning of Work, or to match condition of adjacent, undisturbed areas, whichever outcome achieves the best aesthetic and performance work result.

**END OF SECTION**

## **1 GENERAL**

### **1.01 WORK INCLUDED**

- .1 This section specifies requirements for furnishing all materials, labour, tools and equipment and performing all operations necessary to complete demolition and removals.

### **1.02 REFERENCES**

- .1 Canadian Standards Association (CSA).
  - .1 CSA S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures.

### **1.03 EXISTING CONDITIONS**

- .1 Items to be demolished and removed are to be based on their condition on date that Tender is accepted.

### **1.04 STORAGE AND PROTECTION**

- .1 Prevent movement, settlement or damage of adjacent structures and services. Provide bracing, shoring as required. Repair damage caused by demolition as directed by the Departmental Representative.
- .2 Support affected structures and, if safety of structure being demolished or adjacent structures or services appears to be endangered, cease operations and notify the Departmental Representative.
- .3 Keep noise, dust and inconvenience to occupants to a minimum.
- .4 Fires and burning of waste or materials is not permitted on site.
- .5 Do not bury waste or materials on site.
- .6 Cover or wet down dry materials and waste to prevent blowing dust and debris.
- .7 Protect trees, plants and foliage on site and adjacent properties where indicated.

## **1.05 REGULATORY REQUIREMENTS**

- .1 Performed all work in compliance with applicable provincial and municipal regulations.

## **2 EXECUTION**

### **2.01 PREPARATION**

- .1 Inspect site with the Departmental Representative and verify extent and location of items designated for removal, disposal, and items to remain.
- .2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.
- .3 Notify and obtain approval of utility companies before starting demolition.

### **2.02 SAFETY CODE**

- .1 Observe construction safety measures of Provincial Government, including but not limited to the Occupational Health and Safety Act, Workplace Health, Safety and Compensation Commission provided that in any case of conflict or discrepancy the more stringent requirement shall apply.
- .2 At the end of each day's work, leave work in safe and stable condition.

### **2.03 SEQUENCES OF OPERATION**

- .1 Removal:
  - .1 Remove items as indicated.
  - .2 Do not disturb items designated to remain in place.
- .2 In removal of pavements:
  - .1 Square up and create keyways adjacent surfaces to remain in place by saw cutting and milling as per the Section 32 12 16 - Asphalt Paving.
  - .2 Protect adjacent joints and load transfer devices.
  - .3 Protect underlying and adjacent granular materials.
- .3 Obtain written approval of the Departmental Representative prior to any removal of trees.

**2.04 REMOVAL FROM SITE**

- .1 At end of each day's work, leave work in a safe and stable condition.
- .2 Stockpiling of demolition debris shall not be permitted.
- .3 Removal of temporary stockpiled material will be required, if it is deemed by the Departmental Representative, to interfere with operations of the Owner.
- .4 Complete demolition in a manner to minimize dust. Keep materials wetted.
- .5 Pay all costs and fees associated with the removal from site and disposal.

**2.05 RESTORATION**

- .1 Restore areas and existing works outside areas of demolition to match condition of adjacent, undisturbed areas.

**2.06 CLEANUP**

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.

**3 EXECUTION Not used.**

**END OF SECTION**

## **1 GENERAL**

### **1.01 RELATED REQUIREMENTS**

- .1 Section 02 03 41 - Selective Demolition for Period Structures.
- .2 Section 02 41 10 - Site Work Demolitions and Removal.

### **1.02 REFERENCE STANDARDS**

- .1 CSA International
  - .1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .2 Department of Justice Canada (Jus)
  - .1 Canadian Environmental Assessment Act (CEAA), S.C. 2012, c. 19, s. 52.
  - .2 Canadian Environmental Protection Act (CEPA), S.C. 1999, c. 33.
    - .1 SOR/2003-2, On-Road Vehicle and Engine Emission Regulations.
    - .2 SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations.
    - .3 Transportation of Dangerous Goods Act (TDGA), S.C. 1992, c. 34.
- .4 U.S. Environmental Protection Agency (EPA)
  - .1 EPA CFR 86.098-10, Emission standards for 1998 and later model year Otto-cycle heavy-duty engines and vehicles.
  - .2 EPA CFR 86.098-11, Emission standards for 1998 and later model year diesel heavy-duty engines and vehicles.
  - .3 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

### **1.03 DEFINITIONS**

- .1 Demolition: rapid destruction of building following removal of hazardous materials.
- .2 Deconstruction: systematic dismantling of structure in a manner that achieves safe removal/disposal of hazardous materials and maximum salvage/recycling of materials.

- .3 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, include but not limited to: poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or materials that endanger human health or environment if handled improperly.
- .4 Waste Management Coordinator (WMC): contractor representative responsible for supervising waste management activities as well as co-ordinating related, required submittal and reporting requirements.
- .5 Waste Audit (WA): detailed inventory of materials in building. Involves quantifying by volume/weight amounts of materials and wastes generated during construction, demolition, deconstruction, or renovation project. Indicates quantities of reuse, recycling and landfill.
- .6 Waste Reduction Workplan (WRW): written report which addresses opportunities for reduction, reuse, or recycling of materials. WRW is based on information acquired from WA.

#### **1.04 SCOPE DESCRIPTION**

- .1 The Work of this Section pertains to structures as indicated on Drawings, including Visitor's Information Centre and Gift Shop, including foundations, and immediately adjacent grounds as required to prepare the area for future construction of new facilities.
- .2 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Departmental Representative that may be encountered during structure demolition operations remain Departmental Representative's property. If item(s) of this nature are encountered, stop work at location, notify Departmental Representative immediately, and await instructions.

#### **1.05 SEQUENCING**

- .1 Schedule demolition of Gift Shop to commence after temporary Gift Shop has been constructed, deficiencies corrected, and is occupied and operational.

### 1.06 ITEMS SALVAGED PRIOR TO DEMOLITION

- .1 Visitors Information Centre: The following items shall be removed and salvaged by Departmental Representative prior to demolition work.
  - .1 All but two exterior doors, including all hardware.
  - .2 All interior doors including hardware.
  - .3 Two cabinets located in the Safe room.
  - .4 All fire extinguishers.
  - .5 All theater bench seats.
  - .6 All track lights in the theater.
  - .7 All 2'x4' fluorescent light fixtures in the office.
  - .8 All bathroom fixtures and accessories.
  - .9 All heat pumps, controls, Wi-Fi receivers, etc.
  - .10 All bathroom light fixtures.
  - .11 Bathroom exhaust fans.
  - .12 Lock box located outside main doors.
  - .13 Bathroom windows.
  - .14 Bathroom stalls including all hardware.
  - .15 All security keypads, detectors, etc..
- .2 Green Gables Gift Shop: The following items shall be removed and salvaged by Departmental Representative prior to demolition work.
  - .1 Exterior doors including all hardware.
  - .2 Front window.
  - .3 All interior doors including hardware.
  - .4 Checker plate ramps at entrance and exit doors.
  - .5 HVAC system.
  - .6 All security keypads, detectors, etc..

### 1.07 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-Demolition Meeting:
  - .1 Convene pre-demolition meeting 2 weeks prior to beginning work of this Section, with Contractor's Representative and Departmental Representative in accordance with Section 01 31 19 - Project Meetings to:
    - .1 Verify project requirements.
    - .2 Verify existing site conditions adjacent to demolition work.
    - .3 Coordination with other construction subtrades.
    - .4 Extent of photographic recording, to Section 01 33 00 - Submittal Requirements, item 1.05 Photographic Documentation.

- .5 Review fire protection and fire watch procedures, and requirements of Section 01 35 13.10 - Special Procedures for National Historic Sites.
  - .2 Hold project meetings every week.
  - .3 Ensure site supervisor, project manager, and subcontractor representatives attend.
  - .4 Departmental Representative will provide written notification of change to meeting schedule established upon contract award 48 hours prior to scheduled meeting.
- .2 Scheduling:
- .1 Employ necessary means to meet project time lines without compromising diversion of waste materials from landfill.
    - .1 In event of unforeseen delay notify Departmental Representative in writing.

#### **1.08 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit Schedule of Building Demolition Activities: Indicate the following:
  - .1 Detailed sequence of demolition and removal work, with starting and ending dates for each activity.
  - .2 Interruption of utility services.
  - .3 Coordination for shutoff, capping, and continuation of utility services.
  - .4 Locations of temporary protection and means of egress.
  - .5 Coordination of continuing occupancy of adjacent buildings and property.
- .3 Shop Drawings:
  - .1 Submit for review and approval demolition drawings, diagrams or details showing sequence of demolition work and supporting structures and underpinning.
  - .2 Submit demolition drawings stamped and signed by professional engineer registered or licensed in Province of Prince Edward Island, Canada.
- .4 Pre-demolition Photographs:
  - .1 Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by building demolition operations; Submit before Work begins.

- .1 Refer to Section 01 33 00 - Submittal Requirements, item 1.05 Photographic Documentation.
- .5 Submit records of receipt and acceptance of hazardous wastes by a facility licensed to accept hazardous wastes.

#### **1.09 QUALITY ASSURANCE**

- .1 Engage a professional engineer (P.Eng.) registered in the Province of Prince Edward Island to prepare shop drawings and review site as required by Code.
- .2 Regulatory Requirements: Ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable Federal, Provincial and Regional regulations.
- .3 Special Requirements: conform to requirements of Section 01 35 13.10 - Special Procedures for National Historic Sites.

#### **1.10 SITE CONDITIONS**

- .1 Building being demolished will be vacated and use discontinued before start of Work.
- .2 Departmental Representative assumes no responsibility for buildings and structures being demolished:
  - .1 Conditions existing at time of inspection for bidding purpose will be maintained as far as practical.
- .3 Environmental protection:
  - .1 Do Work in accordance with Section 01 35 43 - Environmental Procedures.
  - .2 Ensure Work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
  - .3 Fires and burning of waste or materials is not permitted on site.
  - .4 Do not bury rubbish waste materials.
  - .5 Do not dispose of waste or volatile materials including but not limited to: mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.
    - .1 Ensure proper disposal procedures are maintained throughout project.

- .6 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.
- .7 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with authorities having jurisdiction.
- .8 Protect trees, plants and foliage on site and adjacent properties where indicated.
- .9 Prevent extraneous materials from contaminating air beyond application area, by providing temporary enclosures during demolition work.
- .10 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on all temporary roads.

### 1.11 EXISTING CONDITIONS

- .1 If material resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in course of demolition, stop work, take preventative measures, and notify Departmental Representative immediately. Proceed only after receipt of written instructions have been received from Departmental Representative.
- .2 Structures to be demolished are based on their condition, at time of examination prior to tendering.
  - .1 Remove, protect and store salvaged items as directed by Departmental Representative. Salvage items as identified by Departmental Representative. Deliver to Departmental Representative as directed.

## 2 PRODUCTS

### 2.01 EQUIPMENT

- .1 Equipment and heavy machinery:
  - .1 On-road vehicles to: CEPA-SOR/2003-2, On-Road Vehicle and Engine Emission Regulations and CEPA-SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations.
  - .2 Off-road vehicles to: EPA CFR 86.098-10 and EPA CFR 86.098-11.
- .2 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

### 3 EXECUTION

#### 3.01 PREPARATION

- .1 Temporary Erosion and Sedimentation Control:
  - .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to: sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
  - .2 Inspect, repair, and maintain erosion and sedimentation control measures during demolition.
  - .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal after completion of demolition work.
  
- .2 Protection of in-place conditions:
  - .1 Work in accordance with Section 01 35 43 - Environmental Procedures and sediment and erosion control plan.
  - .2 With the exception of site demolition Work indicated on Drawings, prevent movement, settlement or damage of adjacent services, walks, paving, trees, landscaping, and adjacent grades.
    - .1 Provide bracing and shoring as required.
    - .2 Repair damage caused by demolition as directed by Departmental Representative.
  - .3 Support affected structures and, if safety of structure being demolished or services appears to be endangered, take preventative measures, stop Work and immediately notify Departmental Representative.
  - .4 Prevent debris from blocking surface drainage system, elevators, mechanical and electrical systems which must remain in operation.
  
- .3 Surface Preparation:
  - .1 Disconnect and re-route electrical and telephone service lines entering buildings to be demolished.
    - .1 Post warning signs on electrical lines and equipment which must remain energized to serve other properties during period of demolition.
  - .2 Disconnect and cap designated mechanical services.
    - .1 Natural gas supply lines: remove in accordance with gas company requirements.

- .2 Sewer and water lines: remove in accordance with authority having jurisdiction or as directed by Departmental Representative.
- .3 Other underground services: remove and dispose of as indicated or as directed by Departmental Representative.
- .3 Do not disrupt active or energized utilities traversing adjacent property or designated to remain undisturbed.
- .4 Refer to Civil, Mechanical and Electrical Drawings for additional information and requirements.

### 3.02 DEMOLITION

- .1 Do demolition work in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .2 Demolish structure as indicated to permit future construction of new facilities. Refer Scope Description in PART 1.
- .3 Workers shall utilize adequate fall protection and certified harness and belay systems where required by governing legislation and in keeping with worker safety best practices in accordance with Construction Safety Association of Prince Edward Island guidelines.
- .4 Remove contaminated or dangerous materials as defined by authorities having jurisdiction, relating to environmental protection, from site and dispose of in safe manner to minimize danger at site or during disposal.
- .5 Prior to start of Work, remove contaminated or hazardous materials as defined by authorities having jurisdiction from site and dispose of at Provincially licensed disposal facilities in safe manner and in accordance with TDGA and other applicable requirements. Refer Existing Conditions in PART 1.
- .6 Use methods required to complete the Work within limitations of governing regulations and as follows:
  - .1 Do not use cutting torches until work area is cleared of flammable materials.
  - .2 Maintain 1-hour fire watch and portable fire suppression devices during flame cutting operations.
  - .3 Maintain adequate ventilation when using cutting torches.

- .4 Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- .7 Contain fibrous materials to minimize release of airborne fibres while being transported within facility.
- .8 Engineering Surveys: Perform surveys as the Work progresses to detect hazards that may result from building demolition activities.
- .9 Use natural lighting to do Work where possible. Shut off lighting, except those lamps required for security purposes, at end of each day.
- .10 Site Access and Temporary Controls: Conduct building demolition and debris removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities:
  - .1 Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Departmental Representative and authority having jurisdiction.
  - .2 Provide alternate routes around closed or obstructed traffic ways if required by authority having jurisdiction.
  - .3 Use water mist and other suitable methods to limit spread of dust and dirt.
  - .4 Comply with governing environmental protection regulations.
  - .5 Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- .11 Proceed with demolition of structural framing members systematically, from higher to lower level.
- .12 Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- .13 Remove debris from elevated portions by chute, hoist, or other device that will convey debris to grade level in a controlled descent:
  - .1 Remove structural framing members and lower to ground elements by method suitable to minimize ground impact or dust generation.

- .14 Crush concrete generated due to demolition to size suitable for recycling. Perform crushing operations off-site to reduce on-site peak noise levels.
  - .1 Where possible, identify markets which will accept crushed material as aggregate.
  - .2 For further information regarding acceptable uses contact Provincial aggregate producers associations and Ministry of Transportation.
- .15 Below-Grade Construction: Demolish foundation walls and other below grade construction:
  - .1 Remove below grade construction, including basements, foundation walls, and footings, completely. Backfill and compact as specified.
- .16 Remove existing equipment, services, materials and elements in a manner that maximizes reuse and recycling and diversion of demolition waste product from landfill in accordance with the requirements of Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .17 Shut off lighting except those required for security purposes at end of each day.
- .18 At end of each day's work, leave Work in safe and stable condition.
- .19 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

### **3.03 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning. Leave Work area clean at end of each day. Keep site clean and organized throughout Work of this Section.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with the requirements of Section 01 74 21 - Construction/Demolition Waste Management and Disposal. Remove recycling containers and bins from site weekly or as otherwise directed by Departmental Representative, and dispose of materials at appropriate facility.

- .4 Upon completion of project, reinstate work areas, parking surfaces, walkways, adjacent grounds affected by Work to condition which existed prior to beginning of Work, or to match condition of adjacent, undisturbed areas, whichever outcome achieves the best aesthetic and performance work-result.

**END OF SECTION**

