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**Part 1 General**

**1.1 REFERENCE STANDARDS**

- .1 CSA International
  - .1 CSA S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures.
- .2 National Research Council Canada (NRC)
  - .1 National Building Code of Canada 2015 (NBC).
  - .2 National Fire Code of Canada 2015 (NFC).

**1.2 ADMINISTRATIVE REQUIREMENTS**

- .1 Pre-Installation Meetings:
  - .1 Convene pre-installation meeting 1 week prior to beginning work of this Section, with Departmental Representative, Consultant and Contractor's 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 Co-ordination with other construction subtrades.
  - .2 Ensure subcontractor representatives attend.
- .2 Scheduling:
  - .1 Employ necessary means to meet project time lines without compromising specified minimum rates of material diversion.
    - .1 In event of unforeseen delay notify Departmental Representative.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit copies of certified weigh bills and receipts from disposal sites and recycling facilities for material removed from site upon request of Departmental Representative.
- .3 Shop Drawings:
  - .1 Submit for review and approval demolition drawings, diagrams or details showing sequence of demolition work and supporting structures.

**1.4 SITE CONDITIONS**

- .1 Environmental protection:
  - .1 Ensure Work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
  - .2 Fires and burning of waste or materials is not permitted on site.
  - .3 Do not bury garbage and rubbish waste materials.
  - .4 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.

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

## **1.5 EXISTING CONDITIONS**

- .1 If material resembling spray or trowel-applied asbestos or other designated substance listed as hazardous be encountered, stop work, take preventative measures, and notify Departmental Representative immediately.
  - .1 Proceed only after receipt of written instructions has been received from Departmental Representative.
- .2 Notify Departmental Representative before disrupting building access or services.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not used.

## **Part 3 Execution**

### **3.1 PREPARATION**

- .1 Protection of In-Place Conditions:
  - .1 Prevent movement, settlement, or damage to adjacent properties, landscaping features, parts of building, utilities, and structures to remain in place. Provide bracing and shoring required.
  - .2 Keep noise, dust, and inconvenience to occupants to minimum.
  - .3 Protect building systems, services and equipment.
  - .4 Provide temporary dust screens, covers, railings, supports and other protection as required.
  - .5 Do Work in accordance with Section 01 35 29.06 - Health and Safety Requirements.
  - .6 Repair damage caused by demolition as directed by Departmental Representative.
  - .7 Prevent debris from blocking surface drainage system, elevators, mechanical and electrical systems which must remain in operation.
- .2 Post warning signs on electrical lines and equipment which must remain energized during period of demolition.

### **3.2 EXAMINATION**

- .1 Inspect site and building with Consultant and Departmental Representative and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage 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.

### **3.3 SALVAGE**

- .1 Dismantle salvaged items without damage.
- .2 Store and protect items until turned over to Departmental Representative.
- .3 Salvage Schedule:
  - .1 Existing baseboard:
    - .1 Salvage in quantities required to complete the Work as indicated on the Drawings.
    - .2 Turn over to Section 09 68 13 for re-installation.
  - .2 Refer to Drawings for items to be salvaged. Store where directed, on site, by Departmental Representative.

### **3.4 DEMOLITION**

- .1 Do demolition work in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .2 Demolish to minimize dusting. Keep materials wetted as directed by Departmental Representative.
- .3 Demolition/Removal:
  - .1 Remove items as indicated.
  - .2 Remove parts of existing building to permit new construction.
- .4 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

### **3.5 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Refer to demolition drawings and specifications for items to be salvaged for reuse.

**END OF SECTION**

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**Part 1            General**

**1.1            SUMMARY**

- .1    This Section specifies general practices and procedures for:
  - .1    Removing and disposing of asbestos contaminated materials.
  - .2    Preventing cross-contamination between contaminated areas and adjacent or nearby uncontaminated areas.
  - .3    Protecting personnel during remediation.

**1.2            RELATED SECTIONS**

- .1    Section 01 10 10 – General Instructions
- .2    Section 02 41 99 – Demolition for Minor Works.

**1.3            REFERENCES**

- .1    Province of New Brunswick Acts and Regulations.
  - .1    Occupational Health and Safety Act (O.C. 92-647).
    - .1    Regulation 91-191 - General Regulation.
    - .2    Regulation 92-106, Code of Practice for Working with Material Containing Asbestos.
  - .2    Transportation of Dangerous Goods Act (Chap. T-11.01).
  - .3    Transportation of Dangerous Goods Regulations (TDGR), (SOR/85-77, SOR/85-585, SOR/85-609, SOR/86-526).

**1.4            PROJECT REQUIREMENTS**

- .1    Comply with Federal, Provincial, and local requirements pertaining to hazardous materials, provided that in case of conflict among those requirements or with these specifications the more stringent requirement applies.
- .2    The Abatement Contractor to develop a remediation plan for removal of identified ACMs.
  - .1    Develop plan in conformance with regulations in effect at the time the Work is performed.
- .3    Asbestos-Containing Materials (ACMs): materials identified under Existing Conditions Article, including fallen materials and settled dust.
- .4    Asbestos Work Area: Area where actual removal of asbestos-containing materials takes place.
- .5    Authorized Visitors: Engineer-Architect's designated representatives, and representatives of regulatory agencies.
- .6    Obtain permits required for abatement and disposal activities.

## **1.5 QUALIFICATIONS**

- .1 Abatement Contractor: persons licensed or certified by the Province of New Brunswick for Work of this Section where required by legislation.

## **1.6 SEQUENCE OF WORK**

- .1 Removal and disposal of asbestos-containing materials and other hazardous materials to be done prior to start of demolition procedures.

## **1.7 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 10 10 – General Instruction.
- .2 Submit remediation plan to Engineer-Architect for review, indicate; Regulatory removal class, sequence of Work, and layout of proposed enclosures and decontamination facilities.
- .3 Submit Provincial and/or local requirements for Notice of Project Form.
- .4 Submit proof of Contractors Liability Insurance for dealing with asbestos materials.
- .5 Submit Workers Compensation Board status and transcription of insurance.
- .6 Submit certified weigh bills, bills of lading and/or receipts from authorized disposal sites and/or reuse and recycling facilities for all hazardous materials removed from site upon request of Engineer-Architect.

## **1.8 PRE-CONSTRUCTION CONFERENCE**

- .1 Conduct a meeting that includes the Contractor, the Abatement Contractor, WorkSafeNB Officer and the Engineer-Architect.
- .2 Verify that the Abatement Contractor is familiar with the scope of work, acceptable removal abatement procedures, and protection precautions required.
- .3 Review remediation plan.
- .4 Establish procedures for entering the Decontamination Enclosures and the Contaminated Work Area, based on acceptable industry practices recognized for asbestos abatement projects.

## **1.9 EXISTING CONDITIONS**

- .1 An Asbestos Assessment Report indicating results of tests of asbestos-containing materials to be handled, removed, or otherwise disturbed and disposed of during this project are available for inspection from the Engineer-Architect. These are for general information only and are not necessarily representative of all asbestos-containing materials covered within the scope of this project.
- .2 The following schedule is a list of principal asbestos-containing materials only, identified in the referenced Asbestos Assessment Report:
  - .1 Resilient tile flooring.
  - .2 Pipe and fitting insulation.
  - .3 Boiler insulation.
  - .4 Textured ceiling finish.
- .3 The Asbestos Assessment Report is not considered to contain a complete schedule of all asbestos-containing materials on the project site. The Abatement Contractor shall review the Asbestos Assessment Report and review the project site to determine final quantities of asbestos-containing materials.

- .4 The Abatement Contractor shall consider material of similar properties and characteristics to ACMs identified in the Asbestos Assessment Report, as asbestos-containing material.
- .5 Where the Abatement Contractor questions whether a material is an ACM, the Abatement Contractor may, at their own expense, provide additional testing and sampling of such materials.
- .6 The Engineer-Architect will not consider any increase in Contract Price where ACMs are identified in the Work that were not specifically identified in the Asbestos Assessment Report, this section or were otherwise accessible for inspection and testing during review of site.

#### **1.10 SCHEDULING**

- .1 Not later than ten (10) days before beginning Work on this Project notify following in writing:
  - .1 The nearest office of WorkSafeNB at Telephone: 1 (800) 442-9776.
  - .2 Disposal Authority.
- .2 Inform sub-trades of presence of friable asbestos-containing materials identified in Existing Conditions.
- .3 Submit to Engineer-Architect one copy of notifications prior to start of Work.

### **Part 2 Products**

#### **2.1 EQUIPMENT**

- .1 Provide tools, materials and equipment required to execute the Work of this Section.
- .2 Verify that persons performing the Work of this Section are wearing personnel protective equipment when working with hazardous materials.

### **Part 3 Execution**

#### **3.1 PREPARATION OF CONTAMINATED WORK AREA**

- .1 Shut off and isolate air handling and ventilation systems to prevent fibre dispersal to other areas of the building during work phase. Conduct smoke tests to ensure that duct work is airtight. Active return air ducts within the Asbestos Work Area shall have all joints and seams rigid seal and caulked.
- .2 Clean proposed work areas using, where practicable, HEPA vacuum cleaning equipment. If not practicable, use a wet cleaning method. Do not use methods that raise dust, such as dry sweeping, or vacuuming using other than HEPA vacuum equipment.
- .3 Put negative pressure system in operation and operate continuously from the time the first polyethylene is installed to seal openings until final completion of the work including final cleanup. Provide continuous monitoring of pressure difference using an automatic recording instrument.
- .4 Seal off all openings such as corridors, doorways, windows, skylights, ducts, grilles, and diffusers, with polyethylene sheeting sealed with tape.

- .5 Cover floor and wall surfaces with polyethylene sheeting sealed with tape. Cover floors with two layers of sheeting first so that polyethylene extends at least 300 mm up walls then cover walls to overlap floor sheeting.
- .6 Build airlocks at all entrances to and exits from work areas so that work areas are always closed off by one curtained doorway when workers enter or exit.
- .7 At each access to work areas install bilingual warning signs posted around the perimeter of the removal area to restrict access.
- .8 Warning signs are required in sufficient numbers, as determined by the Engineer-Architect, to warn of the hazard and must state in large clearly visible letters that:
  - .1 There is an asbestos-dust hazard;
  - .2 Access to the work area is restricted to persons wearing protective clothing and respiratory protective equipment.
- .9 After work area isolation, remove heating, ventilating, and air conditioning filters, pack in sealed plastic bags 0.15 mm minimum thick and treat as contaminated asbestos waste.
- .10 Remove ceiling-mounted objects such as lights, partitions, other fixtures not previously sealed off, and other objects that interfere with asbestos removal, as directed by Engineer - Architect. Use localized water spraying during fixture removal to reduce fibre dispersal.
- .11 Maintain emergency and fire exits from work areas, or establish alternative exits satisfactory to Provincial Fire Marshal.
- .12 Where application of water is required for wetting asbestos-containing materials, shut off electrical power, provide 24 volt safety lighting and ground fault interrupter circuits on power source for electrical tools, in accordance with applicable CSA Standard. Ensure safe installation of electrical lines and equipment.

### **3.2 DECONTAMINATION ENCLOSURES**

- .1 Provide Worker and Equipment Decontamination Enclosure Systems required by the scope of abatement removal in conformance with Provincial regulations.
- .2 Maintain enclosures for the duration of the work to the satisfaction of the Engineer-Architect and local authorities having jurisdiction.

**3.3 ASBESTOS ABATEMENT**

- .1 Provide asbestos abatement operations and procedures in accordance with NB Regulation 92-106 and the approved remediation plan.
- .2 .Dispose of ACMs in accordance with NB Department of Environment and Local Government and local Regional Solid Waste Commission requirements.

**3.4 INSPECTION**

- .1 Inspection of the Asbestos Work Area will be performed to confirm compliance with the requirements of the specifications and governing authorities. Any deviations from these requirements that have not been approved in writing by the Engineer-Architect may result in a stoppage of work, at no cost to the Engineer-Architect.
- .2 The Engineer-Architect may review adherence to specific procedures and materials, and for final cleanliness and completion. Additional labour or materials expended by the Abatement Contractor to provide performance to the level specified shall be at no additional cost.
- .3 The Engineer-Architect may order a shutdown of work when a leakage of asbestos from the Asbestos Work Area has occurred or is likely to occur. Additional labour or materials expended by the Abatement Contractor to provide performance to the level specified shall be at no additional cost.

**END OF SECTION**