

**PART 1        GENERAL**

1.1    Related Sections

- .1       Section 04 03 42 - New Marble Finishes and Repair of Existing Marble.

1.2    References

- .1       Canadian Standards Association (CSA):
  - .1       CSA-S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .2       Federal Legislation
  - .1       Canadian Environmental Assessment Act (CEAA), 1995, c. 37.
  - .2       Canadian Environmental Protection Act (CEPA), 1999, c. 33.
  - .3       Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.
- .3       National Building Code 2010, Part 8 - Safety Measures at Construction and Demolition Sites

1.3    Definitions

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

1.4    Submittals

- .1       Submit documents in accordance with Section 01 33 00 - Submittal Procedures.
- .2       Prior to beginning of Work on site submit detailed Waste Reduction Workplan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal, and indicate:
  - .1       Descriptions of and anticipated quantities, in percentages, of materials to be salvaged reused, recycled and landfilled.
  - .2       Schedule of selective deconstruction.
  - .3       Number and location of dumpsters.
  - .4       Anticipated frequency of tipping.
  - .5       Name and address of haulers, waste facilities, and waste receiving organizations.
- .3       Submit copies of certified weigh bills, or bills of lading, or receipts from authorized disposal sites and reuse and recycling facilities for material removed from site upon request of Departmental Representative.

- .1 Written authorization from Departmental Representative is required to deviate from haulers, facilities or receiving organizations listed in Waste Reduction Workplan.
- .4 Where required by authorities having jurisdiction, submit for approval drawings, diagrams or details showing sequence of deconstruction work and supporting structures and underpinning.
  - .1 Submit drawings stamped and signed by qualified professional engineer registered in Province of Ontario.

#### 1.5 Quality Assurance

- .1 Regulatory Requirements:
  - .1 Ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable provincial and municipal regulations.
- .2 Meetings:
  - .1 Prior to start of work, arrange for site visit with Departmental Representative to
    - .1 Examine existing site conditions adjacent to deconstruction work.
    - .2 Verify items designated for removal and disposal or re- use, items to be returned to Departmental Representative and items to remain.
    - .3 Ensure key personnel, and subcontractor representatives attend.

#### 1.6 Waste Management and Disposal

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Identify materials which are regarded as hazardous products and are subject to regulations for disposal. Information on these controls can be obtained from the Provincial Ministries of Environment and Regional Levels of Government.
- .3 Safely store materials defined as hazardous or toxic waste in containers or areas designated for hazardous waste and dispose of contaminants in an approved legal manner.

#### 1.7 Environmental Protection

- .1 Ensure that deconstruction 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 rubbish or 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 and as directed by Departmental Representative.
- .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 deconstruction work.
- .9 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on temporary roads.

## **PART 2 PRODUCTS**

### **2.1 Equipment**

- .1 Equipment and heavy machinery to:
  - .1 On-road vehicles to meet applicable emission requirements as prescribed in CEPA-SOR/2003-2, On-Road Vehicle and Engine Emission Regulations.
  - .2 Off-road vehicles to meet applicable emission requirements as prescribed in EPA CFR 86.098-10 and EPA CFR 86.098-11.
- .2 Leave equipment and machinery running only while in use, except where extreme temperatures prohibit shutting down.
- .3 Demonstrate that tools are being used in manner which allows for salvage of materials in best condition possible.

## **PART 3 EXECUTION**

### **3.1 Site Verification of Conditions**

- .1 Should material, other than those specified or indicated, 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 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 indicated. Deliver to Departmental Representative as directed.

### **3.2 Preparation**

- .1 Inspect site with Departmental Representative and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain, and phasing of work.
- .2 Do Work in accordance with Section 01 35 29 - Health and Safety Requirements and CSA-S350.
- .3 Do not disrupt active or energized utilities traversing premises.
- .4 Remove rodent and vermin as required by Departmental Representative.
- .5 Comply with safety requirements for guard rails, barricades and other items in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .6 Apply clearly visible markings to steel components in accordance with approved submittals.

### 3.3 Protection

- .1 Prevent movement, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, adjacent grades, and parts of existing building to remain.
- .2 Support affected structures and, if safety of structure being demolished or adjacent structures or services appears to be endangered, take preventative measures, stop Work and immediately notify Departmental Representative.
- .3 Prevent debris from blocking surface drainage system, elevators, mechanical and electrical systems which must remain in operation.

### 3.4 Removal of Hazardous Wastes

- .1 Remove contaminated or hazardous materials from site and dispose of at designated disposal facilities in safe manner in accordance with TDGA and other applicable regulatory requirements.
- .2 Remove as much contaminated or hazardous materials as possible from site prior to commencing deconstruction work.

### 3.5 Deconstruction

- .1 Remove parts of structure and structures to permit construction. Coordinate demolition and deconstruction work with the work of other Sections.
- .2 Where indicated, remove existing roofing and associated materials to expose the existing concrete substrate. Coordinate the removal work with the roofing contractor to minimize exposure of the unprotected deck. Provide weather protection as required to completely protect the building interior from weather damage.
- .3 At end of each day's work, leave Work in safe and stable condition.
  - .1 Protect interiors of parts not to be deconstructed from exterior elements at all times.
- .4 Minimize dusting. Keep materials wetted as directed by Departmental Representative.

- .5 Contain fibrous materials (e.g. Insulation) to minimize release of airborne fibres while being transported within facility.
- .6 Use natural lighting to do Work where possible. Shut off lighting except those required for security purposes at end of each day.
- .7 Throughout course of deconstruction, pay close attention to connections and material assemblies. Employ workmanship procedures which minimize damage to materials and equipment.
- .8 Ensure workers and subcontractors are trained to carry out work in accordance with appropriate deconstruction techniques.
- .9 Remove sheet copper roofing and flashings using installers of materials specified in Section 07 61 00 - Sheet Metal Roofing.
- .10 Project supervisor with previous deconstruction experience must be present on site throughout project.
- .11 Workers must utilize adequate fall protection, certified harness and belay systems where Departmental Representative considers it necessary.
- .12 Maintain structural integrity of structure.
- .13 Systematically remove finishes, furnishings, and mechanical and electrical equipment as indicated.
- .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.
- .17 Store and protect in accordance with requirements for maximum preservation of material.
- .18 Handle salvaged materials as new materials.
- .19 Source separate for recycling, materials that cannot be salvaged for reuse including wood, metal, concrete and asphalt.
- .20 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.
- .21 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.

### 3.6 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. Do not remove bins from site until inspected and approved by Departmental Representative.
- .5 Separate processed materials into organized piles for stockpiling. Provide collection area for materials. Pile materials on pallets to facilitate transport off-site or to storage areas.

### 3.7 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 which facilitates removal from site and examination by potential end markets, and which does not impede disassembly, processing, or hauling procedures.

### 3.8 Removal from Site

- .1 Dispose of materials in accordance with applicable regulations.
  - .1 Disposal facilities must be approved by Departmental Representative and listed in Waste Reduction Workplan.
  - .2 Do not deviate from disposal facilities listed in Waste Reduction Workplan without prior written authorization from Departmental Representative.

### 3.9 Delivery of Salvaged Materials

- .1 Deliver existing copper roofing sheets indicated to be deconstructed, to Departmental Representative at Macoun Centre, Pink Road, Gatineau, Quebec.

### 3.10 Cleaning and Restoration

- .1 Keep site clean and organized throughout deconstruction.
- .2 Upon completion of project, remove debris, trim surfaces and leave work site clean.
- .3 Upon completion of project, reinstate roadways, landscaped areas, parking surfaces, walkways, light standards, and surfaces affected by Work to condition which existed prior to beginning of Work and to match condition of adjacent, undisturbed areas, as applicable.

END OF SECTION