

## **PART 1 GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Not applicable

### **1.2 REFERENCES**

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

### **1.3 QUALITY ASSURANCE**

- .1 Requirements of regulatory agencies: ensure that all work is carried out according to all relevant provincial / territorial regulations.

### **1.4 SITE PROTECTION**

- .1 Protect existing structures that must remain in place and those that must be recovered. If they are damaged, replace or repair them immediately to the satisfaction of the Departmental Representative, at no charge to the Client.

### **1.5 WASTE MANAGEMENT AND DISPOSAL**

- .1 Each day, evacuate off site the materials that are not destined to recuperation or recycling, and transport them to the designate waste disposal area.

### **1.6 ENVIRONMENTAL PROTECTION**

- .1 Ensure that the demolition does not clog or impede surface water drainage.
- .2 Ensure that the demolition produces no adverse effect on adjacent streams, the groundwater and wildlife, and they do not generate excessive levels of air pollution or noise pollution.
- .3 Cover solids and waste or proceed with their demolition when they are wet, to prevent lifting of dust and debris. Apply a dust suppressant on all temporary access roads.
- .4 Take necessary steps to prevent movement or collapse of structures, pipelines, utilities, vegetation and adjacent hard surfaces, and to prevent them from being damaged during the demolition work. If necessary, repair all structures damaged during these works.

## **PART 2 PRODUCTS**

### **2.1 NOT APPLICABLE**

- .1 Not applicable.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- .1 Inspect the site and verify with the Departmental Representative, the location and extent of works to be removed, disposed of, upgraded, recycled, recovered, and those who must remain in place.
  - .2 Mark and protect designated elements that should not be affected by construction.
  - .3 Locate and protect utility pipes. Protect pipes remaining any services that pass through the site, in order to keep them in working order.
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- .4 Do not cut or damage utilities that are in service or under tension.

### **3.2 SAFETY**

- .1 It is forbidden to resort to blasting or explosives for the execution of demolition work.
- .2 At the end of each work day, check the stability and safety of the structure to prevent collapse or movement of one or other of its components.
- .3 Execute the works according to the requirements of CSA S350-M1980 (R2003) standard.

### **3.3 REMOVAL**

- .1 Remove the specified works, as indicated.
- .2 It is forbidden to disturb the structures designated to remain in place.
- .3 Asphalt removal.
  - .1 Delineate, by right-angle cuts, the surfaces that must remain in place; use a saw or other means approved by the Departmental Representative.
  - .2 Remove asphalt and granular material under the work area.
  - .3 Protect adjacent joints
  - .4 Protect granular materials adjacent to the work area.
- .4 Turf Removal
  - .1 Remove the layer of turf and the underlying soil, down to the level needed for proposed surfaces and their foundation
- .5 Disposal
  - .1 Evacuate demolition materials to authorized and approved facilities :
    - .1 Asphalt;
    - .2 Turf;
    - .3 Granular foundation;
    - .4 Underlying soil;
    - .5 Etc.

### **3.4 REHABILITATION**

- .1 Restore surfaces and structures located outside the areas of demolition to the state they were in before the work began.
- .2 Use only soil treatment methods and products are not harmful to health nor harmful to vegetation, and that do not endanger wildlife, watercourses and groundwater.

END OF SECTION

**PART 1 GENERAL**

**1.1 RELATED SECTIONS**

- .1 Section 01 14 25 – Designated Substance Report.
- .2 Section 01 35 43 – Environmental Procedures.
- .3 Section 04 03 43.02 - Historic - Dismantling Stone Masonry.
- .4 Section 05 70 10.02 – Decorative Metal Restoration.

**1.2 REFERENCES**

- .1 Federal Legislation.
  - .1 Canadian Environmental Assessment Act (CEAA), 1992, c. 37.
  - .2 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
  - .3 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.

**1.3 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 hazardous 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 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.
- .5 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .6 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.
- .7 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
  - .1 Salvaging reusable materials from remodeling 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.
- .8 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
- .9 Sound stone: stone that is free from imperfections; with no stylolytes (resembling faults or fissures), no clay, no iron or other inclusions, no holes and no cracks. Acceptable stylolytes are thin and discontinuous.
- .10 Source Separation: acts of keeping different types of waste materials separate, beginning from

first time they became waste.

- .11 Waste Management Coordinator (WMC): contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements.

#### **1.4 SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit pre-demolition audit and deconstruction/disassembly plan/methodology, for review by the Departmental Representative, prior to starting work.
- .3 Comply with requirements of Section 01 35 43 – Environmental Procedures.
- .4 Submit bracing and shoring drawings, stamped and signed by a qualified Professional Engineer registered licensed in the Province of Ontario.

#### **1.5 QUALITY ASSURANCE**

- .1 Ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable provincial regulations.

#### **1.6 SITE CONDITIONS**

- .1 Existing Conditions.
  - .1 Should materials 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 Protection.
  - .1 Prevent movement, settlement or damage to adjacent structures, services, paving, trees, landscaping, adjacent grades and parts of existing structure to remain.
    - .1 Provide bracing and shoring as required.
    - .2 Repair damage caused by deconstruction as directed by Departmental Representative.
  - .2 Support affected structures and, if safety of structure being deconstructed or services appear to be endangered, take preventative measures. Cease operations and immediately notify Departmental Representative.
  - .3 Ensure that selective demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
  - .4 Keep noise, dust, and inconvenience to users to a minimum.
  - .5 Protect existing structures, services and equipment, which are to remain.
  - .6 Cutting torches or other high heat equipment will not be allowed. Note there is a severe risk of sparks from demolition operations leading to smoldering and combustion especially of very dry vegetation. Take all necessary precautions to minimize risk of fire from work. Inform Departmental Representative of all locations where any potential fire risk operations can take place.

### **PART 2 PRODUCTS**

#### **2.1 EQUIPMENT**

- .1 Leave equipment and machinery running only while in use, except where extreme temperatures prohibit shutting down.
- .2 Equipment to be brought on existing structural slabs must be checked for conformance with the load limits by a professional engineer licensed in the Province of Ontario prior to use or installation on site.
- .3 Equipment or machinery that will apply loads to any elements other than existing structural slabs must be reviewed by a professional engineer licensed in the Province of Ontario prior to use or installation on site.
- .4 Demonstrate that tools are being used in manner which allows for salvage of materials in best condition possible.

### **PART 3 EXECUTION**

#### **3.1 PREPARATION**

- .1 Work in accordance with Section 01 35 30 – Health and Safety Requirements.
- .2 Inspect site with Departmental Representative and verify extent and location of items designated for removal, disposal, recycling, salvage and items to remain.
- .3 Post warning signs on electrical lines and equipment which must remain energized to serve other products during period of demolition.
- .4 Do not disrupt active or energized utilities designated to remain undisturbed.

#### **3.2 REMOVAL OF HAZARDOUS WASTE**

- .1 Prior to start of deconstruction work, remove contaminated or hazardous materials from site and dispose of in a safe manner in accordance with applicable regulations, and Section 01 14 25 – Designated Substance Report.

#### **3.3 REMOVAL OPERATIONS**

- .1 Remove items as indicated. Extent of demolition and deconstruction shown on drawings.
- .2 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.
- .3 Remove vegetation as designated by Departmental Representative.
- .4 Do not disturb items designated to remain in place.
- .5 Throughout course of deconstruction pay close attention to connections and material assemblies. Employ workmanship procedures which prevent damage to surrounding materials and equipment.

- .6 Ensure workers are trained to carry out work in accordance with appropriate deconstruction techniques.
- .7 Project supervisor with previous deconstruction experience must be present on site throughout demolition procedure.
- .8 Maintain structural integrity of structure designated to remain.
- .9 Where existing materials are to be reused in Work, use special care in removal, handling, storage and re-installation to assure proper function in completed work.
  - .1 Handle salvaged materials as new materials.
- .10 Stockpile materials designated for alternate disposal in location which facilitates removal from site and which does not impede disassembly, processing or hauling procedures.

### **3.4 DISASSEMBLY OF NORTH PERIMETER WALL FROM PIERS 48 TO 51**

- .1 Provide photographic record of current condition of face stones after excavation, face stone joint pattern, and of ironwork before disassembly of components. See Section 04 03 43.02 - Historic - Dismantling Stone Masonry and Section 05 70 10.02 – Decorative Metal Restoration for additional direction.
- .2 Mark each salvaged sound stone on non-visible face with unique identifier number.
- .3 Transcribe stone number onto enlarged photographs. See Section 04 03 43.02 - Historic - Dismantling Stone Masonry for additional direction.
- .4 Use extreme care when dismantling, to prevent damage to delicate components.
- .5 Remove heritage ironwork before dismantling wall, see Section 05 70 10.02 – Decorative Metal Restoration for additional direction.
- .6 Salvage sound pieces of capstone and pier stones or other sound stone not identified for reuse to use as face stone material. Obtain Departmental Representative acceptance and approval for reuse of salvaged stone. Section 04 03 43.02 - Historic - Dismantling Stone Masonry for additional direction.
- .7 Store stone and railings on pallets and in crates, and transport to storage facility by truck, ensuring wooden boxes are secured and supported sufficiently to prevent movement on the truck bed.
- .8 Store boxes on skids or platforms under cover to protect from weather, preferably in a climate controlled environment.

### **3.5 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, make good landscaped areas, walkways, affected by Work to condition which is indicated on the documents or otherwise existed prior to beginning of Work.

**End of section**