

## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 35 29 - Health and Safety Requirements.
- .3 Section 01 35 43 - Environmental Procedures.
- .4 Section 01 50 00 - Temporary Facilities.
- .5 Section 01 74 21 - Construction/ Demolition Waste Management and Disposal.
- .6 Section 04 03 43 – Dismantling Stone Masonry.

### **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), SC 1992, c. 37.
  - .2 Canadian Environmental Protection Act (CEPA), SC 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 in a manner that achieves safe removal / disposal of hazardous materials and maximum salvage/recycling of materials. The 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 Disassembly: Physical detachment of materials from structure and may include: prying, pulling, cutting, unscrewing.
- .5 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.
- .6 Processing: Tasks which are subsequent to disassembly and may include: moving materials, removing nails, cleaning, separating and stacking.

- .7 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.
- .8 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .9 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .10 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
  - .1 Salvaging reusable materials for reuse on current project or for storage for use on future projects.
  - .2 Returning reusable items including pallets or unused products to vendors.
- .11 Salvage: removal of structural and non-structural materials from deconstruction / disassembly projects for purpose of reuse or recycling.
- .12 Source Separation: acts of keeping different types of waste materials separate, beginning from first time they became waste.

#### 1.4 PERFORMANCE REQUIREMENTS

- .1 Salvage, stockpile and protect masonry units and other exterior elements noted for salvage, removal and reinstallation under this Contract.
- .2 Separate discarded materials from the waste stream to obtain minimum percentages of diversion in accordance with Section 01 74 21 - Construction / Demolition Waste Management and Disposal.

#### 1.5 SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prior to the start of work on site, submit documented evidence of the project supervisor's previous experience with masonry removal work of a similar nature to this project.

#### 1.6 QUALITY ASSURANCE

- .1 Ensure Work is performed in compliance with applicable federal and provincial regulations.
- .2 Stone and brick masonry removals shall be carried out by the masonry subcontractor in accordance with Section 04 03 43 – Dismantling Stone Masonry.

#### 1.7 STORAGE, HANDLING AND PROTECTION

- .1 Do in accordance with Section 01 74 21 - Construction/ Demolition Waste Management and Disposal.

#### 1.8 ENVIRONMENTAL REQUIREMENTS

- .1 Do Work in accordance with Section 01 35 43 - Environmental Procedures.

## 1.9 SITE CONDITIONS

- .1 Existing Conditions:
  - .1 Should materials resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in the course of deconstruction, stop work, take preventative measures, and notify the Departmental Representative immediately. Do not proceed until written instructions have been received.
- .2 Recording Existing Conditions:
  - .1 Should materials resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in the course of deconstruction, stop work, take preventative measures, and notify the Departmental Representative immediately. Do not proceed until written instructions have been received.
- .3 Salvage Existing Materials for Reuse:
  - .1 Label and store stone units specified for salvage in accordance with the Departmental Representative's instructions to prevent damage or loss.
  - .2 Label and package other component parts of the building assembly, such as but not limited to wall-mounted light fixtures, wall-mounted handrails and stair railings, wall-mounted building signage, equipment on roof and interior mechanical / electrical equipment affected by new work and specified for salvage and reuse, in accordance with the Departmental Representative's instructions to prevent damage or loss.
  - .3 Take all necessary measure to safeguard salvaged materials to prevent damage by weather or mishandling, or loss by theft.
- .4 Protection:
  - .1 Prevent movement, settlement or damage of structures, services, and other existing elements. Provide bracing and shoring as required. Repair damage caused by deconstruction as directed by the Departmental Representative.
  - .2 Support affected structures and, if the safety of the structure being deconstructed or adjacent services appears to be endangered, take preventative measures, cease operations and immediately notify the Departmental Representative.
  - .3 Prevent debris from blocking surface drainage systems, elevators, mechanical and electrical systems.
  - .4 Provide special protection in accordance with Section 01 50 00 "Temporary Facilities".

## **PART 2 - PRODUCTS**

### **2.1 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 a manner which allows for the salvage of materials in the best condition possible.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- .1 Do Work in accordance with Section 01 35 29 - Health and Safety Requirements, CSA S350 and other applicable safety standards.
- .2 Maintain existing utilities and protect them against damage during selective demolition operations.
- .3 Locate and protect utility lines. Do not disrupt active or energized utilities designated to remain undisturbed.

### **3.2 EXAMINATION**

- .1 Survey existing conditions and correlate with requirements indicated to determine the extent of selective demolition required.
- .2 Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- .3 When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Departmental Representative.
- .4 Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- .5 Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

### **3.3 DISASSEMBLY, REMOVALS AND DEMOLITION**

- .1 Do disassembly work in accordance with Section 01 35 73 "Procedures for the Deconstruction of Structures".
- .2 Removed materials which are not designated for re-use are the property of the Contractor.

- .3 Throughout the course of deconstruction, pay close attention to connections and material assemblies. Employ workmanship procedures which minimize damage to materials and equipment.
- .4 Ensure workers and subcontractors are briefed and trained to carry out the work in accordance with appropriate deconstruction techniques.
- .5 Deconstruct in accordance with CSA S350 and other applicable safety standards.
- .6 Workers must utilize adequate fall protection where required by construction safety regulations and where the Departmental Representative and/or the authorities having jurisdiction consider it necessary. Comply with applicable Federal and Provincial acts, codes and regulations. In the event of conflict, the more stringent requirement shall apply.
- .7 Maintain the structural integrity of the structure.
- .8 Coordinate with Section 04 03 43 "Dismantling Stone Masonry" to facilitate the systematic disassembly of stone and brick masonry and salvaging stone units and existing brick for re-installation.
- .9 Disassemble other items as indicated and as necessary for the execution of the new work.
- .10 Coordinate the disassembly work with the installation of temporary weather tight closures and waterproof membranes to ensure complete weather protection throughout the period of the Work.
- .11 Transfer disassembly material assemblies from heights to grade. Take appropriate measures to ensure safety.
  - .1 Disassembly masonry material may be stored temporarily on existing roof only with the prior approval of the Departmental Representative and only upon provision of plywood sheathing on insulation to provide protection to roofing in location of temporary storage area.
  - .2 Do not overload roof.
- .12 Separate from the waste stream, material designated for alternative disposal. Salvage items which are in a condition suitable for reuse and/or recycling.
- .13 Remove and store materials to be salvaged in a manner to prevent damage.
- .14 Store and protect in accordance with requirements for maximum preservation of material.
- .15 Handle salvaged materials as new materials.
- .16 Source-separate for recycling, materials that cannot be salvaged for reuse including wood, metal, concrete and asphalt.

- .17 Remove materials that cannot be salvaged for reuse or recycling and dispose of at licensed facilities in accordance with applicable codes.
- .18 Where existing materials are to be re-used in the Work, use special care in the removal, handling, storage and re-installation as necessary to assure proper function in the completed work.

### 3.4 CUTTING AND PATCHING

- .1 Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.
- .2 Refer to Division 1 requirements.

### 3.5 PROCESSING

- .1 Designate a location for processing of materials which eliminates double handling and provides adequate space to maintain an efficient material flow.
- .2 Restrict the storage of materials to comply with the conditions specified in Section 01 50 00 - Temporary Facilities.
- .3 Separate materials to ensure the best possible condition of salvaged materials.
- .4 Keep the processing area clean and free of excess debris.
- .5 Supply separate, marked disposal bins for categories of waste material. Do not remove bins from site until inspected and approved by the Departmental Representative. Notify the Departmental Representative prior to removal of bins from site.
- .6 Separate processed materials into organized piles for stockpiling. Provide a collection area for materials designated for alternate disposal. Pile materials on pallets to facilitate transport off-site or to the storage areas.

### 3.6 POLLUTION CONTROLS

- .1 Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- .2 Take appropriate precautions to protect building users, the public, vehicles and adjacent property from dust and debris generated by the selective demolition work. Remove temporary protection and make good when disassembly and dust-generating activities are complete.
- .3 Remove from site contaminated or dangerous materials, as defined by the authorities having environmental jurisdiction, and dispose of in safe manner to minimize danger at the site or during disposal.
- .4 Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

**3.7 STOCKPILING**

- .1 Label stockpiles, indicating the material type and quantity.
- .2 Designate appropriate security resources/measures to prevent vandalism, damage and theft.
- .3 Locate stockpiled materials convenient for use in the new construction. Eliminate double handling wherever possible.

**3.8 REMOVAL FROM SITE**

- .1 Promptly dispose of demolished materials that will not be reinstalled or stored for future reinstallation. Do not allow demolished materials to accumulate on-site.
- .2 Do not sell or burn demolished materials on site.
- .3 Transport demolished materials off site and legally dispose of them.

**3.9 CLEANING AND RESTORATION**

- .1 Keep site clean and organized throughout deconstruction.
- .2 Sweep the affected exterior areas broom-clean on completion of selective demolition operation.
- .3 Upon completion of the Project, remove debris, trim surfaces and leave the work site clean.
- .4 Upon completion of the project, reinstate areas affected by the Work to a condition at least equal to that which existed prior to beginning of the Work.

**END OF SECTION**