

**Part 1 General**

**1.1 REFERENCES**

- .1 Department of Justice Canada (Jus).
  - .1 Canadian Environmental Assessment Act (CEAA), 1995, c. 37.
  - .2 Canadian Environmental Protection Act, 1999 (CEPA), c. 33.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
  - .1 Material Safety Data Sheets (MSDS).
- .3 Transport Canada (TC).
  - .1 Transportation of Dangerous Goods Act, 1992 (TDGA), c. 34.

**1.2 DEFINITIONS**

- .1 Demolition: rapid destruction of building following removal of hazardous materials.
- .2 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: asbestos PCB's, CFC's, HCFC's poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or well being or environment if handled improperly.

**1.3 SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data: submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials.
- .3 Shop drawings.
  - .1 Submit for approval drawings, diagrams or details showing sequence of demolition work and supporting structures and underpinning, where required by authorities having jurisdiction.
- .4 Hazardous Materials: provide description of Hazardous Materials and Notification of Filing with proper authorities prior to beginning of Work as required.

**1.4 QUALITY ASSURANCE**

- .1 Regulatory Requirements: ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable Provincial/Territorial regulations.
- .2 Site Meetings.
  - .1 Convene pre-installation meeting one week prior to beginning work of this Section in accordance with Section 01 32 17 - Construction Progress Schedule - Bar (GANTT) Chart:
    - .1 Verify project requirements.

- .2 Review installation and substrate conditions.
    - .3 Co-ordination with other building sub-trades.
    - .4 Review manufacturer's installation instructions and warranty requirements.
  - .2 Arrange for site visit with Departmental Representative to examine existing site conditions adjacent to demolition work, prior to start of Work.
  - .3 Hold project meetings every week.
  - .4 Ensure key personnel, site supervisor, project manager, subcontractor and representatives attend.
  - .5 Departmental Representative will provide written notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.
- .3 Health and Safety.
- .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

## **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Perform Work in accordance with Section 01 35 43 - Environmental Procedures.
- .2 Storage and Protection.
  - .1 Protect in accordance with Section 31 23 10 - Excavating, Trenching and Backfilling.
  - .2 Protect existing items designated to remain and items designated for salvage. In event of damage to such items, immediately replace or make repairs to approval of Departmental Representative and at no cost to Departmental Representative.
  - .3 Remove and store materials to be salvaged, in manner to prevent damage.
  - .4 Store and protect in accordance with requirements for maximum preservation of material.
  - .5 Handle salvaged materials as new materials.
- .3 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 Divert excess materials from landfill to site approved by Departmental Representative.
  - .3 Separate for reuse and recycling and place in designated containers steel, metal, and plastic waste.
  - .4 Place materials defined as hazardous or toxic in designated containers.
  - .5 Handle and dispose of hazardous materials in accordance with CEPA, TDGA, and Regional and Municipal regulations.
  - .6 Label location of salvaged material's storage areas and provide barriers and security devices.
  - .7 Ensure emptied containers are sealed and stored safely.
  - .8 Source separate for recycling materials that cannot be salvaged for reuse including wood, metal, concrete and asphalt, and gypsum.

- .9 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.

## **1.6 SITE CONDITIONS**

- .1 Site Environmental Requirements.
  - .1 Perform work in accordance with Section 01 35 43 - Environmental Procedures.
  - .2 Ensure that selective demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
  - .3 Do not dispose of waste of 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 the project.
  - .4 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers or onto adjacent properties.
  - .5 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.
  - .6 Protect trees, plants and foliage on site and adjacent properties where indicated.
- .2 Existing Conditions.
  - .1 Remove contaminated or hazardous materials as defined by authorities having jurisdiction from site, prior to start of demolition Work, and dispose of in safe manner in accordance with TDGA and other applicable regulatory requirements and Section 02 81 01 - Hazardous Materials.

## **1.7 SCHEDULING**

- .1 Employ necessary means to meet project time lines without compromising specified minimum rates of material diversion.
  - .1 Notify Departmental Representative in writing when unforeseen delays occur.

## **Part 2 Products**

### **2.1 EQUIPMENT**

- .1 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

## **Part 3 Execution**

### **3.1 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.
- .2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.

- .3 Notify and obtain approval of utility companies before starting demolition.
- .4 Disconnect and Cap Designated Mechanical Services.
  - .1 Natural Gas Supply Lines: contact utility company to arrange for removal as directed by Departmental Representative.
  - .2 Sewer and Water Lines: remove in accordance with authority having jurisdiction as directed by Departmental Representative and securely plug to form watertight seal.
  - .3 Other Underground Services: remove and dispose of as directed by Departmental Representative. Underground Storage Tanks: remove and dispose of in accordance with CCME PN1326 and directions of Departmental Representative.

### **3.2 REMOVAL OF HAZARDOUS WASTES**

- .1 Remove contaminated or dangerous materials 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.

### **3.3 REMOVAL OPERATIONS**

- .1 Remove items as indicated including the following:
  - .1 A large area will need to be excavated around the exterior gate area of the South Sallyport to accommodate the widening of the existing gate opening. Asphalt, curbs and landscaping are to be removed and reconfigured to suit the new gate opening once the gate widening work is done. Refer to the drawings and to specification Section 32 31 00 – Vehicle Sallyport Gates for further information on new gates.
  - .2 The existing fence around the South Sallyport interior gate is to be modified to suit a new wider gate. Patch and make good after the new gate has been installed. The exact location of the new wider gate is to be approved by the Departmental Representative. Refer to the drawings and to Section 32 31 00 – Vehicle Sallyport Gates for further information on installation of new gates and repairs to existing fencing.
- .2 Do not disturb items designated to remain in place.
- .3 Removal of Pavements, Curbs and Gutters:
  - .1 Square up adjacent surfaces to remain in place by saw cutting or other method approved by Departmental Representative.
  - .2 Protect adjacent joints and load transfer devices.
  - .3 Protect underlying and adjacent granular materials.
- .4 Prevent contamination with base course aggregates, when removing asphalt pavement for subsequent incorporation into hot mix asphalt concrete paving,
- .5 Excavate at least 300 mm below pipe invert, when removing pipes under existing or future pavement area.
- .6 Stockpile topsoil for final grading and landscaping.
  - .1 Provide erosion control and seeding if not immediately used.

- .7 Disposal of Material.
  - .1 Dispose of materials not designated for salvage or reuse on site in accordance with governing regulations.
- .8 Backfill.
  - .1 Backfill in areas as indicated and in accordance with Section 31 23 33 01 - Excavating, Trenching and Backfilling.

### **3.4 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 to 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.

### **3.5 REMOVAL FROM SITE**

- .1 Remove stockpiled material as directed by Departmental Representative, when it interferes with operations of project.
- .2 Remove stockpiles of like materials by alternate disposal option once collection of materials is complete.
- .3 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.

### **3.6 RESTORATION**

- .1 Restore areas and existing works outside areas of demolition to conditions that existed prior to beginning of Work.
- .2 Use soil treatments and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

### **3.7 CLEANING**

- .1 Remove debris, trim surfaces and leave work site clean, upon completion of Work
- .2 Use cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

**END OF SECTION**

## **Part 1 General**

### **1.1 REFERENCES**

- .1 Canadian Standards Association (CSA International).
  - .1 CSA S350-M1980(R1998), Code of Practice for Safety in Demolition of Structures.
- .2 Department of Justice Canada (Jus).
  - .1 Canadian Environmental Assessment Act (CEAA), 1992, c. 37.
  - .2 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
    - .1 SOR/2003-2, On-Road Vehicle and Engine Emission Regulations.
  - .3 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.
- .3 U.S. Environmental Protection Agency (EPA)/Code of Federal Regulations (CFR), Title 40 - Protection of Environment, Chapter 1, Subchapter C - AIR, Part 86 - CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES.
  - .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.

### **1.2 DEFINITIONS**

- .1 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or well being or environment if handled improperly.

### **1.3 SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Where required by authorities having jurisdiction, submit for approval drawings, diagrams or details showing sequence of demolition work and supporting structures and underpinning.
- .3 Submit drawings stamped and signed by qualified professional engineer registered or licensed in Provinces of Saskatchewan, Canada.

### **1.4 QUALITY ASSURANCE**

- .1 Regulatory Requirements: Ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable Provincial/Territorial and Municipal regulations.
- .2 Meetings:
  - .1 Prior to start of Work arrange for site visit with Departmental Representative to examine existing site conditions adjacent to demolition work.

- .2 Hold project meetings every week.
- .3 Ensure key personnel attend.
- .4 Departmental Representative will provide written notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.

## **1.5 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 Divert excess materials from landfill to site approved by Departmental Representative.

## **1.6 ENVIRONMENTAL PROTECTION**

- .1 Ensure Work is done in accordance with Section 01 35 43 - Environmental Procedures.
- .2 Ensure that demolition 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.

## **1.7 EXISTING CONDITIONS**

- .1 Should 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. Do not proceed until written instructions have been received.
- .2 List items to be salvaged for reuse:
  - .1 As indicated on Demolition Plans.

- .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.

## **1.8 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 in writing.

## **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 machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

## **Part 3 Execution**

### **3.1 PROTECTION**

- .1 Prevent movement, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, adjacent grades, parts of existing building to remain.
  - .1 Provide bracing, shoring and underpinning as required.
  - .2 Repair damage caused by demolition as directed by Departmental Representative.
- .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, mechanical and electrical systems which must remain in operation.

### **3.2 PREPARATION**

- .1 Do Work in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .2 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.



- .3 Disconnect and cap designated mechanical services.
  - .1 Natural gas supply lines: remove in accordance with gas company requirements.
  - .2 Sewer and water lines: remove as directed by Departmental Representative.
  - .3 Other underground services: remove and dispose of as indicated.
- .4 Do not disrupt active or energized utilities designated to remain undisturbed.
- .5 Remove rodent and vermin as required by Departmental Representative.

### **3.3 SAFETY CODE**

- .1 Do demolition work in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .2 Blasting operations not permitted during demolition.

### **3.4 REMOVAL OF HAZARDOUS WASTES**

- .1 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.
- .2 Prior to start of demolition work remove contaminated or hazardous materials as defined by authorities having jurisdiction from site and dispose of at designated disposal facilities in safe manner and in accordance with TDGA and other applicable requirements and Section 02 81 01 - Hazardous Materials. Refer Existing Conditions in Part 1.

### **3.5 DEMOLITION**

- .1 Demolish parts of structures.
- .2 To permit construction of addition and as indicated.
- .3 Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace as work progresses.
- .4 At end of each day's work, leave Work in safe and stable condition.
  - .1 Protect interiors of parts not to be demolished from exterior elements at all times.
- .5 Demolish to minimize dusting. Keep materials wetted as directed by Departmental Representative.
- .6 Remove structural framing.
- .7 Contain fibrous materials (e.g. Insulation) to minimize release of airborne fibres while being transported within facility.
- .8 Only dispose of material specified by selected alternative disposal option as directed by Departmental Representative.
  - .1 Additional disposal options to be provided by Departmental Representative, on-site waste diversion representative prior to disposal.

- .9 Do not dispose materials in landfill or waste stream destined for landfill.
- .10 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.
- .11 Remove following materials and equipment, store, protect, and leave ready for installation by other sections of Work:
  - .1 As indicated on drawings.
- .12 Remove following materials and equipment and store in location designated by Departmental Representative:
  - .1 As indicated on drawings.
- .13 Use natural lighting to do Work where possible.
  - .1 Shut off lighting except those required for security purposes at end of each day.

### **3.6 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.
- .5 Supply separate, clearly marked disposal bins for categories of waste material. Do not remove bins from site until inspected and approved by Departmental Representative. Please notify Departmental Representative prior to removal of bins from site.
- .6 Stockpile on site insulation batts, steel studs and clips in good condition for reuse in new construction.

### **3.7 REMOVAL FROM SITE**

- .1 Remove stockpiled material as directed by Departmental Representative, when it interferes with operations of project construction.
- .2 Remove stockpiles of like materials by alternate disposal option once collection of materials is complete.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 Canadian Environmental Protection Act, 1999 (CEPA 1999).
  - .1 Export and Import of Hazardous Waste Regulations (SOR/2002-300).
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).
- .3 National Fire Code of Canada 2005.
- .4 Transportation of Dangerous Goods Act (TDG Act) 1999, (c. 34).
- .5 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2003-400).

**1.2 DEFINITIONS**

- .1 Dangerous Goods: Product, substance, or organism that is specifically listed or meets the hazard criteria established in Transportation of Dangerous Goods Regulations.
- .2 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .3 Hazardous Waste: Any hazardous material that is no longer used for its original purpose and that is intended for recycling, treatment or disposal.
- .4 Workplace Hazardous Materials Information System (WHMIS): A Canada-wide system designed to give employers and workers information about hazardous materials used in the workplace. Under WHMIS, information on hazardous materials is to be provided on container labels, material safety data sheets (MSDS), and worker education programs. WHMIS is put into effect by a combination of federal and provincial laws.

**1.3 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
    - .1 Submit to Departmental Representative current Material Safety Data Sheet (MSDS) for each hazardous material required prior to bringing hazardous material on site.
    - .2 Submit hazardous materials management plan to Departmental Representative that identifies hazardous materials, their use, their location, personal protective equipment requirements, and disposal arrangements.

#### **1.4 DELIVERY, STORAGE, AND HANDLING**

- .1 Co-ordinate storage of hazardous materials with Departmental Representative and abide by internal requirements for labeling and storage of materials and wastes.
- .2 Store and handle hazardous materials and wastes in accordance with applicable federal and provincial laws, regulations, codes, and guidelines.
- .3 Store and handle flammable and combustible materials in accordance with current National Fire Code of Canada requirements.
- .4 Observe smoking regulations at all times. Smoking is prohibited in any area where hazardous materials are stored, used, or handled.
- .5 Abide by the following storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:
  - .1 Store hazardous materials and wastes in closed and sealed containers which are in good condition.
  - .2 Label containers of hazardous materials and wastes in accordance with WHMIS.
  - .3 Store hazardous materials and wastes in containers compatible with that material or waste.
  - .4 Segregate incompatible materials and wastes.
  - .5 Ensure that different hazardous materials or hazardous wastes are not mixed.
  - .6 Store hazardous materials and wastes in a secure storage area with controlled access.
  - .7 Maintain a clear egress from storage area.
  - .8 Store hazardous materials and wastes in a manner and location which will prevent them from spilling into the environment.
  - .9 Have appropriate emergency spill response equipment available near the storage area, including personal protective equipment.
  - .10 Maintain an inventory of hazardous materials and wastes, including product name, quantity, and date when storage began.
- .6 Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.
- .7 Report spills or accidents immediately to Departmental Representative. Submit a written spill report to Departmental Representative within 24 hours of incident.

#### **1.5 TRANSPORTATION**

- .1 Transport hazardous materials and wastes in accordance with federal Transportation of Dangerous Goods Act, Transportation of Dangerous Goods Regulations, and applicable provincial regulations.

### **Part 2 Products**

#### **2.1 MATERIALS**

- .1 Only bring on site the quantity of hazardous materials required to perform work.

- .2 Maintain MSDS in proximity to where the materials are being used. Communicate this location to personnel who may have contact with hazardous materials.

### **Part 3 Execution**

#### **3.1 DISPOSAL**

- .1 Dispose of hazardous waste materials in accordance with applicable federal and provincial acts, regulations, and guidelines.
- .2 Recycle hazardous wastes for which there is an approved, cost effective recycling process available.
- .3 Send hazardous wastes only to authorized hazardous waste disposal or treatment facilities.
- .4 Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited.
- .5 Disposal of hazardous materials in waterways, storm or sanitary sewers, or in municipal solid waste landfills is prohibited.
- .6 Dispose of hazardous wastes in a timely fashion in accordance with applicable provincial regulations.

**END OF SECTION**