

PART 1 - GENERAL

1.1 SECTION INCLUDES

- .1 Methods and procedures for demolition of structures, parts of structures, basements and foundation walls.

1.2 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 56 00 - Temporary Barriers and Enclosures.
- .5 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .6 Section 31 23 33.01 - Excavating, Trenching and Backfilling
- .7 Section 33 65 76 - Direct Buried Underground Cable Ducts.

1.3 REFERENCES

- .1 Canadian Environmental Protection Act, Ch. 22, 1988, and all Amendments.
 - .2 Canadian Standards Association (CSA International).
 - .1 CSA S350-M1980(R1998), Code of Practice for Safety in Demolition of Structures.
 - .3 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.
 - .4 "Erosion and Sedimentation Control Handbook for Construction Sites, 1988", and applicable regulations regarding the handling and disposal of hazardous materials.
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1.4 SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 The Contractor is responsible for fulfillment of reporting requirements.
- .3 Prior to beginning of Work on site submit detailed MSSP 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 demolition.
 - .3 Number and location of dumpsters.
 - .4 Anticipated frequency of tipping.
 - .5 Name and address of haulers, waste facilities, and waste receiving organizations.
- .4 Submit copies of certified weigh bills and receipts from authorized disposal sites and reuse and recycling facilities for material removed from site on a weekly basis to Departmental Representative.
 - .1 Written authorization from Departmental Representative is required to deviate from haulers, facilities and receiving organizations listed in MSSP.

1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: 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 examine existing site conditions adjacent to demolition work.
 - .2 Ensure key personnel attend.
 - .3 Departmental Representative will provide written notification of change to meeting schedule established upon contract award twenty-four (24) hours prior to scheduled meeting.

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.
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- .2 Divert excess materials from landfill to site approved by Departmental Representative.

1.7 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, except as provide for in other Sections.
- .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 or otherwise as directed by Departmental Representative.
- .8 Protect trees, plants and foliage on site and adjacent properties where indicated on drawings.
- .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.

1.8 EXISTING CONDITIONS

- .1 Should material resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in course of demolition that is not identified herein, stop work, take preventative measures, and notify Departmental Representative immediately. Do not proceed until written instructions have been received.
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- .2 List of items to be salvaged for reuse:
 - .1 If applicable, list to be provided by Departmental Representative.
 - .2 Structure to be demolished to be based on its condition on date that tender is accepted.
 - .3 Remove, protect and store salvaged items as directed by Departmental Representative. Salvage items as identified by Departmental Representative. Deliver to Departmental Representative as directed.

1.9 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.

1.10 MEASUREMENT FOR PAYMENT

- .1 No separate measurement for payment shall be made for items under this section. Include costs incidental in the Lump Sum Amount of work on the Combined Price Form.

PART 2 - PRODUCTS

2.1 EQUIPMENT

- .1 Equipment and heavy machinery:
 - .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,
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paving, trees, landscaping, and adjacent grades.

- .1 Provide bracing, shoring and underpinning as required.
 - .2 Repair damage caused by demolition as indicated and directed by Departmental Representative.
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- .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 and Contractor's demolition engineer.
 - .3 Prevent debris from blocking surface drainage system, and mechanical and electrical systems which must remain in operation.

3.2 PREPARATION

- .1 Inspect site with Departmental Representative to verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.
 - .2 Locate and protect existing utilities. Preserve and protect active utilities traversing site in good operating condition.
 - .3 Notify and obtain approval of authorities having jurisdiction before starting demolition.
 - .4 Obtain all necessary permits/certificates including clearance to dig permit.
 - .5 Do Work in accordance with Section 01 35 29 - Health and Safety Requirements.
 - .6 Install fencing and protect sewer/storm drains as specified and indicated.
 - .7 Disconnect electrical, telephone and data service lines entering buildings to be demolished.
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- .1 Post warning signs on electrical lines and equipment which must remain energized to serve other properties during period of demolition.
- .8 Disconnect and cap designated mechanical services.
 - .1 Sewer and water lines: remove in accordance with drawings or as directed by Departmental Representative.
 - .2 Other underground services: remove and dispose of as indicated or as directed by Departmental Representative.
- .9 Do not disrupt active or energized utilities traversing premises and/or designated to remain undisturbed, without approval from Departmental Representative.
- .10 Remove rodent and vermin as required by Departmental Representative.

3.3 REMOVAL OPERATIONS

- .1 Remove items as indicated.
 - .2 Do not disturb items designated to remain in place.
 - .3 Removal of Pavements:
 - .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 Remove designated trees during demolition.
 - .1 Obtain written approval of Departmental Representative prior to removal of trees not designated.
 - .7 Stockpile topsoil for final grading and landscaping.
 - .1 Provide erosion control and seeding if not immediately used.
 - .8 Disposal of Material.
 - .1 Dispose of materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .9 Backfill.
 - .1 Backfill in areas as indicated and in accordance with Section 31 23 33.01 -
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Excavating, Trenching and Backfilling.

3.4 SAFETY

- .1 Do demolition work in accordance with Section 01 56 00 - Temporary Barriers and Enclosures and Section 01 35 29 - Health and Safety Requirements.
- .2 Blasting operations not permitted during demolition.

3.5 DEMOLITION

- .1 Demolish as per approved demolition plan.
- .2 Refer to other sections for demolition and removal of building services.
- .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.
- .5 Demolish to minimize dusting. Keep materials wetted.
- .6 Contain fibrous materials (e.g. insulation) to minimize release of airborne fibres while being transported within facility.
- .7 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.
- .8 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 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.
 - .4 Separate from general waste stream materials designated by Departmental
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Representative. Stockpile materials in neat and orderly fashion in location and as directed by Departmental Representative per Material Source Separation Plan. Stockpile materials in accordance with applicable fire and safety regulations.

- .5 Supply separate, clearly marked disposal bins for categories of waste material. Do not remove bins from site until approved by Departmental Representative.

3.7 REMOVAL FROM SITE

- .1 Remove stockpiled material as directed by Departmental Representative, when it interferes with operations of project.
- .2 Remove stockpiles of source-separated materials once collection of materials is complete.
- .3 Transport material designated for alternate disposal using approved haulers facilities and receiving organizations listed in MSSP and in accordance with applicable regulations.
 - .1 Written authorization from Departmental Representative is required to deviate from haulers facilities or receiving organizations listed in MSSP.
- .4 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.
 - .1 Disposal facilities must be those approved and listed in MSSP.
 - .2 Written authorization from Departmental Representative is required to deviate from disposal facilities listed in MSSP.

3.8 RESTORATION

- .1 Upon completion of project, reinstate areas affected by Work to condition which existed prior to beginning of Work.
- .2 Restore areas and existing works outside areas of demolition and areas disturbed by Work of the Contract as indicated; otherwise, original conditions shall be reinstated.

3.9 CLEANING

- .1 Keep site clean and organized throughout demolition procedure.
- .2 Remove debris and leave Work site clean upon completion of Contract.