

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 – Submittal Procedures
- .2 Section 01 35 29.06 – Health and Safety Requirements
- .3 Section 01 35 43 – Environmental Procedures
- .4 Section 01 45 00 – Quality Control
- .5 Section 01 56 00 – Temporary Barriers and Enclosures
- .6 Section 01 74 21 – Construction/Demolition Waste Management and Disposal
- .7 Section 31 23 33.02 – Foundation Excavation Bridge

1.2 REFERENCES

- .1 Definitions:
 - .1 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, include but not limited to: poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or materials that endanger human health or environment if handled improperly.
 - .2 Waste Management Co-ordinator (WMC): contractor representative responsible for supervising waste management activities as well as co-ordinating related, required submittal and reporting requirements.
 - .3 Waste Reduction Workplan (WRW): written report which addresses opportunities for reduction, reuse, or recycling of materials.
- .2 Reference Standards:
 - .1 Canadian Environmental Protection Act (CEPA)
 - .2 CSA International
 - .1 CSA S6-19, Canadian Highway Bridge Design Code.
 - .2 CSA S350-M1980 (2003), Code of Practice for Safety in Demolition of Structures
 - .3 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Assessment Act (CEAA), 1995, c. 37.
 - .2 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .1 SOR/2003-2, On-Road Vehicle and Engine Emission Regulations.
 - .2 SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations.
 - .3 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.

1.3 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-Installation Meetings:

- .1 Convene pre-demolition meeting 1 week prior to beginning work of this Section with Departmental Representative in accordance with Section 01 31 19 - Project Meetings to:
 - .1 Verify project requirements.
 - .2 Verify existing site conditions adjacent to demolition work.
 - .3 Co-ordination with other construction sub-trades.
- .2 Ensure key personnel, including site supervisor, project manager and subcontractor representatives at minimum attend.
- .3 Departmental Representative will provide written notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit 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.
- .3 Submit 2 copies of certified 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 and receiving organizations listed in Waste Reduction Workplan.
- .4 Where required by authorities having jurisdiction, submit for approval drawings, diagrams or details showing sequence of demolition work and supporting structures and underpinning.
- .5 An formal demolition plan is required. The demolition plan shall clearly outline the method of removal and all required environmental controls. The demolition plan shall be submitted to the Departmental Representative four (4) weeks prior to initiating removal of the existing structure.

1.5 QUALITY ASSURANCE

- .1 Refer to Section 01 45 00 – Quality Control.
- .2 Regulatory Requirements: Ensure Work is performed in compliance with CEPA, CEAA, TDGA, applicable Provincial/Territorial and Municipal regulations.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials 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 Crush demolished concrete from the existing structure to a size suitable for transportation to off-site disposal.

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 No part of the structure shall enter the watercourse during demolition.
- .4 Prevent extraneous materials from contaminating air beyond application area, by providing temporary enclosures during demolition work.
- .5 Cover or wet down dry materials and waste to prevent blowing dust and debris.
- .6 Contractor shall be aware that no machinery will be allowed in the water.
- .7 The Contractor shall respect the allowable in water work times outlined in Section 01 11 00 – Summary of Work.
- .8 Materials from existing structure shall not be used as backfill unless otherwise approved by the Departmental Representative in writing.

1.8 SCHEDULING AND STAGING

- .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.
 - .2 The Contractor is to respect all restrictions on in water work as outlined in the Contract Documents.
- .2 Stage bridge demolition as follows:
 - .1 Demolition of the existing bridge shall not commence until measures have been installed to stabilize temporary detour (temporary retaining walls). At no time shall the demolition of the existing structure cause disturbance to the existing detour.
 - .2 Contractor is not responsible for removal of the existing detour structure.

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, CEPA-SOR/2006-268, Regulations Amending the 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 Contractor to implement an anti-idling policy. 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.
 - .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 draining system.

3.2 PREPARATION

- .1 Do Work in accordance with Section 01 35 29.06 – Health and Safety.
- .2 Contact utilities prior to commencing work. Coordinate removals and relocations with respective utilities.
- .3 Disconnect any utility affected by the required work.
 - .1 Post warning signs on electrical lines and equipment which must remain energized to serve other properties during period of demolition.
- .4 Disconnect and cap any utility to remain.
- .5 Do not disrupt active or energized utilities designated to remain undisturbed.
- .6 Temporary Erosion and Sedimentation Control:
 - .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
 - .2 Inspect, repair, and maintain erosion and sedimentation control measures during demolition.
 - .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal after completion of demolition work.
- .7 Protection of in-place conditions:
 - .1 Work in accordance with Section 01 35 43 - Environmental Procedures.
 - .2 Prevent movement, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, adjacent grades, properties.

3.3 SAFETY CODE

- .1 Blasting operations not permitted during demolition.

3.4 REMOVAL OF HAZARDOUS WASTE

- .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 to site or during disposal.

3.5 DEMOLITION

- .1 Demolish structure as indicated in Clause 1.9.2.
- .2 Demolition of the existing structure includes the entire superstructure (deck, curbs, railings and girders) and the demolition of the existing foundations to 1 meter below the finished grade lines.
- .3 At end of each day's work, leave Work in safe and stable condition.
- .4 Demolish to minimize dusting. Keep materials wetted as directed by Departmental Representative.
- .5 Only dispose of material specified by selected alternative disposal option as directed by Departmental Representative.
- .6 Dispose of materials in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .7 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

3.6 STOCKPILING

- .1 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, highway users, access to the river, or hauling procedures.

3.7 REMOVAL AND DISPOSAL

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

END OF SECTION