

## **54.30 BRIDGE STRUCTURE CLEANING**

### **54.30.1 GENERAL**

The Work consists of the removal, containment and disposal of all dirt, debris and deleterious material and washing of the bridge structure to remove all ice control materials.

### **54.30.2 MATERIALS**

The Contractor shall supply all materials necessary to complete the Work.

Water used for washing the bridge shall not contain any materials that may be damaging to the bridge structure. The source of the water will be subject to the approval of the Engineer.

### **54.30.3 EQUIPMENT**

The Contractor shall supply all equipment necessary to complete the Work. The Contractor may use low pressure, high volume flushing, high pressure equipment, or any other equipment or methods acceptable by the Engineer. Regardless of the equipment or method chosen, the bridge structure and appurtenances shall not be damaged in any way by the cleaning operation. Any damage caused by the Contractor's operations shall be promptly repaired at his expense.

### **54.30.4 PERMITS AND APPROVALS**

The Contractor shall be responsible for obtaining any permits and approvals required for the supply of water and disposal of dirt and debris prior to commencement of the Work.

### **54.30.5 PROCEDURES**

#### **54.30.5.1 General**

All Work shall be performed during daylight hours only, unless adequate lighting exists which provides visibility of at least 700 metres and prior approval of the Engineer is obtained. No Work shall be performed when the visibility is less than 700 metres.

Traffic control and signing shall be performed in accordance with Specification 55.1, Traffic Accommodation and Temporary Signing.

When washing overpass structures, the Contractor shall ensure that dirt or debris is not deposited on vehicles passing below.

No washing shall take place when the ambient temperature is 5°C or less, or when such temperatures are forecast by Environment Canada for the construction area during the time scheduled for washing the bridge.

#### **54.30.5.2 Surfaces To Be Cleaned**

The following surfaces shall be cleaned of all dirt, debris and deleterious material and washed with water to remove the remaining chemicals and winter abrasives:

- decks, sidewalks, curbs, gutters and the exterior surfaces of sidewalks or curbs,
- railings and truss members to a minimum height of three metres above the deck surface, including the bottom chord,
- all associated drainage structures, including scuppers, drain troughs, drain pipes and flumes,
- the approaches to the bridge and all associated bridge elements for a distance of ten metres, as measured from the abutment joint, including approach guardrail, and
- expansion joints and deck joints including troughs and seals.

#### **54.30.5.3 Additional Surfaces to Be Cleaned**

When required by the Engineer, any or all of the following surfaces shall also be cleaned and washed:

- the entire abutment and the end two metres of the superstructure, as measured from the face of the backwall. The abutment includes the bearings, backwall, breastwall, wingwalls and the abutment seat,
- pier caps and pier bearings, and the end two metres of the superstructure, each way, from the centreline of the pier, and
- the concrete slope protection.

#### **54.30.5.4 Removal of Accumulated Material**

The Contractor shall remove from the bridge deck, median, curb and sidewalks, all accumulated dirt and debris exceeding 10 mm in thickness and contain and dispose of it prior to washing. Disposal areas shall be subject to the approval of the Engineer. Disposal of such material in or near watercourses will not be permitted.

#### **54.30.6 TIME TO COMPLETE**

All Work shall be completed within 60 calendar days of issuance of the Work Order.

#### **54.30.7 MEASUREMENT AND PAYMENT**

Measurement will be in square metres of the bridge deck cleaned, regardless of the type and size of the substructure and superstructure.

Payment will be made at the unit price bid per square metre for "Bridge Structure - Cleaning". This payment will be full compensation for the supply of water including any required permits and approvals, cleaning and washing all surfaces identified in Section 54.30.5.2, disposal of dirt and debris, traffic accommodation and signing, and all labour, materials, equipment, tools and incidentals necessary to complete the Work.

Payment for cleaning the additional surfaces specified in section 54.30.5.3, will be made as Extra Work, in accordance with Specification 51.2, General for Maintenance Work.

#### **54.30.8 WARRANTY**

There is no warranty period for this Work.