

## **53.39 HIGHWAY MAINTENANCE WORK**

### **53.39.1 GENERAL**

The Work consists of patrolling the Contract area, responding to unsafe situations at any time, attending to minor maintenance items during normal working hours, and informing the Engineer of any maintenance items that require attention by Work Order. Normal working hours are 7 am to 5 pm, Monday through Friday, excluding Statutory holidays. Included as part of normal highway maintenance Work is the provision for winter road inspection during the periods and at the frequencies shown in the Special Provisions or as shown on the applicable plans.

### **53.39.2 MATERIALS**

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

#### **53.39.2.1 Incidental Materials**

The following materials shall be supplied as part of routine maintenance operations:

- Garbage bags for daily use (excluding scheduled refuse pickup programs),
- Lath, orange flags, and orange ribbon,
- Suitable material for temporary repairs on critical regulatory signs to ensure posts are adequately supported,
- Readily available spill-absorbing material such as Absorb-All or sand,
- Rubber protective gloves for handling animal carcasses,
- Appropriate cleanser such as Vandal Vanish for the removal of graffiti, and
- All other applicable cleaning supplies.

#### **53.39.2.2 Additional Materials**

The following materials shall be supplied when specifically requested by the Engineer:

- Road repair materials for pothole patching,
- Fencing materials for repair of line fence,
- Reflective strips for delineators and guardrail conforming to standards for 3M Hi-Intensity Series 9800 (silver/white), measuring 50 mm by 305 mm,
- Posts and markers for installation of red diamond hazard markers.

### **53.39.3 EQUIPMENT**

The Contractor shall supply all equipment necessary to complete the Work, including but not limited to a pickup truck or other suitable vehicle. The Department will supply a mobile radio for each vehicle engaged in the Work.

The vehicle should be equipped with a winch for removal of large roadkill.

Signs and equipment shall be readily available to perform emergency traffic control and detour work. The necessary signs shall be as shown in Specification 53.36, Supply and Erection of Emergency Signs.

All vehicles used in transporting litter shall be equipped to prevent the accumulated litter from being deposited along the highway.

#### **53.39.4 PROCEDURE**

##### **53.39.4.1 General**

The Contractor shall provide sufficient manpower to regularly patrol the specified area as shown in the Special Provisions, to observe and react to all circumstances or conditions affecting the travelling public or the future repair of the roadway, investigate reports of adverse conditions from members of the public, regulatory agencies, police authorities or a Department official, and to perform all of the routine designated functions. Regular communication shall be maintained with all aspects of the Contractor's operations to ensure that roadways remain in a consistent and safe condition and emergency situations can be responded to in a timely manner.

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

##### **53.39.4.2 Road Inspections**

###### **53.39.4.2.1 Winter Road Inspections**

Winter road inspections shall consist mainly of patrolling specific roads within the Contract area and responding to emergency and safety related issues and conditions. Work which is identified as regularly scheduled work, routine duties or non-critical work items will not normally be performed as part of the winter road inspections. Winter road inspections shall be performed during a night shift as specified in the Special Provisions or as directed by the Engineer.

The specific roads to be inspected (i.e., the circuit) shall be specified in the Special Provisions or shown on the plans. The number of inspections per circuit required during each shift will be specified in the Special Provisions or determined by the Engineer and will depend on road and weather conditions. When determined by the Engineer, inspections of a portion of a circuit will be required.

###### **53.39.4.2.2 Other Road Inspections**

The Contractor may be required to perform inspections for temporary conditions (i.e. smoke, high water) throughout the year as directed by the Engineer.

##### **53.39.4.3 Emergency Duties**

The following are critical items that require immediate response in order to protect the public:

- Repairing or replacing critical regulatory signs (STOP and YIELD) or performing temporary repairs of signs.
- Removing from the road surface, large roadkill in accordance with Specification 55.7, Disposal of Roadkill and all other trash and debris of a size or type that may create a hazard.
- Performing minor repairs to traffic signals, including:

- Resetting the signals if the lights are in flash mode, or
- When the lights are completely out of service, setting up portable STOP signs from all directions until permanent repairs occur.
- Notifying the appropriate party regarding broken or burnt out bulbs and/or signal lights not functioning properly. The parties responsible for the repair of traffic signals will be shown in the Special Provisions.
- Responding to accidents or natural disasters, including:
  - Traffic control, erecting detours or barricades in accordance with Specification 53.36, Supply and Erection of Emergency Signs,
  - Removing from the highway surface, damaged guardrail when it presents a hazard to the travelling public, and
  - Applying absorbent material to minor spills at accidents.
- Repairing pavement failures over 100 mm deep and less than one square metre in area in accordance with Specification 53.10, Pothole Patching by Hand.
- Providing adequate marking for any hazards to the travelling public on the road surface or in the right-of-way.

#### **53.39.4.4 Regularly Scheduled Work**

##### **53.39.4.4.1 Routine Activities**

The Contractor's regular schedule shall include performance of the following duties:

- Servicing Department litter bins and toilets adjacent to primary highways in accordance with Specification 55.6, Maintenance of Litter Bins and Toilets,
- Removing and disposing of small (less than 40 kg) roadkills and other debris from the roadway, and
- Removing and disposing of all incidental refuse and litter from within the right-of-way.

##### **53.39.4.4.2 Routine Observations**

In addition to the routine activities, the Contractor's personnel shall be observant of, and report to the Engineer. the following:

- Damaged signs,
- Water run-off problems including blockages or lack of capacity of ditches, culverts and drainage grates, particularly during spring thaw and run-off. The Contractor shall make interim repairs in these areas when possible.
- Any required cleaning, litter removal or snow removal at roadside turnouts and vehicle inspection stations.

- Damaged light standards or other highway fixtures (i.e., guardrail, bridges).
- Roadside or median barriers which have been damaged or moved from the original position, or any other condition that prevents the barrier from performing its intended function.

#### 53.39.4.4.3 Safety Related Items

The Contractor shall also be observant of safety related conditions as follows and shall immediately mobilize sufficient forces to ensure that unsafe or hazardous conditions are not left unattended until necessary work or repairs have been made:

- Winter highway surface - unsafe or poor conditions such as:
  - sections of packed snow,
  - sections of ice,
  - ice on bridge decks,
  - drifting snow,
  - freezing rain, and
  - any highways requiring snowplowing.
- Pavement surface - unsafe conditions such as:
  - potholes,
  - frost heaves,
  - severe tearing or deterioration of the pavement surface, and
  - breaking of the pavement edge.
- Gravel highways - unsafe conditions such as:
  - potholes,
  - washboard sections,
  - areas of erosion,
  - lack of gravel, and
  - excess (loose) gravel.

#### 53.39.4.5 **Non-Critical Work Items**

The following work shall be performed as required and in accordance with the schedule established at the bi-weekly meetings with the Engineer:

- Replacing reflective strips on guardrails and delineator posts.
- Straightening or replacing of sign posts.
- Washing signs, delineators and reflective strips on guardrail with biodegradable soap.
- Removing graffiti from signs and guardrail. Care shall be taken when removing graffiti from signs to prevent the sign message from being removed as well. Cases in which the graffiti cannot be removed shall be reported to the Engineer.
- Straightening or replacing of delineator posts.

- Removing and storing of non-conforming signs from within the right-of-way. Prior to removal of any non-conforming signs, the Contractor shall contact the Engineer for confirmation and after removal, the signs shall be stored for a minimum of six months at no cost to the Department. After six months, the Contractor shall contact the Engineer for instructions on disposal of the stored signs. Disposal of the signs shall be at the Contractor's expense.
- Obtaining frost probe readings and reporting such information to Alberta Transportation and Utilities, Motor Transport Board, as directed by the Engineer.
- Perform minor fencing repairs and installations on Department owned fence line and wire gates.
- Removal and disposal of refuse which has been collected by other forces (i.e., Adopt-a-Highway volunteers or adult offenders). The litter shall be disposed of at sanitary landfill sites.
- Minor culvert and drainage grate maintenance, including the inspection of culvert or grate to determine needs, reporting major work that may be required, removing minor blockages (garbage, siltation, vegetation) with hand tools, and disposal of debris.
- Minor Maintenance of permanent snow fence (i.e., replacing broken ties, replacing up to 10 wooden slats per 100 m, etc)

This activity shall apply only to debris removed from the immediate sloped end of the culvert. Removal of debris from the barrel of the pipe shall be performed and paid in accordance with Specification 54.6, Cleaning Debris from Culverts. In late summer, culverts and drainage systems shall be checked for blockages by debris and a schedule set up for cleaning. Work shall be completed prior to freeze-up. This work shall be carried out on all blockages in culvert ends that could restrict water flow.

### **53.39.5 REPORTING PROCEDURES**

All hazardous items listed under Section 53.39.4.4.3, Safety Related Items shall be reported immediately to the Engineer.

The Contractor shall record daily and report weekly on all work that is performed. These reports shall include:

- segment(s) worked,
- action(s) taken,
- quantities of work performed,
- kilometres driven,
- hours worked, and
- quantities of materials.

The Contractor shall report daily on all work required in Section 53.39.4.4.2, Routine Observations.

The Contractor shall also report all wildlife roadkills to Fish and Wildlife as directed by the Engineer.

As part of normal winter duties, the Contractor shall also provide a daily report to the Alberta Motor Association detailing driving conditions on the applicable highways within the Contract area boundaries. The report shall be updated as required, to ensure that the travelling public is kept current with changing roadway or weather conditions. The Contractor shall provide the Engineer with a copy of all reports issued.

### **53.39.6 RESPONSE TIME AND TIME TO COMPLETE**

Response to critical items shall be immediate. The Contractor shall notify the Engineer of any cases where two or more critical items occur in a manner which prevents immediate response. The Contractor shall take all reasonable steps to determine and attend to priorities.

Required non-critical work will be identified at the bi-weekly meetings with the Engineer. The Contractor shall complete non-critical items within the two week period following the bi-weekly meeting.

The number of inspections required on each highway and the timing of the Work will be indicated in the Special Provisions or on the plans.

### **53.39.7 MEASUREMENT AND PAYMENT**

Separate measurement will be made of the number of months, or parts thereof (i.e., at the commencement or conclusion of the Contract), that acceptable highway maintenance work (excluding winter road inspections detailed in Section 53.39.4.2) is performed during:

- (i) April 16 to October 14 each year
- (ii) October 15 to April 15 of the following year.

Measurement will be made of the number of inspections of each circuit performed for winter road inspections.

Payment for highway maintenance work performed between April 16 and October 14 each year will be made at the unit price bid per month for "Highway Maintenance Work - Summer" for the full six month period as indicated, regardless of the scope of work required during those periods.

Payment for highway maintenance work performed between October 15 and April 15 of the following year, will be made at the unit price bid per month for "Highway Maintenance Work - Winter" for the full six month period as indicated, regardless of the scope of work required during those periods.

In combined submissions, bid items for "Highway Maintenance Work - Summer" or "Highway Maintenance Work - Winter" apply to the total of the combined areas and will be paid only once per month regardless of the number and size of the maintenance areas in the combined proposal.

Payment for complete winter road inspections on any circuit will be made at the unit price bid per inspection for "Winter Road Patrol." Payment for other road inspections which occur outside normal working hours and partial winter road inspections will be based upon the unit price bid for "Winter Road Patrol", prorated according to the length of the inspection and/or the travel distance to the specified site.

These payments will be full compensation for all labour, equipment, tools and incidentals necessary to complete the work.

Payment for additional materials except pothole patching material, will be made as Extra Work in accordance with Specification 51.2, General for Maintenance Work.

Emergency traffic control will be paid for in accordance with Specifications 53.36, Supply and Erection of Emergency Signs, 53.37, Supply of Flagperson and 53.38, Supply of Arrowboards, as applicable.

Payment for the emergency repair of pot holes will be made in accordance with Specification 53.10, Pot Hole Patching by Hand.

Payment for any other work performed as part of routine operations will be considered incidental to the Contract unless payment items are defined in other specifications or unless the Work is specifically authorized by Work Order.

Payment for replacing sign posts will be made in accordance with Specification 54.11, Remove, Supply and Install Wooden Sign Posts.

Payment for replacing delineator posts will be made in accordance with Specification 54.19, Supply and Install Delineators.

When applicable, the Department will pay the actual landfill disposal fee (with no markup) for disposal of large road kill and litter.

### **53.39.8 AFTER HOURS CALL OUTS**

Under certain conditions, payment for responding to critical items as detailed in Section 53.39.4.3, will be made at the rate of \$100.00 per occurrence. This payment will only be made if:

- Response is required outside the normal working hours of 7:00 am to 5:00 pm, Monday to Friday; and
- The Contractor is not eligible for a premium under a separate category of Work; and
- The Contractor does not receive payment under any bid item other than "Highway Maintenance Work."