

53.39 HIGHWAY MAINTENANCE WORK

53.39.1 GENERAL

The Work consists of the following:

53.39.1.1 Road Inspections

Patrolling the Contract area, both on a scheduled and “on demand” basis to monitor weather or roadway conditions.

53.39.1.2 Emergency Duties

Immediately responding to conditions that are hazardous to road users.

53.39.1.3 Routine Highway Maintenance Activities

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.

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 Highway Maintenance Activities:

- ! 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
- ! Spill-absorbing material such as Absorb-All or sand,
- ! Personal protective equipment for handling animal carcasses and other waste,
- ! Appropriate cleanser for the removal of graffiti,

- ! Temporary 4-way STOP signs on portable stands, to be used when traffic signals are not operating. The number of sign sets supplied will be as detailed in the Special Provisions,
- ! "Police Emergency Ahead" signs in accordance with Drawing WD-200(attached), mounted on portable stands, to be used as the first traffic control device on the scene when police have responded to a highway emergency situation such as a collision, spill or obstruction on the highway. The number of "Police Emergency Ahead" signs required will be detailed in the Special Provisions.
- ! Fencing materials for repair of line fence classified as a Routine Highway Maintenance Activity,
- ! Posts and markers for installation of red diamond hazard markers,
- ! Supplies for roadside toilets(toilet paper, toilet chemicals, roofing repair materials, etc.)
- ! Replacement bulbs for traffic signals, 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, and
- ! Replacement reflective strips for delineators and guardrail conforming to standards as shown in the individual specifications.

53.39.3 EQUIPMENT

All vehicles used in transporting litter (including roadkill) shall be equipped to prevent the accumulated litter from being re-deposited along the highway. Vehicles must be able to remove large roadkill from the right-of-way and transport it to a suitable disposal site.

53.39.4 PROCEDURE

53.39.4.1 General

The Contractor shall provide sufficient resources to regularly patrol the specified roads within each Contract area as shown in the Special Provisions, to observe, react to and report all circumstances or conditions affecting the travelling public or the future repair of the roadway or appurtenances, to investigate

reports of adverse conditions from members of the public, regulatory agencies, police authorities or a Department official, and to perform all Routine Highway Maintenance Activities.

53.39.4.2 Road Inspections

53.39.4.2.1 Scheduled Road Inspections

Scheduled Road Inspections shall consist of patrolling roads within the Contract area boundaries and responding to Emergency Duties and any other issues or conditions concerning the safety of the travelling public. The specific roads to be patrolled and the frequencies of the inspections will be specified in the Special Provisions.

53.39.4.2.2 Additional Road Inspections

The Engineer may direct the Contractor to perform Additional Road Inspections on an “on demand” basis at any time during the term of the Contract. Typically such inspections will be required to establish driving and roadway conditions at that particular time.

53.39.4.2.3 Routine Observations

During the performance of Road Inspections, Emergency Duties, Routine Highway Maintenance Activities or at any other time the Contractors’ personnel are travelling within the Contract area boundaries, such personnel shall observe conditions of the roadway surface, appurtenances, and right of way for the purpose of identifying Work to be performed. The Contractor shall immediately report any such Work to the Engineer.

Any Work identified which falls under the category of Emergency Duties shall be immediately addressed by the Contractor.

Items of Work which would typically be identified during Routine Observations include but are not limited to the following:

- ! Damaged signs,
- ! Drainage problems including blockages, erosion 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 structures of appurtenances (guardrail, light standards, bridges, etc.)

- ! 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.

53.39.4.2.4 Daily Road Reports

As part of normal winter duties, the Contractor shall provide Daily Road Reports to the Alberta Motor Association. These reports shall detail 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.

53.39.4.3 **Emergency Duties**

The following are critical items that require immediate response:

- ! Repairing or replacing critical regulatory signs (STOP and YIELD) or performing temporary repairs of signs.
- ! Removing from the road surface, roadkill and debris of a size or type that may create a hazard.

If an animal is injured, the Contractor shall contact the RCMP or Fish and Wildlife, who will determine and arrange for the treatment required.

In cases involving domestic animals, the Contractor shall remove the carcass from the roadway surface and contact the owner of the animal to dispose of the carcass. If the owner cannot be contacted, the Contractor shall remove the carcass from the right-of-way, dispose of the carcass at an approved site and immediately notify the Engineer.

Ultimately, the Contractor shall remove all such hazardous items from the right-of-way.

- ! Repairing traffic signals, including:
 - Resetting signals if the lights are in flash mode,
 - Replacing burnt-out bulbs, or
 - When the lights are completely out of service, setting up portable STOP signs from all directions until permanent repairs occur.

- ! 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, any material including damaged guardrail which presents a hazard to the travelling public, and
 - Applying absorbent material to minor spills at accidents.

- ! Dispatching snow and ice control equipment to rectify unsafe or poor driving conditions resulting from:
 - sections of packed snow,
 - sections of ice,
 - ice on bridge decks,
 - drifting snow,
 - freezing rain, and
 - any highways requiring snowplowing.

- ! Providing adequate marking of any conditions on the road surface or in the right-of-way which are a hazard to the travelling public.

- ! Emergency repair and marking of unsafe or poor pavement conditions such as:
 - potholes
 - frost heaves
 - severe tearing or deterioration of the pavement surface, and
 - breaking of the pavement edge.

- ! Emergency repair and marking of unsafe or poor gravel highway conditions such as:
 - potholes,
 - severe washboard sections,
 - areas of erosion,
 - lack of gravel, and
 - loose gravel.

- ! Emergency repair and/or marking of unsafe or poor bridge conditions such as:
 - oversize load collisions
 - overload damage
 - hazards or damage created by other types of incidents
 - loose or protruding deck joint plates

- severe deflection of culverts
 - any other item or condition on a bridge structure that presents a danger to the travelling public
- ! Reporting any instance where immediate response was required to the Engineer.
- ! Placing "Police Emergency Ahead" signs at the scene of collisions, spills or obstructions on the highway.

53.39.4.4 Routine Highway Maintenance Activities

The Contractor's regular schedule shall include:

- ! Servicing Department litter bins and toilet facilities adjacent to primary highways. For toilet facilities, the work shall include washing the inside of the toilet facility (including walls, floor and seats), removing graffiti, replenishing toilet tissue, monitoring the levels of septic tanks and pumping out as required, adding toilet chemical as required, sealing roof leaks, replacing door hinges and toilet tissue holders, hand picking litter around toilets and pathways, mowing or clearing snow (at least 2 m wide) from pathways and keeping the pathways free of obstructions such as holes, trees, brush and snow, and other minor repairs.

When cleaning septic tanks, the area surrounding the tank shall be cleaned of any spills. All waste material shall be hauled to and disposed of at a proper waste disposal site.

For litter bins, the work shall include emptying trash barrels, replacing plastic garbage bags with a new bag and disposing of collected litter, hand picking any litter at the litter station and adjacent ditches from the point at which the pavement widens to the point at which it returns to the typical shoulder, immediately reporting any vandalism to the Engineer, performing minor repairs to the litter bins such as replacing hinges or fastening loose boards, and keeping the area in front of the bins free of obstructions such as holes, trees, brush and snow.

- ! Removing and disposing of incidental refuse and litter from within the right-of-way.
- ! Straightening or reinstalling sign posts as follows:
- Posts shall be straightened using hand tools and/or a winch when they are visibly off plumb.
 - Reinstalling "removed" posts into the existing hole (including cleaning out the hole when necessary).

- Shimming and tightening connections on breakaway sign posts as required.
- ! Straightening or reinstalling delineator posts and replacing reflective strips on guardrails and delineator posts.
- ! “Summerising” signals and control boxes by:
 - Thoroughly cleaning the interior of the controller cabinet with a brush and vacuum cleaner. When vacuuming, care must be taken in order that the nozzle does not make contact with any cabinet wire terminals as this may short circuit the cabinet and cause controller failure. A plastic nozzle shall be used when available.
 - If the controller cabinet has a forced air heater, the heater shall be turned to the “Off” position or unplugged completely. If the controller cabinet has a strip heater, the heater control switch shall be turned to the “Off” position.
 - The cooling fan on the top of the cabinet shall be checked for operating function by turning the thermostat to low position. If working, the thermostat shall be turned back to the 30°C or 85°F setting.
 - The wooden or plastic board blocking the lower ventilation openings on the cabinet door shall be removed and replaced with a clean air filter of the correct size.
 - All signal indications shall be checked to ensure that all lamps are functioning and the lenses, where necessary, shall be cleaned with glass cleaner and a cloth. The interior of the signal heads (reflectors) shall also be cleaned.
- ! “Winterising” signals and control boxes by:
 - Thoroughly cleaning the interior of the controller cabinet with a brush and vacuum cleaner. When vacuuming, care shall be taken in order that the nozzle does not make contact with any cabinet wire terminals as this may short circuit the cabinet and cause controller failure. A plastic nozzle shall be used when available.
 - If the controller cabinet has a forced air heater, the heater shall be turned to the “Medium” temperature and plugged into the duplex receptacle. If the controller cabinet has a strip heater, the heater control switch shall be turned to the “On” position.
 - The air filter at the lower opening on the cabinet door shall be removed and replaced with a wooden or plastic board of a size that fits into the holder and blocks the ventilation openings.
 - All signal indications shall be checked to ensure that all lamps are functioning and the lenses, where necessary, shall be cleaned with glass cleaner and a cloth. The interior of the signal heads (reflectors) shall also be cleaned.

- ! Washing signs, delineators and reflective strips on guardrail. If soap is used, it must be biodegradable.
- ! Removing graffiti from all sites accessible without man-lift equipment. 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 or is inaccessible shall be reported to the Engineer.
- ! Removing and storing of non-conforming signs less than 1 m² 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. After six months, the Contractor shall contact the Engineer for instructions on disposal of the stored signs.
- ! Obtaining frost probe readings and reporting such information to Alberta Transportation, Motor Transport Board, as directed by the Engineer.
- ! Performing minor fencing repairs and installations on Department owned fence line and wire gates. Such work shall consist of attaching or splicing wires at one or both ends, tightening up to 50 metres of barbed wire and reinstalling fence posts.
- ! Removing and disposing 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 authorised disposal sites.
- ! Performing 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.

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 for in accordance with Specification 54.6, Cleaning Debris from Culverts. In late summer, culverts and drainage systems shall be checked for blockages by debris. A schedule for cleaning shall be established and the 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
- ! Performing minor Maintenance of permanent snow fence (i.e., replacing broken ties, replacing up to 10 wooden slats per 100 m, etc)
- ! Repairing potholes in accordance with Specification 53.10, Pothole Patching by Hand.

The frequency and/or amount of work to be performed for some, but not all, of the aforementioned work items included in Routine Highway Maintenance Activities will be specified in the Special Provisions. Failure to identify such frequencies and/or amounts of work in the Special Provisions shall not relieve the Contractor of his responsibility to complete the work at intervals required by the Engineer nor entitle the Contractor to any additional compensation as a result of the frequencies and/or amounts of work actually performed.

53.39.5 REPORTING PROCEDURES

All items listed under Section 53.39.4.3, Emergency Duties shall be reported immediately to the Engineer.

The Contractor shall record conditions identified during Road Inspections, and any Work performed as a result of his observations. Such information shall be reported to the Engineer. The report shall make a distinction between conditions that required immediate response and those that could be scheduled as future Work.

The Contractor shall record and report monthly, all Routine Highway Maintenance Activities performed. These reports shall include:

- ! segment(s) worked,
- ! action(s) taken, and
- ! quantities of work performed,

The frequency for submitting Daily Road Reports to Alberta Motor Association shall be detailed in the Special Provisions.

When required by the Special Provisions, the Contractor shall report wildlife roadkill to Fish and Wildlife.

53.39.6 RESPONSE TIME AND TIME TO COMPLETE

53.39.6.1 Road Inspections

The frequency and timing of Scheduled Road Inspections will be detailed in the Special Provisions.

Additional Road Inspections required on an “on demand” basis shall be completed within the time stated on the Work Order or as required by the Engineer.

53.39.6.2 Daily Road Reports

The timing of Daily Road Reports will be detailed in the Special Provisions.

53.39.6.3 Emergency Duties

Response for Emergency Duties 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.

53.39.6.4 Routine Highway Maintenance Activities

Timelines for the completion of Routine Highway Maintenance Activities will be established by the Engineer, with the Contractor, generally at the regular Operational Planning meetings. In the event the Engineer and Contractor cannot agree on the timelines for the performance of the Work, such Work shall be completed within 30 days of the date of the applicable Operational Planning Meeting or from the time the Work is ordered, as applicable.

53.39.7 MEASUREMENT AND PAYMENT

53.39.7.1 Scheduled Road Inspections, Emergency Duties and Routine Highway Maintenance Activities

Payment will be made at the unit price bid per month, per Contract Maintenance Area (CMA), for "Highway Maintenance Work". This payment will be full compensation for performing all required Scheduled Road Inspections including Routine Observations and Daily Road Reports; Emergency Duties, Routine Highway Maintenance Activities including the supply of "incidental materials" and all reporting for a CMA during each monthly period, with the following exceptions:

- ! Separate payment will be made for any item of Work performed as part of a Scheduled Road Inspection, Emergency Duty or Routine Highway Maintenance Activity for which a separate contract bid item exists.

- ! Separate payment will be made for any item of Work for which the Work and payment is specifically covered by a Work Order.

- ! Separate payment will be made for the actual (without mark-up) landfill disposal fee for disposal of large road kill and litter.

- ! Separate payment will be made, as Extra Work, for any "Additional Materials" required in the performance of the Work (with the exception of pothole patching material)

- ! Separate payment will be made, as Extra Work, for the pick-up and disposal of litter bags resulting from the Annual Highway Clean-up program.

53.39.7.2 Additional Road Inspections

Payment for Additional Road Inspections performed on an “on demand” basis will be made at the unit price bid per kilometre for “On Demand Road Inspections”. Payment will be based on the total number of kilometres travelled for each inspection and will be full compensation for all labour, equipment, tools and incidentals necessary to complete the work. Such payment will apply for Additional Road Inspections performed both during and outside normal working hours.

53.39.7.3 After Hours Call-out

Under certain conditions, payment for responding to critical items as detailed in Section 53.39.4.3 Emergency Duties, will be made at the unit price bid per occurrence for “After Hours Call-Out”. Such 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(Excluding Statutory Holidays); 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."

53.39.8 WARRANTY

There is no warranty for Work paid for under the monthly unit price payment for Highway Maintenance Work.

Work paid for under other specifications (i.e. pothole patching) will have the warranty as detailed in the applicable specification.

POLICE EMERGENCY AHEAD SIGN	WD-200
-----------------------------	--------



SECTION REFERENCE			
DIMENSIONS (cm)		90 X 90	
ENLARGEMENT FACTOR		8 X	
COLOUR			
BACKGROUND	BORDER	MESSAGE / SYMBOL	
FLOURESCENT LIME-GREEN	BLACK	BLACK	