

B.C. MINISTRY OF TRANSPORTATION

Maintenance Specification Chapter 7-790

SNOW AVALANCHE RESPONSE

1. OBJECTIVE

To safeguard Highway Users against avalanches and to minimize road closures.

2. GENERAL PERFORMANCE SPECIFICATIONS

2.1 Routine Maintenance Services

The Contractor must

- a) respond to snow avalanches in accordance with the following Ministry of Transportation Snow Avalanche Manuals:
 - i) Snow Avalanche Safety Measures for Highways Manual;
- b) consider the following while planning and carrying out work:
 - i) the safety of Highway Users who travel through or within designated avalanche hazard areas; and
 - ii) the minimization of avalanche related road closures;
- c) ensure that operational personnel working within a designated avalanche area have complete and current training in and awareness of snow avalanche response procedures including the following
 - i) One Day Avalanche Safety Training;
 - ii) Search and Rescue Procedures;
 - iii) Explosive Spill Plan;
 - iv) Avalanche Personnel Check-in Procedures;
 - v) Mock Rescue Practice; and
 - vi) Familiarity of Avalanche Terrain within Service Area.

2.2 Quantified Maintenance Services

Not applicable to this Maintenance Specification.

3. DETAILED PERFORMANCE SPECIFICATIONS

3.1 Routine Maintenance Services

The Contractor must:

- a) provide effective and efficient response and services in the event of a snow avalanche directly or indirectly affecting Highways, by supplying an adequate quantity and quality of equipment, and trained individuals;
- b) maintain and replace lost or stolen avalanche safety equipment supplied by the Ministry, unless otherwise specified in writing by the Province and as defined in the following:
 - i) Snow Avalanche Safety Measures for Highways Manual;
 - ii) Instructions on Weather Observations Manual; and
 - iii) Sign Manuals.
- c) comply with Highway maintenance restrictions as per the Five Level Avalanche forecasts and specific operational procedures, as provided by the local avalanche technicians;
- d) notify local Ministry avalanche personnel of any significant avalanche occurrences either above or on the Highway and report any changes in weather conditions associated with rising avalanche hazard conditions;
- e) ensure vehicle access to snow avalanche facilities, including but not limited to Gun Platforms, Rescue Caches and Explosive Magazines;
- f) ensure access to and relocate avalanche gates as required;
- g) remove avalanche Debris and snow from the Highway including Debris from any adjacent avalanche catchment areas and static avalanche defence structures;

- h) initiate as required and participate in snow avalanche search and rescue efforts to recover vehicles and/or Highway Users buried in a snow avalanche; and
- i) in the event of an avalanche, provide traffic control in accordance with the Maintenance Specification for *Highway Traffic Control*; and notify the Province and establish Highway closures as required to ensure the safety of Highway Users.

3.1.1 Performance Time Frames

The Contractor must:

- a) immediately, from the time an avalanche is detected by or reported to the Contractor, inform the Province and provide traffic control when required;
- b) respond to snow avalanche conditions within the maximum response times shown on the table below.

Condition	Maximum Response Time
(i) initiate Avalanche Search and Rescue Plan (as necessary), and prepare for and participate in search and rescue effort	immediately
(ii) provide access to avalanche gates and vehicle access to snow avalanche facilities	30 minutes, from the time notified by Ministry Snow Avalanche Technician
(iii) start clearing snow avalanche deposits from the Highway	immediately, on approval from the Ministry Snow Avalanche Technician
(iv) start with intent to completely remove clearing adjacent catchment areas and snow avalanche safety structures	within 24 hours, from time approval is obtained from the Ministry Snow Avalanche Technician

3.2 Quantified Maintenance Services

Not applicable to this Maintenance Specification.

3.3 Materials

The Contractor must supply materials and equipment necessary to support avalanche safety measures.

4. WARRANTY

Not applicable to this Maintenance Specification.