



Timber Operations, Pricing and First Nations Division Engineering Branch

Guidance for Ordering Road Closure Gates

Ministry Standard Drawings

STD-G-010-01 to 04 & STD-G-011-01 to 04

1.0 General

Structural details for fabrication of a surface mounted road closure gate and a buried footing road closure gate are provided on ministry standard drawings STD-G-010-01 to 04 and STD-G-011-01 to 04, respectively. These drawings provide some options for gate installations on Forest Service roads (FSRs).

The standard drawings do not provide site specific specifications for gate design, roadway design, installation, signage, or road user safety. These issues must be addressed by the person taking responsibility for gate installation at a specific site based on an assessment of the site specific characteristics including: road width, road alignment and site visibility, foundation materials, vehicle traffic configurations and expected vehicle operating speeds on the road. For some gate sites, alternate steel gate component designs may be required.

The ministry contact who is initiating an order (ITQ) for gate materials should ensure that all gate specifications are determined prior to ordering materials for any specific gate site. A materials template has been prepared to facilitate the ordering of gates and is available at: <http://www2.gov.bc.ca/gov/content/industry/natural-resource-use/resource-roads/engineering-standards-guidelines/bridge-design-construction/material-standards>

2.0 Considerations when ordering gates

2.1 Gate Arm Supports: Surface Mounted Abutments vs Posts with Buried Footings

Surface Mounted Abutments (STD-G-010-01 to 04)

- The surface mounted gates have been developed for temporary installation. However, for some sites, surface mounted abutments may be preferable as gate arm supports if ground conditions at the installation site are expected to be bedrock or otherwise difficult to excavate. The surface mounted abutments require a level surface for abutment foundations and for some sites may require an excavator.
- Note that the surface mounted gate system does not allow the gate arm to open more than 90 degrees and should be considered in assessing the suitability for use at each specific site.

Posts with Buried Footings (STD-G-011-01 to 04)

- Gate arm supports that are posts with buried footings will be (compared to surface mounted abutments) less expensive to fabricate and transport, and will allow the gate arm to open to a wider angle.

- Installation requires earthworks with an excavator, and there should be confidence that excavations to a depth of 1.4 m below ground surface at post locations can be accomplished at the gate installation site.
- If specific site conditions (e.g., bedrock) preclude the use of the standard open latch post with buried footing, alternative solutions can be considered and may be referred for consultation to engineering staff with Engineering Branch.

2.3 'Telescoping' vs 'Fixed Length' Gate Arm

- Telescoping or a fixed length gate arm can be ordered with either surface or buried abutments. If a gate is planned to be moved frequently from site to site, with varying gate opening widths required, the telescoping gate arm is recommended. If a gate is intended to be left at one location long term, and the required and practically attainable opening width is well known in advance, a fixed length gate arm would be most suitable.
- The telescoping gate arm will be more expensive than the fixed length gate arm, and may have some problems with vandals removing the bolts at mid-arm length.

2.4 Gate Reflective Materials and Signage

- The standard drawings do not specify connection details (e.g., welded tabs, specific holes, etc.), or connectors (e.g., bolts, nuts, etc.) for attachment of reflective material and signs to the gate.
- Reflective material and attached signage must be considered to ensure gate visibility to road users.
- The person taking responsibility for gate installation at a specific site must determine the requirements for reflective materials and signage attached to the gate as well as approach roadway signage.
- Gate-ahead signage must be installed to be clearly visible and provide adequate warning for vehicles approaching the gate from both directions.

3.0 Reporting Gate Installation Issues

- The person taking responsibility for the gate installation should require the installation contractor to report any installation issues and/or any problems achieving the gate installation requirements shown on ministry standard drawings STD-G-010-01 to 04 and STD-G-011-01 to 04.