

Self-Screening Registration Criteria

P15: Rockworks Investigation and Design

Mandatory Knowledge Requirements

The Ministry of Forests and Range will only contract with qualified professional engineers (PEngs) to carry out services for rockworks investigation and design related to Forest Service roads and bridges. Professional engineers providing this service must:

1. be members in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC);
2. have appropriate education, training and experience within the discipline of engineering, geological sciences, or earth sciences that are congruent with the services required by the ministry;
3. have considerable recognized specialization in rock mechanics;
4. have thorough knowledge about: geomorphology, airphoto interpretation, soil mechanics; forest road route planning, and forest road construction, landslide avoidance; mitigation and remediation;
5. be thoroughly familiar with Provincial legislation such as the *Forest Practices Code of British Columbia Act* and *Forest and Range Practices Act*, and associated regulations under those acts including the Forest Road Regulation and the Forest Planning and Practices Regulation, among other legislation specific to the project;
6. have a comprehensive working knowledge and understanding of the principles and best management practices provided in the following government publications, among others as required:
 - Forest Practices Code of BC Mapping and Assessing Terrain Stability Guidebook (August 1999)
 - Forest Practices Code of BC Forest Road Engineering Guidebook (June 2002)
7. in the case of projects that come under the control and administration of BC Timber Sales (BCTS), obtain BCTS Environmental Management System (EMS) Level 3 training prior to commencing work on any BCTS Worksite.

Mandatory Experience Requirements

All registered professionals providing rockworks investigation and design services require a minimum of 5 years of demonstrated relevant professional experience in forestry or related resource industries in British Columbia. Registered professional engineers must have specific work experience in the following activities:

1. Field investigation of site conditions, subsurface investigation and geotechnical testing, and engineering design of rock slopes associated with forest roads and foundations for bridges.
2. Design review and analysis of existing rock slopes associated with forest roads and foundations for bridges, and engineering recommendations for rock slope stability and foundation repair and rehabilitation, where needed.
3. Preparation of detailed engineering reports, drawings, specifications and cost estimates.
4. Field reviews of construction activities for rock slopes and foundations for bridges on rock to provide quality assurance and confirmation of conformance to design, including:
 - field inspection of construction activities during critical phases, such as drilling and blasting, rock excavation, scaling and rock bolting
 - reviewing and interpreting design and shop drawings
 - assessing actual field conditions for consistency with design assumptions and recognized “changed conditions”
 - assessing alternatives, and providing revisions to designs for “changed conditions”
 - preparing as-built drawings, and providing statements of construction conformance.