

Self-Screening Registration Criteria

P06: Professional Condition Inspection and Evaluation of Forest Road Bridges and Major Culverts (PEng)

Mandatory Knowledge Requirements

The Ministry of Forests and Range will only contract with qualified professional engineers (PEngs) to provide professional services for condition inspection and evaluation of Forest Service road bridges and major culverts. Professional engineers providing this service must:

1. be members in good standing with the Engineers and Geoscientists of British Columbia (EGBC);
2. have appropriate education, training and experience within the discipline of engineering that are congruent with the bridge and major culvert inspection and evaluation services required by the ministry;
3. have considerable recognized specialization in bridge and major culvert materials, methods of bridge and major culvert condition inspection and assessment, and establishing “load ratings” for bridges;
4. be thoroughly familiar with typical forest road bridge and major culvert configurations and material types including logs, timbers, glulam, steel and concrete elements;
5. be thoroughly familiar with the typical details and arrangements described in the Ministry of Forests and Range publication entitled, *Forest Service Bridge Design and Construction Manual* available at the following web site:
http://www.for.gov.bc.ca/hth/engineering/publications_guidebooks.htm
6. be familiar with forest road, bridge and major culvert planning, including bridge design and construction techniques, design vehicle configuration assessment, fluvial geomorphology, river engineering, scour and scour protection, design flood hydrology determination, open channel hydraulics, flood routing, methods for stream flow training, and debris potential assessment and estimation;
7. be thoroughly familiar with the *Canadian Highway Bridge Design Code* (CAN/CSA-S6), including Section 14 (“Evaluation”) and other associated bridge standards for welding of engineering materials and bridge component fabrication, or other standards as appropriate;
8. have a working knowledge and understanding of the principles and best management practices provided in the following government publications:
 - Forest Practices Code of BC Forest Road Engineering Guidebook (June 2002)
 - Forest Practices Code of BC Fish-stream Crossing Guidebook (March 2002)
 - Forest Practices Code of BC Riparian Management Area Guidebook
 - Forest Practices Code of BC Fish-stream Identification Guidebook

10. 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 professional engineers providing services for condition inspection and evaluation of Forest Service road bridges and major culverts require a minimum of 5 years of demonstrated relevant professional experience. This experience must include professional bridge condition inspection and evaluation of work in forestry or related resource industries in British Columbia.

Registered professional engineers must have specific work experience in the following condition inspection and evaluation activities:

1. Close proximity condition inspection, assessment and structural evaluation of major culverts and bridge superstructures and/or substructures to make recommendations regarding the load capacity and preparation of technical specifications and special provisions for repair.
2. Close proximity condition inspection of substructures to evaluate structural integrity and assess for scour, concrete deterioration, pile rot or corrosion; and prepare technical specifications and special provisions to replace or repair the substructure as required.
3. Structural review and analysis and provision of “load ratings” where needed.
4. Application of Section 14 (“Evaluation”) of CAN/CSA-S6, *Canadian Highway Bridge Design Code*.