



Making a difference...together

## **Building Inspection Division and Local Community Planning**

### **Guidelines for the Preparation of Geotechnical Reports**

---

A geotechnical report (the "Report") is required to confirm that the land may be used safely for the intended use without undue risk of hazards or damage to the environment. The Report shall be prepared at the cost of the applicant by a professional engineer registered in British Columbia with qualifications and experience in geotechnical engineering (the "Engineer").

The Engineer shall inspect the property, supervise the geotechnical site investigations and the Report shall clearly state all relevant restrictions, conditions and/or limitations to the proposed development of the land. The geotechnical site investigations and the Report shall be completed in accordance with good engineering practice. The Report shall address the following minimum criteria with respect to any development or activity including, but not limited to construction, subdivision, soil deposit/removal, alteration of land:

1. Identify any hazards which may affect the safe development of the land including, but not limited to:
  - a) flooding
  - b) ground water flows
  - c) mud flows
  - d) erosion
  - e) subsidence
  - f) land slip
  - g) earthquake
  - h) avalanche
  
2. Identify any natural areas that require protection including, but not limited to:
  - a) foreshore areas
  - b) steep slopes
  - c) riparian areas
  
3. Provide recommendations to reduce the risk of damage to the land on and off site, buildings and the works and services in regards to:
  - a) identifying of any part of the works and services which require inspection by specialized personnel and outline a recommended inspection program during the development of the land;
  - b) further geotechnical investigations and reports;
  - c) restricting the use of the land, buildings or the works and services;

- d) remediation of any unstable or potentially unsuitable soils or natural areas requiring protection;
  - e) further reports during the maintenance period.
4. Evaluate the development plans for the property using the relevant bylaws, (Zoning Bylaw and the Development Permit Area guidelines of the Official Community Plan) to determine the suitability of the land to accommodate the use intended.
  5. Establish a safe setback line from any watercourses, steep slopes or hazard areas to protect the land, buildings and inhabitants from the risk of injury or damage that may, in the opinion of the Engineer, be caused by the hazards of flooding, erosion, land slip, rock fall, subsidence, earthquake, mud flows or any combination thereof. The recommended setback cannot diminish the minimum setbacks requirements established by the bylaw.
  6. Quantify the risks of a geotechnical failure or any substantial hazard.
  7. Certify that "the land is safe for the use intended."
  8. The report must include a site plan illustrating the location of the proposed development as they relate to the geotechnical assessment.

**The Engineer's recommendations and the conclusions of the Report must:**

1. Acknowledge that the CRD, its planning staff and the building inspectors may rely upon the report when making a decision on applications for the subdivision or development of the land;
2. Certify the land is safe for the use intended with the probability of a geotechnical failure resulting in property damage of less than 2% in 50 years for geotechnical hazards due to seismic events, including slope stability.
3. Reference the Association of Professional Engineers and Geoscientists of British Columbia's (APEGBC) "Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia" where slope stability is identified as a hazard;
4. Prescribe the geotechnical works and any changes in the standards of the design of the development which are required.

The report and two duplicate copies shall be provided to the CRD for consideration of the approval of the application. If the report identifies any hazards or site conditions which, in the opinion of the Engineer or the CRD, may impact the safe development of the land or an adjacent property unless restrictions on development are established, the report together with a covenant may be required to be registered on the title of the property pursuant to Section 219 of the Land Title Act.

Registration of a covenant and/or the approval of an application does not warrant or represent that the land may be developed and used safely without risk of damage from hazardous conditions. Notwithstanding the registration of a covenant, a further Report could be required by the CRD if there is a change in the conditions or if some other circumstances arise which are substantially different than those anticipated by the Report.