

Building Inspections

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. 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:

1. Identify any hazards which may affect the safe development of the land including, but not limited to:
 - a) flooding
 - b) mud flows
 - c) debris flows
 - d) debris torrents
 - e) erosion
 - f) land slip
 - g) ground water flows
 - h) rock falls
 - i) subsidence
 - j) avalanche
 - k) earthquake
2. Provide recommendations to reduce the risk of damage to the land, 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; and
 - e) further reports during the maintenance period.
3. Evaluate the development plans for the property using the relevant City bylaws, Schedule “C” of the Zoning Bylaw, the Environmentally Sensitive Area (ESA) and Natural Hazard Area (NHA) designations and the Development Permit guidelines of the Official Community Plan to determine the suitability of the land to accommodate the use intended.

4. 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, mud flows, debris flows, debris torrents, erosion, land slip, ground water flows, rock fall, subsidence, avalanche, earthquake, or any combination thereof. The recommended setback cannot diminish the minimum setback requirements established by the municipal bylaws.
5. Quantify the risks of a geotechnical failure or any substantial hazard.
6. Certify that “the land is safe for the use intended.”

The Engineer’s recommendations and the conclusions of the Report must:

1. acknowledge that the City, its Approving Officer and 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:
 - a) 2% in 50 years for geotechnical hazards due to seismic events, including slope stability; and
 - b) 10% in 50 years for all other geotechnical hazards;
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. identify any deficiency in the design of the buildings, the proposed water, sewer, drainage, access and road works (the “Works and Services”) or the construction standards intended for the development; and
5. prescribe the geotechnical works and any changes in the standards of the design of the development which are required to:
 - a) ensure the land, buildings and the Works and Services are developed safely for the use intended; and
 - b) maintain the safety of the land, buildings and any Works and Services as a condition of the approval of the development.

The Report and two duplicate copies shall be provided to the City 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 City, may impact the safe development of the land or an adjacent property unless restrictions on development are established, the Report together with a Section 219 covenant may be required to be registered on the title of the property pursuant to 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 City if there is a change in the conditions or if some other circumstances arise which are substantially different than those anticipated by the Report.