Overview:  This document outlines when a seismic evaluation of a building may be required and the process by which evaluation will be determined.

Change of Occupancy
Change of occupancy under the BC Building Code triggers the requirement to upgrade the building’s seismic restraint systems (the building’s ability to withstand an earthquake). The BC Building Code uses the occupancy classifications (A) Assembly, (B) Institutional, (C) Residential, (D) Business/service, (E) Retail, and (F) Industrial. Changing between classifications, such as from Bank (D) to Restaurant (A), initiates the requirement to upgrade, while changing within a classification, such as from Bank (D) to Office (D) or Hair Salon (D), does not. To clarify when a seismic evaluation would apply to existing buildings, in November 2002, City Council adopted a policy whereby seismic upgrading would not be required when change of use is between compatible use categories or where it is demonstrated that the change of use is to a lower occupant load and hazard as per the attached Table A (page 2).

Seismic Evaluation
In November 2001, the City of Nanaimo Council adopted the National Research Council (NRC) Guidelines for Seismic Evaluations of Existing Buildings as its standard for evaluation of existing buildings and determination of upgrading required.

NRC Guidelines for Seismic Evaluations of Existing Buildings is a technical manual to guide engineers in evaluating existing buildings to determine potential earthquake hazards and to identify buildings or building components that present unacceptable risk to human lives.

A building does not meet the life-safety objective of the Guidelines if one or more of the following occurs in an earthquake:

- The entire building collapses;
- Parts of the building collapse;
- Components of the building fail or fall; or
- Exit/entry routes are blocked, preventing evacuation or rescue.

The Guideline establishes an acceptable level of compliance to current BC Building Code standards regarding life-safety (i.e., though the building may suffer considerable damage in an earthquake, the major objective is to ensure that the occupants are safe and can still exit the building).

An evaluation of the building is made by a Structural Engineer licensed in BC. Any building component unable to withstand 60% of the current Building Code’s seismic loading criteria is targeted for upgrade. The format for evaluation reports and an evaluation checklist is included in the NRC Guidelines. Seismic Reports/Evaluations provided to the City of Nanaimo are to be in the form specified in the NRC Guidelines.

Required upgrades specific to the building are determined by the engineer’s evaluation and must be completed as part of the building permit to change the building’s occupancy classification.

A list of local professional structural engineers is available on the City of Nanaimo web site www.nanaimo.ca under Building Inspections, Publications and Forms, or at our office at 411 Dunsmuir Street.
Where the proposed change of use is to Assembly, City Council adopted the following policy in 2008:

Where a building can meet the classification requirement under the current Building Code, Subsection 3.2.2., for an Assembly Occupancy, no seismic upgrading is required provided:

- the occupant load for the assembly use is less than 50 persons;
- the area of all assembly uses in the building is not more than 93m², or 10% of the building area, whichever is lesser;
- seismic upgrading for potentially non-structural falling hazards within the suite and its egress route are assessed by an Engineer (as required by Building Inspection); and
- the use does not include a liquor primary occupancy.

A building classified under this policy will always have a limited Assembly use.