

STRUCTURAL ENGINEERING REQUIREMENTS FOR BUILDINGS DESIGNED UNDER THE REQUIREMENTS OF PART 9 OF THE B.C. BUILDING CODE

(Single Family Dwellings)

Buildings designed in accordance with the requirements of Part 9 of the B.C. Building Code are referred to as Part 9 buildings. Part 9 of the B.C. Building Code, titled "Housing and Small Buildings", provides prescriptive guidelines for the design of small buildings, such as single family dwellings. Buildings are also regulated under Part 3 of the B.C. Building Code, which may require the building to be designed under Part 4, titled "Structural Design". Part 4 sets out performance specifications to guide engineers carrying out the structural designs of buildings. Buildings designed under Part 4 are those that require, by virtue of their size or complexity, an Engineer to provide a structural design for the building. A single family dwelling can be designed entirely within the parameters of Part 9, however the complexity of contemporary architectural designs has resulted in many Part 4 components being incorporated in the design, such as trusses and beams.

Professional Engineers providing Letters of Assurance for structural design of Part 9 buildings are required to consider the overall structure, including lateral (wind and/or seismic) load resistance, and cannot limit their involvement to just the Part 4 components within the structure. The adequacy of the load path to the foundations of the structure must be confirmed by the Professional Engineer, for all individual structural components designed under Part 4, within a Part 9 building. The Engineer must also review the shop drawings, such as the truss designs and truss layout for the structure and confirm that these components have been properly incorporated into the structure.

The Building Code requires that the structural Engineer consider the design aspects of anchorage and seismic restraint. However, where the Engineer explicitly indicates, by note, on the sealed plans that the design complies with the seismic requirements of the Code, the phrase "including anchorage and seismic restraint" may be crossed off the Letter of Assurance - Schedule B-2.

Some Professional Engineers have been submitting the Building Code Letters of Assurance, Schedules B-1 and B-2 incorporating limitation clauses. The City of Surrey, in consultation with the Association of Professional Engineers and Geoscientists of B.C. (APEGBC), has determined that a Professional Engineer cannot properly limit the review of a structure to isolated Part 4 components, ignoring the relationship between these components and the balance of the structure. Accordingly, the City of Surrey will not accept Letters of Assurance, Schedules B-1 and B-2 with such limitation clauses.