

October, 2021
BUILDING DIVISION

ALTERNATIVE SOLUTIONS

(2018 BC Building Code Clause 1.2.1.1.(1)(b) of Division A and Section 2.3 of Division C)

This guide has been prepared to outline the City of Surrey's requirements and procedures for alternative solutions submissions, including proposals for existing conditions with mitigating features.

City of Surrey Policy

The 2018 British Columbia Building Code (BCBC) allows compliance using alternative solutions that will achieve at least the level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions. Alternative solutions proposals are typically submitted based on the rationale that:

- The design provides at least the level of performance required by Division B of the 2018 BCBC using new materials, appliances, systems, equipment, methods of design or construction procedures not explicitly described within the 2018 BCBC, provided it is demonstrated that these alternative solutions are suitable, given the associated objectives and functional statements, and are supported by past performance, tests or evaluations.
- The existing conditions, primarily in existing buildings, have mitigating features that result in conditions where full compliance with the 2018 BCBC would be unduly onerous.

Acceptance of alternative solutions for a new building, or for an existing condition with mitigating features, shall be obtained in writing from the Building Division prior to issuance of a Building Permit. The City of Surrey will not accept alternative solutions proposals to compensate for design errors or faulty construction.

Alternative Solutions Information Sheet

A completed Alternative Solutions Information Sheet shall be submitted for each proposed alternative solution, and must include the following:

- **Project Description:** Provide a brief description of the proposed project. The project description should include general information such as the major occupancy(ies), applicable Construction Class Article(s), building height, building area, fire protection features (sprinklers, fire alarm system, standpipe, etc.), and type of construction.

- **Building Code Compliance:** Provide all 2018 BCBC references where literal compliance will not be achieved, and briefly describe the nature of the deviation(s) from the 2018 BCBC requirements.
- **Alternative Solution:** Identify all compensatory and mitigating features being proposed as equivalents to achieve the minimum level of performance required by the 2018 BCBC. Regardless of the proposed alternative solution, aspects of the design that are required for conformance with the 2018 BCBC shall not be considered as compensatory or mitigating features.
- **Applicant Information:** Provide the required contact information for the registered professional who prepared and sealed the alternative solutions report.

Alternative Solutions Proposals

All proposals for fire and life safety alternative solutions shall be submitted in the form of unique letters or reports including:

- a concise description of the subject building, including a Building Code analysis
- an outline of life safety principles relevant to each alternative solution with rationale based upon research of accepted technical agencies (e.g. NRC)
- recommendations and evaluations of specific equivalents
- evidence of reliable performance and consideration of monitoring maintenance of each alternative solution, and a commitment to perform sufficient field reviews of each alternative solution measure

The alternative solutions proposal must include adequate technical analysis and sufficient evidence to justify and validate achievement of the minimum level of performance required by the 2018 BCBC.

- **Number of Copies:** All submissions shall include an original and a copy of the Alternative Solutions Information Sheet(s), the Alternative Solutions Report, and any supporting documentation.
- **Fees:** The alternative solutions review fee shall be paid by cheque (payable to City of Surrey) at the time of submission. Submissions without the required fee will not be reviewed. Submissions that precede the building permit application may not be reviewed immediately and the City's response may be withheld until the building permit application is submitted. The current fee schedule is available at the Building Division front counter and on the City of Surrey website.
- **Professional Seal:** All Alternative Solution Reports and Information Sheets shall bear the professional seal and signature of the registered professional responsible for their preparation and submission. If the applicable building permit application is submitted under the Certified Professional Program, the Certified Professional must stamp and sign all alternative solutions documents.

- **Acceptance/Refusal:** Acceptance or refusal of a proposed alternative solution is at the sole discretion of the Building Division Manager or his designate and shall apply only to the building under consideration. Acceptance of an alternative solution shall in no circumstance be construed as creating any precedent or obligation for acceptance of the same or similar proposal on another project. If an alternative solution has been found to be unacceptable, it may not be resubmitted. However, if the registered professional considers that an expanded or revised proposal will adequately address the concerns that prompted the refusal, a new report may be submitted and an additional review fee may be required.
- **Construction:** The acceptance letter and a copy of the approved report shall be available onsite at all times for review by Building Officials, the Certified Professional, or consultants. A letter of professional certification of compliance from the alternative solution proponent shall be submitted to the Building Division subsequent to the inspections of the work, and prior to final acceptance of the building.