

Technical Review Board Memorandum

Date: July 2026

Issue: SPIR for Low-Rise Building Projects (non-Seismic Mitigation Program)

Background:

In 2004, the Provincial Government (under the Ministry of Education, now Ministry of Infrastructure [MOI]), “The Province,” engaged Engineers and Geoscientists British Columbia (EGBC), with support from the University of British Columbia (UBC) Civil Engineering Department, to assist with the implementation of a seismic upgrade program for low-rise school buildings in BC.

The Seismic Retrofit Guidelines (SRG) were developed to achieve two important goals:

1. Implement seismic retrofits that achieve a life safety objective in a cost-effective manner.
2. Adopt a common engineering approach to the seismic retrofit of low-rise school buildings.

The MOI has directed that the SRG be applied to all public schools undergoing a seismic assessment and retrofit under the MOI’s school seismic mitigation program (SMP).

While the SRG, including the various documents created in support of SRG, were developed for the seismic mitigation of public schools in British Columbia that were deemed to have high seismic/structural risk, the guidance in these documents may also be applicable for the seismic risk mitigation of other low-rise buildings. **On a voluntary basis, the SRG may be used for other low-rise buildings in BC** where low-rise buildings are defined as those having 3 storeys or fewer above grade.

The Seismic Project Identification Report (SPIR) is one of the key documents developed in support of SRG and used to articulate scope, schedule, and budget for a Block, where a Block is a portion of a building or a group of structurally connected buildings of a uniform type of construction and the same number of storeys. As an example, a gymnasium Block in a school will typically be a different type of construction from a classroom Block. A typical school could be made up of a single Block for a small elementary school, or could be up to ten or more Blocks for a large secondary school. Note that adjacent Blocks are not required to be separated by gaps if the review of each Block considers any limitations from drift compatibility and adjacency.

Another key element in the development and application of the SRG is the concept of peer review and independent review. Peer review is provided over the course of development and revisions to the SRG by various leading experts, including UBC’s Earthquake Engineering Research (EERF) facility staff. Limited scope independent review is provided by the Technical Review Board for the application of the SRG for MOI seismic mitigation projects.

For projects that fall outside the MOI's seismic mitigation program (SMP), it is the responsibility of the Engineer of Record to identify and engage the appropriate independent reviewer(s) (as per EGBC's bylaws) at appropriate stages in the project. See below for more guidance.

Training on SRG:

Only firms who have had one or more EGBC registrants trained on the current SRG are granted access to the guidelines and the seismic performance analyzer software; these are integral components needed to apply the SRG methodology. At this time, the training requirements are mandatory for structural engineering firms to conduct seismic assessments and retrofits using the SRG. Training is optional, but recommended, for geotechnical engineering firms.

The current version of SRG is the Seismic Retrofit Guidelines, 2023 Edition (SRG 2023). However, the 2026 Edition (SRG 2026) are expected to be released in 2027. Updates will be posted on EGBC's Seismic Retrofit Guidance webpage (<https://www.egbc.ca/registrants/registrant-programs/seismic-retrofit-guidance>).

SPIR Guidance for Low Rise Buildings in BC:

The SPIR template, along with other supporting documents, can be found on EGBC's Seismic Retrofit Guidance webpage. While use of the SPIR template is not mandatory for projects outside the MOI's SMP, it is recommended to either use this template or another that includes, at a minimum, the same information.

For a firm starting the SPIR process on a Block, one of the first steps undertaken should be the engagement of structural and geotechnical independent reviewers. The structural independent reviewer must have significant experience in the use of the current or immediately preceding edition of the SRG. The geotechnical independent reviewer should have general knowledge of the sub-surface geology and related challenges in the vicinity of the project site. For sites that require site-specific response analysis (SSRA), training on SRG is strongly recommended. All work must be aligned with EGBC's bylaws and Quality Management Guides. It is recommended that an independent review be conducted at the SPIR stage and that the independent review includes a review of the appropriate application of the SRG methodology in addition to the reported results and recommendations. Early involvement of independent reviewers is particularly important for firms and engineers that are completing their first few projects using the SRG.

Engagement of experienced independent reviewers can be a key resource in answering questions and suggesting solutions that have been used successfully on other projects.

When undertaking work using SRG, it is important to have the cost of the independent reviewers included in the proposal and approved consultant budget unless alternate arrangements are specified in advance by the client.

Conclusion

Whether the SPIR template or other form is used for a seismic mitigation project, it is recommended that the information required in the SPIR template, which was developed specifically for use with the SRG, be included. Independent review by a structural engineer and a geotechnical engineer is critical for obtaining a successful project outcome.

Contact

Any questions about the development or administration of the SRG, including this memo and other supporting documentation, should be directed to the Manager, Built Environment and Seismic Initiatives (seismic@egbc.ca).