SDCI

Director's Rule 15-2021

Applicant:	Page	Supersedes:
City of Seattle Department of Construction and Inspections	1 of 3	7-2009
	Publication: July 19, 2021	**Effective:** September 16, 2021
Subject: Seismic Evaluation Report Requirements for Buildings Undergoing Substantial Alterations	**Code and Section Reference:** 2018 Seattle Existing Building Code 307.1.3	
	Type of Rule: Code Modification	
	Ordinance Authority: SMC 3.06.040	
Index: 2018 Seattle Existing Building Code	**Approved** (Signature on file) Nathan Torgelson, Director, SDCI	**Date** September 16, 2021

BACKGROUND:

For existing buildings undergoing substantial alterations, as defined by Section 307.1 of the Seattle Existing Building Code (SEBC), a proposal for seismic rehabilitation shall be provided to the building official. The proposal shall include a comprehensive report, as described in SEBC 307.1.3. The purpose of this director's rule is to describe the requirements for the seismic evaluation report required for such a proposal. For substantial alterations to existing buildings the evaluation and retrofit must be based on the reduced seismic forces described in SEBC Section 303.4.2. In an earthquake, a building which has been substantially altered is not expected to significantly jeopardize life due to structural collapse, falling hazards, or blocked routes of entrance or egress. Buildings designed to these reduced forces may still suffer significant damage in an earthquake.

SELECTED REFERENCES

Seattle Existing Building Code. This code controls the alteration, repair, addition, maintenance and change of occupancy of existing structures. SEBC Section 307.1 addresses substantial alterations and Section 303.4.2 addresses seismic regulations for substantial alterations.

TIP 314. This TIP is intended to clarify the definitions of substantial alteration and provide guidance in how SDCI applies SEBC 307.

ASCE 41-17 Seismic Evaluation and Retrofit of Existing Buildings. This standard provides a three-tiered process for seismic evaluation and retrofit of existing buildings in any level of seismicity.

RULE:

This rule addresses the report requirements and the report contents.

A seismic evaluation report, where required by SEBC 307.1.3, shall address the existence, nature, and extent of structural deficiencies, and shall include proposed solutions for mitigation of all structural deficiencies found. The proposed solutions are permitted to be conceptual only. Minimum design forces used for analysis shall be based on one of the methods outlined in SEBC 303.4.2.

The seismic evaluation report shall be prepared by a structural engineer licensed in the state of Washington.

The report shall, as a minimum, contain the following information:

1. Scope and Intent: The purpose for the evaluation including jurisdiction requirements, a summary of the evaluation procedures used, and level of investigation conducted.
2. Site and Building Information:
    - The street address of the building.
    - A description of the building including the number of stories and dimensions.
    - The date the building was constructed and the dates of any significant additions, structural alterations, and repairs, if known.
    - A list of all occupancy types, both existing and proposed.
    - Structural system description including framing, seismic-force-resisting system, floor and roof diaphragm construction, basement, and foundation system.
    - Description of all nonstructural elements and systems that affect seismic performance of the building or whose failure could cause serious life-threatening injuries to occupants or those near the structure.
    - Condition of structural systems, such as identification of dry rot, deteriorated brick or mortar, cracked or spalled concrete, etc.
    - Testing requirements needed to substantiate the conclusions of the structural report. Unless otherwise approved by the building official, test reports shall be submitted prior to permit issuance.
    - Risk Category and, if using ASCE 41, Structural Performance Level
    - Seismic response parameters and site class.
    - Record drawings used for the evaluation.
3. List of assumptions: Material properties, site soil conditions, etc.
4. Conclusions:
    - The report shall identify and prioritize all significant deficiencies based on earthquake hazard. The report shall also include a conceptual remediation proposal for each deficiency. If the recommendations do not include full mitigation of each identified deficiency, the report shall include justification, which may include cost benefit analysis, impracticalities, test results, engineering judgment, redundancy, etc.

- The engineer shall also include a statement that indicates whether the intent of the recommendations is to meet the performance objective of the code. If there are significant deficiencies that are not remediated such that the project will fail to meet the performance objective, then the engineer shall specify the level of risk reduction that is intended to be achieved. The level of risk reduction provided shall be included in the general notes on the structural drawings.