

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Seattle Building Code Requirements for Existing Buildings that Undergo Substantial Alterations

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Buildings in Seattle that undergo substantial alterations or repairs are subject to Section 3404.9 of the Seattle Building Code (SBC), which defines and lists the special requirements that apply. This Client Assistance Memo (CAM) is intended to clarify the definitions of substantial alteration and provide guidance in how the Department of Planning and Development (DPD) applies SBC Section 3404.

When designing an alteration of an existing building, the building owner and the designer should first determine whether the project will be considered substantial. In many cases, it will be difficult to determine whether or not a project is a substantial alteration and a presubmittal meeting is advised so DPD can gather the information it needs to make a determination. If the project is considered a substantial alteration, the next step is for the designer to evaluate the building's structural and life safety systems.

It is important to note that SBC Section 3404.9 does not require a substantially altered building to comply with all of the current code; it requires compliance only with specific sections. This CAM lists those sections and gives some guidance in determining how DPD will apply them.

For accessibility requirements, refer to SBC Section 3407 which treats alterations differently.

Also, note that other technical codes may treat alterations differently. For example, the Seattle Energy Code requirements apply to the portion being altered, regardless of whether the SBC considers it a substantial alteration. Therefore, you will want to check each technical code to determine the applicable requirements.

DEFINITIONS

The five definitions of substantial alterations as listed in SBC Section 3404.9.1 are:

1. Extensive structural repair. Note: "extensive structural repair" may not be the same as "repair of extensive structural damage" in Section 3404.4.5.
2. Remodeling or additions which substantially extend the useful physical and/or economic life of the building or significant portion of the building, other than typical tenant remodeling.
3. A change of a significant portion of a building to an occupancy that is more hazardous than the existing occupancy, based on the combined life and fire risk as determined by the building official. Table 3404.9 may be used by the building official as a guideline. A change of tenant does not necessarily constitute a change of occupancy.
4. Reoccupancy of a building that has been substantially vacant for more than 24 months in occupancies other than Group R-3.
5. A significant increase in the occupant load of an unreinforced masonry building.

TYPICALLY APPLICABLE PROJECTS

Definition 1: Extensive structural repair

Extensive structural repair occurs when the structural system of a building undergoes significant repairs*. When severe deterioration of significant portions of a building's structural system is repaired, the work will be considered a substantial alteration. Typical projects which would not be considered extensive are replacement of an exterior stair or repair/replacement of water-damaged beams in a roof structure.

*See SBC Section 3404.4 for requirements for damaged buildings.



Definition 2: Extending the useful physical and/or economic life of a building

Extending the useful physical and/or economic life of a building is the trigger most frequently used in determining whether a project is a substantial alteration. It is also one of the most difficult to determine, and varies considerably depending on the nature of the work being done and the condition of the building.

Routine maintenance of a building, by itself, will not trigger this requirement. Routine maintenance typically includes items such as painting, reroofing, replacement of light fixtures or replacement of plumbing fixtures. When routine maintenance has been delayed to the point where the building has suffered significant deterioration and requires expensive restoration, it may be considered a substantial alteration. Routine maintenance combined with some improvement work, such as that performed during condominium conversions, may also be considered a substantial alteration.

There are many ways to look at this definition of substantial alteration. Listed below are some of the criteria that are used most often.

Cost of project. Improvements to major systems such as electrical, plumbing and mechanical are often thought of as “hard costs”—the costs are relatively large and can only be justified over a longer period of time. Hard cost improvements thus more clearly extend the life of the building and carry more weight in determining whether a project is a substantial alteration. On the other hand, routine maintenance is often thought of as “soft costs”—items that are replaced on a regular basis. Many projects consist of a combination of work involving both soft and hard costs which most often will be considered to substantially extend the life of the building.

For the typical project, if the cost is high relative to the value of the building, it will be considered a substantial alteration. For example, if a project consists of new carpet, paint, upgrade of light fixtures, new toilets and sinks, a new roof and patching of plaster, and the cost is more than half the value of the building, it would probably be considered a substantial alteration. Even though most of these items alone would only be considered maintenance, the total amount of work would be great enough to justify a conclusion that the project is a substantial alteration. The fifty percent figure used here is not intended to be a fixed percentage but only as an example.

Existing conditions. A careful review of existing conditions is important in determining whether a given proposal will trigger substantial alteration require-

ments. A relatively new building may undergo a face lift with expensive new finish work and some minor alterations and yet not trigger special requirements, while a very old and poorly maintained building that undergoes a similar project may be viewed as a substantial alteration. There are two reasons for this. One reason is a desire to correct the more serious life-safety hazards likely to be present in older buildings. The other reason is that the relative cost of the new work in relation to the value of the existing building is higher in the older building. In this case, the ratio of project cost to building value is viewed as being directly related to the extent to which the life of the building is being extended.

Size of project relative to building size and extent of use.

Alteration projects vary considerably from total building renovation to renovation of a portion of a floor; building use varies from fully occupied to completely vacant. It is the particular combination of these two items that becomes important in evaluating whether a project is a substantial alteration. A large new restaurant in a fully occupied high-rise building clearly is not a substantial alteration project. However, a similar project in an older, partially-occupied, three-story building is likely to be a substantial alteration. For example, many older downtown buildings have very limited, if any, use of their upper floors. Renovation of the tenant spaces on the lower floors of such a building, even though of a moderate size and scope relative to building size, may trigger the substantial alteration requirements.

When determining whether a project extends the useful life of a building, DPD will consider all these factors in combination.

Definition 3: A change to an occupancy that is more hazardous than the existing occupancy

A change to an occupancy that is more hazardous than the existing occupancy is determined by referring to SBC Table 3404.9. Occupancies have been assigned a hazard rating based on factors such as the number of people expected to be present in the building, whether the people are awake, the amount of combustible materials present and likelihood that a fire will occur.

Questions about interpreting this trigger occur when only a portion of a building changes to a higher hazard rating. In those cases the deciding factors are generally the percentage of the building that is changing to the higher-rated hazard, and how significantly the hazard is increased. A small Group B restaurant space (combined rating of 2) that is converted into a

Group M retail space (combined rating of 6) in a large building such as a high-rise will generally not trigger the requirements for a substantial alteration because the change in hazard rating affects only a small portion of the building. However, converting a significant portion of a building from a low hazard to a high hazard rating usually will trigger the requirements for a substantial alteration. For example, the conversion of an entire floor of a three-story building from a Group S-1 warehouse (combined rating of 4) into a Group A-3 assembly space (combined rating of 12) would be considered a substantial alteration.

Definition 4: Reoccupancy of a building that has been substantially vacant for more than 24 months in occupancies other than Group R, Division 3

The intent of this provision is to ensure that buildings with low or minimal usage are properly retrofitted when they become more fully occupied. A typical example is a multistory mixed use building with a business on the first floor and vacant second and third floors. An owner who wishes to reoccupy these upper floors will be required to comply with the substantial alteration requirements of SBC Section 3404.9.

Definition 5: A significant increase in the occupant load of an unreinforced masonry building

Substantial alteration requirements are necessary when an unreinforced masonry building is changed to a use that will have a significantly higher occupant load, based on SBC Section 1004.

DEALING WITH SUBSTANTIAL ALTERATIONS

The intent of SBC Section 3404.9 is to provide improved structural and fire life safety to a building that undergoes a substantial alteration. The extent of the improvements required is based on the size and scope of work and the relative hazard that exists. The ability of the design team to assess these two items and present proposals that appropriately address the hazards is critical to ensuring a successful resolution to this key SBC requirement.

When a project has been defined as a substantial alteration, SBC Section 3404.9 requires that the project be made to conform with the requirements of Section 403 (high rise buildings, when applicable), special requirements for the Fire District found in Chapter 4, when applicable, Section 716 (protection of ducts and air-transfer openings), Chapter 8 (interior finishes), Section 903 (automatic sprinkler systems), Chapter 10 (means of egress) and Chapter 17 (special inspec-

tion). Fire alarms shall be provided as required by the *International Fire Code*. SBC Section 3404.9.2 requires evaluation and mitigation of seismic deficiencies. See Director's Rule 5-2004 for specific regulations for unreinforced masonry chimneys.

It is incumbent upon the design professionals to provide a critical evaluation of the adequacy of the life safety and seismic systems in the building. The basis for evaluation shall be the above-mentioned sections of the SBC, or for seismic systems, either Chapter 16 or an approved alternate standard. Director's Rule 7-2009 lists approved alternate standards. The evaluation must include a detailed and prioritized list of all items found to be deficient.

Ideally, all items found to be deficient will be corrected. However, in many cases it is recognized that to remedy all deficiencies will impose severe hardships on the building owner. The building code provides DPD with significant flexibility to resolve specific hardship issues. There are three methods by which the applicant may seek relief. SBC Section 104.9 allows DPD to modify the code where the applicant demonstrates that the specific code requirements are impractical. SBC Section 104.10 allows the applicant to identify design solutions which will provide equivalent protection. SBC Section 3401.3 allows the building official to waive code requirements in some circumstances.

The determination to modify or waive a code requirement is dependent on the ability of the design team to provide adequate justification for a proposal. Justification may include *cost benefit analysis, functional issues, total costs, testing, risk analysis, professional judgment, and redundancies*. The more comprehensive and well-justified the applicant's analysis of the issues involved in the project, the more likely the applicant will succeed in obtaining approval for the proposal.

GETTING CONCEPT APPROVAL VIA A PRESUBMITTAL CONFERENCE

For many applicants it is desirable to attend a pre-submittal conference with the building official to get *concept approval* of significant code issues prior to applying for a building permit. Concept approval can greatly facilitate the plan review process and can be in the form of applicant-generated minutes which will be reviewed and approved by the building official.

The pre-submittal conference is an opportunity to present your proposals and appropriate justifications, determine if your project is a substantial alteration,

and resolve code issues. See CAM 318, *Building Code Presubmittal/Code Interpretation Conferences*, for more information about pre-submittal conferences. To schedule a presubmittal conference, call the DPD Applicant Services Center at (206) 684-8850.

OTHER CONSIDERATIONS

If tenants are displaced during a substantial alteration project, refer to CAM 123, *Seattle's Tenant Relocation Assistance Ordinance* for information about tenant relocation.

Access to Information

Links to electronic versions of DPD **Client Assistance Memos (CAMs)**, **Director's Rules**, and the **Seattle Municipal Code** are available on the "Publications" and "Codes" pages of our website at www.seattle.gov/dpd. Paper copies of these documents, as well as additional regulations, are available from our Public Resource Center, located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave. in downtown Seattle, (206) 684-8467.