



AMERICAN WOOD COUNCIL

July 14, 2015

Honorable Tom Bates, Mayor
City of Berkeley
2180 Milvia Street, 5th Floor
Berkeley, CA 94704

RE: Public Hearing, Item 48

Dear Mayor Bates and Members of the City Council:

Our hearts go out to the victims including their families and friends affected by the recent balcony collapse. We suspect this incident has also placed a huge burden on City of Berkeley staff working to address the many challenges and issues raised.

The American Wood Council is a technical organization staffed by former building officials and engineers, very knowledgeable on building codes and the structural, fire, energy and sustainability performance of wood products. We publish both the National Design Specification (NDS) and the Special Design Provisions for Wind and Seismic (SDPWS) that are adopted by reference forming the basis for wood structural design in the International Building Code and the California Building Code.

We are supportive of the initial steps outlined in Recommendations 2 and 3 for inspections and maintenance. However, we believe you should hold off on recommendations 1 and 4, amending the Berkeley Building Code, until there is time for additional stakeholder input and deliberation through an open process.

There should also be a clear discussion and understanding of any unintended consequences of staff proposals that may affect structural safety, fire safety, energy performance and sustainable construction practices before the City considers adoption of changes to its building code.

We observed that the analysis found in the Staff Report as well as the Memorandum dated June 23 does not address what may be a contributing factor in the collapse: unexpected water intrusion. Bulk water intrusion into assemblies must either be prevented or managed. The report does not make any positive recommendations about how to keep water from getting into these assemblies. At a minimum the staff report should examine and identify an inspection program, to be conducted by staff, third party, or both, with a goal to make sure water is properly managed in these critical structural assemblies.

We have included two attachments for your consideration: The first outlines three administrative areas in which action can be taken today without a need for amendment to the current building code, as follows:

1. Regular and special inspections
2. Ventilation
3. Minimum design loads

The second attachment is the building permit procedure for condominium projects, from the City of Seattle, that requires specific review of plans and documentation of third party inspections of the building envelope to prevent water intrusion.

We hope this information is helpful and look forward to working with City staff and other interested parties in considering and evaluating potential code changes the City would like to consider.

Sincerely,



Dennis Richardson PE, CBO, CASp
West Coast Manager of Codes and Standards

C: Mr. Eric Angstadt, Director, Planning and Development Department
Mr. Alex Roshal, Manager, Building and Safety
City Clerk's Office (for distribution to the City Council)

Attachments

July 14, 2015, Attachment 1:

Actions that do not require building code amendments:

1. The Building Official can consider requiring a specific inspection signoff for the exterior wall envelope construction (including balconies, stairs and platforms) for the required details as outlined in Section 107.2.4 of the California Building Code (CBC). This language is sufficiently broad enough to include the intersection and incorporation of balcony, deck, and platform weather protection. CBC Section 110.3.8 of "Required Inspections" gives the Building Official specific current authority to do this. Additional training for the inspectors assigned to this task may be appropriate. The Building Official can require special inspections for proprietary installations of impervious moisture barrier products required by CBC Section 2304.11.2. This is specifically allowed under Section 1705.1.1 special cases, item three, for installations that follow manufacturer's requirements.
2. The Building Official can consider utilization of CBC Section 1203.2 for the ventilation of individual spaces between structural members in enclosed balcony floor construction. Section 104.1 of the CBC gives the Building Official specific authority to consider and implement interpretations, policies and procedures consistent with the intent of the code.
3. The Building Official can consider utilization of CBC table 1607.1, item number 34 to require a minimum design live load no less than 60 pounds per square foot for the construction of balcony, decks and platforms associated with residential occupancies located above the first story. This is not included in the proposed code amendments but will at least require at minimum the same (not reduced) design live load for residential occupancies as in previous California Building Codes based on the 1997 Uniform Building Code.

Engrossed House Bill 1848
Design Document and Inspection Requirements for Building Enclosures (RCW 64.55)

In the 2005 Legislative Session, the Washington State Legislature passed Engrossed House Bill (EHB) 1848, an act “relating to managing construction defect disputes involving multiunit residential buildings”. This bill created Section 64.55 in the Revised Code of Washington (RCW), which contains several sections that affect building permit application submittals, and requires additional third-party inspections for weatherproofing of the building envelope. These new requirements take effect August 1, 2005, at which time DPD will begin to enforce them. The rest of this article will cover highlights of RCW 64.55, as they affect submittal and inspection requirements. Text in italics are quotes from the RCW, but these only represent excerpts from the regulations. Applicants who may be affected by these requirements should review the complete text of the regulations, which may be found through the following link: <http://apps.leg.wa.gov/RCW/default.aspx?cite=64.55&full=true>.

I. Which projects are affected by RCW 64.55/EHB 1848?

The regulations in RCW 64.55 apply to multiunit residential buildings, as defined below. While there are other types of projects which this section of the RCW addresses (for example, condominium conversions), as far as construction permitting is concerned, the primary issues revolve around construction or rehabilitation of multiunit residential buildings. “Rehabilitation” is defined in RCW 64.55 as construction work on the building enclosure that costs more than five percent (5%) of the assessed value of the building (see Section IIA below for further discussion).

According to the language in RCW 64.55, these provisions apply if a permit is **issued** on or after August 1. This means building permit applications already submitted to DPD that are not issued before August 1 will have to meet the requirements in RCW 64.55.

A multiunit residential building is defined in RCW 64.55 as “*A building containing more than two attached dwelling units, including a building containing nonresidential units if the building also contains more than two attached dwelling units.*” It does not include hotels, motels, dormitories, care facilities, or floating homes. It also does not include “*A building that contains attached dwelling units that are each located on a single platted lot.*” Townhouse developments that have approved and recorded unit lot subdivisions fall within this last definition.

RCW 64.55 also allows a developer to elect to treat a development with duplexes and single-family residences as a multiunit residential building.

II. What documents are required to be submitted prior to issuance of the building permit?

RCW 64.55 requires the plans, details, and statements listed below to be submitted to DPD before the building permit will be issued. However, DPD will not be performing a plan review to determine if the details are adequate. RCW 64.55 only requires DPD to collect and archive the information.

A. Building Enclosure Design Documents

RCW 64.55 requires all applicants for multiunit residential building construction or rehabilitation

in the City of Seattle to submit "building enclosure design documents" to DPD. "Building enclosure design documents" are defined as

"...plans, details, and specifications for the building enclosure that have been stamped by a licensed engineer or architect. The building enclosure design documents shall include details and specifications that are appropriate for the building in the professional judgment of the architect or engineer which prepared the same to waterproof, weatherproof, and otherwise protect the building or its components from water or moisture intrusion, including details of flashing, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane, and details around openings."

The "building enclosure" is any part or element of the building that separates the exterior environment from the internal environment, whether it is above or below grade, intended to protect the building from water or moisture intrusion. These elements include (but are not limited to) roofs, walls, balcony support columns, decks, windows, doors, vents, and other penetrations through exterior walls.

Note that "rehabilitative construction" is defined as costing more than five percent of the assessed value of the building. If a project applicant does not want to submit the building enclosure design documents to DPD on the basis that it is not "rehabilitative construction", RCW 64.55 requires the applicant to submit a letter to DPD certifying that the cost is 5% or less of the assessed value of the building.

Note also that these design details must be submitted under the seal and signature of a registered design professional (architect or engineer). Seattle's building code requires a registered design professional submitting plans to DPD be licensed in the State of Washington.

Revisions to the building enclosure design documents that *"alter the manner in which the building or its components is waterproofed, weatherproofed, and otherwise protected from water or moisture intrusion shall be stamped by the architect or engineer"*. The revised documents must be submitted to DPD and to the building enclosure inspector discussed in Section III below. The revisions *"may be provided through individual updates, cumulative updates, or as-built updates."*

B. Design Architect or Engineer Statement

In addition to the details specified above, the building enclosure design documents must contain a statement from the design architect or engineer who stamped the drawings, substantially stating the following:

"The undersigned has provided building enclosure documents that in my professional judgment are appropriate to satisfy the requirements of RCW 64.55.005 through 64.55.090."

C. Exemption from Document Submittal Requirements

RCW 64.55 does provide an exemption from the submittal requirements, in the case of *"a building in which all of the dwelling units are held under one ownership and is subject to a recorded*

irrevocable sale prohibition covenant.” A “sale prohibition covenant” is defined in RCW 64.55 as “*a recorded covenant that prohibits the sale or other disposition of individual dwelling units as or as part of a condominium for five years or more from the date of first occupancy....*” A copy of the covenant that has been recorded with the King County Assessor’s office must be submitted to DPD at the time a construction permit application is received in order for the requirements for the building enclosure design documents and the design professional statement to be exempted. The wording for the covenant must substantially conform to wording provided in the text of RCW 64.55.

D. Townhouse Developments with Unit Lot Subdivisions

As noted above, townhouse developments that have approved and recorded unit lot subdivision permits are exempt from the provisions of RCW 64.55. However, for townhouse developments where the unit lot subdivision permit has not been approved and recorded, DPD will not issue a permit for construction unless one of the following three options is followed:

1. Comply with RCW 64.55 by submitting the building enclosure documentation described above.
2. Demonstrate RCW 64.55 does not apply by submitting an approved and recorded unit lot subdivision, prior to issuance of the construction permit.
3. Demonstrate RCW 64.55 does not apply by submitting a recorded sale prohibition covenant as described above. Note that most townhouse developments with a unit lot subdivision are not condominiums, so the covenant will not prohibit the sale of most individual townhouses.

III. What inspections will be required?

RCW 64.55 requires all multiunit residential buildings to have the building enclosure inspected by a “qualified inspector” during construction, whether the building is new or being rehabilitated. DPD will not verify the qualifications of the inspector, nor will we determine whether the building enclosure inspection is adequate or appropriate. However, the certificate of occupancy for the building will not be issued until the proper certifications have been received by DPD (see below).

A. Qualified Building Enclosure Inspector

According to RCW 64.55, a qualified building enclosure inspector:

- (a) Must be a person with substantial and verifiable training and experience in building enclosure design and construction;*
- (b) Shall be free from improper interference or influence relating to the inspections;*
and
- (c) May not be an employee, officer, or director of, nor have any pecuniary interest in, the declarant, developer, association, or any party providing services or materials for the project, or any of their respective affiliates, except that the qualified inspector may be the architect or engineer who approved the building enclosure design documents or the architect or engineer of record.*

B. Scope of Inspection

RCW 64.55 requires the following tests and inspections to be conducted by the building enclosure inspector:

(a) Water penetration resistance testing of a representative sample of windows and window installations. Such tests shall be conducted according to industry standards. Where appropriate, tests shall be conducted with an induced air pressure difference across the window and window installation. Additional testing is not required if the same assembly has previously been tested in situ within the previous two years in the project under construction by the builder, by another member of the construction team such as an architect or engineer, or by an independent testing laboratory; and

(b) An independent periodic review of the building enclosure during the course of construction or rehabilitative construction to ascertain whether the multiunit residential building has been constructed, or the rehabilitative construction has been performed, in substantial compliance with the building enclosure design documents.

Item (a) above is not required for rehabilitation projects, if windows and cladding are not altered.

C. Certification

Once the above tests and inspections are completed, the building enclosure inspector must submit a signed letter to DPD, certifying that the building enclosure has been inspected during the construction of the project, and that it has been constructed in substantial compliance with the building enclosure design documents, including any revisions.

In summary, effective August 1, 2005, DPD will not issue a permit for a building meeting the definition of a multiunit residential building until the building enclosure design documents and the design professional statement have been submitted. A certificate of occupancy will not be issued until the building enclosure inspector certification letter has been submitted. DPD will not be reviewing the design documents, the qualifications of the building enclosure inspector, nor the reports of the building enclosure inspector.

If you have further questions, please contact Building Code Technical Backup at (206)684-4630 from 1:00 to 4:15 p.m., Monday-Friday.