

**BUILDING SAFETY CODE BOARD OF APPEALS  
MONDAY, JUNE 5, 1995, 3:00 pm - COMMUNITY DEVELOPMENT SERVICES  
CONFERENCE ROOM, 115 WEST MAIN STREET, URBANA, IL**

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**BOARD MEMBERS PRESENT:** Keith Erickson, Carter Doyle,  
Jon Reichard, Ed Schaller,  
William Kubitz

**MEMBERS ABSENT:** John Maloney, J. Dan Stirewalt

**STAFF PRESENT:** Craig Grant, Steve Cochran,  
Kathryn Coffey

**OTHERS PRESENT:** Bill Ohlendorf and Walter Marble, Marco  
Construction; Vincent Quevedo,  
Consultant, City of Bloomington, IL

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CALL TO ORDER

The meeting was called to order by Chairperson Doyle at 3:02 pm.

APPROVAL OF MINUTES

Mr. Erickson moved to accept the minutes of the February 14, 1990 meeting. Motion was seconded and passed by unanimous vote.

OLD BUSINESS

The hearing for the approval of the Bylaws is postponed and will be rescheduled pending review of revisions by Jack Waaler, City Attorney.

NEW BUSINESS

**Case #BSCBA-95-A-1; 1004-1008 Smith Lane (Rainbow Apartments); PI #91-21-15-326-006(A-C); Little River Development Company, Owner**

Craig Grant presented staff's position on this appeal case to determine whether the as-built floor/ceiling assemblies at the subject properties [1004 and 1006 Smith Lane] are equivalent to the requirements of the 1987 BOCA National Building Code, as adopted by the City of Urbana, with regard to the fire resistance rating. The Applicant also seeks a variance should the appeal be denied.

The Board received detailed background and exhibits for the case prior to the hearing. Mr. Grant briefly described the development site indicating that there are fire walls which subdivide the structure into three separate buildings of eight units, each under the provisions of the Building Code. The building's Construction Type classification is 5B (unprotected wood frame) and its Use Group designation is R-2.

The project was reviewed under the provisions of the 1987 BOCA National Building Code, and approved by the City of Urbana, which allowed the one-hour fire rated floor/ceiling assembly to be constructed between dwelling units. The specific assemblies listed which comply with the requirements of the 1987 BOCA National Building Code were GA File No. FC5517, UL No. L522, and NER-200 E-7.

The main issue before the board was the letter written by Mr. Grant (dated April 24, 1995) in response to a faxed information request from Mr. Marble to Steve Cochran, City of Urbana Building Inspector. In that request, Mr. Marble asks for clarification and 1990 BOCA code section references from Mr. Grant, for the requirements applicable to the floor/ceiling assembly at the subject property.

Mr. Marble's request refers to the construction of the floor/ceiling assembly between the first floor level and that of the second floor which was noted to not have two layers of drywall on the underside of the assembly. The assembly consisted of one layer of 5/8" Type X gypsum wall board.

The buildings 1004 and 1006 Smith Lane had been constructed with a floor/ceiling assembly which was comprised of the following materials beginning at the top and proceeding to the bottom:

- 1) floor covering (ie, carpet or vinyl)
- 2) 1 " light weight concrete
- 3) 5/8" T & G subfloor
- 4) TJI floor trusses, 19.2" OC
- 5) 5/8" Type X gypsum board

The contractor chose not to utilize the parallel cord truss system and instead selected the optional TJI wooden joist as an authorized alternate floor framing system.

At a site inspection, Mr. Cochran had informed the contractor that the as-built assembly referenced above, did not meet the requirements of the building code.

In his presentation, Mr. Grant provided a brief summary of the seven approved assemblies for the Board. Mr. Grant determined that the as-built assembly did not meet the criteria for one of seven assemblies which have been approved to provide a one-hour rated floor/ceiling assembly referenced in the NER-200 evaluation report that was referenced on the plans. This is the standard for assemblies that Trus Joist MacMillan, manufacturer of the wooden I-beam, uses and has tested to obtain a one-hour fire resistance rating classification for each of these seven assemblies.

Mr. Grant's determination is also based upon a letter from Trus Joist MacMillan, who tested a similar design system. The results of that test yielded that the substituted floor/ceiling system comparable to what was tested was found to have a fire resistance rating of 48 minutes, not one-hour as the code requires.

The issue that becomes important is the rating of the as-built assembly (noted above) and what is required in the 1987 BOCA building code for floor/ceiling separation between dwelling units.

Staff realizes that the repairs which would be required to be made to the occupied building may need to be completed over time in order to reasonably accommodate the current residents. Recommendation was made that the Applicant be given a reasonable time period to complete the repairs needed at 1004 Smith Lane, and repairs in Buildings 1006 and 1008 be corrected prior to occupancy.

Mr. Vincent Quevedo, retired building safety director, City of Bloomington, and consultant for this case, gave testimony in support of the Applicant's appeal. Mr. Quevedo's expertise as consultant for this case, is through his experience as an eight year member of the code interpretations committee of BOCA, and a 12 year member of the research and evaluation committee of BOCA. The latter committee dealt with NER research and evaluation.

In his lengthy commentary, Mr. Quevedo argued the merits of this case on the inherent nature of the elements of responsibility, accountability and guarantee for code compliance. In his opinion, he believes there was an honest mistake by all with the assumption that the plans and specifications were complete and in code compliance. In addition, he feels that the issue under consideration was not self-imposed, nor was there an intent to circumvent the code.

Mr. Marble, contractor for the project, responded by maintaining that they complied with the plans as drawn by the architect and approved for permit issuance by the City of Urbana. He also states that their appeal is based upon implied compliance on their part, contending that the plans were reviewed and approved by the City of Urbana, a building permit issued, inspections made by the City during various stages of the building's construction, and a temporary Certificate of Occupancy issued for the building at 1004 Smith Lane with a Performance Bond.

Mr. Bill Ohlendorf, superintendent for the project, in his presentation, provided each Board member with a summary of chronological events leading to the floor/ceiling assembly investigation. His responses referenced certain statements of Mr. Grant's letter, intended to clear up some of the events leading to the investigation. The following points relevant to the appeal were included in the summary:

- At no time did he as construction manager of the project intend to not follow the plans and specifications, and to not comply with the building codes of the City of Urbana.
- In reference to the phone conversation between the building inspector and the architect, Mr. Ohlendorf stated that Mr. Marble contends that he was never informed by the architect as to what was required and the components to be used based on the NER 200 report.

- That reports such as the NER 200 are available to architects and suppliers if requested, but are not readily available to building contractors. It is not common practice in the construction industry to list report numbers and let the contractor pick and choose what he wants to build. It was his understanding that the Building Safety Department requested an interpretation from the architect as to what materials were going to be used for the first floor assembly.

In conclusion, all parties presented on behalf of the Applicant contended that the code requirements were met and that structural/fire-resistance integrity is inherent in the system as-built. To implement any modification to the system in that the buildings are fully completed and one is occupied, would cause undue hardship, would be impractical, and constitute unreasonableness beyond the intent of the code.

After careful review of staff's findings in this case, and upon consideration all the evidence and testimony presented by the Applicant at the meeting, a motion was made by member Kubitz and seconded by member Doyle to deny the appeal that the as-built floor/ceiling assemblies at the subject properties do not meet the requirements of the 1987 BOCA National Building Code with regard to fire resistance rating. The motion for denial was approved unanimously.

The Board then considered the variance request for the as-built floor/ceiling assemblies in the occupied building at 1004 Smith Lane. Applicant maintains that implementation of a modification requirement would be an undue hardship, impractical, and unreasonable beyond the intent of the Code. In addition, corrective measures could be made to the unoccupied buildings at 1006 and 1008.

#### MOTION

After discussion and considerations by Staff and the Applicant on issues relating to a reasonable solution for the variance, a motion was made by member Kubitz and seconded by member Reichard denying the variance by unanimous vote, determining that the as-built floor/ceiling assembly in 1004 Smith Lane, and in the unoccupied buildings at 1006 and 1004 Smith Lane does not meet the required equivalency criteria.

#### RECOMMENDATION

Following denial of the original variance, the Board unanimously agreed by motion from Chairman Doyle and seconded by Mr. Schaller to accept the recommendation by the Applicant to modify the as-built assemblies of Buildings 1004 and 1006 Smith Lane by adding blown in mineral wool to meet the equivalency requirement in compliance of the one-hour fire resistance rating, provided that the contractor satisfy the City in an acceptable method to add mineral wool to the floor/ceiling assembly in terms of density, thickness, etc., in acceptable terms of equivalency to a similar system.

ADJOURNMENT

The meeting was adjourned at 5:27 pm. by unanimous vote.

Respectfully submitted:

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Kathryn Wilson Coffey  
Staff Secretary

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Jon Reichard  
Board Secretary