

STATE BUILDING CODE INTERPRETATION NO. I-55-00

August 18, 2000

The following is offered in response to your request for a formal interpretation of Section 3405.1 of the BOCA National Building Code/1996 portion of the 1999 State Building Code.

Question: An existing Use Group M grocery store of 14,300 square feet is located in a 27,900 square foot strip mall of non-combustible construction built in the 1950's. The entire building is un-sprinklered and the grocery store has 8 inch concrete masonry unit walls separating it from the other mercantile establishments to either side. The grocery store wishes to expand to one side, incorporating an additional 5,000 square feet of space, thereby creating a single mercantile space of 19,300 square feet and two additional spaces (separate tenants) of 3,000 and 5,600 square feet each. Can this expansion of the grocery store be made without adding sprinklers to the building?

Answer: No. Although there is no change of use group contemplated, the work proposed is a change of occupancy that will result in a greater hazard to the public safety and is therefore prohibited by Sections 3405.1 and 3408.2.4. Although sprinklers were not required at the time of original construction of the strip mall, the code now requires a fire suppression system in any mercantile occupancy with a fire area that exceeds 12,000 square feet in area. The existing 8 inch CMU walls serve to separate the grocery store into a separate fire area from the other mercantile occupancies. Although it cannot be determined from the information given if the walls meet the requirements of Table 313.1.2 (2 hours); according to "Guidelines for Determining Fire Resistance Ratings of Building Elements", 8 inch CMU walls, depending on type, provide from 12 minutes to 4 hours of fire resistance, with 42% of the walls evaluated rated at 2 hours or more and 75% of the walls rated at 1 hour or more. Removing the existing 8 inch CMU wall to increase the fire area of the grocery store would initiate the requirement for fire suppression in a fire area greater than 12,000 square feet.