

### **FIRE PROTECTION HISTORY-PART 243: 1919 (FIRE RESISTIVE BUILDING CONSTRUCTION/W. C. ROBINSON)**

By Richard Schulte

The twenty-third Annual Meeting of the National Fire Protection Association was held in Ottawa, Canada in May, 1919. Among the topics discussed at this meeting were the requirements for "Grade B" office buildings. The following are comments on the proposal for the provisions for "Grade B" office buildings submitted by W. C. Robinson:

***"Written Discussion by Mr. W. C. Robinson.  
(Vice-President and Chief Engineer, Underwriters' Laboratories.)"***

*(a) For a building equipped so exclusively for executive and clerical purposes, I am of the opinion that the four-hour fire test for the construction is more severe than can be justified from the hazards, even though the offices be fairly large. It seems to me that certainly for the floors a two-hour classification would be ample, requiring, as you know, 25 per cent more than this under the test. For the columns and any important trusses, a three-hour fire test would, in all probability, be sufficient.*

*(b) If stores are to be permitted on the first floor, the subdividing partitions or walls between such stores should comply with at least the two and preferably the three-hour fire test.*

*(c) The four-hour classifications appear in several places in the report, notably in the definition at the beginning and under "Columns" under the Section "Piers."*

*(d) Under "Thickness of Walls," I note that the exterior fire window openings are specified at 45 square feet maximum area and openings for fire walls at 80 square feet. As you know, our present practice is to approve windows and doors somewhat larger than this. If it was the judgment of your Committee that windows and doors should conform to the size now given, I can see no particular objection. At the same time, it is possible to make larger windows and doors which will give a satisfactory account of themselves, and it may have been that the present practice as to size was lost sight of.*

(e) Under "Roof Structures and Coverings," it would seem to me that *the Class B roof covering could be safely permitted on buildings of this type where the fire exposures to the buildings are moderate.* For that matter, speaking simply from the exposure viewpoint, Class C could also be permitted, but as most, if not all, of the Class C roof coverings are inconsistent for a building of this type, we do not believe that they should be mentioned.

(f) *Stair, Elevator and Other Shafts.*— *In view of the fact that such enclosures must fail on two floors in order to permit the passage of fire, we are inclined to believe that the three-hour test specified could be safely changed to the two-hour, as is now specified for the enclosures for the lobbies leading to elevator shafts.*

(g) Under "Service Equipment."— *The requirement for automatic sprinklers for portions of buildings on grade or below grade, while probably a desirable one, would probably be rather difficult to enforce as a result of any experience we have had in the past. If the fuel in such portions of a building is likely to cause more severe fire exposure than the office portions are designed to resist, then the structural members in such portions should be made to withstand a higher fire test and proper design features relating to the isolation of such fires provided. If this is done, the sprinklers are not so essential, and I am afraid that their requirement will usually be neglected and that for one reason or another the sprinklers will not be employed.*

(Signed) W. C. Robinson."

Mr. Robinson's comments clearly indicate that there was a recognition of the relationship between occupancy and fire severity in 1919.

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**Source:** "Proceedings of the Twenty-Third Annual [NFPA] Meeting", Ottawa, Canada, 1919.

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