

# Highlights of New Building Code for New York City as Related to Theaters

By J. KARL JUSTIN

THE NEW Building Code for the City of New York which has been in preparation for several years has now been approved by the City Council and been signed into law by Mayor John V. Lindsay. It supersedes the outdated code which was enacted in 1938 and had not been substantially altered since then. An earlier reference to proposals for this new Building Code appeared in the *Journal* for February 1966, p. 121.

The new code is based on a draft originally developed at the City's request by Brooklyn Polytechnic Institute under the direction of William Correale, Technical Director. The Institute's efforts were supported by individual consultants in various areas. Ben Schlanger, AIA, and a well-known member of SMPTE, was primarily responsible for the portions dealing with theaters and places of assembly. The success of his work stands witness to the advantage of the City's approach.

Because this code affects the design and construction of new motion-picture theaters, some of the highlights of the new requirements compared with those of the old code are here outlined.

The most important section of the code with relation to specific aspects of theater design is Article 8 called "Places of Assembly." Eighteen other articles deal with Administration and Enforcement; Definition of Terms; Occupancy and Construction Classifications; Building Limitations; Fire Protection Construction Requirements; Means of Egress (not including places of assembly); Special Uses and Occupancies; Loads; Structural Work; Foundations; Light, Heat, Ventilation and Noise Control; Mechanical, Ventilation, Air Conditioning and Refrigeration Systems; Heating and Combustion Equipment; Chimneys and Gas Vents; Plumbing and Gas Piping; Fire Alarm, Detection and Extinguishing Equipment; Safety of Public and Property during Construction Operations; and Elevators and Conveyors.

The new code recognizes basically four groups of occupancies or places of assembly. Category F-1 includes indoor places of assembly where persons assembled generally comprise a seated or otherwise passive audience to a performance or presentation. Category F-2 includes all outdoor structures and spaces. Category F-3 covers standing or walking spectators and Category F-4 involves buildings and spaces in which the persons are assembled for dancing, eating, drinking, or combinations thereof.

It is especially noteworthy that the new code makes a clear distinction in the F-1 category between buildings and spaces in which scenery and scenic elements are used on the one hand, and buildings and spaces in which scenery and scenic elements are *not* used on the other hand. The earlier code did not make this separation except for smaller theaters and this made for unnecessary restrictions.

Also under the new code, corollary to this distinction, theaters without scenery or scenic elements are permitted greater travel distances to exits within the assembly space and somewhat greater aisle, stair and ramp loadings.

As a matter of interest, the new code recognizes the growing trend in recent years to depart from the traditional proscenium stage type of theaters and to experiment with and develop other stage forms, such as open, thrust, arena, and caliper stages; all with substantially less physical separation between audience

and stage areas. Use of the new stage forms in theater design has been notably successful in other parts of this country and Europe, however, it has been essentially absent from the New York scene because of the "fire curtain" requirement of the old building code. That is, the old code recognized a single type of theater form only: the proscenium stage; and all of the code's restrictions were written accordingly. The implications of this modification will no doubt be the subject of considerable creative speculation with respect to motion-picture presentation.

Of equal, or perhaps even greater, importance is the flexibility in arrangement of seating made possible by the new code. New spacing provisions are intended to permit continental seating as well as conventional aisle arrangement or possibly other arrangements or combinations. Attached seats are necessary in high-density places of assembly to preserve aisles and unobstructed means of egress. However, in the new code, aisle width is governed by the number of persons using it as an exit and the primary or secondary travel distance from a seat to an exit determines aisle location. There are also penalties to encourage straight paths of travel to an exit thus avoiding the psychological handicap of choice in the problem of crowding at points where directional changes occur. The concept of primary and secondary travel distances serves to assure that exit openings will be widely dispersed, to insure the use of cross aisles and to discourage the location of seats near walls without an intervening aisle.

In addition to the foregoing, stepped aisles are now possible in the orchestra. This is presumably due to the sight line requirements of thrust stage and similar new live performance arrangements. This again, however, could be the subject of creative reflection in relation to motion-picture theaters.

A very important effect of the liberalization of seating arrangements and orchestra stepping is the potential for more efficient utilization of real estate in development of new theaters.

The new code still prohibits inflammable (nitrate) film except under conditions specified in special permits when issued by the fire department. Otherwise, requirements for motion-picture projection booths are more lenient in recognition of the current prevailing use of safety base film. Since it was considered that the combustibility of safety film is approximately the same as that of paper in the same form, no fire-protective requirements other than the use of approved noncombustible construction materials were considered necessary. Only a single exit from the projection room is required. Location of projection equipment is optional but 2-ft passageways around all such equipment and projectors are required; and lamphouses emitting harmful gases still are required to be vented. Fire protective shutters have been eliminated as has the requirement for glass in portholes. The advisability of the use of glass therefore depends now on acoustical considerations versus the value of attendant light source conservation, rather than code requirement. Finally, the sizes of projection and observation portholes are not limited.

There is little question that these enlightened liberalizations of the New York City Building Code will have considerable importance in the construction of motion-picture theaters, particularly considering new approaches and trends. It would be of considerable value to the profession if experiences with the new code, particularly as applied to new methods, were reported on in this publication.

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