



SUBCHAPTER 5 FIRE PROTECTION CONSTRUCTION REQUIREMENTS

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***“C26” omitted from section numbers in this column.*

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ARTICLE 1 GENERAL

§[C26-500.1] **27-318 Scope.** - The provisions of this subchapter shall govern the use and assembly of all materials of construction with respect to fire resistance, flame spread resistance, and smoke and toxic fume limitation. The provisions shall also control the location and function of integral structural and fire protective elements of buildings, and provide for the installation of safeguards against the spread of fire within buildings and between buildings.

§[C26-500.2] **27-319 Standards.** - The provisions of the reference standard RS-5 shall be a part of this subchapter.

§[C26-500.3] **27-320 Definitions.** - For definitions to be used in the interpretation of this subchapter, see subchapter two of this chapter.

§[C26-500.4] **27-321 Use of combustibles.** - The use of combustible component materials in units or assemblies shall be limited to construction group II, except as hereinafter expressly permitted in construction group I. Combustible aggregates may be integrated with other materials to form a noncombustible material provided that the entire mixture, in the form in which it is to be used in construction, meets the requirement of this code for noncombustibility.

ARTICLE 2 FIRE PROTECTION TEST PROCEDURES

§[C26-501.1] **27-322 Tests.** - Samples of all materials or assemblies of materials required by this code to have a fire-resistance rating, fire-protection rating, or flame spread rating, or required to be noncombustible, fire-retardant treated, or slow burning, shall be tested under the applicable test procedures specified herein, in accordance with the acceptance requirements of section 27-131 of article seven of subchapter one of this chapter. The fire-resistance rating of materials and assemblies listed in reference standard RS 5-1 may be used to determine conformance with the fire resistance requirements of this code. In addition to the performance results, test reports shall give all technical data pertaining to the nature of the constituent materials, such as the physical properties, chemical composition and properties, coefficient of expansion, thicknesses of materials, etc. Except as listed in reference standard RS 5-1, any assembly using a component having a structural base of noncombustible material covered with an integrally manufactured combustible surfacing material, shall be approved for fire-resistance rating.

ARTICLE 3 FIRE-RESISTANCE REQUIREMENTS

§[C26-502.1] **27-323 Requirements for structural members and assemblies.** - The fire-resistance rating of construction assemblies and the protection of structural members shall comply with the requirements of table 3-4, based on the test procedures of reference standard RS 5-2, and their materials or combinations of materials shall be in accordance with the specifications of materials used in the test.

*§[C26-502.2] **27-324 Protection of structural members.** - Columns, girders, trusses, beams, lintels, etc. that are required to be fire protected, and that support only one floor or a roof, and/or a non-bearing wall not more than one story high, shall be individually encased on all sides with materials having the required fire-resistance rating; or shall be protected by a ceiling as specified in section 27-327 of this article having the required fire-resistance rating; or shall be protected by a combination of both a ceiling and individual encasement which, together, provide the required fire-resistance rating. Columns, girders, trusses, beams, lintels, etc. that are required to be fire protected, and that support more than one floor or support a bearing wall or wall more than one story high, shall be individually encased on all sides for their entire length or height with materials having the required fire-resistance rating. Trusses that support only two stories or one story and a roof may be fire protected by an envelope that encompasses the entire truss with materials of the required fire-resistance rating.

(a) **Embedments and enclosures.** - Pipes, wires, conduits, ducts, or other service facilities shall not be embedded in the required fire protection of a structural member that is required to be individually encased; except that pipes, wires, and conduits may be installed in the space between the required fire protection and the structural member protected, provided that where such facilities pierce the required fire protection, the area of the penetrations does not exceed two percent of the area of the fire protection on any one face, the penetrations are closed off with close-fitting metal escutcheons or plates and the concealed space shall be firestopped at each story in accordance with the provisions of section 27-345 of article five of this subchapter.

(b) **Impact protection.** - Where the fire protective covering of a structural member is subject to impact damage from moving vehicles, the handling of merchandise, or other activity, the fire protective covering shall be protected by corner guards or by a substantial jacket of metal or other noncombustible material, to a height adequate to provide full protection. Where applicable, such protection shall be designed in accordance with the requirements of section 27-558 of article three of subchapter nine of this chapter.

(c) **Structural members in cavity walls.** - Where structural members occur within exterior cavity walls,

portions of such structural members facing the exterior need not be individually fire protected if the outer width of the cavity wall provides the required fire-resistance rating and is located not more than two and one-half inches from such structural members, and if all surfaces of the structural members are fire protected from the interior of the building by materials having the required fire-resistance rating.

(d) Prestressing steel. - Minimum covering of prestressing steel shall comply with the requirements of reference standard RS 5-15.

(e) Exterior exposed structural members. - Structural members exposed to the outdoors on buildings that do not exceed two stories or thirty feet in height, which are required by table 3-4 to have a fire-resistance rating not exceeding one hour, need not be protected on any face of the member that has an exterior separation of thirty feet or more, provided the outdoor area within the thirty feet separation distance is not used for storage of materials, or for motor vehicle parking.

(f) Inspection of fire protection. - The installation of all required sprayed-on fire protection of structural members except those encased in concrete shall be subject to the controlled inspection requirements of section 27-132 of article seven of subchapter one of this code.

**** (g) Inspection of existing sprayed-on fire protection during alterations in office spaces and in occupancy group E spaces.** - In office spaces and spaces classified in occupancy group E, where an alteration exposes any required sprayed-on fire protection of structural members, or where, pursuant to an alteration persons are required to enter or access areas in which such sprayed-on fire protection is capable of being observed, the existing required spray-on fire protection shall be subject to the controlled inspection requirements of section 27-132 of this code. Such controlled inspection shall require a determination (i) that the existing sprayed-on fire protection as originally applied or installed complies with the applicable requirements of this code, including those for installation methods, materials, thickness and coverage; and (ii) that, since its original application, the integrity of the existing sprayed-on fire protection has not been compromised, damaged or displaced by the current alteration or by any prior alteration or other event.

**Local Law 34-1988.*

***Local Law 26-2004.*

§[C26-502.3] 27-325 Elevators. - Structural members or car frames for elevators located within shaft enclosures need not be fire protected.

§[C26-502.4] 27-326 Lintels. - Lintels over openings wider than four feet in masonry walls, other than in walls of masonry veneer on wood frame structures, shall be fire protected as required by section 27-324 of this article for structural members, when the full load over the opening is not relieved by a masonry arch of required strength. The members of an assembled metal lintel that support only outer face masonry that is securely bonded or anchored to backing need not be fire protected, provided that the inner members of the assembly support the full load imposed upon the lintel and are fire protected as required for structural members supporting masonry.

(a) Stone lintels. - The use of stone lintels on spans exceeding four feet shall not be permitted unless supplemented by fire protected structural members or masonry arches of the required strength to support the superimposed loads.

§[C26-502.5] 27-327 Ceilings. -

(a) Ceilings that contribute to the required fire-resistance rating of a floor or roof assembly shall be continuous between exterior walls, vertical fire divisions, fire separations, corridor partitions or any other partitions having at least the same fire resistance rating as the ceiling. All such fire-rated partitions shall be constructed as set forth in section 27-340 or subdivision (a) of section 27-341, as appropriate. The concealed space above such ceiling shall be firestopped into areas not exceeding three thousand square feet with materials listed in section 27-345 of this subchapter for the full height of the concealed space. Access to each such concealed space may be through one or more openings, not exceeding nine square feet and protected by self-closing opening protectives having the fire-protection rating required by table 5-3.

(1) Firestopping shall not be required where the structural members within the concealed space are individually protected with materials having the required fire-resistance rating, or where the ceiling is not an essential part of the fire-resistive assembly; nor shall firestopping be required where a concealed space is sprinklered in accordance with the construction requirements of subchapter seventeen of this chapter.

(b) Electrical and other openings in ceilings. - Ceilings required to have a fire-resistance rating may be pierced to accommodate noncombustible electric outlet boxes or recessed lighting fixtures if the aggregate area of such openings does not exceed sixteen square inches in each ninety square feet of ceiling area and the electrical outlet boxes or recessed lighting fixtures are constructed of steel at least .022 inches thick and sealed tightly at the ceiling. Noncombustible pipes, ducts, and additional or larger electrical or other service facilities may pierce ceilings that are required to have a fire-resistance rating only when the type of ceiling to be used has been tested with such types of facilities installed in place and the proportionate area of openings for such facilities to be installed in the ceiling does not exceed the proportionate area of such openings in the assembly tested, and provided no opening is larger than that in the assembly tested. Protection for such openings shall be the same as provided in the test. Duct openings installed in accordance with the foregoing shall be protected by fire dampers complying with the requirements of subchapter thirteen of this chapter.

§[C26-502.6] 27-328 Fire retardant treated wood. -

(a) Material. - Fire retardant treated wood shall be pressure treated with fire retardant chemicals in accordance with reference standards RS 5-3 and RS 5-4. Where used as a structural element or as furring, the material shall have a flame spread rating not greater than twenty-five when tested in accordance with reference standard RS 5-5 when exposed for a period of at least thirty minutes, with no evidence of significant progressive

combustion. Where used as interior finish or trim, the material shall have a flame spread rating that meets the requirements of section 27-348 of this subchapter for the location in which it is used. Subsequent to treatment, material two inches thick or less shall be air dried or kiln dried to an average moisture content of not more than nineteen percent.

(b) Label. - All fire-retardant treated wood shall bear the identification of a testing laboratory or producer certifying to the performance thereof, in accordance with the acceptance requirements of section 27-131 of article seven of subchapter one of this chapter.

(c) Application. - Fire-retardant treated wood may not be used where exposed to the weather or in interior spaces where the relative humidity is normally eighty percent or more. There shall be no fabrication of the material after treatment, such as cutting, shaping, or grooving for splines or ring connectors so as to expose untreated surfaces, except that the material may be cut to length, shaped, or grooved if the exposed surfaces or edges are tightly butted against other material that is noncombustible or that is fire retardant treated, so that no untreated wood is left exposed to danger of ignition. Holes may be bored or cut for plumbing or heating pipes and for electric outlets only if the openings are covered [*sic*] with tightly-fitted noncombustible escutcheons or cover plates. The allowable working stresses of the material shall be ninety percent of the allowable stresses for untreated lumber of like classification.

(d) Where permitted in construction group I- Fire-retardant treated wood may be used in buildings of construction group I in the following cases:

- (1) As permitted by table 3-4.
- (2) For interior non-bearing partitions that are not required to have a fire-resistance rating.
- (3) For interior furring and blocking of exterior walls, furring and blocking of interior walls and partitions, and framing of suspended ceilings provided the furring, blocking, and framing do not affect the integrity, or reduce the fire-resistance rating, of the construction element.
- (4) For interior finish and trim.

(e) Area increase. - Fire-retardant treated wood may be used in construction group II buildings in lieu of untreated wood for wall studs, bearing partition studs, columns, beams, girders, joists, rafters, trusses, sole and cap plates, subflooring and roof decks, and when so used, the area limitations of tables 4-1 and 4-2, for buildings of construction group II, may be increased by thirty-three and one-third percent.

§[C26-502.7] 27-329 Opening protectives. - Opening protectives, including frames, self-closing devices, and hardware, shall be classified as to fire-protection rating in accordance with the test procedures of reference standards RS 5-6 and RS 5-7, and shall be installed, maintained, and operated in accordance with the provisions of reference standard RS 5-8. All opening protectives shall bear the identification of a testing laboratory or agency certifying to the performance rating thereof, in accordance with the acceptance requirements of section 27-131 of subchapter one of this chapter.

§[C26-502.8] 27-330 Slow burning plastic. - Slow burning plastic shall be of a material that burns no faster than two and one-half inches per minute in sheets 0.060 in. thick when tested in accordance with reference standard RS 5-12 or that is not consumed in less than two minutes when tested in accordance with reference standard RS 5-13. The thickness of the plastic material shall be determined by method "B" of reference standard RS 5-14.

ARTICLE 4 PREVENTION OF EXTERIOR FIRE SPREAD

§[C26-503.1] 27-331 Exterior walls. - Exterior walls shall comply with the fire-resistance rating requirements of table 3-4. Where provisions of this code require a space or facility to be enclosed, the construction requirements for the enclosure shall not apply to any exterior wall that forms part of the enclosure.

(a) Openings in exterior walls. - In addition to the requirements of table 3-4 and subchapters six and eight of this chapter, exterior openings above the third floor level of a building or above a height of forty feet, except buildings in occupancy group J-3, open parking structures, and buildings of construction class II-D and II-E, shall have opening protectives when (1) any part of the opening is less than thirty feet distant in a direct unobstructed line not in the same plane, from an opening in another building or from a wood frame building or (2) any part of the opening is above and less than thirty feet in a direct unobstructed line from, any roof construction that has a fire-resistance rating of less than one hour or that has unprotected openings therein within this distance, whether the roof construction is on the same building or on an adjacent building.

(b) Opening protective required ratings. - In a building or space classified in occupancy group A, all opening protectives shall be three-quarter hour (class E) opening protectives meeting the requirements of reference standard RS 5-8. Such protectives shall be fixed self-closing or automatic. Alternatively, these openings may be protected with three-quarter hour (class F) protectives together with outside sprinklers installed in accordance with construction requirements of subchapter seventeen of this chapter. In such cases, there shall be an automatic dry pipe sprinkler head centered over each opening with the orifice directed against the opening. All opening protectives required by table 3-4 or by subdivision (a) above in buildings classified in other than occupancy group A shall be three-quarter hour (class F) openings.

(c) First story openings. - Opening protectives required by table 3-4 may be omitted in show windows or other openings on the lowest story of a building facing on a street or public space.

(d) Nonautomatic protectives. - Required opening protectives in exterior openings, if not self-closing or automatic, shall be kept closed by the occupants at all times when not required for light or ventilation under

the provisions of subchapter twelve of this chapter.

(e) Construction of unprotected openings. - Exterior windows and doors, including their frames and glazing, that are not required by this code to have a fire-protection rating, may be of combustible materials. Below a height of seventy-five feet, slow-burning plastic glazing may be used in windows. Glazing in balcony doors shall comply with the requirements of paragraph four of subdivision (g) of section 27-369 of article five of subchapter six of this chapter.

(f) Vertical separation of openings. - In buildings classified in occupancy groups A, B, C, D and E, exceeding three stories or forty feet in height, openings located vertically above one another in exterior walls except in stairway enclosures, shall be separated by a spandrel wall at least three feet high between the top of one opening and the bottom of the opening immediately above; or each such opening above the lower one shall be protected against fire by an opening protective; or a fire canopy of noncombustible materials, extending out at least two feet horizontally from the wall and at least as long as the width of the lower opening, shall be constructed between the two openings. Spandrels and fire canopies shall be constructed to provide at least the fire-resistance rating required for the exterior wall, but in no event less than one hour.

§[C26-503.2] 27-332 Party walls. - The construction, design, and fire-resistance rating of party walls shall be the same as required by this code for vertical fire divisions. Concealed spaces in cornices and eaves shall be fire-stopped as a continuation of the party wall.

§[C26-503.3] 27-333 Parapets on exterior walls. - Parapets shall be provided on all exterior walls of buildings of construction class II-A, II-B, or II-C that have roof construction of combustible materials.

(a) Exceptions. - A parapet need not be provided on the exterior wall of any building:

- (1) That is less than twenty-two feet high; or
- (2) Whose roof has a pitch of more than twenty degrees to the horizontal and whose overhang, fascia, cornice or gutter is of noncombustible construction, or if of combustible construction is separated from the roof and ceiling construction by construction having the fire-resistance rating required for the exterior wall of the building. Combustible members, excluding roof sheathing and its supporting members, if covered by a class A roof covering and complying with the restrictions as required by section 27-335 of this article, shall not extend through this construction, but shall have at least four inches of solid noncombustible material below, at the sides, and at the ends of such members; or
- (3) That is provided with a fire canopy at, or not more than two feet below the roof level, continuous around that portion of the wall that is without a parapet, constructed as required by subdivision (f) of section 27-

331 of this article.

(b) Construction. - Parapets required under this section shall be of materials and assembly having at least the fire-resistance rating of the wall below, and shall be at least two feet high.

§[C26-503.4] 27-334 Protective guards. - Buildings that are more than twenty-two feet in height and have roofs that are flatter than twenty degrees to the horizontal shall be provided with a parapet not less than three feet six inches high, or be provided with a three foot six inch high railing or fence, or a combination of a parapet and railing or fence which together are not less than three feet six inches high. Railings or fences may be located inward from the face of the exterior wall a distance not exceeding six feet, and shall be of a type that will prevent children from crawling through or over them. Where roofs are used for recreational purposes, wire fencing at least ten feet high shall be constructed. Where ball games are played on roofs the wire fencing shall be extended to provide an overhead closure. Except on buildings of classes II-D or II-E construction, railings or fences shall be of noncombustible material. Railings shall be constructed as required in section 27-558 of article three of subchapter nine of this chapter.

§[C26-503.5] 27-335 Exterior trim. - For the purposes of this section, exterior trim shall be defined as any material, other than door and window frames and sash, that is applied to exterior walls and which, if removed or destroyed, will not reduce the structural stability of the building enclosure, and which is installed so as not to reduce the required fire-resistance rating of the enclosure. Exterior trim shall include cornices, overhanging eaves, fascias, belt courses, pilasters, surrounds, gutters, leaders, half-timber work, shutters, trellises, etc.

(a) Combustible exterior trim:

- (1) May not be used on buildings required to be of construction group 1 except that slow-burning plastics or approved equivalent materials may be used up to a height of twenty-five feet, provided that such trim covers not more than five percent of the surface area of the building enclosure (openings not included), or not more than one thousand square feet.
- (2) May be used to a height of forty feet on buildings of construction class II-A, II-B, and II-C provided that such trim covers not more than ten percent of the surface area of the building enclosure (openings not included), projects not more than eight inches beyond the outside face of the building enclosure, and has an exterior separation of at least fifteen feet measured from the outermost surface of the trim.

EXCEPTION - Cornices, gutters, or overhanging roofs, when permitted, may project up to three feet beyond the outside face of the building enclosure if they are at least eight inches above the topmost opening, are

firestopped as required by section 27-345 of article five of this subchapter and either:

- a. have their combustible structural members protected by soffits and fascias of a material or assembly having at least a one hour fire-resistance rating, or
 - b. have all their combustible members separated from the roof and ceiling construction by construction having the fire-resistance rating required for the exterior wall, with at least four inches of solid noncombustible material below, at the sides, and at the ends of such members;
- (3) May be used to an unlimited extent in buildings of construction classes II-D and II-E on exterior walls that are not required to have a fire-resistance rating.

***§27-335.1 Acoustical and thermal insulation; use in noncombustible construction. -**

(a) Notwithstanding any provision of this code to the contrary, acoustical or thermal insulation, which is not noncombustible, may be used where noncombustible construction is required if:

(1) it satisfactorily passes a test for determining noncombustibility of elementary materials, based on the test procedures of A.S.T.M. E136-65, and, upon exposure to fire will not produce products of decomposition or combustion that are more toxic in point of concentration than those given off by wood or paper when decomposing or burning under comparable conditions; or

(2) it has a flame-spread rating not greater than twenty-five, a smoke developed rating not greater than fifty, is without evidence of continued progressive combustion when tested in accordance with the test procedure of reference standard RS 5-5, and upon exposure to fire will not produce products of decomposition or combustion that are more toxic in point of concentration than those given off by wood or paper when decomposing or burning under comparable conditions.

(b) Notwithstanding any provision of subdivision a of this section or any other provision of this code to the contrary, acoustical or thermal insulation, which is not noncombustible and which does not meet the requirements of subdivision a of this section, may be used where noncombustible construction is required subject to the approval of the commissioner, and provided it is installed in a composite method of construction, with a minimum of three inches of unpierced masonry or concrete on all sides.

(c) Notwithstanding any provision of subdivision a or b of this section or any other provision of this code to the contrary, thermal insulation, which is not noncombustible and which does not meet the requirements of subdivisions a and b of this section, may be installed in an exterior wall system in any noncombustible construction group, provided that:

(1) such insulation is of a thickness no greater than four inches; provided, additional thickness used exclusively for decorative or leveling purposes shall be permissible, where the area of such additional thickness

does not exceed fifteen percent of the [sic] wall area on any single story;

(2) such insulation has a heat value not in excess of six thousand Btu per square foot;

(3) such insulation is installed in a composite method of construction and is separated from interior spaces by a thermal barrier having at least a one-hour fire resistance rating;

(4) such insulation has a flame spread rating not greater than twenty-five and a smoke developed rating not greater than four hundred fifty, and is covered with, and sealed or joined by, material having a flame spread rating not greater than twenty-five and a smoke developed rating not greater than fifty, when tested in accordance with the procedures of reference standard RS 5-5;

(5) such insulation is installed in a manner which meets the requirements for firestopping set forth in section 27-345;

(6) upon exposure to fire, the exterior wall system and each of its components will not produce products of decomposition or combustion that are more toxic in point of concentration than those given off by wood or paper when decomposing or burning under comparable conditions;

(7) the structure on which the exterior wall system is installed meets the requirements of section 27-331 pertaining to minimum horizontal and vertical separation distances; provided, however, that such insulation shall not be used on the exterior surface of a wall of a court or shaft if the horizontal or vertical separation distance between such wall and another wall of such court or shaft is less than twenty feet;

(8) the use of such insulation on soffits or other horizontal areas shall not extend more than three feet beyond the outside face of the building enclosure;

(9) the use of such insulation on buildings having party walls meets the requirements of section 27-332;

(10) such insulation meets the acceptance requirements of section 27-131;

(11) the results of a fire test of a representative portion of the exterior wall system meet the requirements of reference standard RS 5-21;

(12) the edge or face of the assembly containing such insulation is labeled with the following information:

a. the name of a nationally recognized testing laboratory acceptable to the commissioner which has inspected such insulation;

b. the model of the exterior wall assembly for which such insulation is listed by a nationally recognized testing laboratory acceptable to the commissioner;

c. the identity of the manufacturer of such insulation;

d. the flame spread and smoke developed ratings; and

(13) the installation of such insulation shall be subject to controlled inspection to ensure that the installation is fully consistent with the terms of the listing by a nationally recognized testing laboratory acceptable to the

commissioner, acceptance requirements of section 27-131 and the manufacturer's installation recommendations.

(d) The commissioner may, with regard to thermal insulation, the use of which is authorized by this subdivision, establish by regulation training criteria for persons installing such insulation, and prohibit the installation of such insulation by persons not adequately trained. Any person installing such insulation shall certify to the commissioner that the installation is fully consistent with the terms of the listing by a nationally recognized testing laboratory acceptable to the commissioner, acceptance requirements of section 27-131 and the manufacturer's installation recommendations.

(e) Definitions. As used in this section:

(1) "Composite method of construction" shall mean a method of construction in which diverse materials are combined to form an assembly, whether the assembly is prefabricated or fabricated at the site of installation.

(2) "Exterior wall system" shall include the exterior walls of a building and the appurtenances thereof.

**Local Law 13-1987.*

§[C26-503.6] 27-336 Porticos, porches, etc. -

Porticos, entranceways, storm enclosures, bay windows, oriel windows, porches, or similar appendages may be constructed of combustible materials or assemblies on buildings of construction class II-E to an unlimited extent, and on buildings of construction classes II-A, II-B, II-C, and II-D under all of the following conditions:

(a) The building is classified in occupancy group J-2 or J-3.

(b) The building is not more than three stories or forty feet high.

(c) The appendage has an exterior separation on all exposed sides of at least fifteen feet, measured from the outermost surface of the appendage.

(d) The appendage is so constructed that its removal or destruction will not reduce the structural stability or fire resistive integrity of the building.

(e) The vertical surface area of the combustible portions of the appendage, including any exterior trim, is not more than ten percent of the total wall area (windows excluded) of the building.

(f) The appendage has a superficial roof area not exceeding one hundred fifty square feet and is included in the area limitations of table 4-1 and 4-2 for the entire building.

(g) The appendage is not higher than the sills of the second story windows.

(h) The roof of the appendage has a class A roof covering.

(i) The soffit or ceiling covering the combustible roof framing of the appendage has a one hour fire-resistance rating.

(j) The requirements of subdivisions (h) and (i) of this section shall not apply in the case of roofs or awnings over patios or entrance platforms where the area of

vertical exposure of the patios or platforms to the outdoors is equal to at least that of the patio or platform area. Plastic shall be slow burning; canvas or other fabric shall be noncombustible or flameproofed in accordance with the provisions of title fifteen of the administrative code.

§[C26-503.7] 27-337 Roof coverings. -

Roof coverings shall be classified as A, B, or C on the basis of their resistance to exterior fire exposure as listed in reference standard RS 5-9, or as determined by tests made in conformance with reference standard RS 5-10 for those not listed.

(a) **Limitations of use.** - Every roof placed on a building shall be covered with Class A or B roof covering, except Class C roof coverings may be placed on buildings classified in occupancy group J when not more than three stories or forty feet in height, and on buildings permitted by this code to be of Class II-D or II-E construction. The use of roofing having no rating is prohibited, except for replacement to the extent of twenty-five percent of the roof area in any twelve month period.

(b) **Combustible roof decking.** - Unless attached directly to noncombustible framework, all roof coverings shall be applied to a closely fitted deck; except that wood shingles, to the extent permitted in subdivision (a) of this section, may be applied to wood slats.

(c) **Roof insulation.** - Combustible roof insulation may be applied on top of roof decking or slab provided that it is protected with the roof covering applied directly thereto.

§[C26-503.8] 27-338 Roof structures. -

(a) **Construction of penthouses.** - Enclosure walls of penthouses shall comply with the requirements for exterior walls of table 3-4 for the construction class of the building on which they are erected. Roofs of penthouses shall comply with the requirements for roof construction of table 3-4 and section 27-337 of article five of subchapter six of this chapter.

(b) **Construction of bulkheads.** - Bulkheads shall be constructed of noncombustible materials having a one hour fire-resistance rating, except that in buildings of construction class II-E, they may be constructed of combustible materials having a one hour fire-resistance rating.

(c) **Scuttles.** - Scuttles shall be constructed of noncombustible materials, or of combustible materials covered on the top, sides, and edges with noncombustible materials.

(d) **Skylights.** - For the purposes of this section, the term "skylight" shall be construed to include the sash, frames, and glazing of roof monitors and sawtooth roofs.

(1) **SASH AND FRAMES.** - Skylights that are inclined at less than sixty degrees to the horizontal on all buildings of other than construction classes II-D and II-E, shall have sash and frames constructed of noncombustible materials, and their glazing shall be as

prescribed in paragraph two of this subdivision. Skylights that are inclined at greater than sixty degrees to the horizontal shall have sash and frames constructed as required for windows, and their glazing shall be as required for windows. Glass, glass blocks, or plastic used in skylights shall be designed and constructed to withstand the same live loads as required for roofs plus any concentrated live loads required herein.

(2) GLAZING. -

a. Skylights over stairways and shafts. - Skylights placed over stairways and shafts shall be glazed with plain glass not more than one-eighth inch thick or unreinforced plastic not more than three-sixteenths of an inch thick.

b. Skylights over other spaces. - Skylights in all locations other than over stairways and shafts shall be glazed with one-quarter inch wired glass, plain glass, glass block, or plastic of material and installation complying with subparagraph c of this paragraph.

c. Plastic. - Plastic used for the glazing of skylights other than skylights over stairways and shafts shall be slow burning plastic. The aggregate area of skylight openings, other than over stairways and shafts, shall not exceed thirty per cent of the floor area of any room or space sheltered by the roof in which they are located. The edges of plastic, if exposed, shall be protected by metal or other noncombustible material. Skylights in which plastic is used, if on roofs having a pitch of twenty degrees to the horizontal or less, shall be constructed in accordance with the following:

1. The area within the curbs of each skylight shall not exceed five square feet, except that this area may be of any size, limited only by other provisions of this section, if the opening is protected on all sides by a noncombustible railing thirty-six inches in height complying with the provisions of section 27-558 of article three of subchapter nine of this chapter for railings; or the skylight is subdivided into areas of five square feet or less by noncombustible muntins or bars capable of supporting a live load of three hundred pounds at any point; or a noncombustible screen or grid capable of supporting a load of three hundred pounds over any one foot by two foot area as provided above, integral with, or not more than three feet below the skylight, with the wire or bars spaced into areas of five square feet or less (if above the roof, the wires shall be of corrosion resistive metal).

2. There shall be a minimum clear distance of three feet between skylights.

(3) SEPARATION OF SKYLIGHTS FROM STRUCTURES. - There shall be at least ten feet between a plain glass or plastic skylight and any door in a stair bulkhead located above the roof in which the skylight is located, and at least ten feet between such a skylight and any opening in any roof structure or other wall above the roof not equipped with an opening protective. On buildings up

to one hundred feet in height, there shall be at least ten feet from such a skylight to the outside face of an exterior wall facing on a frontage space.

(4) SCREENS. - Plain glass skylights shall be protected on their underside by noncombustible screens having a mesh not smaller than three-quarters of an inch by three-quarters of an inch nor larger than one inch by one inch of at least No. 12 B. & S. gage [*sic*] wires. The screen shall be installed tight against the roof opening or shall project on all sides for a distance of not less than the distance of the screen below the glass, and shall be of such material and construction so as to support a load of three hundred pounds over any one foot by two foot area. The provisions for wire glass or screen protection shall not apply to glass block skylights.

(e) Greenhouses. - Greenhouses on the roofs of buildings other than buildings of construction class II-D or II-E shall be constructed of noncombustible framework and shall be glazed with plain or wire glass, or slow burning plastic. The floors of greenhouses shall be constructed at least as required for roof construction in table 3-4 for the construction class of the building on which it is located.

(f) Construction of sloping roofs. - Roofs having a slope of more than sixty degrees to the horizontal shall be constructed of material having the same fire-resistance rating as required for an exterior non-bearing wall of the building of which it is a part. When the slope is sixty degrees or less to the horizontal, the sloping roof shall be constructed as required for the roof of the building. Where the back of a false mansard is exposed to the outdoors, the back shall be covered with noncombustible material or with roof coverings as required for the roof of the building.

(g) Dormers. - Roofs of dormers shall be of the same type of construction and have roof covering of the same class as required for the roof of the building on which they are located. The walls of dormers shall be constructed of materials having the same fire resistance rating as required for non-bearing exterior walls of the building on which they are located; except that in buildings of construction classes II-A, II-B, II-C, and II-D, the walls may be constructed of combustible framing provided that the outside face of the framing is protected with noncombustible sheathing and the aggregate area of all such dormer walls, including openings therein, does not exceed twenty percent of the roof area.

(h) Water tanks. -

(1) SUPPORTS. - All water tanks placed in or on a building and having a capacity of more than five hundred gallons shall be supported on noncombustible walls or framing. When such tank is located within the building, above the lowest story, its framing shall be fire protected as required for columns supporting one

floor or the tank shall be located within a room or space that is enclosed with construction having a fire-resistance rating equivalent to that otherwise required for the protection of the framing.

(i) Cooling towers. - Cooling towers shall be constructed of noncombustible materials, except as follows:

(1) Outside the fire districts, when located on a building three stories or forty feet in height or less of construction group I, cooling towers may be constructed of combustible materials provided they are not more than fifteen feet high and do not exceed seven hundred fifty square feet in area.

(2) Outside the fire districts, when located on the ground and not exceeding three stories or forty feet in height or one thousand five hundred square feet in area, cooling towers may be constructed of combustible material provided they are protected by a noncombustible screen, fence, or wall at least twenty feet from the tower and at least seven feet high.

(3) Filling and drift eliminators may be of combustible materials if the towers are provided with automatic sprinkler protection complying with the construction provisions of subchapter seventeen.

(4) Filling and drift eliminators may be of combustible materials where the towers are not provided with automatic sprinkler protection, provided all of the following conditions are met:

a. The cooling tower is constructed of noncombustible material;

b. The cooling tower is located on a building in construction group I-A or I-B;

c. The cooling tower and filling and drift eliminators are located at least thirty feet away from any windows or fresh air intakes which are at an elevation above the roof on which the cooling tower is located, whether in the same building or in an adjoining building;

d. The cooling tower is located not less than fifteen feet from the nearest lot line; and

e. The cooling tower is located not less than ten feet from any chimney, except that the distance shall be not less than twenty feet from a chimney venting products of combustion other than from gas or oil fired appliances, whether on the same building or an adjoining building.

(5) In no event shall cooling towers or filling and drift eliminators be constructed of materials that contain asbestos.

(j) Miscellaneous roof structures. - The following roof structures may be constructed of combustible material if less than twelve feet high above the roof: antenna supports; flagpoles; clothes drying frames; duckboarding or platforms that do not cover more than twenty per cent of the roof area at that level.

ARTICLE 5 PREVENTION OF INTERIOR FIRE SPREAD

§[C26-504.1] 27-339 Fire segregation of occupancies.-

(a) Segregation by fire divisions. - When different occupancies are to be segregated by fire divisions under the provisions of section 27-240 of subchapter three of this chapter, the occupancies shall be separated from each other, vertically and horizontally, by fire divisions having at least the fire-resistance ratings listed in table 5-2 for the occupancy groups involved. Every building section shall be constructed of elements having at least the fire-resistance rating of a construction class required for the area and height of the building section as listed in tables 4-1 and 4-2.

(b) Segregation by fire separations. - When different spaces are to be segregated by fire separations under the provisions of section 27-240 of subchapter three of this chapter, the occupancies shall be separated from each other, vertically and horizontally, by fire separations having at least the fire-resistance ratings listed in table 5-1. In buildings of construction group I, fire separations shall be constructed of noncombustible materials.

(c) Compartmentation. - Notwithstanding the provisions of Table 4-1, in existing office buildings one hundred feet or more in height having air-conditioning and/or mechanical ventilation systems that serve more than the floor on which the equipment is located, unsprinklered floor areas, more than forty feet above curb level, shall be subdivided by fire separations into spaces or compartments of the size required by paragraphs one through five of this subdivision. Floor area shall be defined as the area within exterior walls and excluding any areas enclosing stairs, corridors, elevators and shafts:

(1) Unless otherwise provided below, all unsprinklered floor areas shall be segregated by one-hour fire separations into spaces or compartments not to exceed seventy-five hundred square feet.

(2) Where the floor area exceeds ten thousand square feet, at least one of the subdividing fire separations shall be of two-hour fire-resistive construction, creating areas of refuge, complying with section 27-372 of article five of subchapter six of this code except that the requirement for an elevator in each area shall not apply.

(3) The floor area or any subdivided area may be increased to not more than fifteen thousand square feet if complete area protection by approved devices for the detection of products of combustion other than heat is provided within such increased area and provided further than*** at least one of the subdividing fire separations shall be of two-hour fire-resistive construction where the floor area exceeds fifteen thousand square feet, creating areas of refuge in the same manner and under the same conditions as provided in two of this subdivision. The activation of any such detectors shall have the same effect as provided in subdivision (f) of section 27-972 of article five of subchapter seventeen of this code.

TABLE 5-1 FIRE SEPARATIONS

Key: Fire-resistance ratings are given in hours. For Table 5-1, read above heavy line. For Table 5-2, read below heavy line.

NR—No Requirement

OCCU-PANCY	A	B-1	B-2	C	D-1	D-2	E	F-1a	F-1b	F-2	F-3	F-4	G	H-1	H-2	J-1	J-2	J-3
A	4	4	4	4	4	4	4 ^c	4	4	4	4	4	4	4	4	4	4	4
B-1	4	3	NR	1 ^{bc}	NR	NR	1 ^{ac}	1 ^c	1 ^c	—	1 ^c	1 ^c	1 ^c	1½ ^c	1½ ^c	1 ^c	1 ^c	1 ^c
B-2	4	3	2	NR	NR	NR	NR	NR	NR	—	NR	NR	NR	NR	NR	NR	NR	NR
C	4	3	2	2	1	NR	NR	NR	NR	—	NR	NR	NR	1	1	1	1	1
D-1	4	3	3	3	3	NR	1 ^a	1	1	—	1	1	1	1½	1½	1	1	1
D-2	4	3	2	2	3	2	NR	NR	NR	—	NR	NR	NR	NR	NR	NR	NR	NR
E	4	3	2	2	3	2	2	NR	NR	—	NR	NR	NR	1 ^a	1 ^a	1 ^a	1 ^a	1 ^a
F-1a	4	3	2	2	3	2	2	2	NR	—	NR	NR	NR	1	1	1	1	1
F-1b	4	3	2	2	3	2	2	2	2	—	NR	NR	NR	1	1	1	1	1
F-2	4	3	2	2	3	2	2	2	2	2	—	—	—	—	—	—	—	—
F-3	4	3	2	2	3	2	2	2	2	2	2	NR	NR	1	1	1	1	1
F-4	4	3	2	2	3	2	2	2	2	2	2	2	NR	1½	1½	1	1	1
G	4	3	2	2	3	2	2	2	2	2	2	2	2	NR	NR	NR	NR	NR
H-1	4	3	2	2	3	2	2	2	2	2	2	2	2	2	NR	1	1	1
H-2	4	3	2	2	3	2	2	2	2	2	2	2	2	2	2	1	1	1
J-1	4	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2	NR	NR
J-2	4	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	NR
J-3	4	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2

TABLE 5-2 FIRE DIVISIONS**NOTES FOR TABLES 5-1 AND 5-2**

^aAn office, or group of offices, whose use is accessory to an occupancy, and totals four hundred square feet or less in area shall not be required to have a fire separation. Such office, or group of offices, totalling more than four hundred square feet in area shall not be required to have a fire separation if such offices exit directly, without having to pass through the area of the related occupancy.

^bCounters and backbars for the sale of publications, tobacco products, liquors, or candies, or for making of reservations for travel, car rental, or theatre, or otherwise involving similar business and mercantile activities that are accessory to an occupancy and are limited in area to one hundred square feet, within the area of the occupancy, need not comply with the requirements of this table.

^cThe provisions of this table shall not apply to closets seventy-five square feet or less in area.

^dNonresidential kitchens need not be separated by fire separations from adjoining dining spaces, provided:

- (1) The cooking equipment is vented directly to the outdoors, and
- (2) 2* draft curtain of noncombustible material, at least twenty-four inches down from the ceiling, is provided to separate the cooking facilities from dining spaces, and
- (3) Sprinkler heads constructed in accordance with the provisions of subchapter seventeen of this chapter, are provided on the cooking facilities side of the curtain, or any opening between the kitchen and dining space, located within twenty-four inches of the curtain or opening, and spaced not more than forty-eight inches on centers if the opening is more than sixty inches wide. When fire separations are provided double-action doors may be permitted.

^eKitchens having a floor area of fifty-nine square feet or less located within dwelling units shall be separated from adjacent spaces by partitions having a fire-resistance rating of at least one hour except for the entrances thereto which need [not]** comply with section 27-342 of this article. If doors are provided they may be of wood.

^fIn buildings or spaces classified in occupancy group J-1 or J-2 all partitions in dwelling units located in cellars shall have a minimum fire-resistance rating of one hour.

*As enacted; "A" probably intended.

**Copy in brackets not enacted but probably intended.

(4) In existing buildings, existing fire separations of one-hour fire-resistive construction may be accepted in lieu of the fire separation of two hour fire-resistive construction providing all other requirements of paragraphs two and three of this subdivision are complied with.

(5) Regardless of the floor area, no subdivision of the floor area shall be required under this subdivision when complete sprinkler protection is provided in accordance with the construction provisions of subchapter seventeen of this chapter.

(6) Existing office buildings one hundred feet or more in height shall comply with the requirements of this subdivision as follows:

a. Whenever an alteration is performed involving partition changes, compliance with this subdivision shall be required in that portion of the building being altered.

b. At least one-third of the total floor area of the building not in compliance with the requirements of this subdivision on February seventh, nineteen hundred seventy-three, shall comply with such requirements on or before December thirteenth, nineteen hundred eighty-one. Complete plans showing such compliance for the phase of the work to be done shall be filed with, and a permit secured from, the commissioner on or before September thirteenth, nineteen hundred eighty.

c. At least two-thirds of the total floor area of the building not in compliance with the requirements of this subdivision on February seventh, nineteen hundred seventy-three, shall comply with such requirements on or before August seventh, nineteen hundred eighty-four.

d. Full compliance shall be provided on or before February seventh, nineteen hundred eighty-eight.

(7) In existing office buildings one hundred feet or more in height where compliance would cause practical difficulty or undue hardship, the commissioner may waive or modify the requirements of paragraphs one through five of this subdivision and accept alternatives fulfilling the intent of these requirements. Where compliance with the time requirements of paragraph six of this subdivision would cause undue hardship, the commissioner, with the approval of the fire commissioner, may extend the time for compliance, in accordance with rules and regulations to be promulgated. Before such application for a time extension shall be considered all required applications and plans must be filed and approved, permits obtained and a good faith effort towards completion of the work shall have been made.

***As enacted; "that" probably intended.

§[C26-504.2] 27-340 Fire divisions. - Fire divisions shall be constructed of noncombustible materials or assembly of noncombustible materials to provide the fire-resistance ratings required by table 5-2. Vertical fire divisions shall be continuous between foundation,

roof, or horizontal fire divisions, and through any concealed space in floor or roof construction. Horizontal fire divisions shall be continuous between exterior walls and/or vertical fire divisions.

(a) When roof construction is combustible on both sides of a vertical fire division, the vertical fire division shall extend through the roof construction to a height of at least four inches above the high point at the roof framing. Decking shall tightly butt the fire division. Above the decking of roofs that are flatter than twenty degrees to the horizontal, blocking shall be constructed to form cants on both sides of the fire division with slopes not steeper than 1:4. Combustible decking shall not extend over the top of the fire division.

(b) Except as required in subdivision (c) of this section, when roof construction is noncombustible on one or both sides of a vertical fire division, the vertical fire division may terminate at the underside of the noncombustible roof construction provided the junction of the wall and roof construction is made smoke tight.

(c) When a vertical fire division is required by table 5-2 to have a fire-resistance rating of three or four hours, and the roof construction has a fire-resistance rating of less than two hours, the fire division shall extend above the roof construction to form a parapet at least three feet high.

(d) Fire divisions shall be so constructed that the removal or collapse of construction on one side will not endanger the support of construction on the other side.

(e) Fire divisions shall be made smoke tight at their junction with exterior walls. In buildings of construction class II-D and II-E, exterior walls shall be constructed of noncombustible materials for a distance of at least eighteen inches on each side of the fire division, or the fire division shall project at least twelve inches through the exterior wall.

(f) Fire divisions may be offset if the construction between the offset divisions, including their supports, has at the same fire-resistance rating as the fire division, with all hollow spaces within the construction firestopped with noncombustible material.

(g) Where combustible members such as joists, beams, or girders bear on, or frame into, vertical fire divisions, such members shall not extend through the wall and shall have at least four inches of solid noncombustible material below, at the sides, and at the ends of each such member.

(h) Chases or recesses shall not be cut into fire divisions so as to reduce their thickness below that required for the fire-resistance rating.

(i) Vertical fire divisions that are hollow shall be firestopped with at least four inches of noncombustible material so as to prevent passage of flame, smoke, or hot gases through the hollow spaces to the story above or below, or to hollow spaces within connecting floor or roof construction.

§[C26-504.3] 27-341 Fire separations. - Fire separations shall be constructed of materials or assembly of materials having at least the fire-resistance ratings required by table 5-1.

(a) Different tenancies. - Different tenant apartments, suites, stores, offices, or other spaces that are not separated from each other by fire divisions, shall be separated from each other by fire separations having at least the fire-resistance rating prescribed in table 5-1, but in no case less than one hour, and shall continue through any concealed spaces of the floor or roof construction above.

§[C26-504.4] 27-342 Openings in fire divisions and separations. - Openings in fire divisions and fire separations that are required to have a fire-resistance rating, shall be protected by opening protectives having the fire-resistance ratings prescribed in table 5-3, shall not exceed the limits in size and area herein prescribed, and shall comply with the provisions of section 27-329 of article three of this subchapter. Door and other openings in enclosures of vertical exits, exit passageways, corridors, and places of assembly shall be protected by opening protectives as required by the provisions of subchapters six and eight of this chapter. When such enclosures also serve as fire divisions or fire separations, openings therein shall be protected as required by the provisions of this subchapter.

**TABLE 5-3 OPENING PROTECTIVES
FOR FIRE DIVISIONS AND FIRE
SEPARATIONS**

Fire-resistance Rating of Fire Division or Fire Separation in which Opening Occurs (hr.)	Fire Protection Rating of Opening Protective
3 or 4	3 hr. (Class A)*
2 or 1 ½	1 ½ hr. (Class B)
1	¾ hr. (Class C)

* **Notes for Table 5-3:**

Shall consist of two one and one-half hour (class B) opening protectives, with one protective installed on each face of a fire division or fire separation.

(a) Size of opening. - In buildings that are not sprinklered no opening through a fire division or fire separation shall exceed one hundred twenty square feet in area, with no dimension greater than twelve feet, and the aggregate width of all openings at any level shall not exceed twenty-five percent of the length of the wall. Where the areas on both sides of a fire division or fire separation are sprinklered in accordance with the construction provisions of subchapter seventeen of this

chapter, the size of the opening may be one hundred fifty square feet in area, with no dimension greater than fifteen feet. In buildings fully sprinklered in compliance with the provisions of subchapter seventeen of this chapter, the size and aggregate width of openings through fire divisions or fire separations shall be unlimited. When a fire division or fire separation serves as a horizontal exit also, it shall have no opening other than door openings not exceeding fifty-six square feet in area, the aggregate width of all openings at any level shall not exceed twenty-five percent of the length of the wall, and shall comply with the provisions of section 27-373 of article five of subchapter six of this chapter.

(b) Conveyor openings. - Where fire doors or shutters are impractical for the protection of conveyor openings in fire divisions or fire separations, a system of water spray nozzles may be used. At least four nozzles shall be provided on each side of the opening so as to give complete coverage of the opening. Nozzles shall be controlled by an automatic valve actuated by a heat detector. Nozzles shall be located at an angle not more than thirty degrees between the centerline of nozzle discharge and a line perpendicular to the plane of the opening. The water discharge rate shall be at least three gallons per square foot per minute. When conveyor openings through floors are protected by this method, the openings shall also be provided with a noncombustible enclosure constructed around the conveyor from the floor up to or slightly beyond the spray nozzles, and draft curtains shall be provided extending twenty-four inches below and around the floor opening.

§[C26-504.5] 27-343 Ducts, pipes and conduits through rated construction. -

(a) Installation of ducts which pass through construction required to have a fire-resistance rating shall comply with the requirements of subchapter thirteen, provided that, notwithstanding the provisions of subchapter thirteen or reference standard RS 13-1, noncombustible ducts which pass through construction required to have a fire-resistance rating of one hour must be provided with fire dampers unless:

- (1) The building is classified in occupancy group C, E, or H-2; and
- (2) Complete sprinkler protection is provided for the floor in accordance with subchapter seventeen; or
- (3) The openings for the ventilation ducts do not exceed three square feet in area; or
- (4) The duct is protected on both sides of the partition for a distance equal to the maximum duct dimension by a sleeve affording one hour fire separation for such horizontal distance.

(b) Noncombustible pipes and conduits. -

Noncombustible pipes and conduits may pass through construction required to have a fire-resistance rating

provided that the space between the pipe or conduit and its sleeve or opening does not exceed one-half inch and is completely packed with mineral wool or equivalent noncombustible material and is closed off by close-fitting metal escutcheons on both sides of the construction; and provided further that the aggregate net area of such openings does not exceed twenty-five square inches in any one hundred square feet of wall or floor area (excluding the areas of openings for sleeves which are firestopped in conformance with this section and section 27-345).

(c) Openings for passage of pipe and ducts whose aggregate net area exceeds twenty-five square inches in any one hundred square feet of wall or floor area (excluding opening for sleeves which are firestopped in conformance with this section and section 27-345) may pierce constructions required to have a fire-resistance rating only when the type of construction to be used has been tested with such types of facilities installed in place and the proportionate area of openings of such facilities to be installed in the construction does not exceed the proportionate area of openings in the assembly tested, and provided no opening is larger than that in the assembly tested. Protection of such openings shall be the same as provided in the test. All openings through hollow fire rated construction shall be sleeved with sheet metal least No. 14 U.S. std. gage thick.

*(d) The installation and proper functioning of required fire dampers shall be subject to the controlled inspection requirements of section 27-132 of this code, except that it shall not be required that the architect or engineer be in the employ of the owner.

**Local Law 26-2004.*

§[C26-504.6] 27-344 Shafts. - The requirements of this section shall apply to all shafts, except that floor openings accommodating a slide pole in a fire house and openings other than for ventilation, chimneys or gas vents in buildings three stories or less in height classified in occupancy group J-3 shall be exempt from these requirements, and except as more restrictive requirements may be specified for chimneys and gas vents in subchapter fifteen of this chapter, stairway enclosures in subchapter six, duct enclosures in subchapter thirteen, elevator, escalator, and dumbwaiter enclosures in subchapter eighteen of this chapter, and except as permitted in reference standard RS 5-18.

(a) Construction. - Shafts shall be enclosed with materials having at least fire-resistance rating required by table 3-4. A shaft that serves the topmost story of a building shall extend through the roof at least thirty-six inches above any combustible roof construction. Where the roof construction is of noncombustible materials, the shaft shall extend through any concealed space within the roof construction and may terminate at the underside of the roof deck. Pipes and ducts penetrating shaft construction shall comply with the requirements of section 27-343 of this article.

(b) Combustible contents. - Shafts shall be kept free of bookshelves or other combustible contents except for stair construction as permitted under subchapter six of this chapter, duct and pipe coverings as permitted under subchapters thirteen and sixteen, and elevator car enclosures as permitted under subchapter eighteen of this chapter.

(c) Openings in shafts. - All shaft openings below the top terminus shall be provided with opening protectives that comply with section 27-329 of this subchapter and table 5-3. In shafts that contain only one opening below the roof terminus, no opening protective need be provided. Openings in elevator and dumbwaiter shafts shall comply only with the requirements of subchapter eighteen of this chapter. Where a window is located in a shaft wall that is an exterior wall and is ten stories or less above grade or three stories or less above a roof, it shall be protected against entrance by a permanently secured grille consisting of 5/8 in. dia. bars, 10 in. o. c. vertically, or by a stationary metal sash window having 1/8 in. thick solid section steel muntins, 8 in. o. c. one way. This protection shall not be required in stair shafts where there is a stair landing or platform not more than three feet directly below the window sill.

(d) Smoke venting of closed shafts. - All closed shafts having an area exceeding four square feet, other than elevator or dumbwaiter shafts, shall be provided with a smoke vent having an area of at least three and one-half percent of the maximum shaft area at any floor, but in no event less than one-half square foot. Elevator and dumbwaiter shaft vents shall comply with the requirements of subchapter eighteen of this chapter. Smoke vents may be windows, louvers, skylights, vent ducts, or similar devices. Vent ducts shall be enclosed by construction having the same fire resistance rating as required for the shaft enclosure. Such vent ducts shall extend vertically, diagonally, or horizontally as provided below.

(1) Through any roof of the building provided the vent opening is at least ten feet from any window, door, outside stairway, or interior lot line. This dimension may be reduced to five feet if the vent duct is extended up to at [sic] least the level of the top of the window or door. A vent that is required to extend above a roof shall extend at least eight inches above a roof assembly constructed of noncombustible materials, and at least thirty-six inches above a roof assembly constructed of combustible materials that are within a horizontal distance of ten feet.

(2) Through an exterior wall of the building, provided there are no openings in the wall within a distance of thirty feet vertically above the vent opening, and within five feet either side of the vent opening. When a side of a shaft is an exterior wall or a wall of a roof bulkhead, the required vent may be a louver or window. Any window or louver located in a shaft wall above a roof constructed of combustible materials shall have its sill at least thirty-six inches above the roof.

(e) Terminus of shaft vents. - Of the total required vent area for shafts, at least one-third shall be clear opening to the

outdoors, either in the form of fixed louvers, ridge vents, or hooded or goosenecked openings. In lieu thereof, skylights or trap doors may be used if constructed and arranged to open automatically by fusible link or other mechanical device when subjected to a temperature of one hundred sixty degrees Fahrenheit or to a rapid rise in temperature at a rate of fifteen to twenty degrees Fahrenheit per minute. The remaining portion of the required vent area may be a window or skylight glazed with plain glass not more than one-eighth inch thick or slow burning plastic.

(f) Machine rooms.- Any compartment containing machinery that communicates with a shaft enclosure shall comply with all requirements for shafts. The required louver or glazing shall not be located in any door leading into such compartment.

§[C26-504.7] 27-345 Firestopping.- Concealed spaces within partitions, walls, floors, roofs, stairs, furring, pipe spaces, column enclosures, etc. that would permit passage of flame, smoke, fumes, or hot gases from one floor to another floor or roof space, or from one concealed area to another, shall be firestopped to form an effective draft barrier, or shall be filled with noncombustible material in accordance with the requirements of this section. Firestopping shall not be required where a concealed space is sprinklered in accordance with the construction provisions of subchapter seventeen of this chapter, or is constructed as a shaft.

(a) Firestopping materials.- In buildings of construction group I, firestopping or fill shall be of noncombustible material that can be shaped, fitted, and permanently secured in position. In buildings of construction group II, firestopping may be of combustible material consisting of wood not less than two inches nominal thickness with tight joints, two layers of one inch nominal thickness assembled so that there are no through joints or of one-half inch exterior type plywood with joints backed, except that noncombustible firestopping shall be used in concealed spaces of fire divisions and where in contact with fireplaces, flues, and chimneys. Noncombustible firestopping may be masonry set in mortar, concrete, three-quarter inch thick mortar or plaster on noncombustible lath, plasterboard at least three-eighths of an inch thick, fire-rated wallboard at least five-eighths of an inch thick, sheet metal at least No. 14 U.S. std. gage thick, solid web metal structural members, asbestos-cement board at least one-quarter of an inch thick, or equivalent rigid noncombustible material. Mineral, slag, or rockwool may be used for firestopping when compacted to a density of at least three and one-half pounds per cubic foot into a confined space of least dimension not more than one-third its second dimension.

(1) The performance of through-penetration fire stops shall be measured and specified according to reference standard RS 5-19.

(2) The commissioner may accept reference standard RS 5-19 test data results from an independent laboratory acceptable to the commissioner pursuant to subdivision (c) of section 27-131, when such data is submitted by a registered architect or licensed professional engineer to justify the usage of fire stops or the details of their installation not specified herein.

(b) Hollow partitions and furred spaces.- All hollow partitions and furred out spaces shall be firestopped at each floor level. Firestops shall be the full thickness of the hollow space or furred out space.

(c) Stairs.- Concealed spaces within stair construction shall be firestopped between stringers at the top and bottom of each flight of stairs so as not to communicate with concealed spaces in the floor, roof or intermediate landing construction.

(d) Ceiling spaces.- Floor or roof assemblies required to have a fire-resistance [sic] rating shall have any concealed spaces therein firestopped in accordance with section 27-327 of this subchapter.

(e) Exterior cornices.- Exterior cornices and eaves, constructed of combustible materials or with combustible framing, shall be firestopped at the ends of fire divisions and party walls, and at maximum intervals of twenty feet. If not continuous, they shall have closed ends and at least four inches separation between adjoining sections.

(f) Trim and finish.- Where combustible trim and finish is permitted all hollow spaces shall be firestopped at ten foot intervals or shall be solidly filled with noncombustible materials.

(g) Duct and pipe spaces.- Ducts and pipes enclosed in construction that does not meet the requirements of this code for shaft construction shall be firestopped at every floor level.

(h) Inspection of firestopping.- The installation of all required firestopping shall be subject to the controlled inspection requirements of section 27-132 of article seven of subchapter one of this chapter, except that the architect or engineer need not be retained by the owner. Firestopping shall not be concealed from view until inspected.

§[C26-504.8] 27-346 Partitions and furring.- In buildings of construction group I, partitions and furring shall be constructed of noncombustible materials, except that nonbearing partitions that are not required to have a fire-resistance rating, and furring may be constructed of fire retardant treated wood as provided in subdivision (d) of section 27-328 of article three of this subchapter, and except that such partitions and furring, may be constructed of combustible materials in spaces classified in occupancy group E, J-2, or J-3, provided the following conditions are met:

(a) the space containing the combustible partitions does not exceed five thousand square feet in area within a noncombustible enclosure having a fire-resistance

rating of at least one hour.

(b) the space is in a single tenancy.

(c) glass or slow burning plastic is used for glazing.

§[C26-504.9] 27-347 Folding partitions. -Folding partitions shall not be used as partitions that are required by this code to have a fire-resistance rating.

(a) Construction group I. - In buildings of construction group I, folding partitions may be used if they are constructed of noncombustible materials, or of fire retardant treated wood, or are constructed of noncombustible frame covered with fabric that has a class A interior finish rating. Where partitions of combustible materials are permitted by section 27-346 of this article, folding partitions may also be constructed of combustible materials. Where doors constructed of materials having a class C interior finish rating are permitted by section 27-348 of this article, folding doors may be constructed of combustible materials.

(b) Construction group II. - In buildings of construction group II, folding partitions may be constructed of combustible materials, surfaced with interior finish materials meeting the requirements of section 27-348 of this article.

§[C26-504.10] 27-348 Interior finish. -

(a) Definition. - For the purposes of this section, interior finish shall mean those materials that form the exposed interior surfaces of a building and that are part of or affixed to walls, fixed or folding partitions, ceilings, and other construction elements.

(b) Classification. - Interior finish materials shall be classified in accordance with the surface flame-spread rating obtained as prescribed in the provisions of reference standard RS 5-5. Where an interior finish material is comprised of two or more materials laminated, glued, nailed, or otherwise secured together, the test rating for flame spread shall be based upon the composite of the materials in the form in which it will be used in construction. Interior finish materials shall be grouped in the following classes, in accordance with their surface flame spread characteristics:

Interior Finish Class	Flame Spread Rating
A	0 to 25
B	26 to 75
C	76 to 225
D	Over 225

(c) Requirements. - Interior finishes and exposed structural or construction materials shall have a flame-spread rating not greater than that designated by the class prescribed for the various occupancy groups in

which they are used, as listed in table 5-4. Exceptions to these requirements are:

(1) Finish flooring and floor coverings, which are subject to the requirements of section 27-351.

(2) Wall coverings and coatings that are less than 0.036 in. [*sic*] in total thickness, when applied directly to a noncombustible, or fire-retardant treated wood, substrate.

(3) Exposed structural members and planking in buildings of class II-A construction, which may be left exposed in any room or space, except in exits.

(4) Twenty per cent (20%) of the aggregate wall and ceiling area of any room, space, or corridor required to have a class A or B rating may be finished with materials having a class C rating. This allowance shall include the area of doors, folding partitions, windows, glazing, skylights, luminous ceilings, trim, bases, chair rails, panels, moldings, etc. This exception shall not operate as a waiver of other requirements of this code relating to opening protectives.

(5) When a sprinkler system is provided in any room or space, and is installed in compliance with the construction provisions of subchapter seventeen of this chapter, interior finish materials may be one class higher in flame-spread rating than required by table [*sic*] 5-4.

(d) Smoke density. - No material shall be used for interior finish in the following locations if the material develops smoke in greater density than the rating shown, based upon a test conducted in accordance with the provisions of reference standard RS 5-5. Materials used for interior finish that cover not more than twenty percent of the aggregate wall and ceiling area of any room, space, or corridor shall be exempt from the above requirements.

Location or Occupancy.....	Smoke Developed Rating
Exits, Corridors.....	25
Occupancy groups H-1 and H-2.....	50
Rooms in which the net floor area per occupant is ten square feet, or less.....	100

(e) Toxicity. - No material shall be used in any interior location that, upon exposure to fire will produce products of decomposition or combustion that are more toxic in point of concentration than those given off by wood or paper when decomposing or burning under comparable conditions.

(f) Attachment of interior finish. -

(1) To be credited with the same rating, interior finish materials that were applied to a substrate when tested shall be applied at the building to an equivalent substrate.

*TABLE 5-4 INTERIOR FINISH REQUIREMENTS CLASS

Occupancy Group Classification of the Space	Occupancy Group Designation	Exits and Shafts	Corridors ^b	Rooms More Than 1500 Sq. Ft. in Area ^a	Rooms Less Than 1500 Sq. Ft. in Area ^a
High Hazard	A	A	A	B	B
Storage	B-1	A	A	B	C
Storage	B-2	A	B	B ^c	C
Mercantile	C	A	B	B ^c	C
Industrial	D-1	A	A	B	C
Industrial	D-2	A	B	B ^c	C
Business	E	A	B	C	C
Assembly	F-1 ^a	A	B	B	B ^d
Assembly	F-1b	A	B	B ^c	B ^{c, d}
Assembly	F-2	A	B	B ^c	B ^{c, d}
Assembly	F-3	A	B	B ^c	B ^{c, d}
Assembly	F-4	A	B	B ^c	C
Educational	G	A	A	B	C
Institutional	H-1, H-2	A	A	B	B ^d
Residential	J-1, J-2	A	A	B ^e	B ^{e, f}
Residential	J-3	B	D	D	D

NOTES FOR TABLE 5-4:

^a In determining the applicable requirements for rooms or enclosed spaces, the occupancy group classification of the room or enclosed space shall be the governing factor, regardless of the occupancy group classification of the building. For the purposes of this table, the area of a room shall be that floor area contained within enclosing construction in which interior doors or other interior openings represent not more than ten percent of the area of the enclosing construction. Interior doors or windows that are constructed of noncombustible materials and that are self-closing or automatic may be ignored in computing door or opening area. Rooms or spaces that have unprotected openings constituting more than ten percent of the area of enclosing construction shall not be considered as a room. Interior finish requirements for rooms are based upon rooms being enclosed in ceiling high partitions. Partitions, to be considered ceiling high, shall extend up to the floor or roof construction above or to a ceiling having at least a three-quarter hour fire-resistance rating. Partitions that do not comply with this requirement shall not be considered as enclosing the spaces, and the rooms or spaces on both sides thereof shall be considered as one.

^b Rooms or spaces through which it is necessary for occupants of an adjacent room to pass in order to reach the only exit shall, for the purposes of this table, be considered as corridors. Where used in corridors, class B finish material shall not extend more than fifty feet between separations of class A finish material that are at least two feet wide.

^c On the street floor of one-story buildings in construction group II, ceilings, beams, trusses, etc. that are twenty feet or more in height from the floor to their lowest part, may have a class C finish.

^d Class C interior finish may be used in offices, or groups of offices, whose use is accessory to an occupancy, provided such offices are separated from the occupancy, by construction having at least a two hour fire-resistance rating.

^e Class C interior finish may be used in the residential rooms of one- and two-story motels when there is a direct exit from each room to the exterior.

^f Interior finish when used in the following spaces shall be at least class B:

- (1) Kitchens, cooking spaces, and pantries in buildings classified in occupancy groups other than J-2 and J-3.
- (2) Repair and maintenance rooms.
- (3) Boiler rooms and incinerator combustion rooms.

**Superscripts in body of this table (which refer to notes) not enacted but probably intended.*

(2) Interior finish materials shall be cemented or otherwise secured in place in the same manner and with materials equivalent to those used in flame-spread tests conducted in accordance with subdivision (b) of this section for the applicable classification.

(3) Where walls, ceilings, partitions, or other construction elements are required to have a fire-resistance rating or are required to be constructed of

noncombustible materials, and the interior finish is secured to studs or furring, the surface of the interior finish facing the concealed space shall either have a class A rating, shall be applied to a substrate that has a class A rating, or shall have the concealed space completely filled with noncombustible material.

§[C26-504.11] **27-349 Coatings.** - Coatings applied in the field by brush or spray shall not be used as flame-spread retardants except on existing surfaces of buildings existing on December sixth, nineteen hundred sixty-eight, and then only with the express permission of, and in a manner directed by, the commissioner.

§[C26-504.12] **27-350 Ceiling construction.** - Ceilings that are to be suspended below floor or roof construction by means of a framing system shall consist of supporting hangers, carrying channels and a supporting grid complying with reference standard RS 5-16 or shall have supporting hangers and carrying channels and a supporting grid that can be demonstrated to the satisfaction of the commissioner to be of strength adequate to support the ceiling material. The hangers and supporting grid shall be of noncombustible materials. In buildings of construction group II, every other hanger supported from wood members shall be attached by a through bolt or clinched through nail. Where, in table 3-4, floor or roof construction is required to have a fire-resistance rating, a ceiling having no fire-resistance rating may be suspended below the fire-resistance construction.

(a) **Luminous ceilings.** - For the purpose of this section, a luminous ceiling shall be defined as a ceiling consisting of translucent, louvered, egg-crated, mesh, or similar light-diffusing material suspended from the ceiling or structural framework. A suspended ceiling containing less than twenty square feet of translucent, louvered, egg-crated, mesh, or similar material in any one hundred square feet of ceiling area shall not be considered a luminous ceiling, and shall be constructed and installed in accordance with department of buildings requirements for lighting fixtures. Luminous ceilings shall, in addition to the requirements of this section, conform to all of the requirements of section 27-348 of this article for interior finish.

**Local Law 59-1996.*

(1) **LUMINOUS CEILINGS OF NONCOMBUSTIBLE MATERIAL.**- Luminous ceilings constructed of glass and/or metal or other noncombustible materials may be used in any location.

(a) Glass used in luminous ceilings, unless it is wire glass or heat-resistant glass as specified below, shall not weigh more than two psf, nor shall any pane be larger than eight square feet in area. If glass used in luminous ceilings is wire glass, or is heat resistant by reason of having a maximum coefficient of expansion of 36 x 10.7 in. per in. per degree C, the glass may be of any weight and any size, limited only by considerations of structural safety.

(b) Luminous ceilings installed below sprinkler heads shall be constructed of a type of noncombustible louver, mesh, or other open material that will not impede the flow of water from the sprinkler heads over the intended area of coverage. The luminous ceiling shall be constructed so as

to provide access to all heads and valves.

(2) **LUMINOUS CEILINGS OF COMBUSTIBLE MATERIAL.**- Luminous ceilings constructed of combustible materials shall not be installed in:

a. Any exit or corridor.

b. Any room classified in occupancy group H, or any room leading therefrom as defined in note b of table 5-4.

c. Any room in which the net floor area per occupant is twenty square feet or less, or any room leading therefrom as defined in note b of table 5-4.

d. Luminous ceilings constructed elsewhere than in the spaces listed in subparagraphs a, b, and c above shall be exempt from the provisions of section 27-348 of this article, provided that:

1. The panels of such ceilings are of slow-burning plastic;

2. The panels are installed above or below sprinklers that are constructed in accordance with the provisions of subchapter seventeen of this chapter;

3. No individual plastic panel exceeds ten feet in maximum dimension. Where installed below sprinkler heads, the plastic shall be a material that will fall from its mounting at a temperature at least fifteen degrees lower than the temperature at which the sprinkler heads are designed to operate or are constructed of open material which will not impede the flow of water from the sprinkler heads. Luminous ceilings shall be installed so as to provide ready access to all heads and valves.

(b) **Suspension of new ceilings below existing suspended ceilings.** - In construction group I a new ceiling may be suspended below not more than one existing suspended ceiling and shall be supported directly from the ceiling carrying channels adjacent to the hangers. In construction group II, an existing suspended ceiling shall be completely removed before a new ceiling may be suspended.

§[C26-504.13] **27-351 Finish flooring and floor coverings.** - Finish flooring and floor coverings shall comply with the following:

(a) **In buildings or spaces classified in occupancy group A** and in all exits except those in buildings of construction group II-E, finish flooring shall be of noncombustible material and except as otherwise provided for stairs in subdivision (h) of section 27-375 of article five of subchapter six of this chapter.

(b) **Flooring in buildings or spaces of construction group I.** - Except as provided in subdivision (a) of this section combustible finish flooring may be used in buildings or spaces of construction group I when cemented directly to the top surface of noncombustible floor construction, or attached to combustible or noncombustible sleepers. When attached to sleepers, the space between the noncombustible floor construction and the bottom of flooring shall be solidly filled with noncombustible material to within one-quarter inch of the flooring, or the space between the sleepers under the flooring shall be firestopped into areas of not more than twenty square feet, and provided further that no open

spaces shall extend under or through fire divisions or through fire separations. Combustible insulating or sound absorbing boards not more than one-half inch thick and having a flame-spread rating not greater than Class C may be used when attached directly to noncombustible floor construction and covered with finish flooring.

(c) Flooring in buildings or spaces of construction group II. - Except as provided in subdivision (a) of this section, finish flooring in buildings or spaces of construction group II may be of combustible material.

(d) Floor coverings. -

(1) Exits. - Where exits are required under any provision of this code, carpets and carpet assemblies shall not be installed in such exits, except that wool carpeting may be installed in lobby areas, exit passageways and convenience stairs.

(2) Flammability requirements. - The requirements of this subdivision shall apply to carpets and carpet assemblies only when used as a floor covering (for requirements pertaining to carpets and carpet assemblies used as interior finishes, see section 27-348 of this article). For purposes of this subdivision, carpeting assemblies shall include the carpet, its underlay, and adhesives which when tested as a composite shall be representative of the proposed installation.

a. Pill test. - All carpets and underlayments shall pass a methanine pill test in accordance with the requirements of reference standard RS 5-20.

b. Critical radiant flux test. - Carpets and carpet assemblies shall be tested by the method for critical radiant flux in accordance with the requirements of reference standard RS 5-20. The time frame for such test shall be at least a fifteen minute exposure.

1. Carpets and carpet assemblies representative of the actual installation on floors of corridors, shall have a minimum critical radiant flux of 0.5 watts per square centimeter (W/cm^2).

2. Carpets and carpet assemblies representative of the actual installation on floors of general areas shall have a minimum critical radiant flux of $0.4 W/cm^2$.

c. Smoke developed ratings. - Carpets and carpet assemblies representative of the actual installation on floors of corridors or general areas shall be tested for smoke developed ratings in accordance with the requirements of reference standard RS 5-20. The smoke developed ratings in either the flaming or no-flaming mode shall not exceed three hundred within the first four minutes of the test.

d. The manufacturer of the carpets and carpet assemblies shall submit a certificate from an independent laboratory acceptable to the commissioner pursuant to section 27-131, showing the complete test data results, prior to final acceptance. The certification shall state that the material is treated for fire resistance and shall indicate the service life of the treatment or that the material is inherently fire resistant by virtue of its construction, chemical properties and/or composition. Materials which are not inherently fire

resistant may be used only when the certified fire resistant service life exceeds that of the planned service life of the carpets and carpet assemblies with consideration being given to cleaning, traffic, and other conditions of use which may affect the treatment.

***§[C26-504.14] 27-352 Fireplaces. - REPEALED**

**Local Law 80-1989.*

§[C26-504.15] 27-353 Smoke and heat venting. -

(a) Where the floor area of a one-story building classified in occupancy group A, B-1, or D-1 is greater in depth than one hundred feet from a frontage space, that portion beyond one hundred feet shall be provided with roof vents and smoke curtains complying with the requirements of reference standard RS 5-11. Where the effective area of vents are glazed with plain glass or plastic not thicker than one-eighth inch, they need not be provided with automatic opening devices.

(b) Buildings classified in occupancy group E, one hundred feet or more in height, having air-conditioning and/or mechanical ventilation systems that serve more than the floor on which the equipment is located, shall be provided with at least one smoke shaft by means of which smoke and heat shall be mechanically vented to the outdoors as provided in reference standard RS 5-17. Buildings that are sprinklered throughout shall be exempt from the smoke shaft requirements.

(c) Existing office buildings, one hundred feet or more in height, having air-conditioning and/or mechanical ventilation systems that serve more than the floor on which the equipment is located, shall be provided with at least one smoke shaft by means of which smoke and heat shall be mechanically vented to the outdoors as provided in reference standard RS 5-17, or in lieu of such smoke shaft or shafts, all interior enclosed stairs other than a fire tower or access stairs may be provided with a system of pressurization for fire emergency use. Such pressurization shall be provided by means of a system or systems as provided in reference standard RS 5-18. Such buildings shall comply with the smoke and heat venting requirements herein on or before September thirteenth, nineteen [sic] hundred eighty-two. Complete plans showing such compliance shall be filed with, and a permit secured from, the commissioner on or before September thirteenth, nineteen hundred eighty.

Existing buildings that are sprinklered throughout shall be exempt from the smoke shaft and stair pressurization requirements.

An existing building, which is to be sprinklered throughout, shall be exempt from the smoke shaft and stair pressurization requirements under the following conditions:

(1) the installation proceeds in conformance with a schedule acceptable to the commissioner, setting forth the sequence and corresponding time for installation in the various locations. On or before September thirteenth, nineteen hundred eighty such a schedule, as well as complete plans of the installation, shall be filed with, and a

permit secured from, the commissioner for the phase of the work to be done as required by paragraph two of this subdivision.

(2) at least one-third of the total floor area of the building, including but not limited to the entrance lobby, corridors and elevator landing areas, is sprinklered on or before December thirteenth, nineteen hundred eighty-one.

(3) at least two-thirds of the total floor area of the building is sprinklered on or before December thirteenth, nineteen hundred eighty-two.

(4) the building is sprinklered throughout on or before December thirteenth, nineteen hundred eighty-three.

Where compliance with the time requirements of this subdivision would cause undue hardship, the commissioner, with the approval of the fire commissioner, may extend the time for compliance, in accordance with rules and regulations to be promulgated. Before such application for a time extension shall be considered all required applications and plans must be filed and approved, permits obtained and a good faith effort towards completion of the work shall have been made.

§[C26-504.16] 27-353.1 Smoke protection for elevators and escalators. -

(a) Elevators.- In existing buildings classified in occupancy group J-1, at every floor above the main entrance floor, all passenger elevators [*sic*] shall open only into elevator vestibules, except for:

(1) Such existing buildings which contain spaces classified in occupancy group C or F and have an automatic sprinkler system protecting all spaces (except boiler rooms) not in occupancy group J-1 and all exits and corridors serving such spaces located on or below the lowest floor containing sleeping rooms as well as all storage closets no matter where located, except that storage closets less than seventy-five square feet may, in the alternative, be provided with smoke detectors which shall be of the central supervisory type connected to an approved central station; or

(2) Such existing buildings, which contain no, spaces in occupancy group C or F, and have either:

a. An automatic sprinkler system protecting all public areas and storage closets; or

b. An automatic sprinkler system protecting all sleeping rooms and storage closets.

c. Notwithstanding subparagraphs a and b of this paragraph, storage closets less than seventy-five square feet may be provided with smoke detectors of the central supervisory type connected to an approved central station.

d. Notwithstanding any other provision of this code, the sprinklers serving the storage closets may be connected with the domestic water supply.

(b) Escalators. - In buildings and existing buildings classified in occupancy group J-1, fire protection for escalators shall be provided by any one of the following methods:

(1) Enclosure in accordance with sections 27-375 and 27-378 if escalator is used as an exit; or

(2) Automatic rolling shutters in accordance with

reference standard RS 18-1; or

(3) Kiosks in accordance with reference standard RS 18-1; or

(4) Where the building section is fully protected by a supervised automatic sprinkler system and the escalator sprinklers are spaced to protect exposed sides of the escalator opening, a noncombustible heat apron constructed to bank heat around the sprinkler heads adjacent to the opening where the bottom edge of the draft curtain is not less than twelve inches below the bottoms of sprinkler heads when heads are in operation, and in no event less than twenty-four inches below the ceiling; or

(5) Spray nozzles in accordance with reference standard RS 18-1.

(c) The requirements of this subdivision shall be complied with on or before April first, nineteen hundred eighty-seven.

***§27-353.2 Smoke protection for elevators in E occupancies.-**

For an elevator in a high rise building where such elevator serves four or more stories that contain space classified in occupancy Group E (office space), inclusive of any lobby or entry level, such elevator shall meet the following requirements at every level served by such elevator (i) for such buildings erected pursuant to new building applications filed on or after October 22, 2004, or (ii) where two or more new elevator shafts are installed in such buildings in existence on October 22, 2004:

(a) Elevator vestibule required.- At every floor above the main entrance floor where the fire command station is located, all elevators shall open into an enclosed elevator vestibule. The elevator vestibule shall be separated from the building occupancy by smoke barriers extending from floor slab to floor slab.

(b) Permitted penetrations.- Penetrations in addition to those permitted in section 27-353.3 (smoke barrier) shall be provided with smoke dampers as defined in reference standard RS 13-1, except that a package pass through or communication opening not exceeding one square foot in area need not be provided with smoke dampers.

(c) Access to exits.- Access to an exit on any floor through the enclosed elevator vestibule shall be permitted if the occupied areas on that floor have access to at least one other required exit that does not require passing through the elevator vestibule.

(d) On floors with a floor area of less than twenty-five hundred square feet, the commissioner may accept an alternative design or construction method that accomplishes the purposes of this section, or, if the commissioner determines that compliance with this section is impracticable in whole or in part, the commissioner may authorize an exemption from the requirements of this section.

**Local Law 26-2004.*

***§27-353.3 Smoke barrier.-** A smoke barrier may or may not have a fire resistance rating. Smoke barriers may have openings that are protected by automatic closing devices, adequate to inhibit movement of smoke through

the opening. The smoke barrier may be constructed of heat-strengthened or tempered glazing or the equivalent and protected by sprinkler heads constructed in accordance with subchapter seventeen of this chapter and installed a maximum of six feet (6'-0") on center on each side of the barrier. If the smoke barrier is constructed of glass, the portions of the smoke barrier located within two feet of the door opening and within five feet of the floor shall be constructed of tempered glass. Glass panels having an area in excess of nine square feet with the bottom edge less than eighteen inches above the floor shall likewise be constructed of tempered glass. Portions of glass smoke barriers shall be marked where required in accordance with the rules of the board of standards and appeals.

**Local Law 26-2004.*