

PROVIDENCE BUILDING CODE REVISIONS

List of Sections Added and Revised

- (1) SEC. 203 HIGH HAZARD USED
- (2) SEC. 304.0 RESTRICTIONS OF FIRE DISTRICT NO. 2
- (3) SEC. 403 VOLATILE FLAMMABLES
- (4) SEC. 412.0 PAINT SPRAYING & STORAGE
- (5) SEC. 414.0 PRIVATE GARAGES
- (6) SEC. 419.0 OTHER PLACES OF ASSEMBLY
- (7) SEC. 426.0 SWIMMING POOLS
- (8) SEC. 516.0 VENTILATION OF SHAFTS
- (9) SEC. 609 & TABLE 12 LENGTH OF TRAVEL
- (10) SEC. 612.0 CORRIDORS AND AISLES
- (11) SEC. 613.0 GRADE PASSAGEWAYS & LOBBIES
- (12) SEC. 614.0 DOORWAYS IN THE PATH OF EGRESS
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- (19) SEC. 841.0 LATERAL BRACING OF BEARING WALLS
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- (23) SEC. 888.0 FIRE PREVENTION & FIRESTOPPING
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- (25) SEC. 913.0 SHAFTS AND ENCLOSURES
- (26) SEC. 914.0 FLOORS AND ROOFS
- (27) SEC. 915.0 BEAMS AND GIRDERS
- (28) SEC. 919.0 EXTERIOR OPENING PROTECTIVES
- (29) SEC. 920.0 FIRE DOORS
- (30) SEC. 222.0 WIRED GLASS
- (31) SEC. 932.0 ROOF STRUCTURES
- (32) SEC. 1111.0 BOILER ROOMS
- (33) SEC. 1207.0 STAND PIPE FIRE LINES
- (34) SEC. 1323.0 WINDOW CLEANING
- (35) SEC. 2000.0 PLASTIC CONSTRUCTION

I  
II

SEC. 203.0 - USE GROUP A - HIGH HAZARD BUILDINGS

SEC. 203.1 - LIST OF HIGH HAZARD USES (no change)

TABLE 1

USE GROUP A1 - HIGH HAZARD USES (no change)

USE GROUP A2 - HIGH HAZARD USES

(At bottom of listed uses the following paragraph shall be added)

Acetylene gas and gases such as hydrogen, illuminating, natural ammonia, chlorine, phosgene, sulphur dioxide, carbon dioxide, methyl oxide and all gases subject to explosion, fume or toxic hazard when under fifteen (15) pounds pressure and under twenty-five hundred (2500) cubic feet in quantity.

v. A-1.

SEC. 304.0 - RESTRICTIONS OF FIRE DISTRICT NO. 2

(No change in this section except for the following)

SEC. 304.7 - PRIVATE GARAGES. Private garages, when accessory to a dwelling on the same lot, one story but not exceeding fifteen (15) feet in height and seven hundred and fifty (750) square feet in area may be erected of Type 4 construction, when located three (3) feet or more from interior lot lines; provided, however, that such buildings may be located within three (3) feet and not less than one (1) foot from the interior lot lines, if the side or sides within such distances shall have the spaces between the studding completely filled in flush with brick, concrete or any other type of masonry. *incumbustible material*

SEC. 304.8 - ATTACHED GARAGES (no change) *satisfactory to the Director.*

SEC. 403.0 - VOLATILE FLAMMABLES

SEC. 403.1 - PROCESS AND STORAGE

.11 - Inside Storage. (no change)

.12 - Handling. (no change)

.13 - Construction of Enclosures. Process rooms shall be enclosed in walls, floors and ceilings of not less than two (2) hours fire-resistive construction with incombustible door sills not less than six (6) inches high and all openings protected with one and one-half (1 1/2) hour opening protectives vented as required in Section 402.0. Floors shall be waterproofed and drained to comply with Section 885.0.

.14 - Fire Protection. (no change)

SEC. 403.2 - MAIN STORAGE (no change)

.21 - Outside Underground System. Outside tanks shall be buried underground with the top of the tanks not less than two (2) feet below the grade or with a reinforced concrete or other approved structural cover not less than four (4) inches thick and a twelve (12) inch earth cover. The maximum capacity of such tanks shall be limited by their location in respect to adjacent buildings and adjacent lot lines as provided in Table 8.

TABLE 8

CAPACITY OF OUTSIDE UNDERGROUND TANKS  
FOR VOLATILE FLAMMABLE LIQUIDS

LOCATION Fire Separation in Feet	QUANTITY OF STORAGE Gallons
50 or more .....	Unlimited
40 .....	50,000
30 .....	20,000
25 .....	12,000
20 .....	6,000
10 .....	3,000

When within ten (10) feet of any building, and the top of the tank is above the lowest floor of the building, the capacity of the tank shall be not more than five hundred and fifty (550) gallons.

The capacity of storage of combustible liquids other than volatile flammable as herein defined shall be restricted to three (3) times the values specified in Table 8.

.22 - Outside Aboveground Systems. (no change)

.23 - Inside Underground Systems. (no change)

"C"

.24 - Outside Storage House. All outside storage houses shall be constructed of fireproof (Type 1A) construction. No opening shall be permitted in the enclosure walls within eleven (11) feet of adjoining property lines or with a fire exposure of less than eleven (11) feet to any other building or structure.

SEC. 419.0 - OTHER PLACES OF PUBLIC ASSEMBLY

(No change in paragraph following main heading)

SEC. 419.1 - AISLES AND FIXED SEATS (no change)

SEC. 419.2 - AISLES WITHOUT FIXED SEATS (no change)

SEC. 419.3 - KITCHEN AND SERVICE PANTRIES. Where kitchen and service Pantries are provided, they shall be separately enclosed in partitions, floors and ceilings of not less than one (1 ) hour fire-resistance and no required exitway shall pass through such areas.

SEC. 419.4 - BOWLING ALLEYS (no change)

SEC. 419.5 - SKATING RINKS (no change)

SEC. 412.0 - PAINT SPRAYING AND SPRAY BOOTHS

(No change in paragraph following main heading)

SEC. 412.1 - LOCATION OF SPRAYING PROCESS (No change)

SEC. 412.2 - CONSTRUCTION

.21 - Spray Spaces (No changes)

.22 - Spray Booths " "

.23 - Spray Rooms. All spray rooms shall be enclosed in partitions constructed of approved materials of not less than one (1) hour fire resistance. Floors shall be waterproofed and drained in an approved manner. Floor drains to the building drainage system and the public sewer shall be prohibited.

.24 - Storage Rooms. In multi-story buildings spraying materials in quantities of fifty (50) gallons may be stored in approved metal cabinets ventilated top and bottom; when more than fifty (50) gallons and not more than one hundred (100) gallons, they may be stored in approved double walled incombustible cabinets vented directly to the outer air; and all spraying materials in quantities of more than one hundred (100) and not more than two hundred fifty (250) gallons shall be stored in an enclosure of not less than two (2) hour fire resistance construction. Storage of all spraying materials in single story buildings of masonry or incombustible construction shall be the same as in multi-story buildings except that the amount of storage of spraying materials may be increased to not more than five hundred (500) gallons when stored in a room with a two (2) hour fire resistance enclosure or in a separate exterior storage building but in no case shall such storage be in quantities of more than five hundred (500) gallons. In buildings in which pyroxylin products are manufactured, stored or kept, the amount of storage shall be not more than fifty (50) gallons.

SEC. 414.0 - PRIVATE GARAGES

SEC. 414.1 - ATTACHED GARAGES

.11 - One and Two Family Dwellings. Private garages located beneath a one and two family dwelling shall have walls, partitions, floors and ceilings separating the garage space from the dwelling constructed of not less than three-quarter (3/4) hour fire resistance, with the sills of all door openings between them raised not less than four (4) inches above the garage floor. The door opening protectives shall be three-quarter (3/4) hour fire doors complying with Article 9 or one and three-quarter (1 3/4) inch solid core wood doors.

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.12 - Multi-Family Dwellings. Private garages located beneath multi-family dwellings and in which no gasoline or oil is stored or handled shall be of protected construction of not less than one and one-half (1 1/2) hour fire resistance, with the sills of all openings between them raised not less than four (4) inches. The door opening protectives shall be one (1) hour fire doors complying with Article 9.

.13 - Separation by Breezeway. Private garages attached to one and two family dwellings shall be protected as required in Section 414.11.

.14 - Other Conditions. All private garages not falling within the purview of Sections 414.11, 414.12, or 414.13, attached to or located beneath a building shall comply with the requirements of Section 415.13 for public garages.

SEC. 414.2 - EGRESS. Where living quarters are located above a private garage, required egress facilities shall be protected from the garage area with one (1) hour fire resistive construction. Required egress from living quarters shall not pass through the garage.

SEC. 414.3 - DETACHED GARAGES. Outside the first fire district, such buildings may be erected of frame construction (Type 4) not exceeding one (1) story or fifteen (15) feet in height and seven hundred fifty (750) square feet in area when located three (3) feet or more from interior lot lines, provided however, that such buildings may be located within three (3) feet but not closer than one (1) foot from interior lot lines, if the space between the studding on the side or sides nearest to said interior lot lines is completely filled in flush with brick, concrete blocks or any other type of masonry. *incumbustible materials as approved by the Director*

SEC. 426.0 - SWIMMING POOLS

SEC. 426.1 - GENERAL. Pools used for swimming or bathing shall be in conformity with the requirements of this section, provided, however, these regulations shall not be applicable to any such pool less than twenty-four (24) inches deep or having a surface area less than two-hundred and fifty (250) square feet, except when such pools are permanently equipped with a water recirculating system or involves structural materials. For purposes of this code, pools are classified as private swimming pools or public and semi-public swimming pools, as defined in Section 426.2.

Materials and constructions used in swimming pools shall comply with the applicable requirements of the Basic Code.

Pools used for swimming or bathing and their equipment or accessories which are constructed, installed and maintained in accordance with the applicable standards listed in Appendix B, shall be deemed to conform to the requirements of the Basic Code, provided the requirements of Section 426.8 are included in the installation.

SEC. 426.2 - CLASSIFICATION OF POOLS. Any constructed pool which is used, or intended to be used, as a swimming pool in connection with a single family residence and available only to the family of the householder and his private guests shall be classified as a private swimming pool.

Any swimming pool other than a private swimming pool shall be classified as a public or semi-public swimming pool.

#### SEC. 426.3 - PLANS AND PERMIT

.31 - Permits. No swimming pool or appurtenances thereto shall be constructed, installed, enlarged or altered until a permit has been obtained from the building official. The approval of all city, county and state authorities having jurisdiction over swimming pools shall be obtained before applying to the building official for a permit. Certified copies of these approvals shall be filed as part of the supporting data for the application for the permit.

.32 - Plans. Plans shall accurately show dimensions and construction of pool and appurtenances and properly established distances to lot lines, buildings, walks and fences; details of water supply system, drainage and water disposal systems, and all appurtenances pertaining to the swimming pool. Detail plans of structures; vertical elevations; and sections through the pool showing depth shall be included.

SEC. 426.4 - LOCATIONS. Private swimming pools shall not encroach on any front or side yard required by the Zoning Ordinance. No wall of a swimming pool shall be located less than six (6) feet from any rear or side property line or less than fifteen (15) percent of the average depth of the lot from any street property line. However, the front yard setback shall not be less than twelve (12) feet and need not exceed twenty (20) feet.

#### SEC. 426.5 - DESIGN AND CONSTRUCTION

.51 - Structural Design. The pool structure shall be engineered and designed to withstand the expected forces to which it will be subjected.

.52 - Wall Slopes. To a depth up to five (5) feet from the top, the wall slope shall not be more than two (2) feet horizontal in five (5) feet vertical.



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.53 - Floor Slopes. The slope of the floor on the shallow side of transition point shall not exceed one (1) foot vertical to seven (7) feet horizontal. The transition point between shallow and deep water shall not be more than five (5) feet deep.

.54 - Surface Cleaning. All swimming pools shall be provided with a recirculating skimming device or overflow gutters to remove scum and foreign matter from the surface of the water. Where skimmers are used there shall be at least one (1) skimming device for each one thousand (1,000) square feet of surface area or fraction thereof. Where overflow gutters are used they shall be not less than three (3) inches deep, pitched one-quarter ( $1/4$ ) inch per foot to drains, and constructed so they are safe, cleanable and that matter entering the gutters will not be washed out by a sudden surge of entering water.

.55 - Walkways. All public or semi-public swimming pools shall have walkways not less than four (4) feet in width extending entirely around the pool. Where curbs or sidewalks are used around any swimming pool they shall have a non-slip surface for a width of not less than one (1) foot at the edge of the pool and shall be so arranged to prevent return of surface water to the pool.

.56 - Steps and Ladders. One (1) or more means of egress shall be provided from the pool. Treads of steps or ladders shall have non-slip surfaces and handrails on both sides, except that handrails may be omitted when there are not more than four (4) steps or when they extend the full width of the side or end of the pool.

#### SEC. 426.6 - WATER SUPPLY, TREATMENT AND DRAINAGE SYSTEMS

.61 - Water Supply. All swimming pools shall be provided with a potable water supply, free of cross-connections with the pool or its equipment.

.62 - Water Treatment. Public and semi-public swimming pools shall be designed and installed so that there is a pool water turnover at least once every eight (8) hours. Filters shall not filter water at a rate in excess of three (3) gallons per minute per square foot of surface area. The treatment system shall be so designed and installed to provide in the water, at all times when the pool is in use, excess chlorine of not less than 0.4 p.p.m. or more than 0.6 p.p.m., or excess chloramine between 0.7 and 1.0 p.p.m., or disinfection may be provided by other approved means. Acidity-alkalinity of the pool water shall not be below 7.0 or more than 7.5.

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Private swimming pools shall be designed and installed so that there is a pool water turnover at least once every eighteen (18) hours. Filters shall not filter water at a rate in excess of five (5) gallons per minute per square foot of surface area. The pool owner shall be instructed in proper care and maintenance of the pool, by the supplier or builder, including the use of high test calcium hypochlorite (dry chlorine) or sodium hypochlorite (liquid chlorine) or equally effective germicide and algaecide) and the importance of proper pH (alkalinity and acidity) control.

.63 - Drainage Systems. The swimming pool and equipment shall be equipped to be completely emptied of water and the discharged water shall be disposed of in an approved manner, that will not create a nuisance to adjoining property.

#### SEC. 426.7 - APPURTENANT STRUCTURES AND ACCESSORIES

.71 - Appurtenant Structures. All appurtenant structures, installations, and equipment, such as showers, dressing room, equipment houses or other buildings and structures, including plumbing, heating, and air conditioning, amongst others appurtenant to a swimming pool, shall comply with all applicable requirements of the Basic Code and the zoning law.

.72 - Accessories. All swimming pool accessories shall be designed, constructed, and installed so as not to be a safety hazard. Installations or structures for diving purposes shall be properly anchored to insure stability, and properly designed and located for maximum safety.

#### SEC. 426.8 - SAFETY PRECAUTIONS

.81 - Overhead Electrical Conductors. No overhead electrical conductors shall be installed within fifteen (15) feet of any swimming pool. All metal fences, enclosures or railings near or adjacent to swimming pool to which bathers have access, which may become electrically alive as a result of contact with broken overhead conductors, or from any other cause, shall be effectively grounded.

.82 - Equipment Installations. Pumps, filters, and other mechanical and electrical equipment for public and semi-public swimming pools shall be enclosed in such a manner as to be accessible only to authorized persons and not to bathers. Construction and drainage shall be such as to avoid the entrance and accumulation of water in the vicinity of electrical equipment.

.83 - Swimming Pool Safety Devices. Every person owning land on which there is situated a swimming pool shall erect and maintain thereon an adequate enclosure surrounding the pool area, sufficient to make such inaccessible to small children. Such enclosure, including gates therein, must be not less than five (5) feet above the underlying ground; all gates must be self-latching with latches placed five (5) feet above the underlying ground or otherwise made inaccessible from the outside to small children.

A natural barrier, hedge, or other protective device as approved may be used so long as the degree of protection afforded by the substituted devices or structures is not less than the protection afforded by the enclosure, gate and latch described therein.

*Check State Law  
on Height of Fences*

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SEC. 516.0 - VENTILATION OF ELEVATOR HOISTWAYS AND OTHER SHAFTS

All enclosed vertical shafts extending through more than two (2) stories of a building or structure shall be vented at the top or sides to the outer air with thermostatically controlled skylights, or windows constructed as herein provided or as specified in Article 9, or with other adequate means of ventilation in accordance with the approved rules.

(Sections 516.1 to 516.4 remain unchanged)

TABLE 12  
LENGTH OF TRAVEL  
TO  
POINT OF ACCESS TO EXITWAYS

	Type of Construction					
	1A	1B	2A	3A	3B	2B 4
A - High Hazard		75		75		50
B - Storage		100		100		50
C - Mercantile		100		100		50
D - Industrial		100		100		50
E - Business		150		125		75
F - Assembly		100		75		50
H - Institutional		100		75		50
L - Residential		75		75		50

SEC. 609.3 - FLOORS BELOW GRADE (no change)

SEC. 609.4 - FIRST FLOOR ASSEMBLY OCCUPANCIES (no change)

SEC. 609.5 - SPRINKLERED BUILDINGS. In storage, mercantile, business and industrial buildings equipped with an approved automatic sprinkler system, <sup>when sprinklers are not required,</sup> the permissible length of travel to the exit may be increased by fifty (50) percent. (New section)

SEC. 611.4 - BASEMENT RECREATION ROOMS. In residential buildings (use groups L-1 and L-2), the basements of which are used as playrooms or for similar recreation purposes, with an occupancy load of twelve (12) or more, such areas and the interior stairway shall be enclosed with partitions and ceilings of not less than three-quarter (3/4) hour fire resistance construction, <sup>out</sup> with direct access to the main street exit. <sup>out</sup> A direct secondary exit from the basement to streets, yards, or courts leading to the street, shall be acceptable in lieu of the requirement for an enclosed stairway.

(New section)

#### SEC. 612.0 - CORRIDOR AND AISLES

SEC. 612.1 - ACCESS TO CORRIDORS AND AISLES (no change)

SEC. 612.2 - DEAD ENDS (no change)

SEC. 612.3 - WIDTH OF CORRIDORS AND AISLES (no change)

SEC. 612.4 - CORRIDOR PARTITIONS AND VERTICAL SEPARATION OF TENANT SPACES, <sup>AND PUBLIC HALLWAYS</sup>  
The enclosure walls of corridor partitions and vertical separation of tenant spaces shall be as provided in Table 5.

(Note:) Line 5 of Table 5 should be changed to read "Fire Enclosure of Exitways, Elevator Hoistways, Public Hallways and Stairways". (Same as BOCA)

Line 6 of Table 5 should be changed to read "Corridor Partitions and Vertical Separation of Tenant Spaces". (Same as BOCA)

SEC. 612.5 - CONSTRUCTION OF DOORS. Every door from room to room shall be of one (1) story in height and shall be three-quarter (3/4) inch thick in buildings of Type 1A, 1B and 2A construction and of one and three-quarter (1 3/4) inch thick solid core wood doors or their approved equivalent in buildings of Type 2B, 3B and 3A construction. Transoms over doors and louvers in doors from rooms to public corridors are prohibited.

SEC. 612.6 - CONSTRUCTION OF DOORS (no change)

SEC. 613.0 - GRADE PASSAGeways AND LOBBIES

SEC. 613.1 - ENCLOSURE OF PASSAGeways. Every required interior and exterior stairway which does not adjoin a street shall be directly connected to the street or to an open court leading to the street by an enclosed passageway, hallway, foyer, lobby, or other unobstructed exitway constructed as provided in this section and in Section 911.0.

SEC. 613.2 - WIDTH AND HEIGHT (no change)

SEC. 613.3 - MAXIMUM STAIRWAY LIMITATIONS (no change)

SEC. 613.4 - CONSTRUCTION (no change)

.41 - Door Openings. (no change)

.42 - Show Windows (no change)

.43 - Trim and Finish. (no change)

.44 - Sprinklered Buildings. When the grade floor lobbies, passageways, public hallways and other public spaces connected thereto are equipped with an approved automatic sprinkler system complying with Article 12, the requirements of Sections 613.42 and 613.43 shall be waived.

SEC. 613.5 - OTHER TYPES OF CONSTRUCTION (no change)

SEC. 613.6 - OFFICE SPACE (no change)

.61 - Sales Spaces. Sales spaces in grade floor lobbies for the retail sale of merchandise not exceeding one hundred (100) square feet in area shall be permitted in grade floor lobbies, provided the required clear width of the exit corridor is not reduced thereby.

SEC. 614.0 - DOORWAYS IN THE PATH OF EGRESS

(Following Sections to follow Sec. 614.73 of Prov. Code - Page 136)

.74 - Entrance and Exit Doorways. Where separate doors are provided for entrance and egress use the entrance door shall be clearly marked "ENTRANCE ONLY" in letters not less than six (6) inches in height and legible from both inside and outside; unless such doors are equipped with an emergency release bracket that will disengage the door operator and permit the door to swing outward under total pressure of not more

than fifteen (15) pounds. Unless so equipped, doors swinging inward only shall not be accepted as part of the required exit facilities. When doors are operated by a mechanical opening device they shall comply with the requirements of Section 614.75.

.75 - Mechanical Operations. Where required exit doors are arranged to be opened by mechanical devices of any kind, they shall be so constructed that the door may be opened manually and will release under a total pressure of not more than fifteen (15) pounds applied in the direction of exit travel.

SEC. 618.0 - INTERIOR STAIRWAYS

- SEC. 618.1 - CAPACITY OF STAIRS (no change)
- SEC. 618.2 - MINIMUM WIDTHS (no change in entire section from 618.2 to 618.29)
- SEC. 618.3 - LANDINGS AND PLATFORMS (no change in section from 618.3 to 618.32)
- SEC. 618.4 - TREADS AND RISERS

.41 - Minimum Dimensions. The height of risers and width of treads in inches shall be as follows:

Use Group	Maximum Riser	Minimum Tread
One and two family dwellings (use group L-3)		
All stairs with closed risers.....	8 1/4"	9" plus 1 1/4" nosing
Basement service stairs with open risers..	8 1/4"	9" plus 1/2" nosing
All other residential (use group L-1 and L-2)	8"	9" plus 1 1/4" nosing
Assembly and institutional.....	7 1/2"	9 1/2" plus nosing
Business.....	7 3/4"	9 1/2" plus nosing

.42 - Winders. No winders shall be permitted in required stairways except that in one and two family dwellings and in ornamental stairways not required as a means of exit, treads with a minimum width of four (4) inches and an average width of nine (9) inches may be permitted.

.43 - COMPUTATION OF RISER AND TREAD (no change)

- SEC. 618.5 - HAND RAILS (no change)
- SEC. 618.6 - STAIRWAY DOORS

- .61 - Width. (nochange)
- .62 - Direction of Swing. (no change)
- .63 - Fire Resistance of Stairway Doors. (no change)
- .64 - One, Two and Three Family Dwellings and Two Story Duplex Dwellings.

The use of wood or other combustible doors in one, two and three family dwellings, and two story duplex dwellings where two (2) stairways are provided, is not herein prohibited.

- .65 - Stairway Doors in Type 4 Construction. (no change)
- .66 - Grade Exit Doors. (no change)
- .67 - Revolving Doors. (no change)
- .68 - Other Stairway Doors. (no change)

618.71  
SEC. ~~618.5~~ - SPIRAL STAIRWAYS. Spiral stairways of noncombustible construction may be used as exits from mezzanine floors not more than two hundred and fifty (<sup>500</sup>250) square feet in area nor more than one-third (1/3) the area of the floor below. The minimum width shall be twenty-<sup>30</sup>two (22) inches for the accommodation of not more than ten (10) persons.



SEC. 618.7 - SUPPLEMENTAL STAIRWAYS (no change) 11/

SEC. 618.8 - STAIR CONSTRUCTION (no change)

.81 - Strength. (no change)

.82 - Enclosures. Unless otherwise specifically required in the Basic Code, all required interior stairways shall be enclosed in partitions of two (2) hour fire-resistance rating, except in one and two family dwellings not exceeding three (3) stories in height; and except further that in buildings not more than three (3) stories or more than forty (40) feet in height, with an occupancy load of not more than seventy-five (75) above nor more than forty (40) below the grade floor, the enclosures shall be of not less than three-quarter (3/4) hour fire resistance.

.83 - Combustible Construction. The stairways and their enclosures in all buildings of type 3 or 4 construction in all use groups other than assembly and institutional buildings, not over three (3) stories or forty (40) feet in height with not more than seventy-five (75) occupants above nor more than forty (40) occupants below the grade floor may be constructed of wood or other approved materials of similar combustible characteristics and of adequate strength; except that in no case shall combustible construction be permitted in school buildings.

.84 - Enclosures for Combustible Construction. The enclosure and underside of stairways of combustible construction, except in one and two family dwellings, shall be protected with fire resistive partitions and ceilings as herein required, fire stopped as specified in Sec. 888.0-- "Fire Prevention and Fire Stopping" of Article 8; and the space below the stairs shall be kept open or shall be solidly enclosed with fire resistive partitions.

.85 - Ventilation for Stairways. All enclosed stairways extending through more than two (2) stories of a building or structure shall be vented as provided in Section 516.0.

SEC. 618.9 - OPENINGS. No openings except the necessary doorways, and windows opening to the exterior of the building, shall be permitted in exit-stairway enclosures required by this section. (New section)

#### SEC. 619.0 - ACCESS TO ROOF

SEC. 619.1 - ACCESS TO ROOF BY STAIRWAY. In buildings more than three (3) stories in height with roofs having a slope of less than one (1) in four (4), at least one stairway shall extend to the roof and when the roof is used as a roof garden or for other habitable purposes, sufficient additional stairways shall be extended to provide the necessary exit facilities

required for such use and occupancy.

SEC. 619.2 - BULKHEADS (no change)

SEC. 619.3 - BY SCUTTLE. All other types of buildings exceeding twenty (20) feet in height with flat or pitched roofs shall be provided with access scuttles of incombustible construction meeting the requirements of Section 932.1.

SEC. 623.0 - FIRE ESCAPES

SEC. 623.1 - WHERE PERMITTED. Fire escapes shall not be accepted as a required means of egress on new buildings. They may be accepted as a required means of egress on existing buildings only by special permission or special order of the Director when the buildings or structures do not exceed five (5) stories or sixty-five (65) feet in height, when constructed in accordance with the provisions of this section and when more adequate facilities can not be provided.

SEC. 623.2 - LOCATION. When located on the front of a building and projecting beyond the building line, the lowest platform shall not be less than ten (10) nor more than fourteen (14) feet above grade, and the fire escape shall be equipped with a drop ladder or counter balanced stairway to the street and a fixed ladder to the roof as may be directed or required by this section. In alleyways and thoroughfares less than thirty (30) feet wide, the clearance under the lowest balcony shall not be less than fourteen (14) feet.

SEC. 623.3 - CONSTRUCTION. Fire escapes shall be designed to support a live load of one hundred (100) pounds per square foot and shall be constructed of steel or other approved incombustible material.

.31 - Dimensions. Stairs shall be at least twenty-two (22) inches wide for residential buildings and at least twenty-four (24) inches wide for other types of buildings. Risers shall be not less than eight and one-half (8 1/2) inches and treads not less than nine (9) inches, and there shall be platforms at the foot of stairs not less than thirty-six (36) inches wide by thirty-six (36) inches long, located not more than eight (8) inches below the access window or door. Stairs for residential type buildings shall have an incline of not greater than sixty (60) degrees. Stairs for other types of buildings, shall have an incline of not less than forty-five (45) degrees. Stairs shall have not more than 15 risers or less than 3 risers between landings unless otherwise approved. Stairs with an incline of sixty (60) degrees shall have stringers not less than 4 1/2 x 3/8" plate and stairs with an incline of less than sixty (60) degrees shall have stringers not less than 5" x 3/8" plate or 5" rolled channel.

Stairs 2'0" wide shall have stringers not less than 5" x 3/8" plate or 5" rolled channel.

Balconies:--Balconies for residential buildings shall have flooring built up of bars not less than 1 1/4" x 1/4", set on edge, spaced not more than 1 3/4" on centers. Balconies for other types of buildings, shall have flooring built up of bars not less than 1 1/4" x 1/4", spaced not more than 1 1/2" on centers. All flooring bars to be assembled with 3/8" tie rods spaced not more than 2'0" on centers, and with pipe separators. Plate flooring is prohibited.

.32 - Opening Protectives. (no change)

.33 - Stairways to the Ground. Fire escapes on assembly and institutional buildings shall be equipped with stairs leading to the ground and permanently fixed thereto. Where conditions make it impossible to permit stairways to the ground, fire escapes shall be equipped with counter balancing stairways that permit them to be easily and quickly released and placed in rigid position for use.

.34 - Drop Ladders. In other than assembly or institutional buildings a drop ladder from the lowest balcony to the ground may be used. Drop ladders shall be set not less than five (5) inches from the wall, and bottom of ladder shall not be more than eight feet six (8'6) above the ground.

#### SEC. 624.0 - EXIT SIGNS AND LIGHTS

SEC. 624.1 - SIZE AND LOCATION. In other than one and two family and multi-family dwellings and <sup>Religious Assemblies</sup> churches, all required means of egress shall be indicated with approved metal signs reading "EXIT" in red letters at least six (6) inches high on a white background or in other approved distinguishable colors; illuminated by an electric light bulb of not less than twenty-five (25) watts, visible from the exit approach and when necessary supplemented by directional signs in the access corridors indicating the direction and way of egress. Or such signs may be internally illuminated with an enclosing noncombustible case through ruby glass. The letters of internally illuminated signs shall be not less than four and one-half (4 1/2) inches high.

SEC. 624.2 - POWER SOURCE. (no change)

SEC. 827.0 - FIBER BOARDS

Insulating boards manufactured with wood or other vegetable fibers used as building boards for sheathing, roof decks, plaster bases, interior wall and ceiling finish, roof insulation or sound deadening, shall be vermin proof, resistant to rot-producing fungi and water-repellent and shall meet the strength and durability tests specified in the standards listed in Appendix C. When required under the provisions of Article 9, the boards shall be protected or treated to develop the required fireresistance or flameresistance as determined by test.

SEC. 827.1 - MANUFACTURE (no change)

SEC. 827.2 - JOINTING (no change)

SEC. 827.3 - USES

.31 - Plaster Base. (no change)

.32 - Roof Insulation. (no change)

.33 - Wall Insulation. (no change)

.34 - Sheathing. (no change)

.35 - Roof Deck. When used as roof decking in open beam construction fiber board insulating roof deck shall have a minimum nominal thickness not less than one (1) inch.

*See Change Page 190*

14.

SEC. 828.0 - PLYWOOD

SEC. 828.1 (Providence Code) No change

SEC. 828.2 " " No change

SEC. 828.3 - SPANS AND THICKNESS. The maximum spans of plywood roof sheathing and plywood sub-flooring shall be limited by the allowable stresses and deflections for the design live load but shall have not less than the following thicknesses, provided it is continuous over two or more spans and laid with face grain perpendicular to the supports.

Plywood Roof Sheathing  
Douglas Fir Plywood  
30 Pound Live Load

<del>3/8"</del> — <del>5/16</del>	inch thickness	16"	inch span
<del>1/2"</del> — <del>3/8</del>	" "	20	" "
<del>5/8"</del> — <del>1/2</del>	" "	24	" "
<del>3/4"</del> — <del>5/8</del>	" "	30	" "
<del>13/16"</del> — <del>3/4</del>	" "	42	" "
<del>1 1/8"</del> — <del>7/8</del>	" "	48	" "

.31 - Plywood Sub-Flooring. Where used as structural sub-flooring, plywood shall be of the minimum thicknesses set forth in table below:

Minimum Thickness of Plywood Sub-Floors  
Maximum Live Load 100 lbs. Per Square Foot  
(Plywood continuous over 2 or more spans and face grain perpendicular to supports)

Douglas Fir Plywood

1/2 inch thickness	12 inch span
5/8 " "	16 " "
3/4 " "	24 " "

.32 - Vertical Maximum Stud Spacing for vertical sheathing and for use in stress panel or other prefabricated constructions shall be determined by accepted engineering analysis or by the tests prescribed for prefabricated assemblies in Sec. 804.6.

For wall studding spaced 16" c.c. plywood sheathing shall not be less than  $\frac{3}{8}$  inch thick.

SEC. 841.0 - LATERAL BRACING OF BEARING WALLS

(No change in paragraph following main heading)

SEC. 841.1 - SOLID MASONRY WALLS (no change)

SEC. 841.2 - HOLLOW WALLS AND WALLS OF HOLLOW UNITS (no change)

SEC. 841.3 - CAVITY WALLS (no change)

SEC. 841.4 - VERTICAL BRACING. In no case shall the length of bearing or non-bearing walls between cross walls, piers, buttresses or other equivalent vertical bracing be more than seventy-five (75) times the required minimum wall thickness.

SEC. 841.5 - ANCHORAGE OF BEAMS AND GIRDERS (no change)

SEC. 858.0 - FRAME CONSTRUCTION

.14 - Bridging. In all floor, attic and flat roof framing, there shall be not less than one line of bridging for each ten (10) feet of span. The bridging shall consist of not less than one by three (1 x 3) inch lumber, double-nailed at each end, or of equivalent metal bracing of equal rigidity secured at the intersection. A line of bridging shall also be required at supports where adequate lateral support is not otherwise provided. (New Section)

.15 - Foundation Anchorage. Wall sills shall be anchored to foundation walls at corners and at intermediate intervals of not more than eight (8) feet with one-half (1/2) inch bolts embedded in the masonry foundations to a depth of not less than eight (8) inches. (new sec.)

.61 - Masonry Veneers. Veneers of unit masonry shall be attached to the wood frame with corrosion-resistive anchors at vertical intervals of not more than sixteen (16) inches and horizontal intervals of not more than twenty (20) inches or direct to a one (1) inch reinforced cement mortar base. (new section)

.62 - Height of Veneers. The average height of four (4) inch brick veneer shall be not more than twenty-five (25) feet above its support on foundation wall or on corbels of masonry or steel; and not more than eighteen (18) feet in height for two (2) inch veneers. (new section)

SEC. 863.0 - FIRE ACCESS PANELS

SEC. 863.1 - WHEN REQUIRED. Completely enclosed buildings, without exterior openings in the enclosure walls, or without ready access for the purpose of fighting fire, shall be provided with access panels in the first to sixth stories. Such access panels shall be not less than thirty-six (36) by seventy-two (72) inches in size, nor shall they be spaced more than one hundred (100) feet apart in each story, and shall have a sill height of not more than thirty-six (36) inches. Access panels shall be clearly marked "Access Panel" with painted or attached letters not less than six (6) inches high. Panels shall be readily opened from the outside, or shall be glazed with plain, flat glass, but when required to be fire-resistive, they shall be equipped with approved opening protectives which can be readily opened from both the outside and the inside complying with Article 9.

SEC. 863.2 - LOCATION (no change)

SEC. 882.0 - FOUNDATION WALLS

SEC. 882.1 - DESIGN. Foundation walls shall extend at least four (4) feet below the ground level and shall be designed to support safely all vertical and lateral loads as provided in Article 7. Accepted engineering design which considers all loadings shall govern thicknesses required for all foundation walls deeper than guides for thicknesses included herein. Unless properly reinforced, they shall be designed to eliminate all tensile stresses in the masonry.

SEC. 882.2 - MINIMUM THICKNESS (no change)

.21 - Reinforced Concrete. (no change)

.22 - Mass Concrete. When not more than seven (7) feet below the finish grade level, foundation walls shall not be less than twelve (12) inches thick, and when not more than nine (9) feet below the finish grade level, walls shall not be less than sixteen (16) inches thick.

.23 - Hollow Unit Walls. Foundation walls of approved hollow masonry units shall be not less than twelve (12) inches thick laid on a concrete footing at least eighteen (18) inches wide and ten (10) inches thick. Hollow unit masonry foundations shall be permitted only under structures having no cellar or basement.

SEC. 882.3 - INCREASED THICKNESS WITH DEPTH (no change)

SEC. 882.4 - FORMS FOR CONCRETE WALLS. Concrete foundation walls for all buildings, except for one, two and three car garages shall be poured between wood or metal forms erected on both sides of the wall with proper braces and ties.

Portable metal buildings not more than four hundred (400) square feet in area and one story in height may be erected on properly reinforced concrete grade beam or on piers of concrete or hollow masonry units not less than twelve (12) inches square and three (3) feet deep. Bolts not less than eight (8) inches long shall be embedded in top of grade beam and piers for anchoring building.

SEC. 882.5 - LATERAL STABILITY. Foundation walls of buildings and structures which serve as retaining walls shall conform to the applicable requirements of Section 883.0.

~~Note Sec. 882.24 - "Rubble Stone" Deleted.~~

SEC. 888.0 - FIRE PREVENTION AND FIRE-STOPPING

(Paragraph following main heading--no change)

SEC. 888.1 - (no change)

SEC. 888.2 - " "

SEC. 888.3 - " "

SEC. 888.4 - " "

SEC. 888.5 - CONCEALED ROOF SPACES. Concealed roof spaces shall be subdivided into areas as provided in Section 914.2 and Section 914.4.

SEC. 888.6 - (no change)

SEC. 888.7 - " "

SEC. 888.8 - " "

SEC. 888.9 - " "



## SEC. 912.0 - FIRE RESISTIVE PARTITIONS

SEC. 912.1 - CONSTRUCTION (no change)

SEC. 912.2 - SUPPORTS (no change)

SEC. 912.3 - HEIGHT OF NON-BEARING PARTITIONS (no change)

SEC. 912.4 - OPENINGS. Door openings shall not exceed seventy (70) square feet in area and where required to be fireproof, the protection shall comply with the provisions of Section 920.0.

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SEC. 912.5 - FIREPROOF CONSTRUCTION. In all buildings and structures of fireproof (Type 1) or of protected non-combustible (Type 2) constructions, partitions built of fireproof treated 2" x 4" studs spaced 16" on center with the spaces between the studs filled with non-combustible material such as fiberglas or mineral wool insulation and the studs covered with lath and plaster or 5/8" thick sheetrock may be erected to subdivide rooms or spaces not exceeding two thousand five hundred (2,500) square feet in area when such areas are occupied by a single tenant and are enclosed in fire resistive or fire partitions, fire walls and fire resistive floors. Larger areas may be subdivided if building is equipped with sprinklers, but such areas must not exceed five thousand (5,000) square feet in area. (Ref. Sec. 910.42 of BOCA - page 222)

## SEC. 913.0 - SHAFTS AND ENCLOSURES

(Note: No change in this section, except for following:)

SEC. 913.42 - Extending to Roof. All shafts that extend into the top story or to the roof of the building or structure shall extend through the roof and shall be covered at the top with a skylight <sup>or other self opening device</sup> of at least one-quarter (1/4) of the area of the shaftway, constructed in accordance with the requirements of Section 932.2, ventilated as required in Section 516.0.

## SEC. 914.0 - FLOORS AND ROOFS

~~Superseded - Sec. P-17a~~

SEC. 914.1 (No change)

SEC. 914.2 - HOLLOW FLOOR AND ROOF CONSTRUCTION. Floor and roof constructions in which the secondary structural members are not separately encased in fire-resistive materials or assemblies of component materials, shall be firestopped in areas of two thousand (2,000) square feet or less with incombustible materials in accordance with Section 924.0. When open-web joists are used as secondary floor members, solid-web joists of the same depth shall be approved for use as firestopplings; and the girders shall be protected as required in Table 5. (Ref. Sec. 913.3 BOCA-Page 224)

SEC. 914.0 - FLOORS AND ROOFS

SEC. 914.1 - FIRE-RESISTIVE CEILINGS. (no change)

SEC. 914.2 - HOLLOW FLOOR AND ROOF CONSTRUCTION. Incombustible floor and roof constructions in which the individual members are not separately encased in fire-resistive materials or assemblies of component materials, shall be firestopped in areas of three thousand (3000) square feet or less with incombustible materials in accordance with Section 924.0. When open-web joists are used as secondary floor members, solid-web joists of the same depth shall be approved for use as fire stops; and the girders shall be protected as required in Sec. 915.1.

SEC. 914.3 - FIRESTOPPING OF WOOD JOIST CONSTRUCTION. Where the ceilings are suspended below wood joist floor construction, the space between the ceiling and the floor above shall be firestopped in areas of not more than one thousand (1000) square feet with materials meeting the requirements of Sec. 924.0.

SEC. 914.4 - CONCEALED ROOF SPACES. Concealed roof spaces enclosed by combustible ceiling and roof construction shall be subdivided into areas of not more than two thousand (2000) square feet by tight partitions or by approved incombustible fire-stops.

SEC. 915.0 - BEAMS AND GIRDERS

(Paragraph following main heading - no change)

SEC. 915.1 - SUSPENDED CEILING PROTECTIONS. When a ceiling is used to fire-protect noncombustible floor and roof assemblies, floor beams and girders need not be individually fire-protected, except when such members support loads from more than one floor or one floor and roof. Such fire-resistive ceiling shall be continuous except as provided in Sec. 914.1.

SEC. 915.2 - WALL SUPPORTS (no change)

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SEC. 915.0 - BEAMS AND GIRDERS

~~Superseded See P. 17a~~

(no change in paragraph following heading)

SEC. 915.1 - SUSPENDED CEILING PROTECTION. When the secondary beams supporting floor or roof construction are not individually fireproofed they may be protected by a suspended ceiling of the required fire-resistance rating.

SEC. 915.2 - WALL SUPPORTS. (no change)

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SEC. 919.0 - EXTERIOR OPENING PROTECTIVES

Where specified herein, the exterior openings of all buildings and structures more than three (3) stories or forty (40) feet in height, other than churches (Use Group F-4), Residential Buildings (Use Groups L-2 and L-3) and Buildings of Frame (Type 4) construction, shall have approved fire windows, water curtains, doors or other approved opening protectives meeting the requirements of this code and the provisions of Article 4 for special use and occupancies. (Ref. BOCA Sec. 916.0-Pg.226)

SEC. 919.1 - HORIZONTAL EXPOSURE (no change)

SEC. 919.2 - VERTICAL EXPOSURE (no change)

SEC. 919.3 - INTERIOR LOT LINE EXPOSURE. Opening protectives shall be provided in every permissible wall opening in buildings of high hazard (Use Group A) within eleven (11) feet of an interior lot line or other building; and in wall openings of all other buildings of other use groups which are erected within six (6) feet of interior lot lines or other buildings, except as provided in Section 919.4.

SEC. 919.4 - EXCEPTIONS.

.41 - First Story. (no change)

.42 - Dwellings and Churches. The required opening protectives may be omitted on window and door openings in dwellings of Use Group L-2 and L-3; and churches Use Group F-4.

SEC. 919.5 - AREA OF OPENINGS PERMITTED. Total area of openings permitted in a wall of a building of high hazard (Use Group A) located within eleven (11) feet of an interior lot line or other building shall not exceed thirty (30) percent of the wall area. Total area of openings permitted in a wall of all other types of buildings located within six (6) feet of an interior lot line or other building as provided in Sec. 919.3 shall not exceed fifty (50) percent of the wall area.

(Note: Sec. 919.3 - Closing Devices (Present Prov. Code deleted)  
New Sec. 919.3 "Interior Lot Line Exposure" replacing same)

SEC. 920.0 - FIRE DOORS

SEC. 920.1 - FIRE RESISTANCE RATING. Approved fire door assemblies shall be constructed of any material or assembly of component materials to afford the degree of fire resistance including hanging and operating hardware as determined by the tests specified in Section 904.4 and as specified in this code and the rules adopted thereunder for the use and location for which they are intended but not less than the following fire resistance ratings:

3 hour fire doors.....for use in fire walls or assemblies of three (3) hour or more fire-resistance rating;

1 1/2 hour fire doors.....for use in fire partitions or assemblies of two (2) hour fire-resistance rating except where otherwise specifically permitted;

3/4 hour fire doors.....for use in non-combustible fire resistive partitions and in assemblies of one hour or less fire-resistance rating;

*omit* { 1 3/4" solid core wood doors (or their equivalent) in partitions or assemblies requiring a one hour or less fire-resistance rating in buildings of Type 2B, 3B and 3A construction. *check?*

SEC. 920.2 - MULTIPLE DOORS

.21 - Fire Walls. (no change)

.22 - Fire Partitions. (no change)

SEC. 920.3 - CONSTRUCTION OF FIRE DOORS

.31 - Equipment. (no change)

.32 - Alternate Closing Devices. (no change)

SEC. 922.0 - WIRED GLASS

Wired glass in approved protective assemblies shall be not less than one quarter (1/4") inch thick and shall be limited in area and location as herein required.

SEC. 922.1 - FIRE WALL PROTECTIVES. (no change)

SEC. 922.2 - FIRE PARTITION PROTECTIVES. (no change)

SEC. 922.3 - FIRE RESISTIVE PARTITION PROTECTIVES. (no change)

SEC. 922.4 - EXITWAY PROTECTIVES. (no change)

SEC. 932.0 - ROOF STRUCTURES

(No change in paragraph following main heading)

SEC. 932.1 - SCUTTLES

.11 - Size. Unless provided with some means of access to the roof, every building and structure more than twenty (20) feet in height, shall have an access trap door not less than two (2) by three (3) feet in area, securely attached or anchored to the roof framing, with ladder leading thereto from the top story.

.12 - Construction. (no change)

TABLE 5

Line 6 - Partitions enclosing corridor partitions and vertical separation of tenant spaces should have the following fire ratings:

1 hour for Type 1-A, 1-B and Type 2-A  
(same should be of incombustible construction)

1 hour for Type 2-B, 3-B and 3-A construction  
(combustible type construction)

3/4 hour for Type 4 construction

( Note: If changes shown in Line 6 (above) are approved, changes will also have to be made in Sec. 215.1, 215.2 - 216.1, 216.2 - 217.1, 217.2 )

SEC.1111.0 - BOILER ROOMS

SEC. 1111.1 - ENCLOSURES. Except in one and two family dwellings and as specifically required for industrial furnaces and accessory equipment or for high hazard uses in article 4, all heating boilers installed in a building or structure shall be located in a separate room or compartment completely enclosed by floors, walls and ceilings of the required fire-resistance; but in no case shall the enclosure of boiler rooms have less than two (2) hour fireresistance for high pressure boilers and not less than three-quarter (3/4) hours for low pressure boilers.

Sections 1111.2, 1111.3, 1111.4, 1111.5 and 1111.6 - do not change

SEC. 1207.0 - WET STANDPIPE FIRE LINES

Except as herein required, all buildings and structures hereafter erected, designed for other than residential use, Use Groups L-2 and L-3 and all buildings heretofore erected which are not already equipped with two and one-half (2 1/2) inch or larger standpipes, shall comply with the provisions of this article.

SEC. 1207.1 - SIZE

.11 - Building Over Two Stories. All buildings more than two (2) stories or thirty (30) feet in height and more than ten thousand (10,000) square feet in area shall be equipped with not less than two and one-half (2 1/2) inch standpipes.

.12 - Buildings Over Four Stories. (no change)

.13 - Buildings Over Six Stories. (no change)

.14 - Buildings Over 250 Feet High. (no change)

SEC. 1207.2 - EXCEPTIONS (no change)

.21 - Equipped With Sprinklers. (no change)

.22 - One Story Buildings. (no change)

SEC. 1323.0 - WINDOW CLEANING

These provisions apply to all window cleaning operations performed wholly or partially on the outside of all buildings, more than three (3) story high, or in which the sills of windows are located more than forty (40) feet above grade or adjoining flat roof.

Sections 1323.1, 1323.21 and 1323.22 - not changed.

SEC. 1323.3 - WHEN APPROVED SAFETY DEVICES SHALL BE USED

.31 - Window Sills Forty or More Feet Above Grade. Buildings having windows with sills forty (40) or more feet above the grade and so constructed that it is necessary for a person to clean the windows from the outside, approved safety devices for the use and protection of the window cleaner shall be provided.

(Note: No other changes in all other sections of this main heading of Sec. 1323.0)



## ARTICLE 20 - PLASTIC CONSTRUCTION

### SEC. 2000.0 - SCOPE

The provisions of this article shall govern the quality and methods of application of plastics for use in buildings and structures.

SEC. 2000.1 - APPROVED MATERIALS. The use of all plastics which meet the strength, durability, sanitary and fire-resistive requirements of the Basic Code and accepted engineering practice as listed in Appendixes C and G shall be permitted.

\*\*\* .11 - Application of Approval. Applicants for approval of a plastic material shall furnish all necessary technical data required by the Department of Building Inspection including among others the manufacturing process; all pertinent physical properties including coefficient of expansion, fire resistance, flame spread; products of combustion; electrical properties and weather resistance.

SEC. 2000.2 - IDENTIFICATION. All plastic materials approved for use under the Building Code shall be identified by the trade formula number or name or other acceptable identification. Each sheet, roll or film of approved plastic shall bear the approval number or other identification mark of the approving authority.

SEC. 2000.3 - MANUFACTURER'S CERTIFICATE. All applications for a building permit shall indicate the type and kind of plastic proposed for use in the building or structure and shall specify the trade formula, number or other approved designation and shall be accompanied by the manufacturer's certificate certifying that the plastic material has been approved or that the assembly complies with the requirements of the Building Code for specified use.

### SEC. 2001.0 - DEFINITIONS

Approved plastic. Any plastic material which meets the requirements of Sec. 2000.1.

Flamoresistant plastic (check test). A plastic material which will not support flame when tested in accordance with the ASTM standard for flammability listed in Appendix C.

\*\*\* (Note: Reference must be made to Providence Code, Appendix C and G, as per attached sheet)

(The following references must be made in  
Appendix C of Providence Code):--

Flammability of Plastics 0.050 inches and Under in  
Thickness--Method of Test for..... ASTM D 568---56T  
Flammability of Rigid Plastics Over 0.050 inches in  
Thickness--Method of Test for..... ASTM D 635---56T  
Plastics--Definitions of Terms Relating to..... ASTM D 883---59T  
Plastics, Deformation of, Under Load--  
Method of Test for..... ASTM D 621---59

Slow-burning plastic (check test). A plastic material which burns no faster than two and one-half (2 1/2) inches per minute when tested in accordance with ASTM standard for flammability listed in Appendix C.

Thermoplastic material. A solid plastic material which is capable of being repeatedly softened by increase of temperature and hardened by decrease of temperature.

Thermosetting material. A solid material which is capable of being changed into a substantially infusible and insoluble product when cured under the application of heat or by mechanical means.

Reinforced thermosetting plastic. A thermosetting plastic reinforced with a glass fiber mat having not less than one and one-half (1 1/2) ounces of glass fiber per square foot.

#### SEC. 2002.0 - DESIGN AND INSTALLATION

SEC. 2002.1 - STRUCTURAL REQUIREMENTS. All plastic materials and their assemblies shall be of adequate strength and durability to withstand the loads and forces specified in Article 7 for their approved use.

SEC. 2002.2 - FIRE AND FLAME-RESISTANCE. In addition to the check tests specified in Section 2001.0, all plastic materials and their assemblies shall comply with the fire-resistance requirements of Article 9, except as modified for glazing of interior and exterior openings in Sec. 2003.1 and 2004.1, and in Sections 2003.4 and 2004.5 for skylights.

SEC. 2002.3 - CONNECTIONS AND SUPPORTS. All fastenings, connections and supports shall be proportioned to transmit two and one-half (2 1/2) times the design live load. Adequate allowance shall be made in the fastenings and supports for differential expansion and contraction of the connected materials.

#### SEC. 2003.0 - ACCEPTED USES FOR THERMOPLASTICS

Subject to the provisions of the Code governing structural requirements in Article 7, protection of wall openings and other fire-resistance requirements in Articles 8 and 9 except as herein modified with respect to glazing, approved thermoplastics shall comply with the following provisions for specific uses.

SEC. 2003.1 - GLAZING. Where approved fire doors and fire windows are not specifically required under the Basic Code, exterior and interior door and window openings may be glazed with approved plastics, except that such glazing shall not be allowed in exterior openings which are located more than four (4) stories or fifty (50) feet in height above grade.

SEC. 2003.2 - LUMINOUS CEILINGS. Flameresistant plastic panels securely mounted on approved noncombustible frames and suspended from noncombustible floor or roof construction may be employed as luminous ceilings in classrooms with an occupancy load of less than seventy-five (75) and in other rooms or spaces, not including exitways, not more than two thousand five hundred (2,500) square feet in area, in other than high hazard, assembly and institutional use groups. In spaces protected by approved automatic sprinkler systems, approved plastics may be installed without limitation in area of the room or space.

SEC. 2003.3 - TRANSPARENT ROOF SHEATHING. Outside of the first fire zone, where class 4 roof coverings are permitted under Section 929.3 and in industrial buildings for other than high hazard uses, approved plastics may be used as transparent roof sheathing as follows:

.31 - Structural. The assembly shall meet the structural requirements of Section 711;

.32 - Limiting Area. Each transparent or translucent section shall be not more than one hundred (100) square feet in area and the aggregate area on any one building shall not exceed fifteen (15) percent of the total roof area;

.33 - Panel Separation. All individual sections of plastic covering shall be separated in every direction by not less than eight (8) feet of approved non-combustible construction; and

.34 - Form of Panels. The transparent panels shall be pitched or arched in the direction of the minor dimension of the opening which shall be not more than eight (8) feet.

SEC. 2003.4 - SKYLIGHTS. Skylight assemblies in all locations other than over places of assembly may be glazed with approved thermoplastics under the following conditions:

.41 - Limiting Area. The roof opening shall be not more than fifty (50) square feet in area; and not more than twenty (20) percent of the roof area shall be occupied by such installations;

.42 - Form of Skylight. The skylight assembly shall be constructed with a pitch of not less than thirty (30) degrees to the horizontal or shall be dome-shaped with a minimum rise at the center equal to ten (10) percent of the maximum dimension but not less than five (5) inches;

.43 - Location of Units. The units shall be installed on the roof with a minimum distance of three (3) feet between adjoining units and shall have a curb not less than four (4) inches in height above the level of the roof and no unit shall be installed within twenty (20) feet of any wall in which the exterior openings are required to be protected;

.44 - Maximum Unit Size. The total area enclosed within the curb of a single unit shall not exceed fifty (50) square feet and no dimension shall be greater than ten (10) feet;

.45 - Sash and Frames. The plastic material shall be mounted in a steel or other approved metal frame.

SEC. 2003.5 - DORMER WINDOWS. Where class 3 and class 4 roof coverings are permitted under the provisions of Section 929, dormer windows may be glazed with approved plastics.

SEC. 2003.6 - SIGN CONSTRUCTION. Approved plastic materials for use in billboards, ground, marquee, roof and wall signs shall comply with the provisions of Article 14.

SEC. 2004.0 - ACCEPTED USES FOR REINFORCED THERMOSETTING PLASTICS

The use of reinforced thermosetting plastics shall comply with the structural requirements of Article 7, the protection of wall openings and the fireresistance requirements of Article 9 except as herein modified.

SEC. 2004.1 - GENERAL GLAZING. Where fire doors, fire windows or other opening protectives are not specifically required under the Building Code, exterior and interior door and window openings may be glazed with approved thermosetting plastics, provided such openings in exterior walls are located not more than four (4) stories nor more than fifty (50) feet above grade and as further regulated by the provisions of Sections 2004.21 to 2004.24.

SEC. 2004.2 - WALL SIDING. In storage (use group B) and industrial (use group D) buildings, not including high hazard uses, reinforced thermosetting plastics shall be permitted as follows:

.21 - Outside Fire District No. 1. A continuous run of thermosetting plastics shall be permitted not more than one hundred (100) feet in length and twelve (12) feet in height in enclosure walls of noncombustible (Type 2-B) construction, provided such walls are located fifteen (15) feet or more from interior lot lines or from any other building. In Fire District No. 2, the total area of this material shall not exceed fifty (50) percent of the wall area. The glazing of openings in masonry enclosed (Type 3) and in wood frame (Type 4) construction shall not exceed the limits

prescribed in Section 2004.24 and shall be in compliance with the required fire separations of the Building Code.

.22 - Segregation of Continuous Panels. Not less than eight (8) feet of approved noncombustible siding shall be provided longitudinally between the ends of consecutive bands of continuous siding and not less than ten (10) feet vertically between adjacent parallel rows.

.23 - Access Panels. Access panels shall be provided in all continuous runs to comply with the requirements of Section 863.0.

.24 - Within Fire District No. 1. Wall panel units of reinforced thermosetting plastics shall be limited to the covering of individual window openings as provided in Section 2004.1 and shall not exceed twenty-five (25) percent of the total wall area of the story on that side.

SEC. 2004.3 - TRANSLUCENT ROOFING. Approved reinforced thermosetting plastic construction shall be permitted in roofs of storage and industrial buildings for other than high hazard uses as herein provided:

.31 - Pitched Roofs Outside Fire Limits. Approved reinforced thermosetting plastics may be used on pitched roofs in continuous rows or bands but not more than one hundred (100) feet in length and twelve (12) feet in width on storage (use group B) and industrial (use group D) buildings for other than high hazard uses, with eight (8) feet separation longitudinally between the ends of consecutive rows and ten (10) feet transversely between adjacent parallel rows. The total area of this material shall not exceed thirty (30) percent of the roof area.

.32 - Within Fire Limits. The size of roof panel units within the fire limits shall be limited as provided for skylights in Sec. 2004.5.

SEC. 2004.4 - CONSTRUCTION OF WALL AND ROOF UNITS. All reinforced thermosetting plastic wall and roof panel units shall be directly attached to the building framework or shall be mounted individually in steel or other approved metal frames.

SEC. 2004.5 - SKYLIGHTS. Both within and without fire limits, approved reinforced thermosetting plastics shall be permitted for use as skylights except over rooms and spaces used as places of assembly as herein provided, in buildings of all use groups and of other than fireproof (type 1) buildings. Skylights installed over stairway or other shafts shall be constructed to be self-venting or equipped with automatic means of removing hot air and gases to comply with Sections 516.1 and 516.2.

installations.

SEC. 2004.6 - PARTITIONS. Reinforced thermosetting partitions shall be permitted wherever wood and glass construction is acceptable in buildings of masonry enclosed (type 3) and wood frame (type 4) construction, and in rooms and spaces not exceeding five thousand (5000) square feet in area enclosed in three-quarter (3/4) hour fireresistive construction in buildings of fireproof (type 1) and non-combustible (type 2) construction as provided in Section 925.1.

SEC. 2004.7 - LUMINOUS CEILING AND WALL PANELS. Approved reinforced thermosetting plastic panels supported from noncombustible floor or roof construction or attached to noncombustible walls or partitions may be used in luminous ceiling and wall assemblies in rooms and spaces, not including exitways, not more than seventy-five hundred (7500) square feet in area of other than assembly or institutional occupancy. When such spaces are protected by an approved automatic sprinkler system, such luminous panels shall be permitted without limitations in the area of the room or space. The luminous panels shall be installed so as not to interfere with the operation of the sprinkler heads. All sprinkler heads located within the area to be covered by panels, shall be installed below the level of the panels.

SEC. 2004.8 - ROOF COVERINGS OVER TERRACE. Roof coverings over terraces and patios of one and two family dwellings shall be permitted in reinforced thermosetting plastic construction. The supports for such construction shall comply with the requirements of the Basic Code.

SEC. 2004.9 - ACCESSORY STRUCTURES AND MISCELLANEOUS EQUIPMENT.

.91 - Greenhouses, Fences and Windbreaks. Wherever wood frame and unprotected steel construction is permitted under the provisions of Sections 303 and 304, reinforced thermosetting plastics shall be permitted within the limitations therein specified.

.92 - Lighting and Other Decorative Fixtures. Approved reinforced thermosetting plastics shall be permitted for light diffusion media and decorative hangings within the limitations specified for decorative materials in Section 930.

.93 - Bathroom Accessories. Approved thermosetting plastics shall be permitted as a substitute for glass in shower stalls and doors, bathtub enclosures and similar accessory units.

## ARTICLE 20 PLASTICS CONSTRUCTION

### SEC. 2000.0 - SCOPE

The provisions of this article shall govern the quality and methods of application of plastics for use in buildings and structures, when offered for one (1) or more of such typical uses as:

Interior finish and trim

Light-diffusers in ceilings

Panels in interior walls and partitions

Exterior wall panels

Glazing of unprotected openings

Roof panels

Skylights

Panels in monitors and sawtooth roofs

Exterior veneer

Awnings and canopies

Greenhouses

Signs, fences, and similar structures

### SEC. 2001.0 - DEFINITIONS

Glazing. Light-transmitting material set in a frame or sash. (As distinguished from roof or wall panels, defined in this section.)

Laminate. A product made by bonding together two (2) or more layers of material or materials.

Light-diffusing systems in ceilings. Installations of plastic panels suspended below lighting fixtures for the purpose of diffusing light throughout a room or space and supported directly or indirectly from floor or roof construction.

Plastic. A material that contains as an essential ingredient an organic substance of large molecular weight, solid in its finished state, and at some stage in its manufacture or in its processing into finished articles, can be shaped by flow.

Reinforced plastic. A plastic material with some strength properties superior to those of the base resin, resulting from the presence of high-strength fibers or other reinforcing materials embedded in the composition.

Roof panels. Plastic sheets installed in the plane of the roof.

Self-extinguishing plastic (check-test). A plastic material which will not continue to burn when tested in accordance with the ASTM standard for flammability listed in appendix C.

Wall panels. Plastic sheets fastened directly to structural members of sheathing, without frame or sash, whether opaque or as a light-transmitting medium in exterior walls.



SEC. 2002.0 -- DESIGN, INSTALLATION AND CONDITIONS OF ACCEPTANCE

2002.1. Structural Requirements. -- All approved plastic materials and their assemblies shall be of adequate strength and durability to withstand the design loads as prescribed elsewhere in the Basic Code. If required, substantiating data consistent with sections 803 and 804 shall be submitted.

2002.2. Identification. -- Each plastic material shall be identified by the manufacturer with a trademark, generic name and ASTM abbreviation, where available. Each piece or container of plastic material shall be adequately labeled with a mark, decal, or sticker carrying such accepted identification.

2002.3 Plans and Specifications. -- Plans and specifications submitted to the building official and calling for use of a plastic material shall identify the material as required in section 2002.2.

SEC. 2003.0 - APPROVED PLASTIC MATERIALS

2003.1. Conditions for Approval. -- To allow proper evaluation of a plastic material, the manufacturer, in accordance with section 805, shall file with the building official such technical data as may be considered relevant. The data may include the chemical classification and pertinent physical, mechanical, electrical and thermal properties such as coefficient of expansion, weather resistance, and burning characteristics.

Upon review, the building official shall determine the adequacy of the plastic material and, if found satisfactory for the intended use, he may approve the material subject to the limitations of article 20.

2003.11. Approved Plastic Material. -- An approved plastic material is one which meets the strength, durability, sanitary and fireresistive requirements of the Basic Code and accepted standards listed in appendixes C and G.

2003.12. Toxicity. -- The toxic products of combustion of an approved plastic material shall not exceed tolerable limits established in accepted standards or as determined by test.

2003.2. Plastic material classification. --

Class A. -- Reinforced, unreinforced or laminated plastic materials which are self-extinguishing when tested in accordance with test procedures in appendix C and tabulated in section 2003.11.

Class B. -- Plastic materials which are reinforced with glass fiber or other non-combustible material amounting to not less than one and five tenths (1.5) ounces per square foot and not less than twenty (20) per cent weight of the plastic panel or sheet.

Class C. -- Plastic materials other than class A or class B which meet the requirements of section 2003.1.

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SEC. 2004.0. -- INTERIOR FINISH AND TRIM

2004.1. Approved Plastic Materials. -- Approved plastic materials used for interior finish and trim, shall comply with applicable sections in article 9.

2004.2. Light-transmitting Plastic Materials. -- Light-transmitting plastic materials need not comply with article 9, provided that they conform with other requirements of article 20.

SEC. 2005.0. - EXTERIOR WALL PANELS AND GLAZING OF UNPROTECTED OPENINGS

Approved plastic materials may be used, except in occupancies F-1, F-2, F-3 and H in exterior walls not required to be fireresistive, and in wall openings not required to be wire glazed nor to have other fire protection.

2005.1. Continuous Wall Panel or Glazed Wall Opening. -- Each continuous wall panel or glazed wall opening shall be separated from each adjacent panel or opening by a section of noncombustible wall material four (4) feet wide for longitudinal separation and eight (8) feet in height for vertical separation.

2005.11. Maximum Length. -- Maximum length of each continuous wall panel or glazed wall opening shall not exceed one hundred (100) feet for class A or B, nor fifty (50) feet for class C plastic.

2005.12. Maximum Height. -- Maximum height of each panel or glazed wall opening shall not exceed twelve (12) feet in buildings over (1) story for class A or class B plastic nor eight (8) feet for class C plastic.

2005.13. Dimensional, Area and Separation Requirements. -- Dimensional, area, and separation requirements are not applicable to type 4 buildings.

2005.14. Height Above Grade for Plastic Glazing. -- Plastic glazing shall not be located at a height greater than seventy-five (75) feet above grade level.

2005.2. Area Limitations. -- Wall panels and glazing shall be limited by percentage of the wall area of each story in which they are installed.

2005.21. Aggregate Area of Class A or Class B Plastics. -- The aggregate area of class A or class B plastics shall not exceed fifty (50) per cent.

2005.22. Aggregate Area of Class C Plastics. -- The aggregate area of class C plastics shall not exceed thirty (30) per cent.

SEC. 2006.0. - ROOF PANELS AND SKYLIGHTS

2006.1. Roof Panels. -- Approved plastic materials may be installed in all roofs protected by automatic sprinklers, or in all roofs where roof construction is not required to have a fireresistance rating, except for occupancies F-1, F-2, F-3 and H, provided the following conditions are met:

1 -- The roof must be sloped at least four (4) inches in twelve (12) inches.

Corrugated roof panels shall be pitched in the direction of the slope;

2 -- Each roof panel shall be separated from every adjacent panel by at least eight (8) feet laterally and at least four (4) feet along the slope.

2006.2. Skylights. -- Approved plastic materials may be used in skylights, as light-transmitting panels in monitors and sawtooth roofs provided the following conditions are met:

1 -- The lower edge of the plastic shall be mounted at least four (4) inches above the roof on a noncombustible curb;

2 -- Skylight units or light-transmitting panels must be sloped at least four (4) inches in twelve (12) inches. If dome-shaped, the plastic unit must rise above the mounting flange a minimum distance equal to the ten (10) per cent of its maximum span, but not less than five (5) inches. Corrugations must run with the inclined plane;

3 -- Individual skylight units or areas of plastic panels shall be installed in the roof separated from each other by a distance not less than ten (10) per cent of the length of the plastic section, or five (5) feet, whichever is greater. In no case shall plastic skylights or light-transmitting panels be installed closer than five (5) feet to an exterior wall nor within a fire exposure separation where wall openings are required to be fire protected.

2006.3. Area Limitations. -- Individual roof panels, skylight units and other light-transmitting panels shall be limited in area. Where the aggregate area plastics exceeds the individual area limit of a unit or panel, the area shall be limited by a percentage of the floor area of the room or space over which the units or panels are installed. The following criteria shall apply to installations:

<u>Class Plastic</u>	<u>Unit or Panel Individual Area Maximum (sq. ft.)</u>	<u>Aggregate Area Maximum (per cent of floor area)</u>
A or B	300	50
C	100	30

#### SEC. 2007.0 - LIGHT DIFFUSING SYSTEMS IN CEILINGS

2007.1. Installations Requirements. -- Plastic light diffusing systems in ceilings shall not be installed in required fire exits or corridors or in occupancies F-1, F-2, F-3 and H, unless the assembly employs class A plastics and is approved for such installations. In other rooms or spaces, panels of approved plastics may be installed as light diffusing systems in accordance with the following provisions:

1 -- Plastic diffusers installed in light diffusing systems in which the aggregate plastic area exceeds thirty (30) per cent of the ceiling area shall be deemed to be an interior finish and as such shall conform to the requirements of article 9;

2 -- Plastic diffusers of approved plastics may be installed in light diffusing systems provided the aggregate plastic area does not exceed thirty (30) per cent of the ceiling area;

3 -- Plastic diffusers installed in surface mounted or recessed fixtures shall not be subject to the requirements of this section unless the aggregate area of the diffusers exceeds thirty (30) per cent of the area of the ceiling;

4 -- No plastic light diffusing system shall be installed in areas required to be equipped with automatic sprinklers unless appropriate tests by a recognized laboratory have shown that such system does not prevent effective operation of the sprinklers or unless sprinklers are located both above and below the light diffusing system to give effective sprinkler protection;

5 -- In types 1, 2 and 3 buildings, all hanging supports and fastenings shall be of noncombustible material and hangers shall be at least no. 12 U. S. standard gauge galvanized wire, or equivalent;

6 -- The maximum anticipated service temperature in the space between the panel and the ceiling shall not exceed the manufacturer's recommended maximum service temperature for the plastics employed in the panel;

7 -- All electrical work, lighting equipment, fixtures, wiring and installation of same, when they are installed in conjunction with these systems, shall comply with the requirements of the National Electrical Code and article 15 of the Basic Code.

#### SEC. 2008.0. - PARTITIONS

2008.1. Light-Transmitting Media in Partitions. -- Approved plastics may be used to provide the light-transmitting media in partitions where plain glass is permitted, provided the area of plastic so installed does not exceed in the aggregate one-third (1/3) of the area of the partition in which installed.

2008.2. Openings in Movable Partitions of Other Noncombustible Material. -- Approved plastics may be installed in openings in movable partitions made of metal or other noncombustible material, provided the area of plastic so installed does not exceed in the aggregate one-half ( $\frac{1}{2}$ ) of the area of the partition in which it is installed.

2008.3. Partitions Not Required To Be of Noncombustible Construction. -- Where partitions are not required to be of noncombustible construction, class A plastics may be used for the construction of the entire partition.

#### SEC. 2009.0. - EXTERIOR VENEER

2009.1. General. -- Approved plastics may be attached to a noncombustible backing in accordance with applicable requirements, provided: that no plastic veneer shall be attached to any exterior wall to a height greater than seventy-five (75) feet above grade, but shall be permitted only on the first story of buildings located in the fire limits.

#### SEC. 2010.0. - ACCESSORY STRUCTURES AND MISCELLANEOUS EQUIPMENT

2010.1. Awnings and Canopies. -- Approved plastics may be used in awnings and canopies, and all such awnings and canopies shall be constructed in accordance with provisions governing projections and appendages as provided elsewhere in the Basic Code.

2010.2. Greenhouses. -- Approved plastics may be used in lieu of plain glass in greenhouses under the provisions of sections 301 and 302.

2010.3. Signs, Fences and Similar Structures. -- The use of plastics in signs, fences and similar structures shall be governed by the specific sections of the Basic Code applicable to those structures.

2010.4. Carports, Patio or Porch Covers. -- Approved plastics may be used in carports, patio or porch covers, and similar structures under the provisions of section 2006.0.

CHANGE NO. S20-65-66  
Part 12 of 12 Parts

Appendix C.

Change the dates of the following standards:

UNCLASSIFIED MICELLANEOUS

Flammability of Plastics 0.050 Inches  
and Under in Thickness--Method of  
Test for.....ASTM D 568--(56T) 61

Flammability of Rigid Plastics Over  
0.50 Inches in Thickness--Method  
of Test for.....ASTM D 635--(56T) 63

# IN CITY COUNCIL

MAR 3-1953

FIRST READING  
REFERRED TO COMMITTEE ON URBAN REDEVELOPMENT  
RENEWAL & PLANNING

.....  
*Vincent Vaspin*, CLERK